

CITY OF FRUITA, COLORADO

TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN



FEBRUARY 1999

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OFFICE OF ENERGY CONSERVATION  
ADOPTED BY THE FRUITA PLANNING COMMISSION: JANUARY 11, 1999  
ADOPTED BY THE FRUITA CITY COUNCIL: FEBRUARY 2, 1999

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## **Governor's Office of Energy Conservation**

This study is funded in part by a grant through the Governor's Energy Conservation Program. The Governor's program seeks to fund studies which analyze and propose solutions for innovative, energy efficient ways of handling and limiting the increasing automobile traffic in Colorado's communities

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# I. INTRODUCTION AND BACKGROUND

## Reasons for the Study and Plan

This study and plan provides traffic and circulation solutions for the small City of Fruita, before the rapid growth in and around the community cause a greater problem. The City population has grown from 4,000 in 1990 to 5120 in 1998. With this growth, and rapid growth in the surrounding county, traffic throughout the community has grown dramatically and will continue to increase.

How this increase in traffic is addressed will effect the character and quality of life in the city.

## Rethinking the Solutions

The solutions in this plan do not focus solely on accommodating the automobile. They apply principles that place an equal focus on the safety and mobility of pedestrians and bicyclists, recognizing them as an important part of the communities transportation system.

The solutions to traffic management presented represent a departure from the usual automobile oriented solutions; which are too common to small towns like Fruita and which change the character and reduce the quality of life in the community. Instead of building wider streets, more stop signs and stop lights, the solutions proposed by this plan stress "Traffic Calming" measures for specific problem areas identified by the community at meetings and workshops. It provides a "toolbox" of techniques for slowing traffic down and giving pedestrians and bicyclists safer routes through the City. Traffic roundabouts or circles, curb extensions, and separate bicycle/pedestrian trails, alternative off-road bicycle/pedestrian routes and commuter trail corridors are used. Sketch designs and detail sheets illustrate typical solutions and budgets. Special attention is given to safety of school walking routes around Fruita's three regional schools (Shelledy Elementary School, Fruita Middle School and Fruita Monument High School).

GROWTH	1990	1998	Change		Rate
Fruita	4,042	5,129	1,087	27%	3.4%
Mesa County	93,145	111,873	18,728	20%	2.5%

## A Community Effort

The City of Fruita has been joined by Mesa County, the Fruita Chamber of Commerce, School District 51, the high school, middle school, and elementary school and the local bike shop and other user groups to participate in the study and plan and to help implement it. Study participants include: Family Health West (Fruita Medical Center), the Mesa County Traffic Engineering Department, the Colorado Department of Transportation, School District 51 (Shelledy Elementary School, Fruita Middle School and Fruita Monument High School), and the Mesa County Transportation Planning Region/Metropolitan Planning Organization.

We expect to begin implementing the plan within two years after it is completed. The plan has applicability to other small towns in Colorado by demonstrating affordable solutions to small town transportation problems. It also relates to the larger context of the Grand Junction Transportation Region (TPR) and the Mesa County Metropolitan Planning Organization (MPO). The plan will be widely discussed and disseminated using public forums, presentations to the schools, press releases and presentations to the Transportation Planning Region.

*After decades of trying to eliminate traffic congestion by building more and bigger roads, transportation planners are now beginning to understand that we can not build our way out of congestion. As Murphy's law of traffic goes - Traffic expands to fill the available street.*

## Related Studies and Plans

### a. Building a Walkable and Bicycle Friendly Community for Fruita, Colorado Walkable Communities, Inc. 1997

This study analyzes several areas of Fruita and makes recommendations regarding each. Topics covered include: Town Entry (Highway 340 and Aspen St.), Development Policies and Practices, Downtown, and Key Principles for a Successful Main Street. Recommendations include proposals for the 340 overpass sidewalk, a landscaped roundabout at 340 and Aspen Ave., Circle Park traffic circle, downtown, and new development. These recommendations are included in the recommendations section of this plan.

### b. Fruita Community Plan (1994)

The Fruita Community Plan, adopted in 1994, as the official master plan of the City has numerous references to the need for better pedestrian and bicycle facilities and traffic engineering improvements; i.e. more traffic lights and wider collector roads. The Fruita Community Plan provides the basis for much of his plan, however many of the recommendations of this plan represent the latest concepts in traffic calming and represent a refinement of the recommendations made in the Fruita Community Plan.

The following sections of the Fruita Community Plan are applicable to this study:

#### Community Character (p. 14).

(Goal:) Establish Fruita as a model community for environmental excellence.

(Action:) Encourage use of bicycles and walking as transportation; develop and maintain bicycle and walking routes

#### City of Fruita Internal Road System (p. 73)

For the existing grid the City should pursue measures to ensure that roadways are utilized as designated, such as installing planters at the entrance to local access roads to discourage through traffic.

#### Pedestrian and Bicycle Circulation (p. 73)

- ▶ Officially designate on road bike routes and sign and stripe appropriately.
- ▶ Implement a sidewalk/trail system around Fruita Monument High School.
- ▶ Implement the sidewalks and trails called for in the [340 Corridor Conceptual Development Plan (1994)]
- ▶ Implement other trail projects in coordination with the Colorado national Monument, BLM and the Mesa County-Grand Junction Riverfront Commission

#### Recreation and Open Space (p.78)

The City does not have any developed pathways. It should develop a plan to implement a pathway system which connects residential neighborhoods, the schools, parks and recreation facilities, downtown and Devil's Canyon (Dinosaur Discovery Museum), as well as regional trail systems and open space areas including Kokopelli's Trail, the Colorado National Monument and trail systems along the Colorado River being developed by the Mesa County/Grand Junction Riverfront Commission. . The City should also protect corridors along the salt washes as nature trails (p.78).

### d. Other Related Plans Include:

- Multi-Modal Transportation Study, Grand Junction/ Mesa County Urbanized Area (Mesa County Public Works, 1993),
- 2015 Plan (Mesa County Public Works, 1994),
- Transportation Improvement Plan (Mesa County/Grand Junction Transportation Planning Region),
- State Trails Plan(Colorado State Parks),
- Western Slope Trails Network, "The Missing Links", (Special Report by Club 20 in Partnership with Great Outdoors Colorado and Colorado State Parks, 1996).

### Trail Projects already in place or in the planning stages in the Fruita area include:

- Little Salt Wash Trail,
- Colorado River Trail (Fruita-Grand Junction),
- Fruita-Kokopelli River Trail (Fruita-Loma),
- Dinosaur Hill/Old Fruita Bridge Trail,
- Dinosaur Hill Trail,
- Bookcliffs Trails,
- BLM trails Kokopelli, Pollack Bench, Devil's Canyon, Pollack Canyon, Kodell's Canyon,
- Colorado National Monument Trails,
- Downtown Walking Tour,
- Fruita Tree Walk,
- U.S. 6 pedestrian/bicycle path: Fruita Monument High School to downtown Fruita (ISTEA)
- SH 340 Corridor Plan ( adopted 1994)

## II. GOALS

The overall goal of this study is to plan a circulation system that is safe and convenient for autos, bicycles, and pedestrians and which enhance rather than diminish the quality of life in the community by:

- Developing innovative, energy efficient ways of handling the increasing traffic in our rapidly growing small city.
- Providing safer walking and bicycle routes through out the community using traffic calming, bicycle, and pedestrian solutions to transportation and traffic problems experienced by this rapidly growing small city.
- Paying special attention to school walking routes around Fruita's three regional schools (Shelledy Elementary School, Fruita Middle School and Fruita Monument High School).

### III. ISSUES AND OPPORTUNITIES

The following issues were developed at the steering committee charette held on June 8, 1998 and the public workshop held on July 15, 1998

#### Bicycle Issues

- On street parking is a problem for bicycles---parking within bike lanes needs to be enforced
- We need a bike lane to the new state park on the river
- Who has the liability to unsafe sidewalks? (There is an ordinance which allows the City to assess the property owners for sidewalk improvements)
- We need a bike route to the Bookcliffs
- The best bike route to Grand Junction is the I-70 Frontage Road and River Road, but it has heavy truck traffic during the day
- We need bike routes to all three schools and the Riverfront, and swimming pool
- Ottley and Aspen would be good bike routes
- Bike lanes are needed on Ottley, Aspen, Mesa, Cherry, Maple and Coulson
- Kingsview Road needs bike lanes
- What about pedestrians on the Frontage Road?

#### Pedestrian / Bicycle issues

- Bike/Pedestrian safety is a problem around the former Circle K Store
- We need to do something about traffic and the lack of pedestrian/Bicycle facilities on 18 Road and 6 & 50
- We need an inventory of bicycle/pedestrian destinations
- Why not have bike route and trail ratings similar to ski trails?
- We need to improve the education of motorists with regard to pedestrian and bicycle traffic
- Trails do not have to be all of one standard some can be paved, others just cleared paths, other soft surface such as bark chips or crusher fines,
- We need a comprehensive map related to schools
- Which side of the river should the riverfront trail be on--north or south?

#### Pedestrian Issues

- Sidewalks in Fruita need improvement
- (25% are broken or cracked)
- We need to connect disconnected sidewalks such as from the Oaks Congregate Elderly Center to town, 6 & 50 etc.
- Rural areas around Fruita are dangerous for pedestrians since there are no sidewalks
- We need an inventory of what we have (sidewalks, street widths)
- We need to address how children can get to school safely, especially around the high school
- We need better handicapped (ADA) accessibility including motorized wheel chairs
- Access for the elderly is important with Family Health West's elderly care facilities: the Oaks, The Willows, Independence Village)
- We need hiking trails where pedestrians are not threatened by roller blades or dogs
- We need better pedestrian access to downtown
- Children need to be educated about the dangers of cars and the rules of the road
- We need a trail connecting Fruita to Dinosaur Hill
- Fruita Middle School is already involved in trail building and will help in the future with the Old Fruita
- Bridge and Little Salt Wash
- We need a crosswalk at 340 and at the Loco Convenience Store Sidewalks are needed at 18 and K Roads

## **Traffic Calming Issues**

- Aquarius Ave. In Holly Park and Sunflower Subdivision has become a speedway
- 18, 17.5, 17 Roads north of K Road, SH 340--high speed traffic
- 6 & 50, Ottley 17 to 18 Road-traffic
- J Road at the High School-traffic
- K Road at 18.5 Road-traffic
- 340 at Aspen and Cherry-traffic
- Family Health West-turning truck traffic, confusing signs at crosswalk
- Schools need better crosswalks
- Mulberry and Aspen Ave, Mesa and Ottley, J.3 and J Roads, Maple and Grand --dangerous intersections
- Triangle Park is a good rest stop amenity--We need more parks like this
- There is too much speeding in downtown Fruita
- Maple to Coulson, Aspen to Maple and Ottley to Pabor should be addressed in depth (Traffic around schools, congestion, pedestrians, bicycles)
- All of the intersections along 6 & 50 should be addressed (dangerous angles, no pedestrian/bicycle facilities)
- We should address what tourists do when they get to Fruita, (I-70 is an ugly entrance, parking is a problem for cars and RV's
- North Ash-traffic - We need to calm the rush hour traffic
- The North Cherry St. Area needs attention; Family Health West, the swimming Pool, and Shelledy Elementary School
- The City's pavement management system can be used to evaluate the pavement condition of roads
- We need a matrix with causes and effects of traffic calming techniques including a tool box of solutions such as medians, chokers, bulb-outs, roundabouts, etc..
- Aspen Ave. and 340 should be our major emphasis
- Speeding on residential streets and everywhere in town is a problem
- Parking around the hospital and Little League Fields is a problem
- Congestion at the Colorado Welcome Center
- Rimrock Rodeo/Fletcher Property traffic congestion at rodeo time
- South Mesa needs re-striping
- Access points for 6 & 50 businesses, pedestrian bicycle path

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## **Comments received on the Draft Plan at Public Workshop held on December 7, 1998**

- Traffic is a problem around Fruita Monument High School at J Road and the Old Fruita Highway (the plan proposes improvements at this intersection)  
□
- Something needs to be done about the bus congestion at Shelledy Elementary School and Ottley Ave. (this will be studied in conjunction with the traffic circle)
- Cherry St. and Pabor Ave- intersection is a dangerous crossing for pedestrians especially school children who are going to Shelledy. It is a blind intersection (the plan proposes improvements at this intersection)  
□
- Parking on Pabor in the existing built up part of town is a problem for bicycles and traffic flow. (the plan proposes striping of bicycle lanes)
- Post office mailboxes at Pabor and Cherry are a problem for congestion as well as sight distance. (Proper One-way traffic is proposed)  
□
- 18 Road, Maple and Grand are problem intersections because of the angle of the intersections they should all be right angle intersections (the plan shows all of these intersections being redesigned)
- 

(continued next page)

- Truck traffic could be a problem with the plan's proposed design at Triangle Park is there enough turning radius, how much of the park would the new design take up? (The proposed redesign would not take out additional park-land as tentatively proposed it would be in the gravel area at the far western end of the park and truck turning movements would be accommodated)
- Turning lanes are needed on South Maple and Highway 6 (the plan proposes new intersection design for this intersection with turning lanes)
- How close to the nearest driveway in a commercial area can you place a roundabout? (There should be a minimum separation of 50-100 feet however, this might have to be modified in existing situations such as Circle K.)
- Can roundabouts handle long trucks and agricultural equipment? What about oversized vehicles? (Fruita's roundabouts will have to be designed with extra widths for these types of vehicles)
- If we are going to have more bicycle usage we need to have better bicycle education programs in the schools (The Plan suggests programs in the fall as school starts and in the spring before summer break. Many videos are and handouts are available, a bicycle rodeo is also a fun way to educate kids about safety while making it fun)
- Will there be landscaping along Highway 6? Can anything grow there with no irrigation? (Desert landscaping is proposed in the swale along the highway where the trail is proposed similar to the landscaping in downtown Fruita which requires little irrigation. Irrigation will be provided. The runoff from the road will also help water this area along with periodic initial flood irrigation.)
- Aspen and Mulberry is a dangerous intersection (traffic calming circle is proposed)
- Ottley and 18 Road are high-speed problems (traffic circles are proposed in the plan along with curb extensions)
- What is being done about the school children in the northeast end of town who have to walk from Holly Park, Sunflower and Monument Glen Subdivisions (the plan proposes sidewalks and a traffic circle with stop signs at 18 Road and Ottley this year the City of Fruita will be installing a foot path from Holly Park west to Sycamore St.)
- How will this proposal be implemented? (New developments will, in some cases, be required to install the improvements; other proposals can be implemented over time as City initiated projects or State DOT initiated projects)
- Not only do you have a speeding problem coming into town, you also have a speeding problem leaving town especially around the high school on J Road (the plan proposes "chokers" to slow traffic at the entrances (and exits) to town.)
- The video about Seattle's traffic circles emphasized public participation and petitions signed by at least 60% of the neighborhood before a traffic circle is installed will Fruita follow a similar procedure (yes, we will ask for public input and hold neighborhood meetings before circles or other calming devices are installed. (Shelledy Elementary School's principal has already indicated a willingness to cooperate in gathering public opinion if we intend to improve the Ottley/ North Mesa intersection.)
- How can we gain more community involvement? (Neighborhood meetings, along with the City Link, Fruita's boards and commissions, and homeowners associations can be used to get involvement. Complaints about speeding are received regularly from many sources including the citizen suggestion box.)
- North Mesa and Ottley is a problem intersection next to Shelledy School (the plan proposes improvements at this intersection.)
- North Maple and Ottley is a problem intersection next to Fruita Middle School (the plan proposes improvements at this intersection.)

## IV. RECOMMENDATIONS / PROPOSED PLAN

The overall goal of this study is to plan a circulation system that is safe and convenient for autos, bicycles, and pedestrians and which do not diminish the quality of life in the community for the sake of accommodating more traffic. One way to accomplish this is through the use of "Traffic Calming" devices such as narrower pavement widths, deviators, changes in alignment, traffic circles, textured cross walks, curb extensions, raised cross walks, traffic bumps and others described in the appendix of this plan.

Traffic calmed streets are safer for all users. Because automobile traffic moves slower there are fewer accidents and those that do occur are less severe. The streets are quieter and less air pollution is created.

This plan takes a balanced approach, realizing that the auto, pedestrian and bicycle systems are inter-related and that the pedestrian and bicycle systems are equally important and viable elements of an efficient circulation system which serves the entire population of the community.

### PRINCIPLES

- **The Automobile is not the only consideration.**  
Streets are not solely corridors for auto traffic. They are also for social interaction, walking, playing and cycling. Different streets will have these ingredients in different proportions – but no one function should dominate to the exclusion of all others.

The best quality of life the city can provide includes the least noise possible, the least pollution possible, and the safest environment possible and an environment which fosters a rich community life in which each individual is free to reach their fullest potential. Mobility is an important part of enjoying the quality of life the community offers.

All residents, regardless of age financial status or social standing have rights to an equal share of the mobility which a city can responsibly provide for its residents. By emphasizing automobile transportation at the expense of the pedestrian or bicyclist disenfranchises those too young or old to drive or unable to afford an automobile.

The public circulation resources should be managed to provide the city with the maximum efficiency. This includes time, money, energy, and also takes into consideration social and environmental effects. Streets should be designed for the safety of all modes of transportation.

- **Use street design to limit automobile speed and volumes** rather than depending upon the driver to obey the speed limit, traffic calming uses various techniques to invoke a natural response from the driver to slow down where appropriate.
- **Calm Traffic on Major Streets at strategic locations.** A series of traffic circles, neck downs, raised crossings, changes in alignment and other techniques can slow traffic on major streets in areas where pedestrian, bicycle and auto traffic share the street.
- **The circulation system should link origins and destinations within and around the community with:**
  1. Streets designed to safely accommodate auto traffic but which incorporate Traffic Calming, Pedestrian and Bicycle friendly street design.
  2. A continuous, safe pedestrian system.
  3. A continuous, safe bicycle system.

## TECHNIQUES

Several techniques can be used in combination to change the psychological feel of the street and calm traffic

### Narrow traffic lanes

- Bulb-outs
- Landscape Islands
- Protected Parking
- Neck downs
- Center islands
- Narrower street pavement and travel lanes

### Change Road Surface Change directions

- Raised Cross walks
- Paved Speed tables

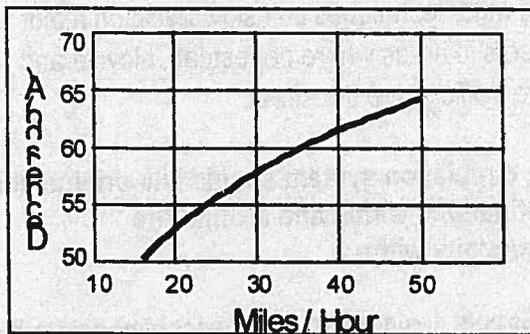
(other techniques are listed in the tool kit in the appendix) the concept is to design streets that are comfortable to the driver at speeds that are safer for the pedestrian and cyclist.

### Interrupt long straight sight lines

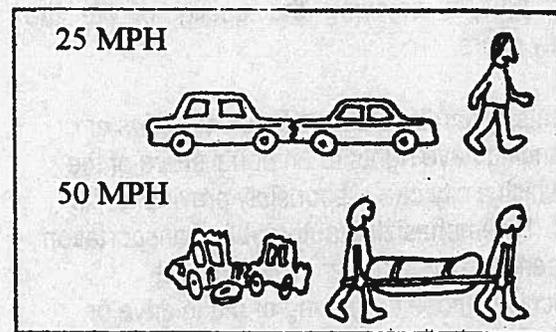
- \* Traffic Circles
- \* Bends in street alignment

## BENEFITS OF TRAFFIC CALMING

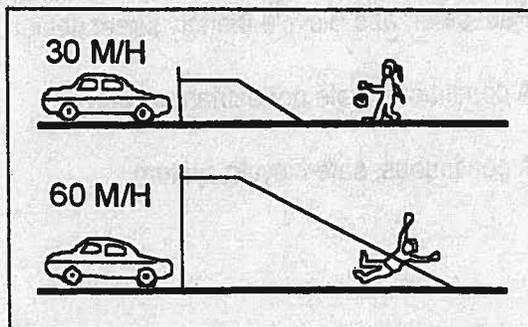
1. Slower traffic emits less noise and fumes
2. There are fewer accidents
3. Accidents that do occur are less severe
4. The capacity of existing road space may be increased This point may be surprising but is true. It is natural to think that the faster traffic is traveling the more traffic the road can handle. What is overlooked is that as speed increases the safe traveling distance between cars is also increased which has the effect of reducing the volume of traffic the street can handle. Each street has an optimum speed. Speeds above or below this optimum reduce the amount of traffic the street can carry. The optimum speed for most streets is between 25 and 40 mph.



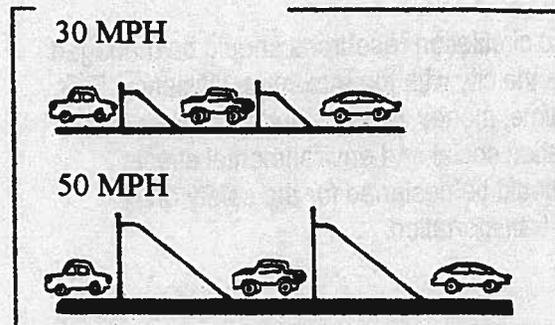
1.



3.



2.



4.



## **IMPROVEMENTS FOR PEDESTRIANS AT SCHOOLS:**

A variety of traffic calming and pedestrian improvements are recommended in the vicinity of the schools as illustrated in the following map.

Pedestrian crossings in the vicinity of all schools should be improved with:

- Crosswalks marked with ladder type bars (2' x 10'). These are much more visible to approaching motorists.
- Curb extensions on all sides of the intersection crossings (at least as wide as the parking lane) to add visibility of the crosswalk, shorten the pedestrian crossing, improve the visibility of pedestrians before they step into the street.
- Where high speed traffic is an issue at individual crosswalks, the City should consider raising the pedestrian crossing (similar to a speed hump but designed to minimize impacts to fire trucks while slowing traffic.) and installing pedestrian refuge islands in the center of each crossing.
- Provide appropriate signing at the approach to all crosswalks and school zones.
- It is recommended that a raised crossing with curb extensions and center refuge islands be installed on Mesa Avenue at the entrance of Shelledy Elementary and on Cherry Street between the pool area and the athletic fields north of the medical buildings where pedestrian crossings exist already. This treatment will reinforce the concept of this section of Cherry being an area with intense pedestrian activity where cars are allowed but only when they travel slowly.
- Identify all missing sidewalk links near schools and add the necessary sidewalks. One example is along the West Side of Maple on the school frontage south of Ottley Ave.
- A raised traffic circle is recommended at the intersection of Ottley and Mesa and Ottley and Maple to slow traffic before it reaches the elementary school area.

**18 Road** has important pedestrian and traffic issues due to the combination of commuter traffic, high school traffic (with inexperienced drivers) and heavy pedestrian traffic from the high school.

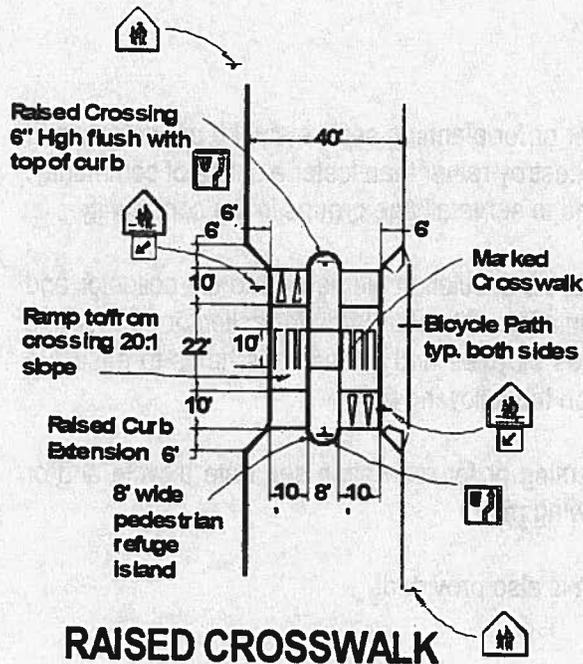
At 18 and J Road - Provide controlled turns with curb extensions on both sides of J Road and a curb extension on the west side of 18 Road. This will:

- Slow traffic at this "T" Intersection
- Shorten the pedestrian crossing, and
- Increase pedestrian visibility to drivers.

Pedestrian access to the High School will be improved by providing detached sidewalks on both sides of J Road and on both sides of 18 Road.

A signed, marked and possibly raised pedestrian crossing should be installed on 18 Road north of SH 6+50 where the majority of high school pedestrian traffic crosses during the lunch hour. (Between the driveways of the two businesses located on the west side of 18 road) A center island median help will slow traffic and break the street crossing into two shorter crossings.

Minimize the radius on the proposed continuous right turn lane at 18 and Hwy 6 & 50 to slow traffic to the greatest extent possible. Continuous turn lanes should be avoided in areas where high pedestrian traffic is anticipated.



**Crosswalks with curb extensions and center islands** are recommended in mid-block locations where heavy pedestrian traffic crosses busy streets and where it is necessary to slow traffic in order to provide a safe pedestrian crossing.

Where multiple lanes exist it may be necessary raise the crosswalk to slow traffic.

Crosswalks like that shown in the adjacent sketch are recommended at the entrances of the schools. A raised crosswalk is recommended on 18 road. These are shown on the map of improvements in the vicinity to schools.

## PEDESTRIAN / BICYCLE FRIENDLY STREETS

The meaning of "pedestrian friendly" can be interpreted in many ways, but generally, the intent is for street design to incorporate elements that enhance the safety, security, comfort, and mobility of pedestrians and bicyclists.

### Typical Elements Include

- Streets that are interconnected and small block patterns provide good opportunities for pedestrian access and mobility
- Narrower streets, scaled down for pedestrians and less conducive to high vehicle speeds (note: street trees at the sides of streets create the perception of a narrower roadway and provide separation between autos and pedestrians)
- Median refuge islands to provide a refuge area for crossing pedestrians
- Traffic calming devices to slow traffic or if appropriate, reduced speed limits
- Wide and continuous sidewalks or separated walkways that are fully accessible
- Signs, information kiosks, maps and other elements to help pedestrians
- Clear delineation and direction for the pedestrian (special paving on sidewalk or at edge of pedestrian travel area, easy-to-reach signal actuators, etc.)
- Public art, murals, banners, sculpture pieces and water features Street lighting designed to pedestrian scale (shorter light poles with attractive fixtures that are effective in illuminating the pedestrian travel way but not obtrusive)
- Lively building faces with architectural relief, windows, or attractive surfacing
- Street furnishings, such as benches, garbage receptacles, drinking fountains, and newspaper stands, if not placed in the route of travel
- Public spaces and pedestrian "pockets" adjacent to the main pedestrian travel way, that provide a place to rest and interact (sidewalk cafes, benches, etc.)
- Awnings/covered building entrances that shelter pedestrians from weather
- Planting buffers, with landscaping and street trees that provide shelter and shade without obstructing sight Colorful planters, holiday lighting and other attractive features

## STREET CROSS SECTIONS

Too often, circulation plans emphasize the automobile, leaving for later or for planning separately the pedestrian and bicycle systems. Streets that are built for the exclusive domain of cars destroy rather than foster a sense of community. Instead, streets should be built to serve all modes of transportation and to serve all age groups in the community.

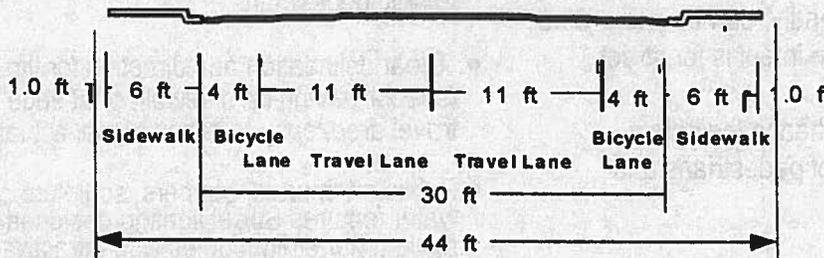
The street cross sections shown below incorporate pedestrian and bicycle circulation elements into the collector and arterial street system. By incorporating bicycle and pedestrian elements into City standards for collector streets and keeping in mind that the street system being planned and build serves bicycles and pedestrians helps to ensure a continuous pedestrian and bicycle circulation system like that shown on the following map

Where possible and where there is a need or desired rout for commuting or for recreation separate bicycle and or pedestrian paths should be provided. These are also shown on following map.

A more detailed alignment for the pedestrian path along little salt wash is also provided.

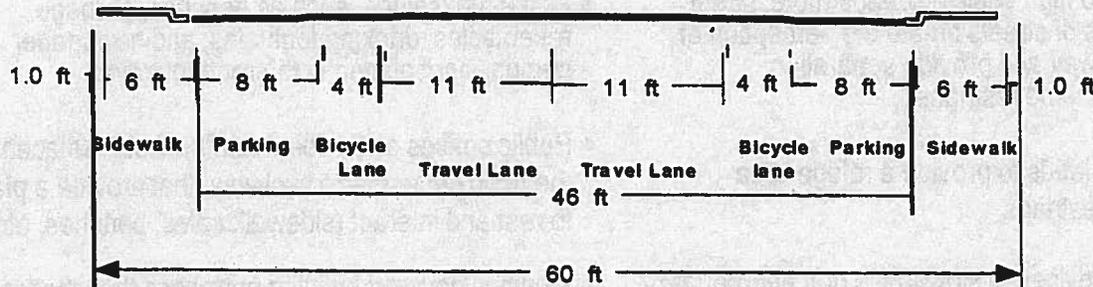
### Residential Subcollector Street

250 to 1000A.D.T  
No on-street Parking



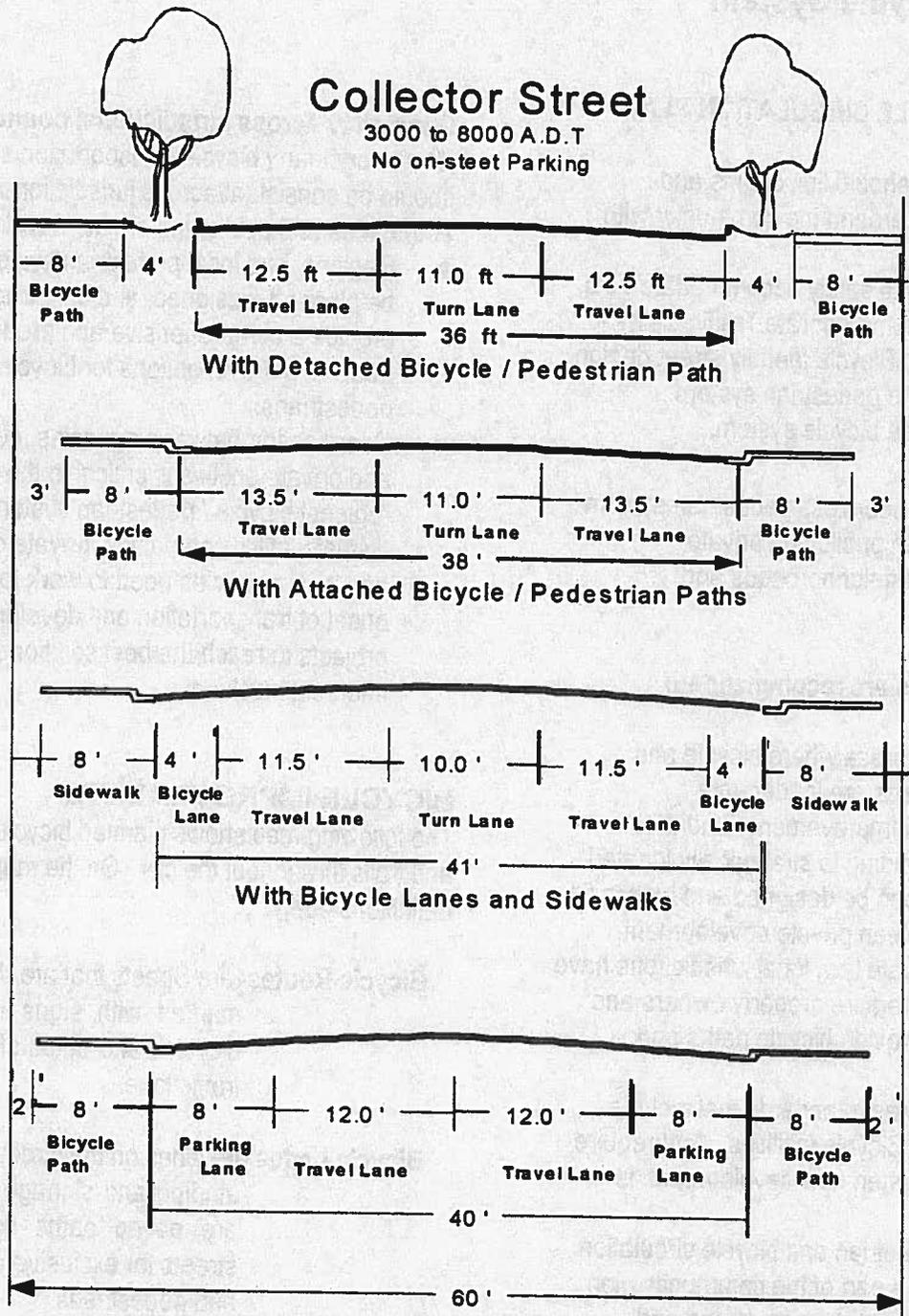
### Subcollector Street With Parking

250 to 1000A.D.T



# Collector Street

3000 to 8000 A.D.T  
No on-street Parking



**With On-Street Parking and Attached Bicycle / Pedestrian Paths**

(Parking should be limited on collector streets but does exist in places in the city)

## Creating a Consistent, Continuous Pedestrian / Bicycle System

### PEDESTRIAN / BICYCLE CIRCULATION PLAN

The circulation system should link origins and destinations within and around the community with:

- Streets designed to safely accommodate auto traffic but which incorporate Traffic Calming, Pedestrian and Bicycle friendly street design
- A continuous, safe pedestrian system.
- A continuous, safe bicycle system.

The development of a seamless pedestrian system will be the result of both public and private investment throughout neighborhoods and communities

**The following actions are recommended:**

- Retrofit existing areas where bicycle and pedestrian facilities are inadequate
- Create a Capital Improvement Fund that targets public funding to strategically located projects which can be designed and built to fill in the gaps between private development.
- Under current state law, local jurisdictions have the authority to require property owners and developers to provide bicycle paths and sidewalks.
- Adopt development standards that include Pedestrian and Bicycle facilities. And require these facilities when new development is approved.
- Adopt this pedestrian and bicycle circulation master plan as a part of the community plan and use it in project specific design and intergovernmental coordination

### Constancy across jurisdictional boundaries

The pedestrian / bicycle transportation system should be consistent across jurisdictional boundaries and public and private developments

- Regional and local pedestrian systems need to be planned, designed, and constructed to provide a comprehensive and predictable network of travel options for bicycles and pedestrians.
- Coordination between agencies, governments, and private entities is critical to the success of regional bicycle / pedestrian systems. School districts, utility companies, private corporations, and local agencies need to work together at the onset of transportation and development projects to reach the best solutions for all interests involved.

### BICYCLE IMPROVEMENTS

The following map shows planned bicycle routes, lanes and trails throughout the city. On the map the following definitions apply:

**Bicycle Routes** are Streets that are designated and marked with signs indicating that bicycles and autos share the same traffic lane

**Bicycle Lanes** are lanes on the street designated by striping and signage Bicycle Paths are paved paths separated from streets for exclusive use by bicycles and pedestrians

**Trails** are minimally improved walkways for pedestrian use.

**CANAL NOTE**

Canal banks are generally private property and users of canal banks are trespassing. Any designation of a portion of a canal bank as a trail location will be determined with the written consent and coordination of land owners and canal companies. An inventory of exiting trails is on file with the City of Fruita Community Development Department.

**PRIVATE PROPERTY NOTE**

Parts of the area shown on this map as a future trail are private property and trail users should be aware of public and private property boundaries, otherwise they may be trespassing. Dedicated public trails are anticipated for this area in the future. Actual trail locations will be determined in coordination with developers and land owners during the planning process for the affected parcels. An inventory of existing trails is on file with the Fruita Community Development Department.

## TRAFFIC CALMING AND PEDESTRIAN SAFETY

**“Pedestrian Facilities” are more than sidewalks. They include:**

Sidewalks and on-street facilities, walkways and trails, curb extensions and ramps, traffic calming and control devices, traffic circles, speed humps, speed deterrents, raised crosswalks and striping, grade separations (such as underpasses and overpasses), wide shoulders in rural areas, furnishings that create a pedestrian friendly atmosphere (such as benches and landscaping) design features, and strategies intended to encourage pedestrian travel (such as traffic calming devices, planting strips, shade trees, shelters, public art, and lighting)

### Common Characteristics of Pedestrian / Bicycle Friendly Communities

- **Coordination Between Jurisdictions** Putting pedestrian facilities in place to meet current and future needs requires close coordination between jurisdictions and other modes of transportation.
- **Connectivity Shortened-Trips Convenience** Connections are provided between popular origins and destinations, between dead-end streets or cur-de-sacs, or as shortcuts through open spaces,
- **Separation from Traffic** Street and driveway crossings are minimized or eliminated and well defined. Buffers from motor vehicles and separation of uses are provided.
- **Pedestrian Supportive Land Use Patterns**
- Land use patterns, such as a grid layout or short blocks in business districts and downtown's enhance pedestrian mobility.
- **Linkages to a Variety of Land Uses** Pedestrian circulation and access is provided to shopping areas, transit, downtown, schools, parks, offices, developments, and other community origins and destinations, as well as other communities.
- **Continuous System** Pedestrian elements create a continuous predictable system. A complete system of interconnected sidewalks, pedestrian walkways, and other pedestrian facilities will increase pedestrian travel.
- **Lively Public Spaces** Secure, attractive, and active spaces provide focal points in the community where people can gather and interact. Pedestrian pocket parks and plazas are examples.
- **Character** Preservation of important cultural, historic, and architectural resources strengthens community heritage and character.
- **Scenic opportunities** Attractive environments and scenic views encourage pedestrian use, particularly when facilities are oriented toward them.
- **Pedestrian Furnishings** Providing furnishings, such as benches, restrooms, drinking fountains, artwork and other elements, creates a more attractive and functional environment for pedestrians.
- **Street Trees** Street trees bring human scale to the street environment provided shade.
- **Landscaping and separation from autos.** Landscaping and flowers in planting strips, containers, and other areas soften surrounding hard edges of buildings and parking lots and add life, color, and texture to the pedestrian's field of vision.
- **Design Requirements** Guidelines and adopted standards are followed and, if deviated from, justified and documented.
- **Proper Maintenance** Frequent cleanup and repair on a regular basis ensures ongoing, consistent use.
- **Well-Functioning Facilities** Adequate width and sight distance, accessible grades, an alignment to avoid blind corners are provided. Common problems, such as poor drainage, are avoided.
- **Designated Space** Pedestrian facilities should be well delineated, signed, and marked.
- **Security and Visibility** Design to ensure a secure environment for pedestrians is important. Lighting, increased visibility, open sight-lines, and access to police and emergency vehicles, and locating pedestrian facilities adjacent

## **CREATING AN EFFECTIVE PEDESTRIAN / BICYCLE SYSTEM**

The *National Bicycle and Walking Study* conducted by the US Department of Transportation in 1992 provides a broad approach in its description of making a pedestrian system effective. The study states: "Pedestrian facilities both encourage people to walk and improve pedestrian safety along certain routes. The facilities must be well designed and maintained to be effective.

Consider the needs of pedestrians and bicyclists throughout project planning, design, and development processes at all levels. Give pedestrian and bicycle facilities the same attention as auto circulation in regard to access, linkages, convenience and safety. The following page contains a check list of features a pedestrian / bicycle friendly project should contain.

Pedestrian and bicycle systems and facilities need to be functional if they are to be effectively used.

### **THE IMPORTANCE OF GOOD DESIGN FOR PEDESTRIANS AND BICYCLISTS**

Pedestrian and bicycle facilities are an integral part of the City's transportation system. The importance of good design not only applies to development of new facilities, but also the improvement and retrofit of existing facilities for bicycle and pedestrian use. It also implies a maintenance program to keep these facilities in good condition. When access is expanded, existing conditions are improved and facilities are well designed and maintained, higher numbers of users can be expected.

Pedestrians and Bicyclists want and need facilities that are safe, attractive, convenient, and easy to use. If designed properly, the best facilities can also be the most durable and the easiest to maintain. Poorly designed facilities can lead to perpetual problems and can actually discourage use if pedestrians and bicyclists are made to feel unsafe, unprotected, or uncomfortable. Unattractive, inadequate and poorly designed and maintained facilities can be an unfortunate waste of money and resources and a hindrance to the community.

Consider pedestrian and bicycle facilities at the inception of all public and private projects, and address pedestrian needs as part of the total design solution. This allows for potential conflicts between transportation modes related to safety and level of service to be resolved early on and avoids the problems of pedestrian and bicycle paths being an after thought.

Consider the character and setting of the area, nearby land use densities, origins and destinations, and the level of pedestrian use, including the increase in use that may occur when improvements are installed and future links are made. Often, decisions not to install pedestrian and or bicycle facilities are short sighted, based on the perception that an area with low use doesn't need improvement. In reality, areas are probably not being used because it is not adequately meeting their needs under existing conditions. Sometimes facilities need to be upgraded to serve more intensive travel. After conditions are improved use can almost always be expected to increase,

## PEDESTRIAN / BICYCLE FRIENDLY DESIGN INCORPORATES THE FOLLOWING ELEMENTS

- The lay out includes a dependable, predictable system of safe bicycle routes, lanes and paths and sidewalks that link to the Town wide system serving as a secondary transportation system and/or for recreational purposes.
- Bicycle / pedestrian paths with plans of adjacent jurisdictions to provide a continuous system.
- Neighborhoods are Linked with schools, community and district parks and commercial centers with bicycle and pedestrian paths.
- Bicycle paths are provided along arterial and collector streets to enhance continuity, safety and convenience of the path system.
- Potential conflicts between pedestrians, bicycles and motor vehicles are minimized, unnecessary crossings and conflicts with autos are eliminated and provisions at necessary crossings are provided to increase safety.
- Clear, direct and convenient walking and bicycle routes are provided throughout the site. Surfaces should be firm and level. Curb cuts and ramps are provided where necessary. Accessible walkways should be continuous (not dead ends).
- Sidewalks, walkways, paths, or paved shoulders of adequate width, clear of obstructions and separated from traffic lanes and which offer safe travel for pedestrians and bicyclists are provided;
- Advantage is taken of multi use opportunities along transmission corridors, canal banks, drainage ways, to incorporate paths where they make sense.
- Lighting, increased visibility, open sight-lines, and access to police and emergency vehicles, and locating pedestrian facilities adjacent
- Site entrances are well defined and conveniently located in relation to the site and the building which lead to parking areas, and building entrances
- Clear and easy to read signage to direct pedestrians and bicyclists to their origins and destinations is provided.
- Building entries that are clearly identified and accessible. public facilities (restrooms, phones, drinking fountains) are located near entryways and accessible routes.
- Resting areas are provided where pedestrians must walk distances. Benches and other furnishings do not encroach on walkways
- Locations of potential future mass transit services are considered and provided with pedestrian links to the community.
- Adequate, secure bicycle parking facilities within 100 feet of entryways are provided at destinations such as shopping areas, places of employment and recreation.
- Facilities address needs of various users including commuters, recreational, older residents and children.
- Drop-off zones are convenient and located as close to the primary entrance of the building as possible.
- Waiting areas with adequate seating and lighting are located within 100 ft of building entries. When appropriate overhead shelters or awnings next to buildings or at seating areas provide protection from weather.
- Access is secured for pedestrian and bicycle paths across major barriers such as canals and railroads where planned. Properly located and designed grade separate crossings when clearly justified, if not properly planned, designed and located these facilities go unused or create illegal street crossing behavior;
- Pedestrian malls which are well-planned with respect to commercial development, traffic circulation and visual appeal
- Proper design and operation of traffic and pedestrian signals, including pedestrian push buttons, where appropriate;
- Buffers that physically separate pedestrians from motor vehicle traffic are provided at appropriate locations;
- Transit stops are located in highly visible and convenient areas. Pedestrian shelters are provided.
- Facilities for people with mobility and visual impairments, including curb ramps, audible pedestrian signals, and longer intervals for slower pedestrian walking speeds are provided
- Signage and marking, including pavement edge lines and pedestrian warning signs are provided where needed

## **EDUCATION AND ENFORCEMENT**

Good design is an important factor in incorporating pedestrians and bicyclists into the City's transportation system, but it can't be expected to solve all related problems. Education and enforcement are other important tools that heighten awareness of pedestrians. Pro-active local policy development typically sets the stage for establishing a stronger focus on pedestrian

- **Sponsor semi-annual educational programs** in cooperation with schools and service clubs to teach bicyclists the laws and give them bicycle safety tips. The best times are Fall as school begins and in the Spring before school lets out. Many excellent videos are available on bicycle safety aimed at all ages.
- **A bicycle rodeo** to test and challenge bicycle skills in conjunction with educational materials will make it more fun for children.
- **Begin an inexpensive bicycle registration system** to increase the likelihood of return of stolen bicycles
- **Expand the implementation of the mobile smart radar trailer** The Town of Fruita owns a mobile smart radar trailer for use in controlling speed in town. However, it is our understanding that the trailer has not been used to its potential to date. Other Colorado communities have had positive results in slowing speeds with the use of these trailers. It is recommended that this become a routine part of local speed control efforts. Deploying the trailer to areas where complaints of speeding traffic have been received will not only help reduce the problem but will also result in positive public relations for the police

## **POLICIES FOR ENCOURAGING PEDESTRIAN TRAVEL**

Local, regional, and state jurisdictions addressing pedestrian issues through comprehensive planning as required by the Inter-modal Surface Transportation Efficiency Act (ISTEA)

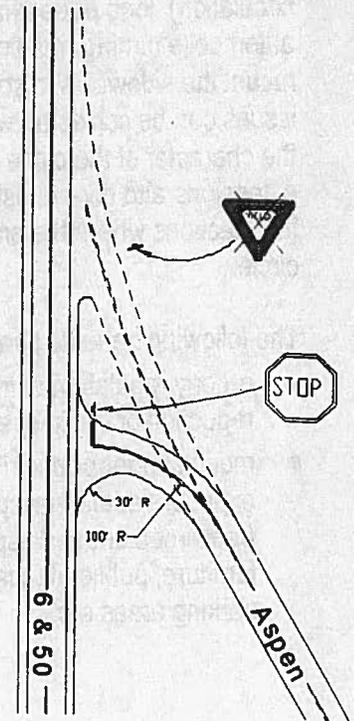
- Considering pedestrian needs in all transportation facilities
- Reinforcing a sense of neighborhood and community with transportation designs that accommodate pedestrian use
- Ensuring a connected system of pedestrian routes in urban areas
- Enhancing pedestrian mobility and safety in rural areas
- Defining jurisdictional roles in providing pedestrian facilities
- Encouraging land use and transportation development that accommodates pedestrians
- Providing pedestrian facilities that complement local business activity and provide access for employees
- Enhancing inter-modal access for persons with impaired mobility
- Maintaining the existing pedestrian transportation system adequately so pedestrian use is maximized
- Link mass transit facilities to neighborhoods and businesses with adequate pedestrian facilities

## TRAFFIC SOLUTIONS

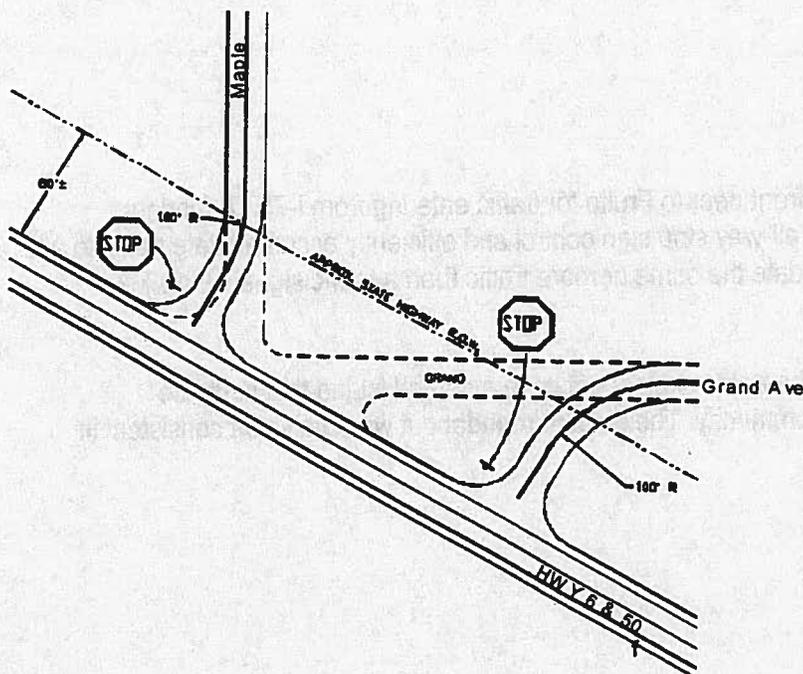
Several locations within the community have unsafe street configurations. As traffic increases these locations can be expected to yield an increased number of auto accidents.

### Improvements to intersections along State Hwy. 6+50:

**Aspen and State Hwy 6+50** - This existing "Y" intersection has poor delineation, flat approach angles with potentially unsafe turning movements, and the potential for high speed access to and from a local street (Aspen). It is recommended that this intersection be reconfigured to create a "T" intersection as illustrated on Figure 3. This reconfiguration will organize and slow down the access to and from Aspen and should improve safety. It will also reduce confusing headlight glare during nighttime operation. The down side is that the western tip of The park will be compromised, but most of this area is currently an undelineated gravel surface currently. An eastbound left turn lane on State Hwy. 6+50 could be added if traffic volumes warrant. Geometric recommendations of the State Highway Access Code should be utilized if a turn lane is added.



### Grand Avenue and Maple Street

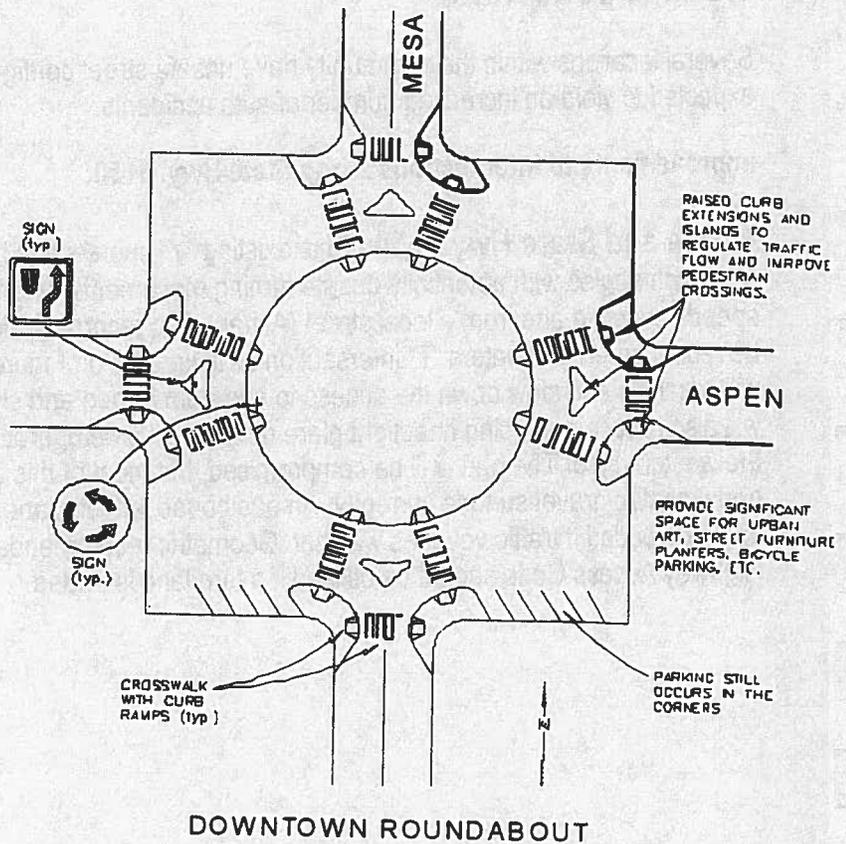


Grand Avenue and Maple Street intersect SH 6+30 at the same location given the grid of local streets and the angled alignment of the state highway. This combined intersection results in confusion for approaching motorists and potentially unsafe access to and from the SH 6-50. The wide right of way along SH 6+50 (that measures approximately 80 feet northeast of the northeast edge of the pavement along SH 6+50) will allow the joint intersection to be separated into two separate intersections. Left turn lanes could be added on SH 6+50 if turning traffic warrants.

**Downtown Circle:** The historic downtown circle defines the character of the area and serves as a park. However, the large areas of asphalt in the corners and at the side street intersections result in confusing automobile circulation patterns (including wrong way circulation), long pedestrian crossings, and automobile turning movements that nearly mount the sidewalks in some cases. These issues can be corrected without compromising the character of the circle by constructing curb extensions and diverter islands at the four intersections where the side streets access the circle.

The following benefits should be achieved:

- orderly regulation of traffic flow' and reduction of traffic speed around the circle
- much shorter pedestrian crossings and exposure additional space behind the curbs (reclaimed unused asphalt) to allow street furniture, public art, planters, bicycle parking areas etc.



## Entrance to Town

The intersection of Aspen and Cherry serves as a front door to Fruita for traffic entering from I-70. A modern roundabout could be added to replace the existing all-way stop sign control and efficiently accommodate traffic to and from the interchange. A roundabout will accommodate the same or more traffic than a traffic signal at this key intersection as the community grows.

This roundabout (not a traffic-calming feature like the traffic circles) will have a central island that could be landscaped to add identity to the entrance to the community. The circular roundabout would also be consistent in character with the historic circle two blocks east.

## **Highway 6 Enhancement and Pedestrian Improvements**

The City has obtained a grant to improve the Highway 6, to make it more pedestrian and bicycle friendly. The improvements will extend from the Fruita High School to Triangle Park,

The proposed improvements are shown in the conceptual sketches on the following pages and will include:

- A detached bicycle and pedestrian path
- Landscaping and Drainage facilities
- Improved definition of driveway access to existing and future businesses

## V. IMPLEMENTATION

### The city will take several steps to Implement this Plan

- Adopt this plan as a part of the Community Master Plan
- Revise street improvement standards to include incorporate pedestrian and bicycle facilities and restripe existing streets as necessary.
- Use a part of the annual Capital Improvements budget to maintain, repair or replace existing sidewalks and bicycle paths.
- Use pedestrian facility check list when reviewing proposed plans and new capital improvements.
- Use ISTEA and other transportation grants to make pedestrian improvements.
- Coordinate with other jurisdictions and entities to improve and enhance pedestrian and bicycle / pedestrian circulation systems.
- Use temporary structures to test traffic calming devices and install them where they are deemed to be successful.
- Make street improvements to Local street and Hwy 6 as recommended in the plan.

Item	Priority	Responsible Agency	Start Date	End Date	Status

**CITY OF FRUITA, COLORADO**  
**TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN**

**IMPLEMENTATION STRATEGY**

The following is a suggested five year implementation program for this study. It is anticipated that many of these projects may be implemented through developer installed improvements as new subdivisions take place, development impact fees, the City of Fruita, Mesa County and the Colorado Department of Transportation's five year plans and capital budgets, the use of grants, and coordinating reconstruction of streets and roads with the recommendations found in this study.

Sources for grants include: 1. Colorado State Department of Transportation grants including the Intermodal Surface Transportation Act of 1998 and the Transportation Enhancement Grants under this act. 2. Colorado State Trails Program, Colorado State Parks, 3. Great Outdoors Colorado, 4. Colorado Historical Society Grants, 5. Mesa County Lottery Grants, 6. Colorado Division of Local Affairs, Energy Impact Grants, and others.

**SUGGESTED FIVE YEAR TRAFFIC CALMING CAPITAL IMPROVEMENTS**

The following are suggested five year capital improvement projects to implement the traffic calming study and plan. Initial projects are often shown as interim temporary improvements rather than full scale improvement projects; i.e temporary curb extensions using plastic bubbles, temporary traffic circles and roundabouts using bumper blocks, railroad ties, removable planters, etc. Several projects are already budgeted and have been awarded grants as is indicated in the project column.

<b>PROJECT</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>1. TRAFFIC SOLUTIONS</b>						
a. Aspen and State Highway 6- redesign intersection with landscaping (Triangle Park)				40000		
b. Grand Ave. and Maple St.-redesign intersection with landscaping			100000			
c. Downtown Traffic Circle-retrofit with landscaping		3000			30000	

CITY OF FRUITA, COLORADO  
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PROJECT	1999	2000	2001	2002	2003	2004
d. Entrance to Town (State highway 340 and Aspen Ave.)-construct new roundabout with landscaping				40000		
e. 18 Road-construct new pedestrian crossings		18000				
f. Maple St. and East Aspen Ave.-construct new roundabout, curb extensions, crosswalks						30000
<b>2. TRAFFIC CALMING AND PEDESTRIAN SAFETY</b>						
<b>Shelley Elementary School</b>						
a. Improve crosswalks, install traffic circle North Mesa Ave. at Ottley Ave. with landscaping	3000		35000			
b. Improve crosswalks, curb extensions North Cherry Street at Ottley Ave. with landscaping		25000				
c. Install crosswalks, install choker North Cherry St.- mid block with landscaping		1500				15000

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PROJECT	1999	2000	2001	2002	2003	2004
d. Improve crosswalks, curb extensions North Coulson St. and Ottley Ave. with landscaping		3000		35000		
<b>Fruita Middle School</b>						
a. Improve crosswalks, install traffic circle, curb extensions North Maple St. and Ottley Ave. with landscaping			3000		35000	
b. Improve crosswalks, install curb extensions North Maple St. and Columbine Ave. with landscaping			3000			7000
c. Improve crosswalks, install curb extensions North Maple St. and Pabor Ave. with landscaping		3000			7000	
d. Improve crosswalks, install curb extensions North Elm and Pabor Ave. with landscaping				3000		7000
e. Improve crosswalks, install curb extensions North Peach St. and Columbine Ave. with landscaping				3000		7000
<b>Fruita Monument High School</b>						

CITY OF FRUITA, COLORADO  
TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN

PROJECT.	1999	2000	2001	2002	2003	2004
a. 18 Road and Highway 6 reconstruct intersection with curb extensions, chokers, crosswalks, medians (CDOT Traffic Hazard Elimination Grant)		200000				
b. 18 road and J Road reconstruct intersection with curb extensions, chokers, crosswalks medians with landscaping		7000				
c. Construct pedestrian bicycle path from High School to downtown Fruita with landscaping (CDOT ISTE A Grant)		238000				
d. J Road -construct new sidewalk to High School in conjunction with road widening, curb, and gutter (City of Fruita/SD 51 funding)	60000					
<b>Edges of Town</b>						
a. North Coulson (17 Road) north of Ottley Ave. - semi-diverter with landscaping		3000			10000	
b. North Mesa (17 1/4 Rd..) north of Ottley- semi-diverter with landscaping			3000			10000

**CITY OF FRUITA, COLORADO  
TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN**

<b>PROJECT</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
c. North Pine (18 Rd.,) North of Ottley Ave.- semi-diverter with landscaping			3000			10000
d. North Maple St. (171/2 Rd..) North of Ottley Ave.- semi-diverter with landscaping			3000			10000
<b>Expand Mobile Smart Trailer use</b>	x	x	x	x	x	x
<b>Pedestrian/bicycle Improvements</b>						
<b>Bicycle/Pedestrian Path</b>						
a. Little Salt Wash Trail	70000	50000	50000	50000		
b. Highway 6 pedestrian/bicycle path (see Fruita Monument High School "c" above)						
c. Fruita Kokopelli Greenway (includes land acquisition-project part of Colorado State Parks-Colorado River State Park)	240000	100000	100000	100000	100000	100000
d. Fruita Grand Junction Greenway (includes land acquisition-project part of Colorado State Parks-Colorado River State Park)		100000	100000	100000	100000	100000

CITY OF FRUITA, COLORADO  
TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN

PROJECT	1999	2000	2001	2002	2003	2004
e. Old Fruita Bridge/ Dinosaur Hill Trail (Colorado Historic Society grant, Colorado State Trails grant, City of Fruita, CSU Engineering Study)	100000	74000				
f. Ottley Ave. (K Road) from Holly Park Subdivision to North Sycamore St.	10000					
<b>Bike Lanes/Routes</b>						
a. US 6 west to Loma						
b. Frontage Road to 20 Road and River Road to Grand Junction						
c. Maple St. (17.5 Road)						
d. McCune Ave.						
e. North Cherry St.						
f. East Aspen Ave.						
g. Pabor Ave.						
h. Harrison Ave.						
i. Ottley Ave. From Holly Park Subdivision to Grand Junction						
j. J Road from 18 Road to 20 Road						
k. 19 Road from J Road to K Road						

**CITY OF FRUITA, COLORADO  
TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN**

<b>PROJECT</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
l. Pine St. (18 Road)						
m. North Mesa Ave. (1.25 Road)						
n. North Coulson Ave. (17 Road)						
<b>TOTAL</b>	<b>483000</b>	<b>825500</b>	<b>400000</b>	<b>371000</b>	<b>371000</b>	<b>282000</b>

**ACTION PLAN**

The purpose of the Fruita Traffic Calming, Pedestrian, Bicycle Plan is

To develop innovative, energy efficient ways of handling the increasing traffic in our rapidly growing small city.

To emphasize traffic calming, bicycle, and pedestrian solutions to transportation and traffic problems experienced by this rapidly growing small city.

To give special attention to school walking routes around Fruita's three regional schools (Shelledy Elementary School, Fruita Middle School and Fruita Monument High School).

The following is an action plan for the first steps in implementing the plan:

**Incorporate the Traffic Calming Toolbox into the Fruita Land Use Code**

- Adopt the Traffic Calming Toolbox as part of the Fruita Land Use Code, thereby enabling the City Council, Planning Commission, and staff to utilize these concepts, where applicable, as part of the City of Fruita standards.

**Designate through signage and stripping bike routes and bike lanes as called for in the Plan**

- Install signs and stripe all designated bike routes and bike lanes as called for in the

**CITY OF FRUITA, COLORADO**  
**TRAFFIC CALMING, PEDESTRIAN, BICYCLE PLAN**

plan

**Shelley Elementary School**

- Improve crosswalks, install temporary traffic circle North Mesa Ave. at Ottley Ave. with landscaping. This project would slow down traffic coming through this busy intersection where a large number of elementary school children cross the street. Stop signs would also remain in place

**Fruita Monument High School**

- J Road -construct new sidewalk to High School in conjunction with road widening, curb, and gutter (City of Fruita/SD 51 funding) This project has been partially completed.

**Bicycle/Pedestrian Improvements**

- Construct a detached pedestrian path from Ottley Ave. (K Road) and Holly Park Subdivision to North Sycamore St.
- Continue to obtain dedications for Little Salt Wash Trail and Greenway from developers, acquire additional easements and fee simple parcels to complete the trail from L road on the north to the Colorado River on the south. Continue to apply for grants to complete the project.
- Continue to assist State Parks in acquiring strips of land for the Fruita Kokopelli Greenway (includes land acquisition-project part of Colorado State Parks-Colorado River State Park) and include this project in the 2020 CDOT plan as well as GO CO Legacy 2 funding
- Complete Old Fruita Bridge/ Dinosaur Hill Trail project (Colorado Historic Society grant, Colorado State Trails grant, City of Fruita, CSU Engineering Study)

# Traffic Calming Toolbox

## Speed Limit Signing

### Speed Limit Enforcement

- Traditional
- Mobile Speed Monitoring Trailer
- Neighborhood Speed Watch
- Photo Radar

### Operational Changes

- All Way Stop
- Restricted Movement Signing

### Roadway Narrowing

- Full Block Median
- Partial Median
- Entry Island
- Neckdown or Curb Extension
  - at intersection
  - mid-block

### Horizontal Changes

- Curvilinear Street
- Realigned Intersection
- Traffic Circle

### Vertical Changes

- Speed Hump
- Raised Crosswalk
- Raised Intersection

### Restricted Movements

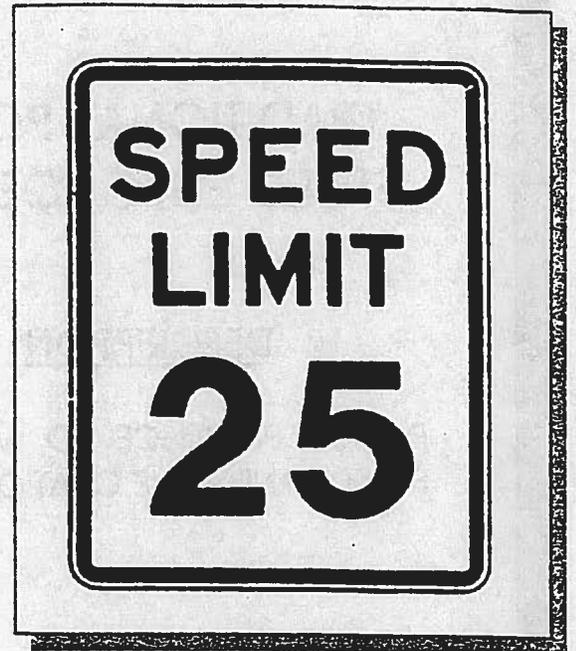
- Restricted Movement Island
- Entrance Barrier
- Semi-Diverter
- Full Diverter (diagonal closure)

- A System of Traffic Mitigation Devices Is Typically Needed-

## SPEED LIMIT SIGN

### DESCRIPTION:

SIGNS THAT DEFINE THE LEGAL DRIVING SPEED UNDER NORMAL CONDITIONS.



### Application:

- Streets where speeding is a problem

### Advantages:

- Provides clear definition of legal speed limit
- Provides context for enforcement efforts
- Provides goal for traffic calming efforts

### Disadvantages:

- Typically not effective in and of themselves
- Not self enforcing
- Requires on-going police enforcement
- Unrealistically low speed limits are difficult to enforce and tend to be disregarded
- More visual pollution from signs in the neighborhood

### Special Considerations:

- Speed limits set by an engineering analysis tend to be higher than limits set by political pressures

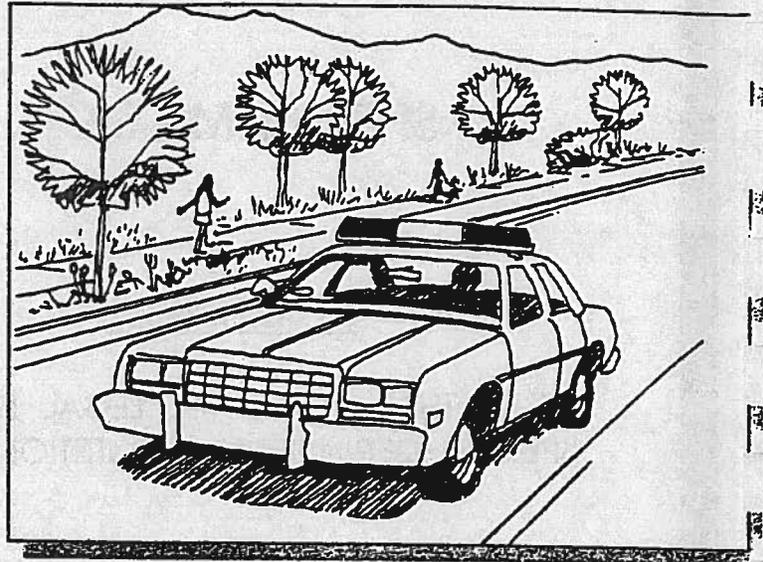
### Cost:

- Low: inexpensive to install
- High: expensive to enforce

# TRADITIONAL POLICE SPEED ENFORCEMENT

## DESCRIPTION:

POLICE PRESENCE TO MONITOR SPEEDS AND ISSUE CITATIONS.



## Application:

- Streets with documented speeding problem and need for quick mitigation
- Locations where restrictions are being violated

## Advantages:

- Effective while officer actually monitoring speeds
- Flexible measure that can be implemented in almost any location at short notice

## Disadvantages:

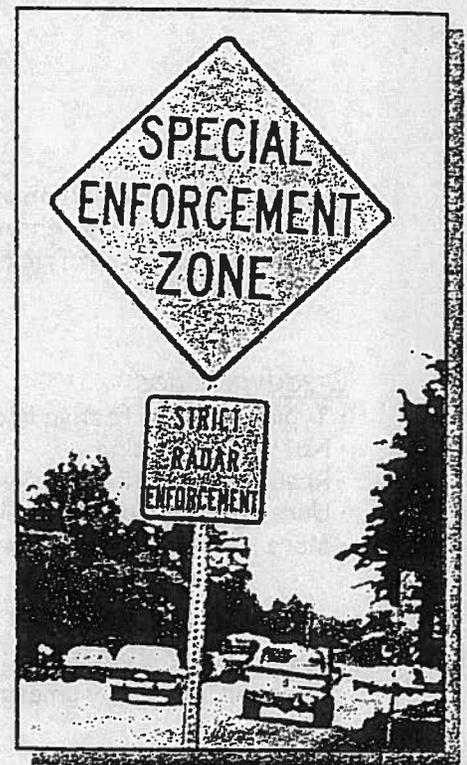
- Not self enforcing; temporary measure
- Fines do not typically cover cost of enforcement
- Disrupts efficient traffic flow on high volume streets
- Short "memory effect" on motorists when enforcement officers no longer present

## Special Considerations:

- Often helpful in school zones
- May be used during "learning period" when new devices or restrictions first implemented

## Cost:

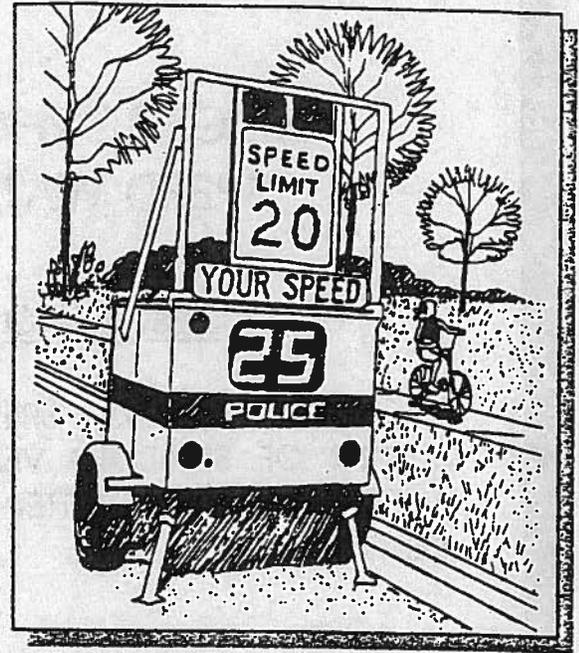
- High cost primarily due to the staffing requirements



# MOBILE SPEED MONITORING

## DESCRIPTION:

MOBILE TRAILER MOUNTED RADAR DISPLAY  
THAT INFORMS DRIVERS OF THEIR SPEED.



## Application:

- Any street where speeding is a problem

## Advantages:

- Educational tool
- Good public relations
- Effective for temporary speed reduction needs

## Disadvantages:

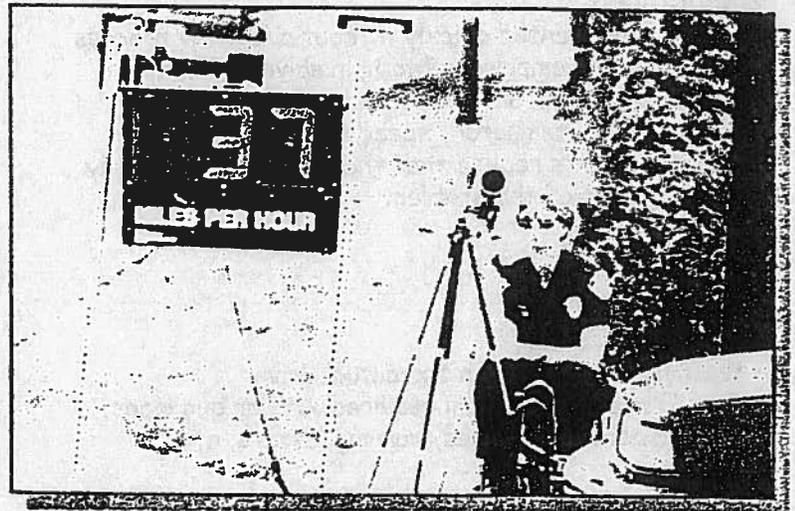
- Some motorists may speed up to try to register a high speed
- Duration of effectiveness may be limited
- Not self enforcing

## Special Considerations:

- Should not be used in remote areas

## Cost:

- Moderate cost to use due to staffing requirements
- Expensive to enforce



## NEIGHBORHOOD SPEED WATCH

### DESCRIPTION:

NEIGHBORS MONITOR SPEEDING TRAFFIC.  
OWNER OF SPEEDING VEHICLE RECEIVES  
WRITTEN WARNING LETTER FROM POLICE  
DEPARTMENT.



### Application:

- Any street where speeding is a problem

### Advantages:

- Can be implemented quickly without a lengthy process
- Residents are empowered to help solve problem
- Utilizes volunteer labor predominantly
- Effective for temporary speed reduction needs
- Helps residents realize that their driving habits may be a big part of the problem

### Disadvantages:

- Not self enforcing
- Warning may not reach the actual driver
- Coordination of program required - radar gun loans, vehicle record searches, warning letters, etc.

### Special Considerations:

- Care should be taken such that access to motor vehicle database is not abused.

### Cost:

- Low cost to use due to volunteer staffing

## NEIGHBORHOOD SPEED WATCH PROGRAM

# **WARNING !!**

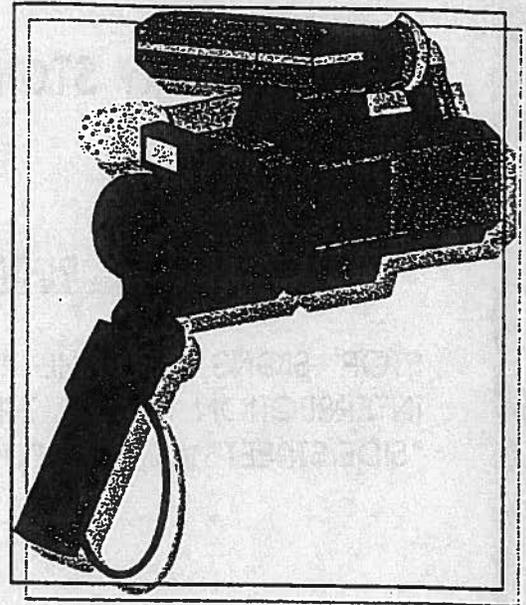
(on official Police Stationary)

The vehicle registered to  
JOHN DOE was observed  
speeding on 11/14/97 on  
W.B. BROADWAY at 52 MPH

# PHOTO RADAR SPEED ENFORCEMENT

## DESCRIPTION:

RADAR TRIGGERED CAMERA TO DOCUMENT VEHICLES AND MOTORISTS WHO ARE EXCEEDING THE SPEED LIMIT AND SYSTEM TO ISSUE SPEEDING TICKETS TO VIOLATORS (OR VEHICLE OWNERS).



## Application:

- Streets with speeding problems

## Advantages:

- Speed enforcement with minimal staffing
- May have widespread effectiveness due to mobile nature, difficulty to anticipate and widespread application

## Disadvantages:

- Public perceptions related to invasion of privacy
- Vehicle owner may receive the ticket when they were not driving
- Current legal issues need to be addressed before implementation

## Special Considerations:

- Legal jurisdiction must be defined
- May assess fines without points against drivers license
- May contract service to private providers

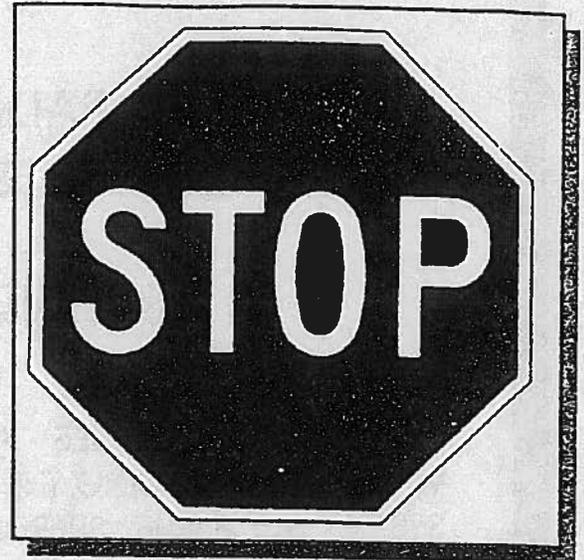
## Cost:

- Moderate cost to implement system. May be low cost if contracted

# ALL-WAY STOP SIGNS

## DESCRIPTION:

STOP SIGNS ON THE "MAIN STREET" AT INTERSECTION WHERE TYPICALLY ONLY THE "SIDE STREET" WOULD BE REQUIRED TO STOP.



## Application:

- Non-arterial street intersections

## Advantages:

- Require through traffic to stop at an intersection
- Increase opportunities for pedestrians to cross the roadway
- May discourage cut-through traffic

## Disadvantages:

- Penalize all motorists on the main street even if they were obeying the speed limit
- May create compliance problems where motorists do not acknowledge the need to stop
- Safety issues for pedestrians when compliance is poor
- Mid-block speeds may increase as motorists try to make up for lost time
- Noise and air pollution increased
- Unwarranted stop signs not supported by traffic engineers
- May increase traffic accident frequency
- May increase emergency response times

## Special Considerations:

- Should not be used on critical emergency response routes
- New stop locations may require additional sanding during winter months

## Cost:

- Low cost to install
- Cost may increase if enforcement is required

# RESTRICTED MOVEMENT SIGNING

## DESCRIPTION:

SIGNS THAT PROHIBIT CERTAIN MOVEMENTS AT AN INTERSECTION.



## Application:

- Streets where reducing cut-through traffic is desired

## Advantages:

- Redirects traffic to main streets
- Reduces cut-through traffic
- Addresses time-of-day problems

## Disadvantages:

- Not self enforcing
- May increase trip length for some drivers
- More visual pollution from signs in the neighborhood

## Special Considerations:

- Can be used on a trial basis
- Has little or no affect on speeds for through vehicles

## Cost:

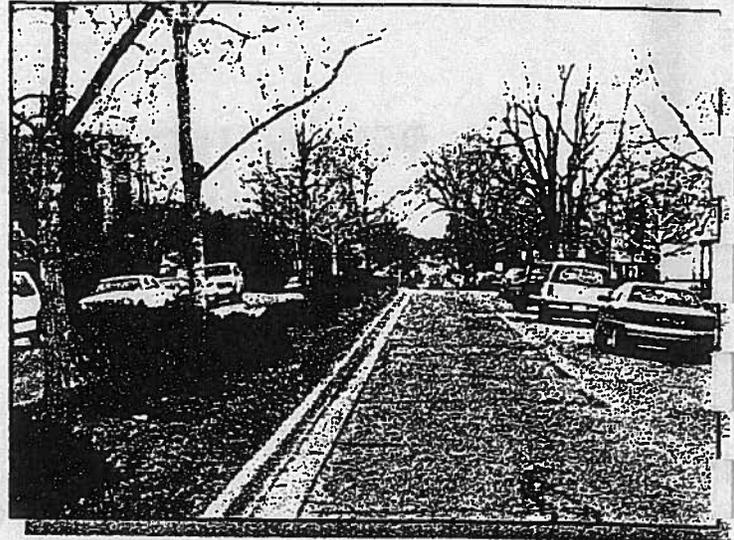
- Low; inexpensive to install
- High; expensive to enforce



# MEDIAN

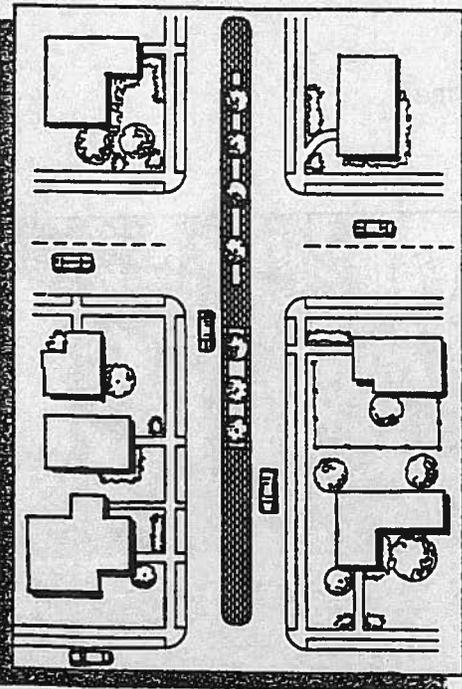
## DESCRIPTION:

RAISED ISLAND IN THE CENTER OF THE ROADWAY WITH ONE-WAY TRAFFIC ON EACH SIDE.



## Application:

- Used on wide streets to narrow each direction of travel and to interrupt sight distances down the center of the roadway



## Advantages:

- Narrowed travel lanes provide "friction" and can slow vehicle speeds
- Significant opportunity for landscaping and visual enhancement of the neighborhood
- Can utilize space which otherwise would be "unused" pavement
- Can be used to control traffic access to adjacent properties if desired

## Disadvantages:

- Long medians may impact emergency access potential
- May interrupt driveway access and result in U-turns
- May require removal of parking

## Variations:

- Medians of various lengths can be constructed
- Can be constructed mid-block only to allow all turning movements at intersection
- Can be extended through intersections to preclude left turning access, or side street through movement if desired

## Special Considerations:

- Vegetation should be carefully designed not to obscure visibility between motorists, bicyclists and pedestrians at intersection and pedestrian crossing areas
- Maintain 12 foot wide lane minimum on each side
- Maximum length between access points should be 200' to accommodate emergency response - turning radius for a fire truck should be maintained at these breaks

## Cost:

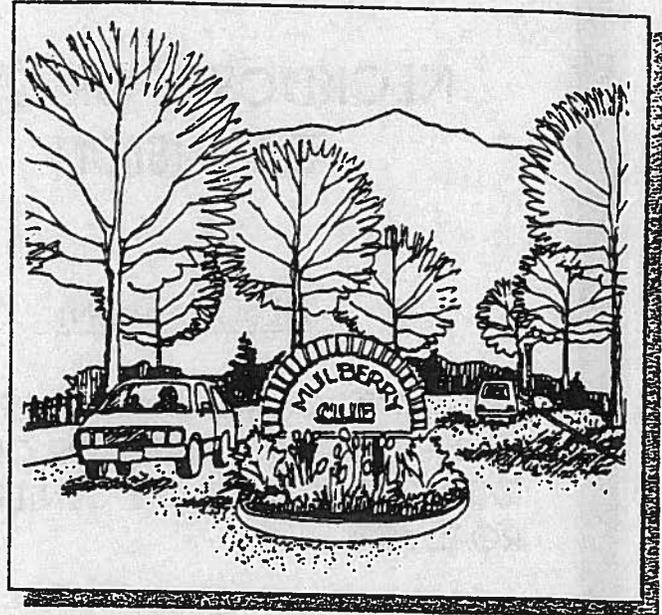
- High cost to construct, landscape and maintain

# ENTRY ISLAND

(Neighborhood Identification Island)

## DESCRIPTION:

A RAISED ISLAND IN THE CENTER OF A TWO-WAY STREET ADJACENT TO AN INTERSECTION AT THE PERIMETER OF A NEIGHBORHOOD THAT IDENTIFIES THE ENTRANCE.



## Application:

- Placed in a roadway to define the entry to a residential area and/or to narrow each direction of travel and interrupt sight distance along the center of the roadway

## Advantages:

- Notifies motorists of change in roadway character
- Helps slow traffic
- Opportunity for landscaping and/or monumentation for aesthetic improvements
- May discourage cut-through traffic

## Disadvantages:

- Need for maintenance (and irrigation)
- May necessitate removal of parking

## Variations:

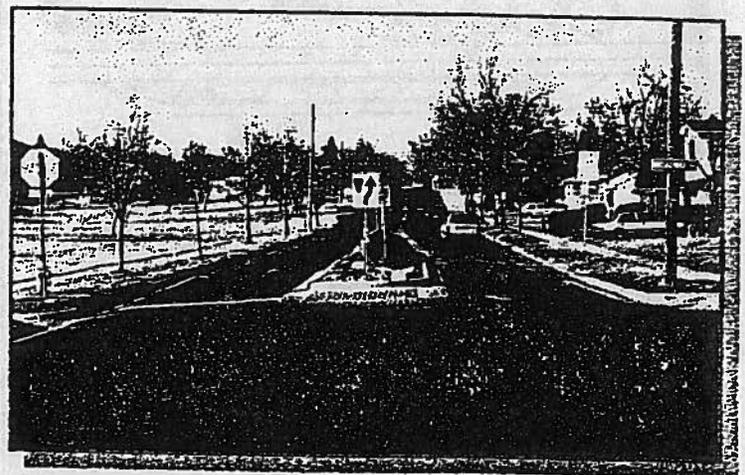
- Can incorporate neighborhood identification signing and monumentation

## Special Considerations:

- Care should be taken not to restrict pedestrian visibility at adjacent crosswalk

## Cost:

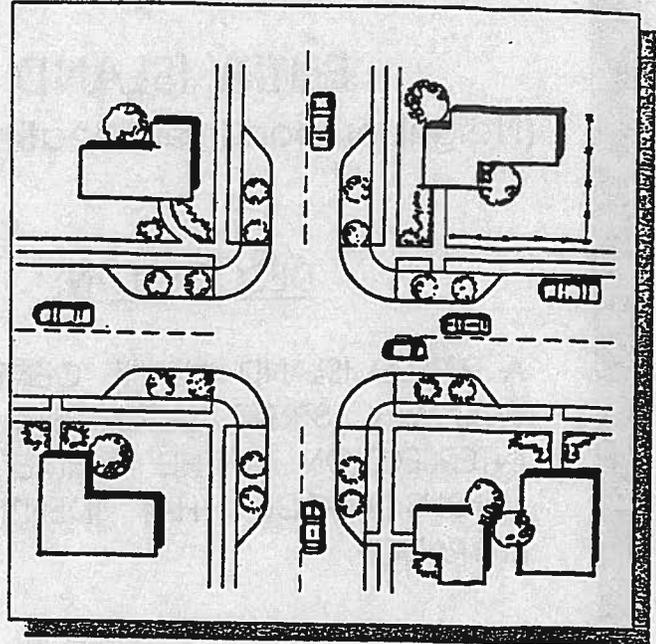
- Low to medium cost to install, landscape and maintain



# NECKDOWN OR CURB EXTENSION

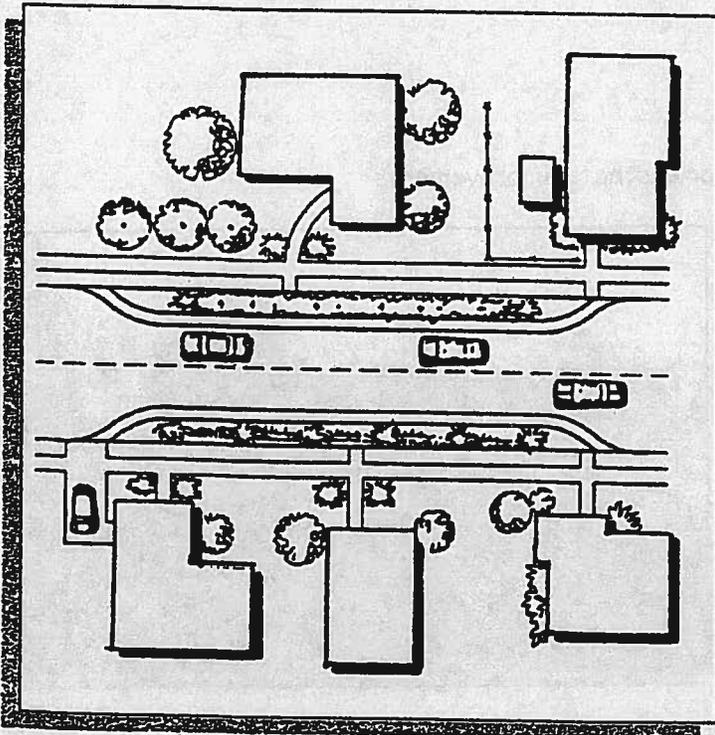
## DESCRIPTION:

SEGMENTS OF ROADWAY NARROWING WHERE ROADWAY EDGES OR CURBS ARE EXTENDED TOWARD THE CENTER OF THE ROADWAY.



## Application:

- Typically used adjacent to intersections where parking is restricted
- Can be used to narrow roadway and shorten pedestrian crossings



## Advantages:

- Pedestrian visibility increased and crossing distance reduced
- Narrowed roadway section may contribute to vehicular speed reduction
- Can "reclaim" pavement for pedestrian and streetscape amenities
- Breaks up drivers' line-of-sight

## Disadvantages:

- Creates drainage issues where curb and gutter exist
- May create hazard for bicyclists

## Variations:

- Mid-block neckdowns often used in conjunction with pedestrian crossing treatments

## Special Considerations:

- Curb extensions should not extend into bicycle lanes where present

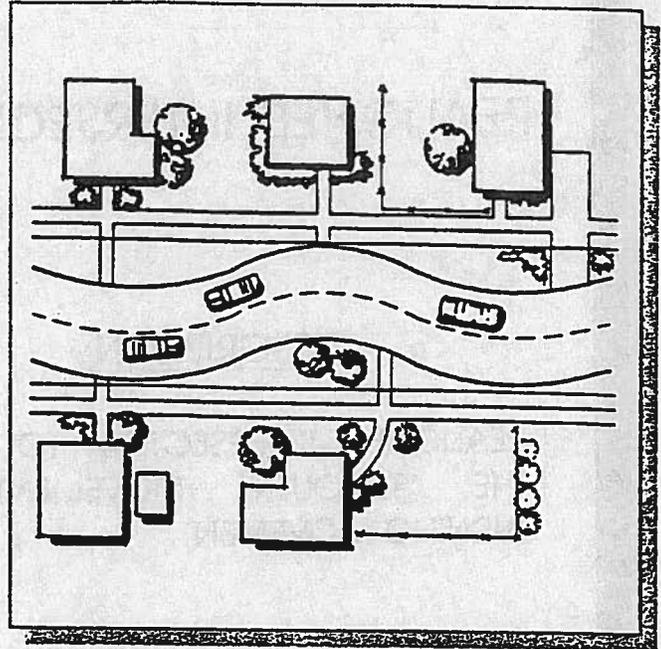
## Cost:

- Medium to high cost depending on landscaping, pavement treatments and storm drainage considerations

# CURVILINEAR STREET

## DESCRIPTION:

A CURVED STREET ALIGNMENT CAN BE DESIGNED INTO NEW DEVELOPMENTS OR RETROFITTED IN EXISTING RIGHTS-OF-WAY. THE CURVILINEAR ALIGNMENT REQUIRES ADDITIONAL MANEUVERING AND REDUCES DRIVERS' LINE-OF-SIGHT.



## Application:

- Any street where speed control is desired
- Any street where reduced line-of-sight is desired

## Advantages:

- Little to no impact on snow removal
- Aesthetically pleasing
- Provides landscaping opportunities
- Minimal impact on emergency response

## Disadvantages:

- Expensive
- May have little or no impact on cut-through traffic
- Needs to be combined with narrowing or other traffic calming tools to have significant impact on speeds
- May require additional R.O.W. to be effective

## Special Considerations:

- Cannot be used where right-of-way is limited
- May require removal of on-street parking

## Cost:

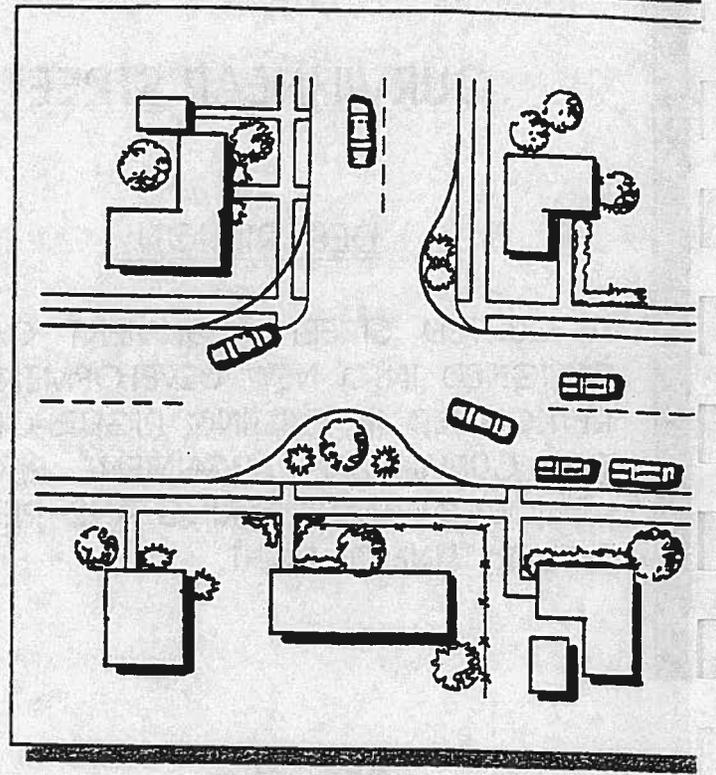
- High



# REALIGNED INTERSECTION

## DESCRIPTION:

REALIGNS T-INTERSECTION TO MAKE THE "THROUGH MOVEMENT" A TURNING MOVEMENT.



## Application:

- Streets where it is desired to redirect traffic to another facility
- Streets where slowing traffic as it enters the neighborhood is desired

## Advantages:

- Provides landscaping opportunities
- Discourages traffic from continuing through a neighborhood
- Slows traffic as it enters a neighborhood
- Breaks up sight-lines on straight streets

## Disadvantages:

- May redirect traffic to another local street
- Fairly expensive

## Variations:

- Stop sign control on one leg
- Stop sign control on all three legs
- Neckdowns in the intersection

## Special Considerations:

- Drainage
- Potential for redirecting traffic to adjacent local streets
- May change stop configuration and affect emergency response times

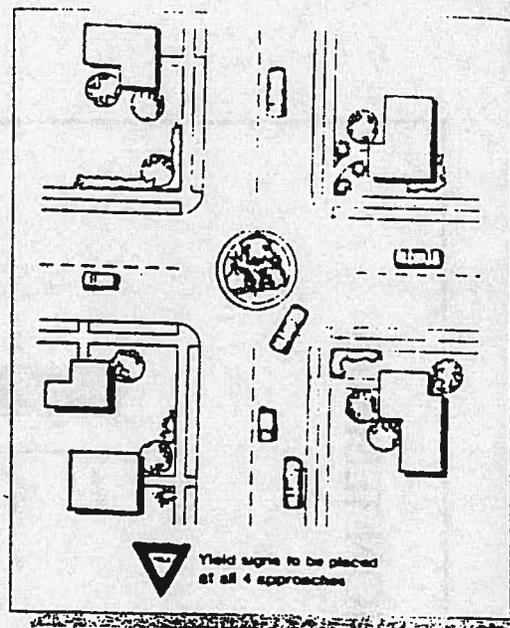
## Cost:

- High

# TRAFFIC CIRCLE

## DESCRIPTION:

TRAFFIC CIRCLES ARE RAISED CIRCULAR MEDIANS IN AN INTERSECTION WITH COUNTERCLOCKWISE TRAFFIC FLOW. VEHICLES MUST CHANGE THEIR TRAVEL PATH TO MANEUVER AROUND THE CIRCLE AND ARE TYPICALLY CONTROLLED BY "YIELD ON ENTRY" ON ALL APPROACHES.



## Application:

- Streets where speed control is desired
- Intersections where improved sidestreet access is desired

## Advantages:

- Provides increased access to street from side street
- Slows traffic as it drives around median
- Breaks up sight-lines on straight streets
- Opportunity for landscaping in the intersection

## Disadvantages:

- Definition of right-of-way is contrary to the "yield to the vehicle on the right" rule
- May impede emergency response
- Relatively expensive if curb extensions are required
- May impede left turns by large vehicles
- On streets with bicycle facilities, bikes must merge with traffic around circle

## Variations:

- With or without neckdowns
- With or without diverter islands
- Different sizes and dimensions
- Island with barrier curb and gutter face or tapered/mountable face

## Special Considerations:

- Need to be used in series or in conjunction with other traffic calming devices
- Should not be used on critical emergency response routes
- May require extensive signing
- Maintenance concerns associated with plowing, sweeping and asphalt maintenance around circle
- Minimum 20' clearance is required around circle
- May require educational campaign and learning period

## Cost:

- High



# TRAFFIC CIRCLE SPEED REDUCTION TESTING

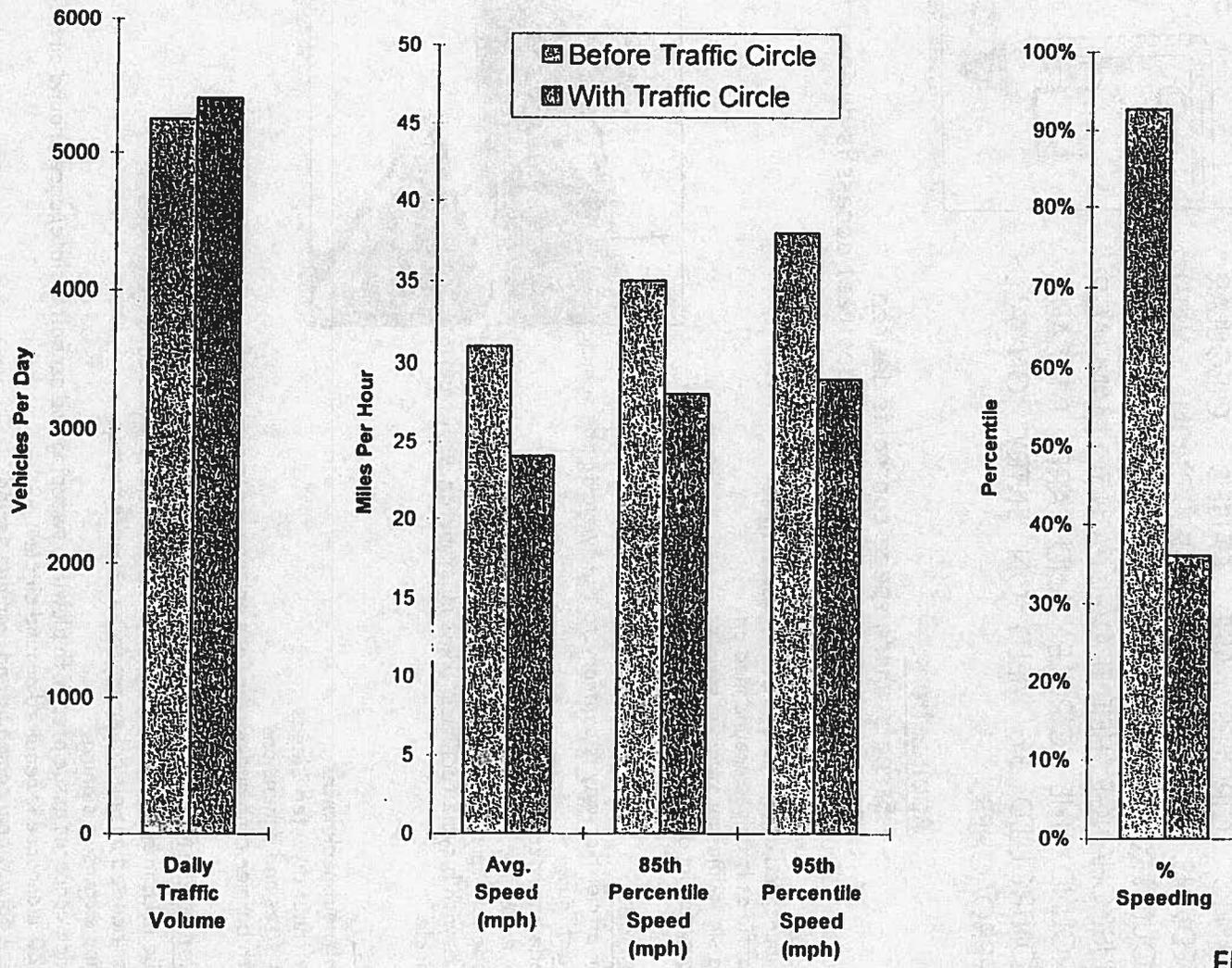
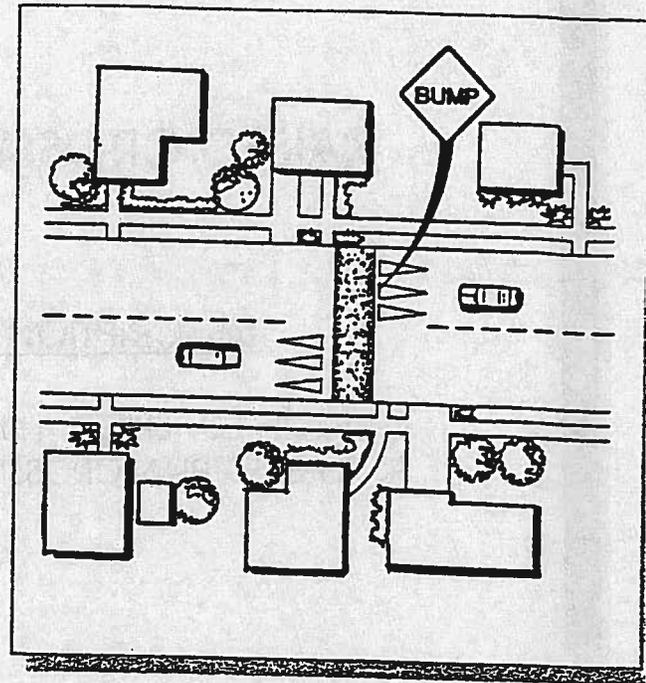


FIGURE 1

# SPEED HUMP

## DESCRIPTION:

SPEED HUMPS ARE AREAS OF PAVEMENT RAISED 3-6 INCHES IN HEIGHT OVER A MINIMUM OF 8 FEET. THE COMBINATION OF DIFFERENT HEIGHTS, LENGTHS AND APPROACH RAMPES WILL VARY THE SPEED A VEHICLE CAN COMFORTABLY GO OVER THE HUMP. THEY ARE MARKED WITH SIGNS AND PAVEMENT MARKINGS.



## Application:

- Local streets where speed control is desired
- Local streets where cut-through traffic is to be discouraged

## Advantages:

- Slows traffic
- Self enforcing
- Requires minimum maintenance; pavement markings must be maintained
- Minimal impact on snow removal

## Disadvantages:

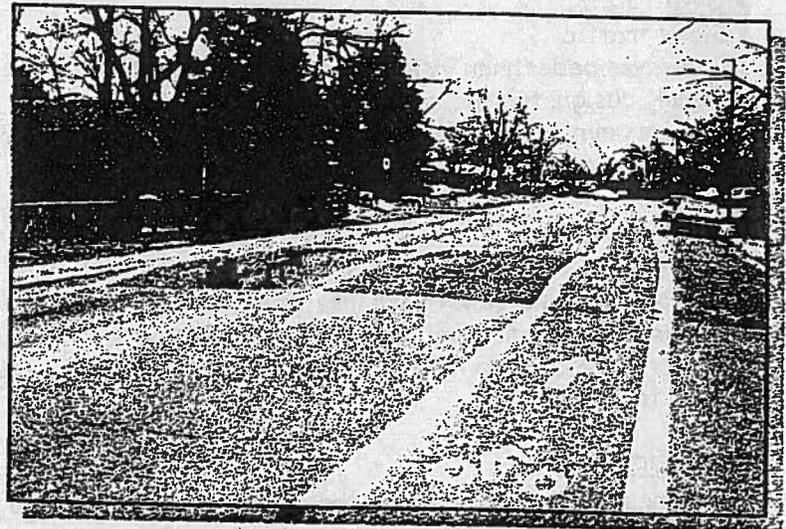
- Increases emergency response times
- May damage emergency response vehicles if not carefully designed
- May increase traffic noise in vicinity of hump

## Special Considerations:

- Should not be used on critical emergency response routes
- Needs to be used in series or in conjunction with other traffic calming devices to control speeds
- Longer designs can minimize impact on long wheelbase vehicles

## Cost:

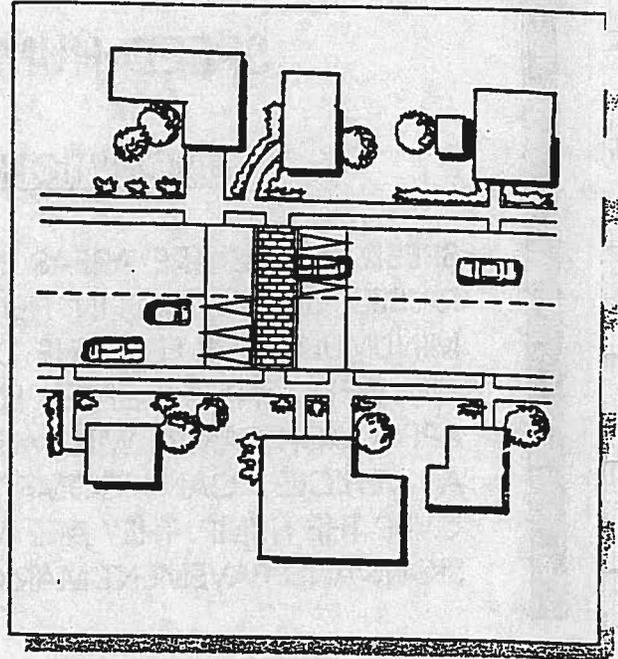
- Low to moderate



# RAISED CROSSWALK

## DESCRIPTION:

FLAT-TOPPED SPEED HUMP BUILT AS A PEDESTRIAN CROSSING.



## Application:

- Local streets where speed control and pedestrian crossing designation are desired
- Local streets where cut-through traffic is to be discouraged

## Advantages:

- Slows traffic
- Increases pedestrian visibility in the crosswalk
- Clearly designates the crosswalks
- Requires minimum maintenance; pavement markings must be maintained
- Minimal impact on snow removal

## Disadvantages:

- Increases emergency response times
- May damage emergency response vehicles if not carefully designed
- May increase traffic noise in vicinity of crosswalk
- May create drainage issues where raised crossing extends from curb to curb

## Variations:

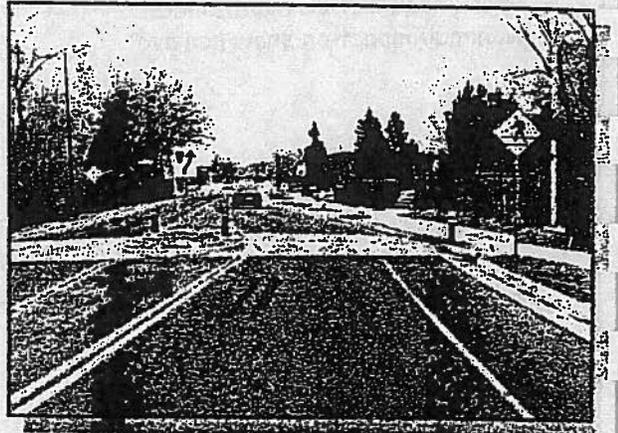
- Pavement treatment without the raised hump to create a pedestrian crossing focal point

## Special Considerations:

- Appropriate near schools and recreation facilities
- Should not be used on critical emergency response routes
- Needs to be used in conjunction with other traffic calming devices to control speeds
- If a new crosswalk location, may reduce available on-street parking
- May require extensive signing

## Cost:

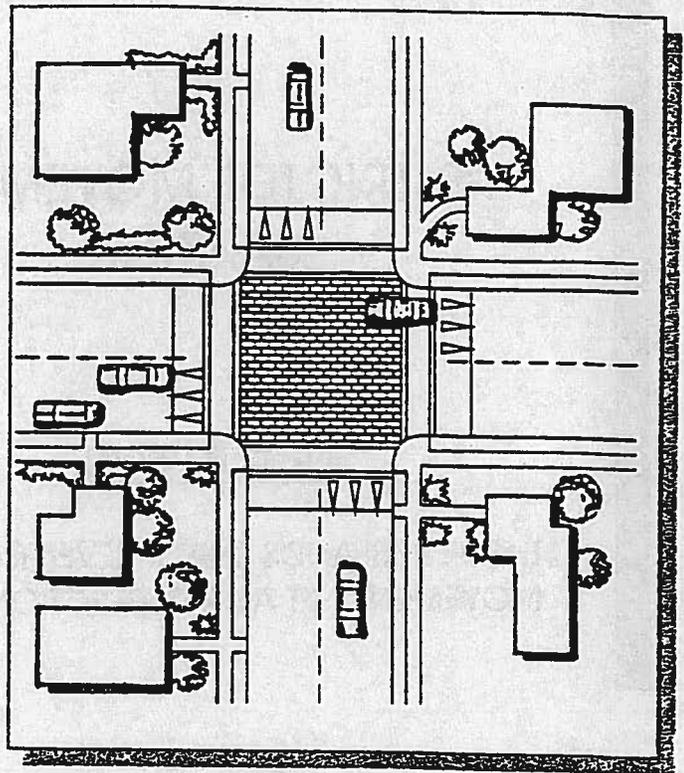
- Moderate



# RAISED INTERSECTION

## DESCRIPTION:

A RAISED SECTION OF ROADWAY AT AN INTERSECTION WHERE THE PAVEMENT IS ELEVATED TO BE FLUSH WITH THE TOP OF THE CURBING AND THE APPROACHES ARE RAMPED LIKE SPEED HUMPS.



## Application:

- Roadways where speed reduction or discouragement of cut-through traffic is desired.

## Advantages:

- Effective speed mitigation
- Opportunity for attractive pavement treatments
- Improved pedestrian safety at intersection

## Disadvantages:

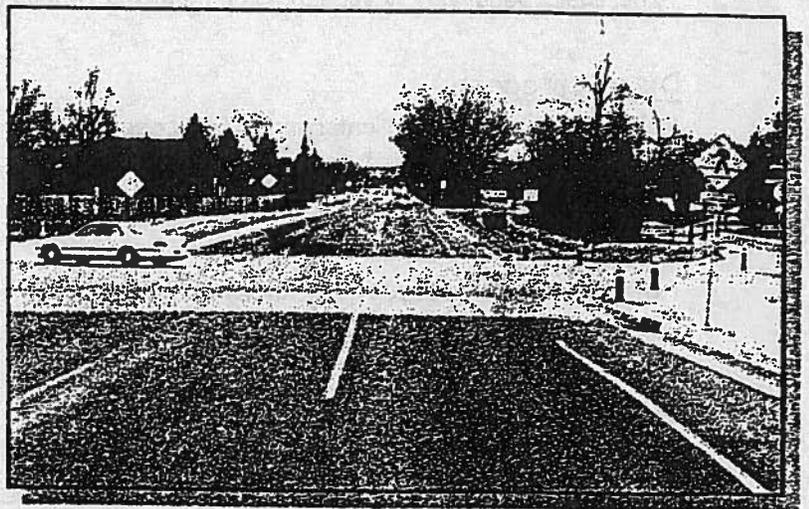
- Requires storm drainage
- May require bollards to define the corners of the intersections

## Special Considerations:

- Special signing required

## Cost:

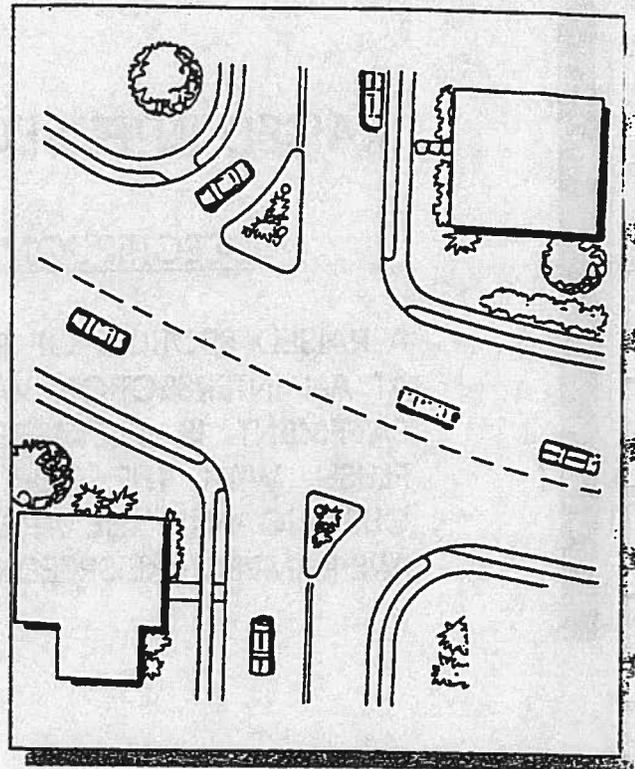
- High cost of construction and storm drainage



# RESTRICTED MOVEMENT BARRIER

## DESCRIPTION:

BARRIER ISLANDS THAT PREVENT CERTAIN MOVEMENTS AT AN INTERSECTION.



## Application:

- Streets where reducing cut-through traffic is desired

## Advantages:

- Redirects traffic to main street
- Reduces cut-through traffic
- Increases opportunity for landscaping in the roadway

## Disadvantages:

- May negatively affect emergency response
- May increase trip length for some drivers

## Variations:

- Medians on main street that allow left and right turns in but restrict left turns out or straight across movement from side street

## Special Considerations:

- Should not be used on critical emergency response routes
- Has little or no affect on speeds for through vehicles

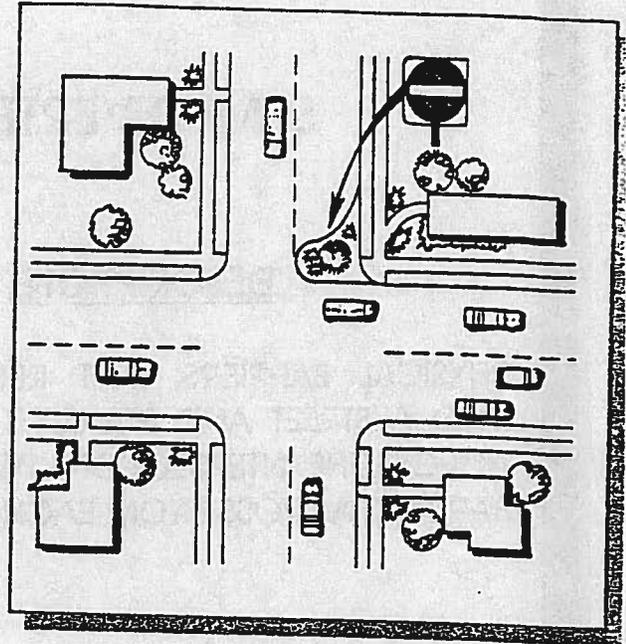
## Cost:

- Moderate

# ENTRANCE BARRIER

## DESCRIPTION:

PHYSICAL BARRIER THAT RESTRICTS TURNS INTO A STREET. CREATES A ONE-WAY SEGMENT AT THE INTERSECTION WHILE MAINTAINING TWO-WAY TRAFFIC FOR THE REST OF THE BLOCK.



## Application:

- Local streets where cut-through traffic is a concern
- Local streets where vehicles from nearby facility circulate looking for parking

## Advantages:

- Restricts movements into a street while maintaining full access and movement within the street block for residents
- Reduces cut-through traffic
- More self enforcing and aesthetically pleasing than turn restriction signing

## Disadvantages:

- May redirect traffic to other local streets
- May increase trip length for some drivers
- In effect at all times; even if cut-through problem exists only at certain times of day

## Special Considerations:

- Should not be used on critical emergency routes
- Use only on local streets
- Has little or no effect on speeds for local vehicles
- Consider how residents will gain access to street

## Cost:

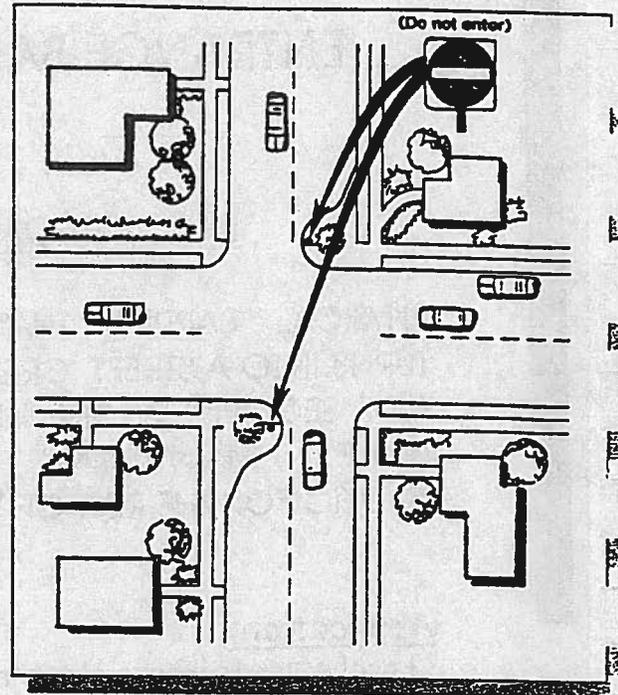
- Moderate



# SEMI-DIVERTER

## DESCRIPTION:

PHYSICAL BARRIERS THAT RESTRICT TURNS INTO A STREET AND STRAIGHT MOVEMENTS ACROSS THE INTERSECTION. TWO ENTRANCE BARRIERS ACROSS FROM EACH OTHER.



## Application:

- Local streets where cut-through traffic is a concern
- Local streets where vehicles from nearby facility circulate looking for parking

## Advantages:

- Restricts movements into a street or between neighborhoods while maintaining full access and movement within the block
- Reduces cut-through traffic
- Opportunity for increased landscaping
- More self enforcing and aesthetically pleasing than turn restriction signing

## Disadvantages:

- May redirect traffic to other local streets
- May increase trip length for some drivers
- In effect at all times; even if cut-through problem exists only at certain times of day

## Special Considerations:

- Should not be used on critical emergency routes
- Use only on local streets
- Has little or no effect on speeds for local traffic
- Consider how residents will gain access to street

## Cost:

- Moderate

# CITY OF FRUITA AREA TRAILS INVENTORY

(2/99)

Note: Detailed trails maps for many of these trails are available from the Colorado National Monument Visitor Center, the US Forest Service, the Riverfront Commission, and the US Department of Interior, Bureau of Land Management

TRAIL	LENGTH (MILES)	LOCATION	COMMENTS
1. LITTLE SALT WASH	.25	between North Mesa St. and North Maple St.	Walking, jogging and nature study
2. OLD FRUITA BRIDGE/ DINOSAUR HILL TRAIL	1.5	From Dinosaur Discovery Museum and downtown Fruita to Dinosaur Hill	Under construction; mt. and road biking, hiking, jogging, horseback riding, nature study, paleontological site
3. COLORADO RIVER TRAIL: FRUITA-GRAND JUNCTION	7	State Highway 340 at Colorado Welcome Center (17 Road) via I-70 frontage Road to Redlands Parkway and Blue Heron Section of Colorado River Trail	Road biking, jogging
4. KOKOPELLI'S TRAIL	145	4 miles west of Loma exit off of I-70 turn south (left) to frontage road south of weigh station to parking lot/trail head	BLM lands, mt. biking, hiking, horseback riding, nature study, ORV (partial); remote back country with no facilities
4A. Mary's Loop	10.8	.9 miles west of Loma Exit off I-70, take frontage road south to parking lot	(see above)
4B. Lion's Loop	17	(see above)	(see above)

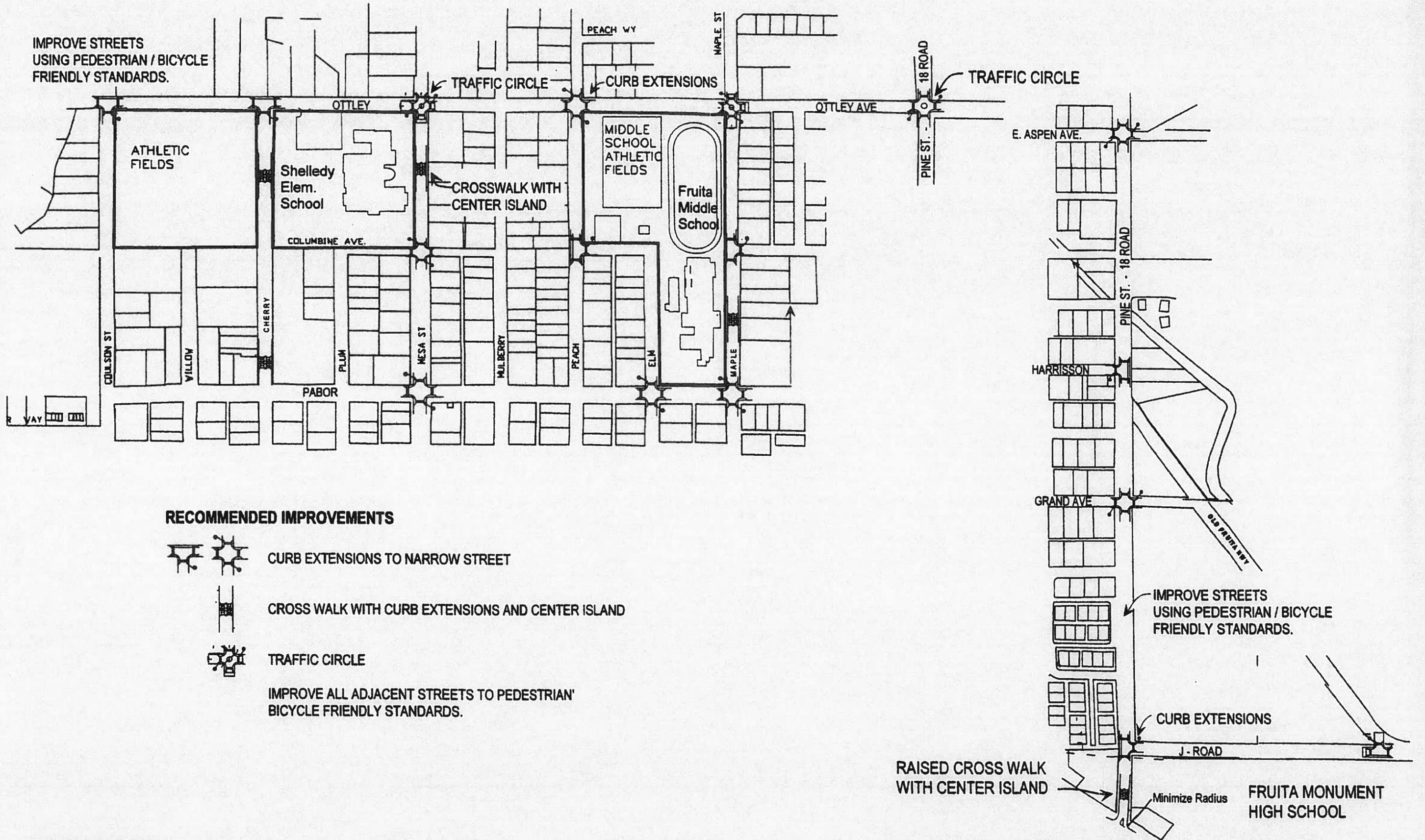
**CITY OF FRUITA AREA TRAILS INVENTORY**

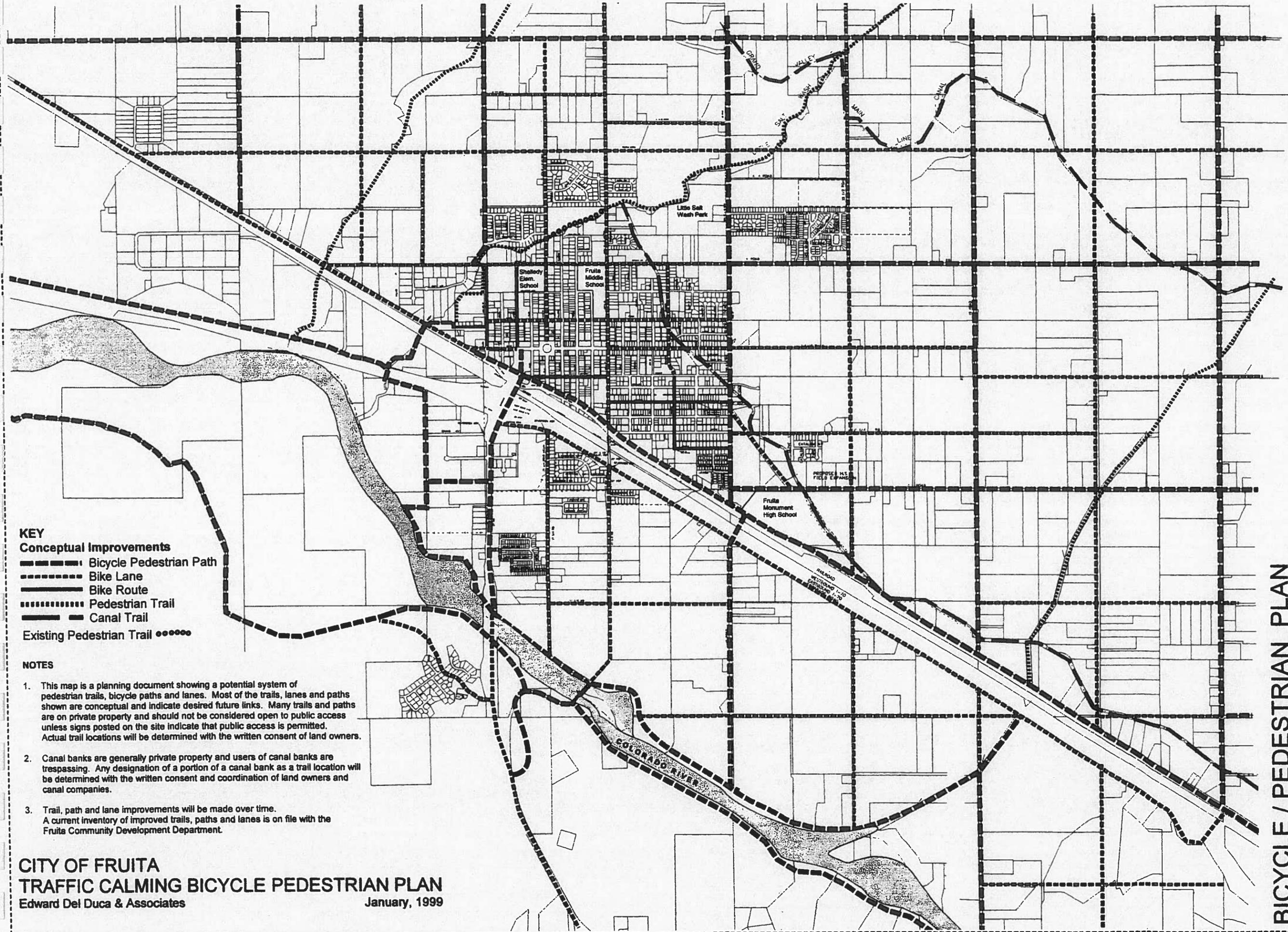
TRAIL	LENGTH (MILES)	LOCATION	COMMENTS
4C. Horsethief Bench Loop	3.4	(see above)	(see above)
4D. Steve's Loop	2.9	(see above)	(see above)
4E. Troy Built Loop	8	(see above)	(see above)
<b>5. DEVIL'S CANYON/BOW TIE</b>	8.5	Kingsview Road to Devil's Canyon trail head	BLM canyons, mt. biking, hiking, horseback riding, nature study, ORV (partial), remote back country with no facilities
<b>6. POLLACK BENCH</b>	7	Kingsview Road to Pollack Bench trail head parking lot	BLM canyons, mt. Biking, horseback riding, nature study, remote back country with no facilities
<b>7. RABBIT VALLEY</b>		Exit #2 on I-70	north of I-70: trail through time paleontological site south of I-70: numerous trails for mt. biking, hiking, horseback riding, nature study, ORV (partially open), remote back country with no facilities
<b>8. BLACK RIDGE-RATTLE SNAKE ARCHES</b>	24	take Rimrock Drive Fruita entrance through the Colorado National Monument to the Glade Park turnoff to Black Ridge turnoff (.25 miles)	BLM lands, mt. biking, hiking, horseback riding, nature study, ORV (partially open), remote back country with no facilities

**CITY OF FRUITA AREA TRAILS INVENTORY**

TRAIL	LENGTH (MILES)	LOCATION	COMMENTS
9. 18 ROAD		18.5 Road north to 18 Road and north to the Bookcliffs and trail head at the end of the road	BLM lands, mt. biking, hiking, horseback riding, nature study, ORV (partially open), remote back country with no facilities
10. 16 ROAD (COAL CANYON)		16 Road north 13 miles to trail head at creek and dirt road heading east	BLM lands, mt. biking, hiking, horseback riding, nature study, ORV (partially open), remote back country with no facilities
11. COLORADO NATIONAL MONUMENT; National Park Service; (obtain map at visitor center—trails on the Fruita side of the Monument)		Fruita entrance: 2 miles south of I-70, Fruita exit, and 1.5 miles south of the Colorado River on State Highway 340	many trails from easy to difficult; trails are open to hiking and horseback riding, nature study; mt. and road biking only on Rim Rock Drive; some trails are open to cross country skiing in the winter
11a. Window Rock	.25	(see above)	(see above)
11b. Canyon Rim	.50	(see above)	(see above)
11c. Otto's Trail	.50	(see above)	(see above)
11d. Coke Ovens	.50	(see above)	(see above)
11e. Alcove Nature Trail	1	(see above)	(see above)
11f. CCC Trail	.75	(see above)	(see above)

TRAIL	LENGTH (MILES)	LOCATION	COMMENTS
11g. Black Ridge	4	(see above)	(see above)
11h. Monument Canyon	6	(see above)	(see above)
<b>12. PINYON MESA-FRUITA RESERVOIRS</b> (obtain map from US Forest Service)		From Fruita entranced to Colorado National Monument drive along Rim Rock Drive to Glade Park turnoff; to Glade Park Store, proceed straight ahead to Pinyon Mesa and reservoirs	numerous trails around reservoirs; trails are open to hiking and horseback riding, nature study, mt. and road bikes; some trails are open to cross country skiing in the winter; ORV (partially open); road may be closed in the winter, remote back country with no facilities
<b>13. HORSETHIEF WILDLIFE AREA</b> (Colorado Division of Wildlife; check in at gate)		from State Highway 340 turn right (west) onto Kingsview Road; follow road to wildlife area (2.5 miles)	trails around wildlife area and on road
<b>TOTAL</b>	<b>248.85</b>		





**KEY**

**Conceptual Improvements**

- — — — — Bicycle Pedestrian Path
- ..... Bike Lane
- Bike Route
- - - - - Pedestrian Trail
- - - - - Canal Trail

Existing Pedestrian Trail ●●●●●

**NOTES**

1. This map is a planning document showing a potential system of pedestrian trails, bicycle paths and lanes. Most of the trails, lanes and paths shown are conceptual and indicate desired future links. Many trails and paths are on private property and should not be considered open to public access unless signs posted on the site indicate that public access is permitted. Actual trail locations will be determined with the written consent of land owners.
2. Canal banks are generally private property and users of canal banks are trespassing. Any designation of a portion of a canal bank as a trail location will be determined with the written consent and coordination of land owners and canal companies.
3. Trail, path and lane improvements will be made over time. A current inventory of improved trails, paths and lanes is on file with the Fruita Community Development Department.

**CITY OF FRUITA**  
**TRAFFIC CALMING BICYCLE PEDESTRIAN PLAN**  
 Edward Del Duca & Associates  
 January, 1999

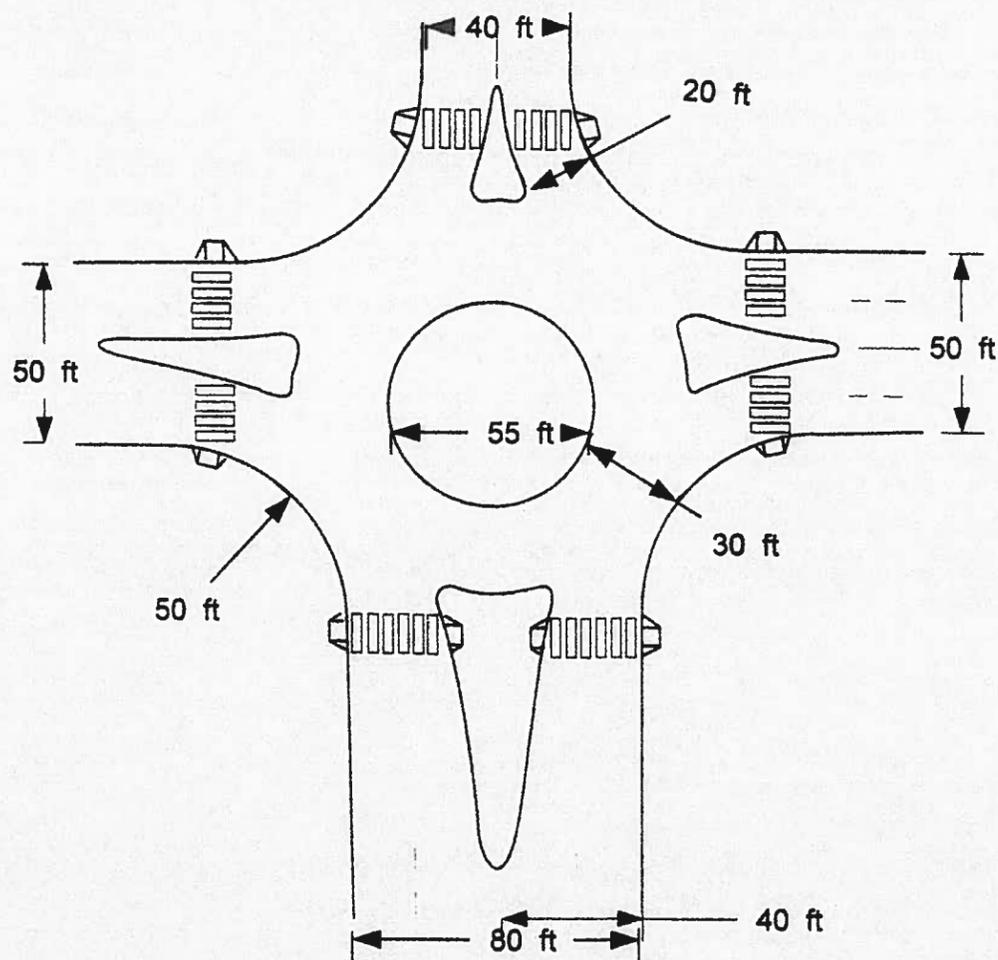
**BICYCLE / PEDESTRIAN PLAN**

# ROUNABOUT AT ASPEN AND CHERRY STREETS

## Entrance to Town

The intersection of Aspen and Cherry serves as a "front door" to Fruita for traffic entering from I-70. To efficiently accommodate traffic to and from the interchange, a modern roundabout could replace the existing all-way stop sign. A roundabout will accommodate the same or more traffic than a traffic signal and will allow for possible increasing traffic at this key intersection as the community grows.

This roundabout (not a traffic-calming feature like the traffic circles discussed below) will have a central island that could be landscaped to add identity to the entrance to the community. The circular roundabout would also be consistent in character with the historic circle two blocks east.



## PLANTINGS FOR CIRCLE

### TREES & SHRUBS

#### ACCENT TREES:

Malus	Crabapple "Spring Snow"
	"Prairiefire" or "Radiant"
Prunus virginiana	Canada Red Cherry
Pyrus calleryana	Ornamental Pear

#### MEDIUM SHRUBS:

Caryopteris x clandonensis	Blue Mist Spirea
Juniperus horizontalis	Hughes Juniper
Prunus bessyi	Western Sand Cherry
Rosa "Nearly Wild"	Shrub Rose

#### LOW SHRUBS:

Berberis thunbergii	Crimson Pigmy Barberry
Cotoneaster apiculata	Cranberry Cotoneaster
Potentilla fruticosa	"Gold Drop" Potentilla
Zauchneria arizonica	Hummingbird Trumpet

#### ORNAMENTAL GRASSES:

Festuca ovina glauca	Blue Fescue
Miscanthus sinensis	Maiden Grass

#### FLOWERS:

##### Spring:

Tall -	Bearded Iris
Med -	Shasta Daisy
Low -	Basket Of Gold, Creeping Phlox, Snow-in-summer

##### Early Summer:

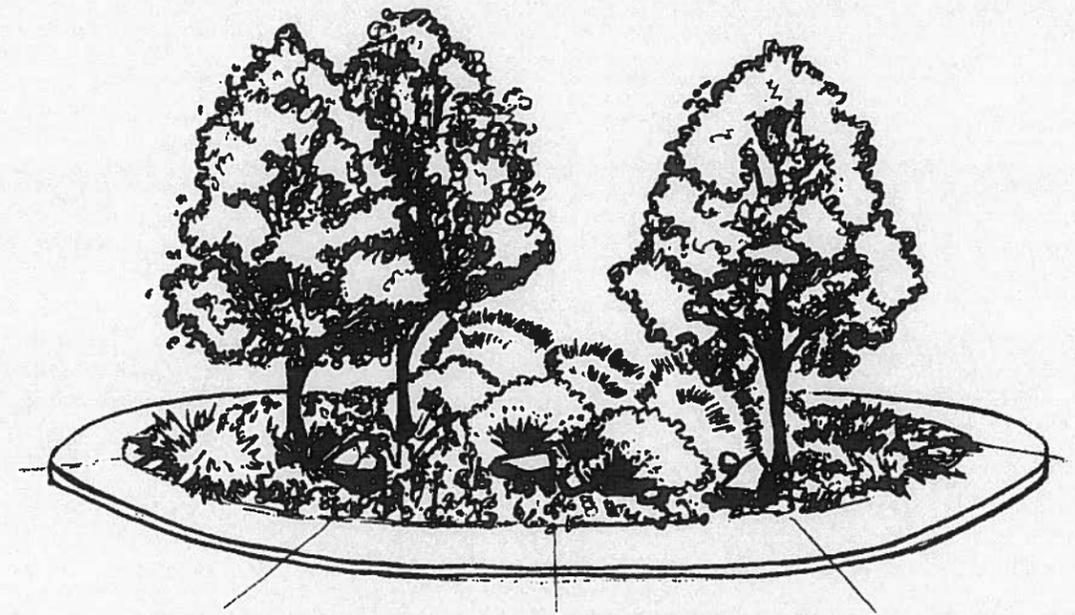
Tall -	Larkspur, Daylily, Yarrow
Med -	Penstemon - (barbatus, Eatonii, Parryi, Strictus)
Low -	California Poppies, Mexican Primrose, Pineleaf Penstemon

##### Summer:

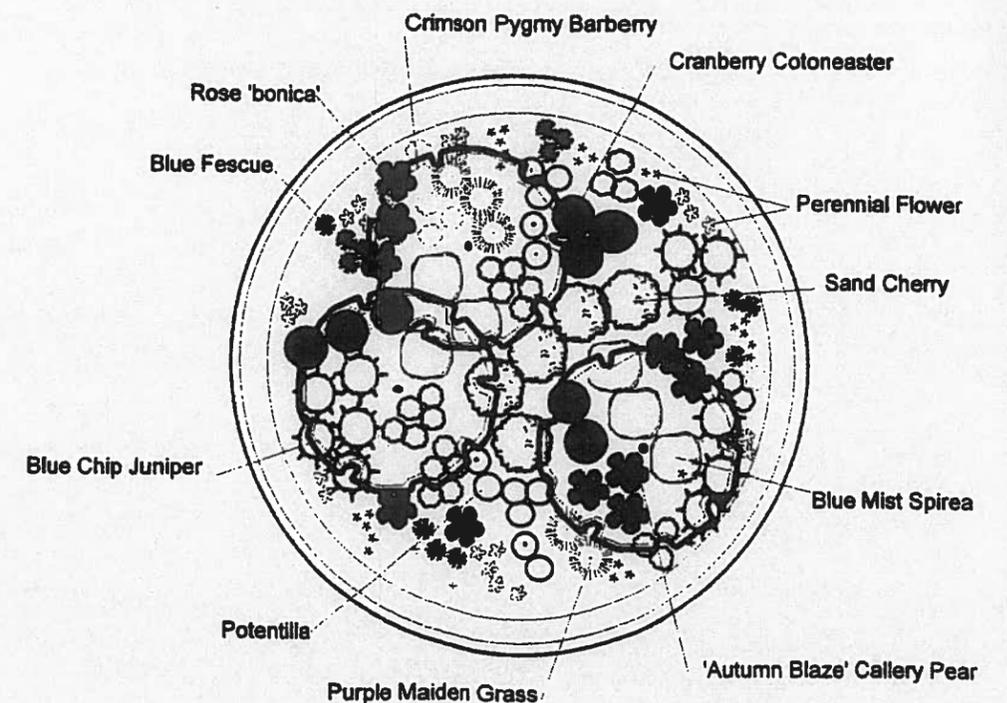
Tall -	Garden Phlox
Med -	Salvia (blue), Agastache
Low -	Artemisia Stelleriana, Hardy Pink Iceplant,

##### Fall:

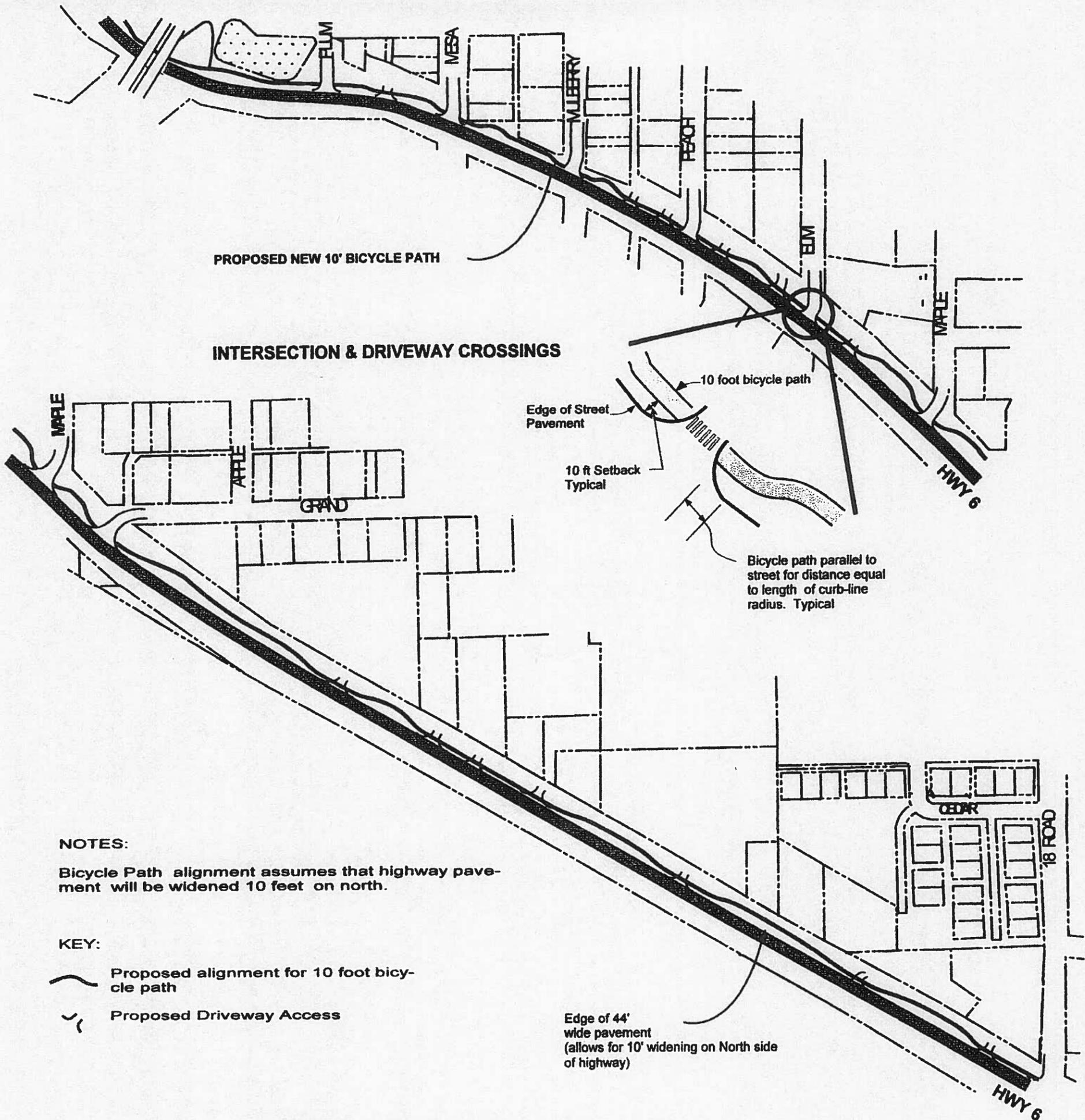
Tall -	Russian Sage
Med -	Autumn Joy Sedum,
Low -	Homestead Purple Verbena



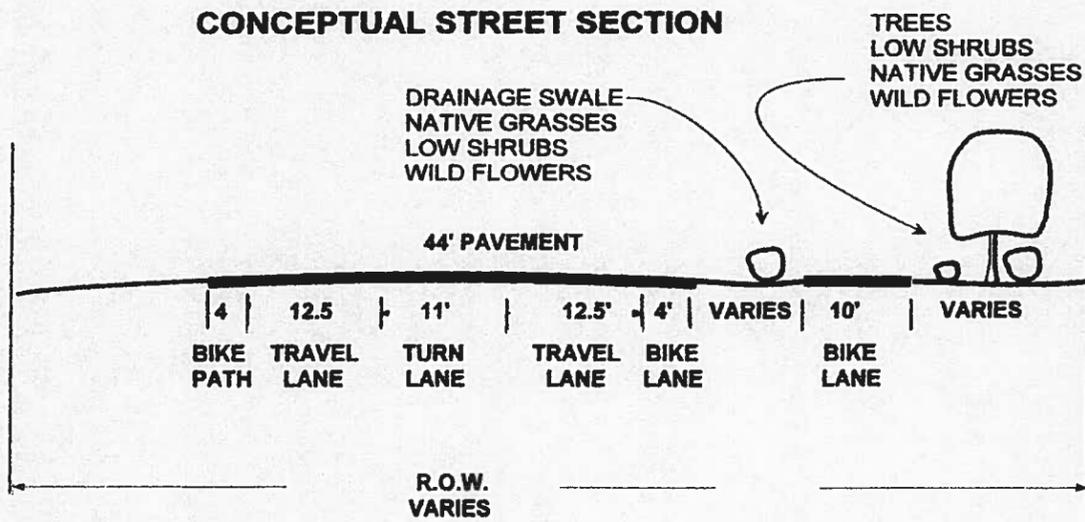
ELEVATION SKETCH OF PLANTINGS FOR CIRCLE



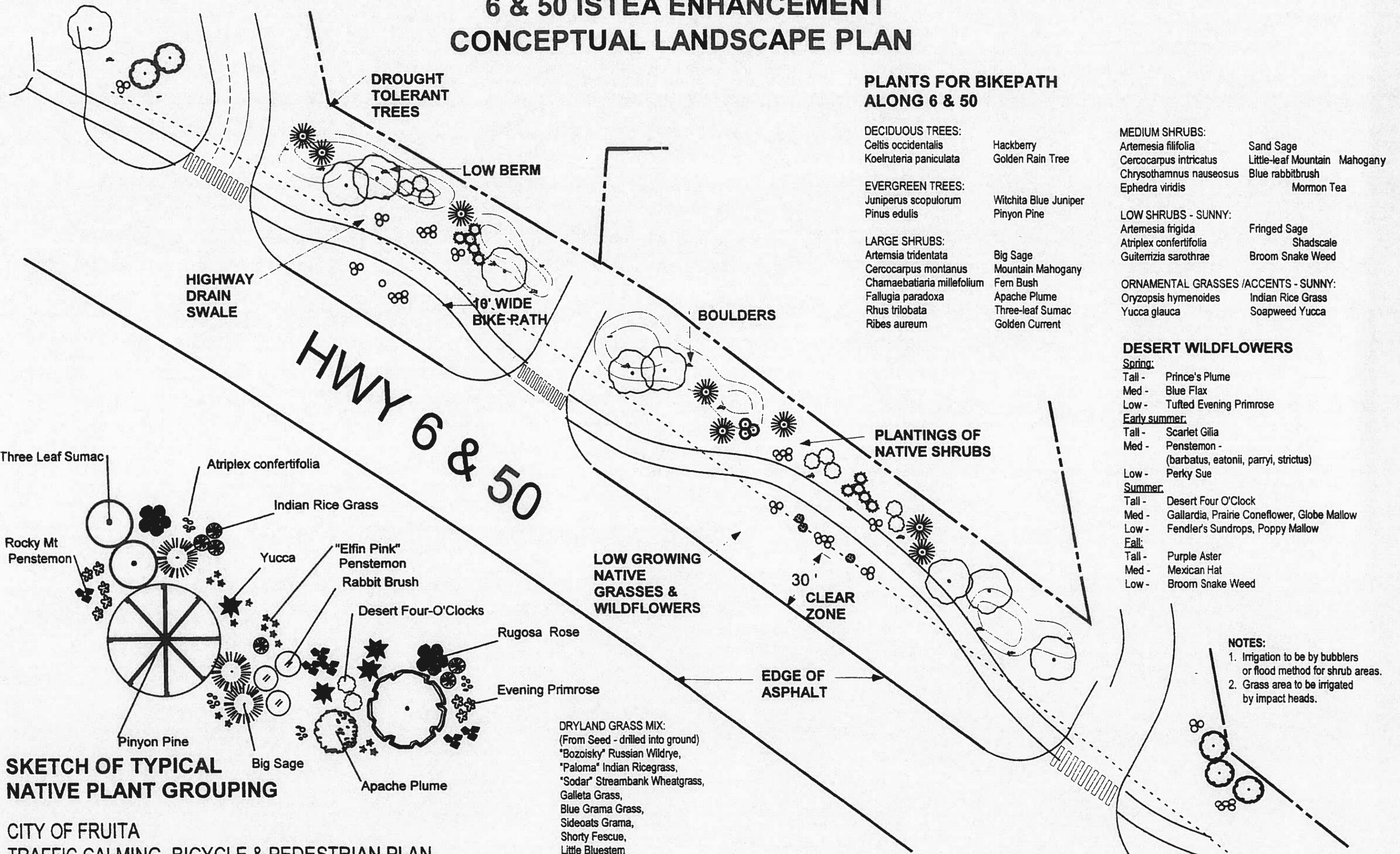
PLAN SKETCH OF PLANTINGS FOR CIRCLE



**CONCEPTUAL STREET SECTION**



# 6 & 50 ISTEVA ENHANCEMENT CONCEPTUAL LANDSCAPE PLAN



## Traffic Calming Alternative Evaluation Matrix

Potential Mitigation Devices Based On Roadway Classification, Volume / Speed Conditions, and Cost Effectiveness

Roadway Classification and Volume/Speed Conditions	Speed Limit Enforcement			Operational Changes			Roadway Narrowing				Vertical Changes			Horizontal Changes		Restricted Movements		
	Speed Limit Signing	Police Enforcement	Speed Monitoring	All Way Stop	Restricted Movement Signing	At Grade Pedestrian Crossing	Full Block Medians	Partial Medians	Entry Islands	Curb Extensions	Speed humps	Raised Pedestrian Crossing	Curvilinear Street	Realigned Intersection	Traffic Circles	Turn Barrier Islands	Entrance Barrier	Semi-Diverter
<b>Relative Cost:</b>	Low	High	Med	Low	Low	Med	High	Med	Low-Med	Med-High	Low-med	Med	High	High	Med-High	Med	Med	Med
<b>Volume Mitigation Effectiveness:</b>	Low	Low	Low	Low	Med	Low	Low-Med	Low-Med	Low-Med	Low-Med	Med-High	Med-High	Med	Med	Med-High	High	High	High
<b>Speed Mitigation Effectiveness:</b>	Low	Med	Med	Med	Low	Low	Med	Med	Low-Med	Med-High	High	High	High	Med	High	Low	Low	Low
<b>ARTERIAL</b>																		
All Speeds and Volumes	● M	● L	● M	✕	● M	○ L	○ L	○ M	✕	✕	✕	✕	○ M	✕	✕	○ M	○ M	○ M
<b>COLLECTOR</b>																		
Critical Emergency Response Route																		
Volume ≥ 2000 Veh./Day, 85% ≥ 10 mph over speed limit	● M	● L	● M	○ M	● M	● L	✕	● M	● M	● M	✕	◇ H	● M	● M	○ M	○ M	○ M	○ M
Volume ≥ 2000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	● M	● L	✕	○ M	○ M	○ M	✕	✕	○ M	○ M	✕	○ M	○ M	○ M
Volume < 2000 Veh./Day, 85% ≥ 10 mph over speed limit	● M	● L	● M	○ M	○ M	● L	✕	● M	● M	● M	✕	◇ H	● M	● M	○ M	○ M	○ M	○ M
Volume < 2000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	○ M	● L	✕	○ M	○ M	○ M	✕	✕	○ M	○ M	✕	○ M	○ M	○ M
Non-Critical Emergency Response Routes																		
Volume ≥ 2000 Veh./Day, 85% ≥ 10 mph over speed limit	● M	● L	● M	○ M	● M	● L	● L	● M	● M	● M	○ H	○ H	● M	● M	● M	● M	○ M	○ M
Volume ≥ 2000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	● M	● L	○ L	○ M	○ M	○ M	○ H	○ H	○ M	○ M	○ M	● M	○ M	○ M
Volume < 2000 Veh./Day, 85% ≥ 10 mph over speed limit	● M	● L	● M	○ M	○ M	● L	● L	● M	● M	● M	○ H	○ H	● M	● M	● M	○ M	○ M	○ M
Volume < 2000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	○ M	● L	○ L	○ M	○ M	○ M	○ H	○ H	○ M	○ M	○ M	○ M	○ M	○ M
<b>LOCAL ACCESS</b>																		
Volume > 1000 Veh./Day, 85% > 10 mph over speed limit	● M	● L	● M	○ M	✕	● L	● L	● M	● M	● M	● H	● H	● M	● M	● M	● M	○ M	○ M
Volume > 1000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	✕	● L	○ L	○ M	○ M	○ M	○ H	○ H	○ M	○ M	○ M	● M	○ M	○ M
Volume < 1000 Veh./Day, 85% > 10 mph over speed limit	● M	● L	● M	○ M	✕	● L	● L	● M	● M	● M	● H	● H	● M	● M	● M	○ M	○ M	○ M
Volume < 1000 Veh./Day, 85% < 10 mph over speed limit	● M	● L	● M	○ M	✕	● L	○ L	○ M	○ M	○ M	○ H	○ H	○ M	○ M	○ M	○ M	○ M	○ M

This Matrix Developed by TransPlan of Boulder, CO.

### MATRIX KEY

**Applicability for given Roadway Classification and Volume / Speed**

- - Highly Applicable. May require other traffic calming treatments
- - Applicable and can be considered on critical emergency response routes for given roadway conditions
- ◇ - Applicable and can be considered on critical emergency response routes for given roadway conditions
- ✕ - Not applicable - Do not Use for given roadway conditions.

**Cost Effectiveness Index ( Potential to mitigate traffic speed or volume given installation cost )**

- H - Highly Cost Effective
- M - Medium Cost Effectiveness
- L - Low Cost Effectiveness

### Effectiveness

This evaluation matrix assumes that all traffic calming devices are installed at appropriate spacing based upon engineering judgement and devices may be used in combination with the reduces in a traffic calming plan tailored to local conditions.

The cost effectiveness index combines the physical cost to install a device to treatment with the relative potential to mitigate traffic problems

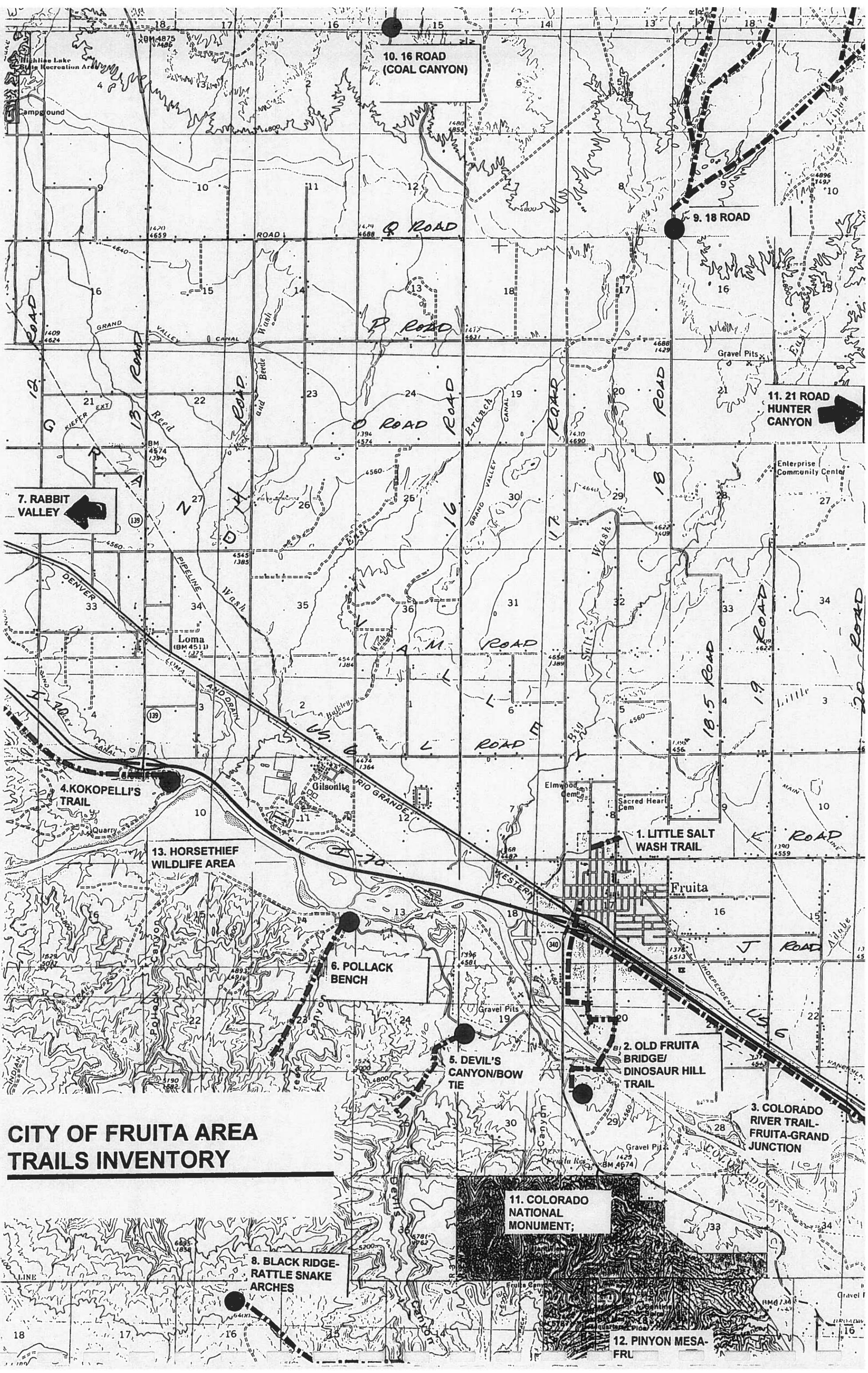
A device that is expensive to install but is highly effective would get a medium rating.

A device that is inexpensive and highly effective would get a high rating.

A device that is inexpensive to install but is less effective would get a medium cost effectiveness

A device that is inexpensive or of medium expense, but highly effective would get a high rating.

**Note:** This traffic Calming matrix is designed to assist in the development of an effective traffic calming plan for neighborhoods. application It provides a relative comparison of the applicability, physical effectiveness, and cost effectiveness of traffic calming tools. This matrix is only a comparative tool. Each specific traffic calming plan must be tailored to local conditions.



**CITY OF FRUITA AREA TRAILS INVENTORY**

**11. COLORADO NATIONAL MONUMENT;**

**12. PINYON MESA- FRUITA**