

## 3. CONCEPTUAL PLAN ELEMENTS

### Concept Elements

The conceptual plan is composed of five basic elements:

1. **Pedestrian Connections & Traffic Calming**
2. **Gateway & Unifying Theme**
3. **New Village Center**
4. **New Cultural Center**
5. **Village Grid System & Main Street Design**

Each of these concept elements is described in the following sections.



### 3. CONCEPTUAL PLAN ELEMENTS

#### 3.1 Pedestrian Connections & Traffic Calming

People come together in cities and towns for the primary purpose of exchanging goods and services along with sharing ideas and information, hopes and fears, and other aspects of daily living with others. Such is the case in downtown Hoopa.

Marketing professionals have identified five basic needs of people who visit retail stores, service centers, or neighborhoods (*Street Design Guidelines for Healthy Neighborhoods*, Dan Burden, Center for Livable Communities, January 2002).

The basic needs are:

1. **Security**
2. **Convenience**
3. **Efficiency**
4. **Association**
5. **Comfort and Welcome.**

Walkable communities are places where people find all of these basic needs met.



*The lack of sidewalks poses hazards to pedestrians along the Highway.*



*Only one striped crosswalk exists in the mid-town area.*



*Pedestrians must use the shoulder to avoid conflicts with vehicles.*

## Traffic Calming

Traffic calming slows vehicles on streets where drivers travel at higher speeds than desirable. Traffic calming is a way to reduce the negative effects of automobile use, alter driver behavior and improve conditions for the property owner, retailer, walker and bicyclist. Often traffic calming measures are taken to correct conditions on an existing street where the original design was inappropriate for, or no longer matches, the existing use. In some cases changes in land use and transportation patterns have changed traffic speeds and volumes (Burden, April 2000).

Traffic calming helps create livable communities where it is easy to travel by bicycle, car, transit or on foot. Neighborhood workshops on traffic calming across the nation asked people what was important about their community and what improvements were needed over the next 20 years.

The responses generally fell into three categories:

1. **Safety**
2. **Access and Mobility**
3. **Quality of Life**



*The Trinity River Bridge currently accommodates a variety of traffic.*

These categories are three indicators used to determine if traffic calming is appropriate in neighborhoods, what traffic calming treatments are best suited to a particular area, and methods of evaluating the effectiveness of the treatments installed (Burden, January 2002). The categories are briefly summarized below:

**Safety** - Traffic travels slowly on traffic-calmed streets, resulting in fewer and less severe accidents. The number of fatalities due to motor vehicle crashes are also reduced. Traffic-calmed streets also encourage more people to walk and ride bicycles.

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Access and Mobility - Safer streets balance mobility and access for all users, particularly pedestrians and bicyclists. This is especially important for children, seniors, and persons with disabilities.

Quality of Life - Traffic calming improves "livability" and encourages people to walk by reducing the number of automobile trips necessary - thereby decreasing levels of pollution, congestion, and traffic-related noise. Traffic calming devices can provide additional space within the street right-of-way for landscaping, sidewalks, street furniture and transit shelters. These amenities create pleasing streets, attract pedestrians, encourage people to walk more frequently for short trips, and increase the likelihood of interactions among people.



*Uncontrolled access and egress can pose hazards to pedestrians as well as motorists.*



*Well defined driveways help both pedestrians and vehicles in avoiding conflict.*

## Existing Conditions:

### Pedestrian Connections

State Highway 96 is a major route for people (including people walking, on horseback or bicycle, parents with baby strollers) as well as trucks and automobiles. Yet there are no sidewalks, bikeways, or formal public trails that allow people to walk adjacent to the travel lanes in ways that meet the five basic needs cited above. Gravel shoulders provide space for pedestrian travel along both sides of the Highway but expose people to speeding vehicles (and those vehicles within the speed limit), debris and dust from passing vehicles, as well as excessive heat, cold and rain, depending on the season.

Only one striped crosswalk exists in the mid-downtown area but is hard to see and somewhat ignored by both pedestrians and motorists. In general, people cross the highway back and forth where and when they need to. Some of the younger crowd can even be seen challenging vehicles by pretending to ignore their presence.

Accident data supports the relative hazard for pedestrians walking along or crossing the highway (Appendix A). Likewise, information collected from focus group interviews, community meetings and the walking "audit" around downtown Hoopa raised issues related to pedestrian safety and security as well as convenience and comfort.



*Landscaping and lighting are relatively absent along Highway 96.*



*Crossing the bridge can be especially hazardous.*



*Uncontrolled access and egress can pose hazards to pedestrians as well as motorists.*

### Traffic Calming

State Highway 96 through downtown Hoopa is devoid of any traffic control or traffic calming measures with the exclusion of posted speed limits, which are largely ignored. Vehicles enter the downtown area at unsafe speeds as they encounter other vehicles entering or exiting the highway as well as bicyclists, horses, and people walking along and crossing the highway. This situation results in "fender benders" at best and collisions with injuries or fatalities at the worst.

Uncontrolled access and egress to the highway (no dedicated driveways to area shops and businesses, no sidewalks or planter strips separating highway from adjacent drives and parking areas, no dedicated turn lanes) allow motorists to exit and enter the highway at will creating another hazard to a motorist who may already be driving too fast and any pedestrians in the vicinity. This condition is aggravated by the lack of safe and convenient pedestrian facilities (i.e., sidewalks, crosswalks, etc.) and forces people to use vehicles for even short trips that they could make by walking.

Focus group interviews as well as public input during the community meeting identified three conflict points within the study area:

1. just north of the Trinity River Bridge where Tish Tang Road enters the east side of Highway 96, there is poor sight distance of northbound traffic crossing the bridge for motorists exiting Tish Tang;
2. at the driveway to the Tsewenaldin Inn which enters and exits along the westside of the highway just north of the Tish Tang Road intersection; and,
3. 50 feet later the westside access drive to the grocery store, casino, post office, tribal police and emergency medical facilities. This

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driveway must accommodate northbound vehicles crossing the southbound travel lane; and exiting vehicles crossing the southbound travel lane to travel north. Several head-on collisions have been observed and documented in the northbound left turn lane to the shopping center, which also serves as a left turn lane for southbound traffic accessing Tish Tang Road.

### Discussion:

#### Pedestrian Connections

Sidewalks are essential in neighborhoods. Even with traffic speeds of 15-20 mph, children, seniors and people with disabilities cannot walk safely without sidewalks. While sidewalks themselves do not reduce vehicle speeds, they separate the pedestrian from the street space. Sidewalks attract higher volumes of pedestrians and remind motorists that they are in a place for people (Burden, January 2002).

Walking is a social activity so a minimum sidewalk width of 5 feet allows two people to walk side by side. Landscaped edges should separate sidewalks from streets. For sidewalks with no landscape edge, the minimum width should be 6 feet. Sidewalks should also be placed on both sides of the street. Sidewalks must meet Americans With Disabilities Act (ADA) requirements ensuring accessibility by all (Burden, January 2002).



*Gravel shoulders serve as pedestrian paths.*



*Pedestrians make their own connections where none exist.*

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*Where is the pedestrian crosswalk?*

Designated street crossings help teach children to identify the best places to cross the street as well as alerting motorists of pedestrian activity. Crosswalks also increase motorists' willingness to yield to pedestrians. Motorists should be able to see and anticipate where pedestrians are most likely to cross. Crosswalks should be well identified and medians should be provided to aid in crossing wider streets.

Healthy neighborhoods support high levels of bicycle use. Trails can be provided to link homes, schools, parks, transit, nature areas, and other common destinations. On roadways with 15-20 mph speeds, bicycles mix comfortably with cars and trucks. On roadways with higher speeds, bike lanes should be provided or bicycle trails (that may or may not parallel the highway).



*Community members express concerns related to safety and security.*

In healthy neighborhoods, people should feel comfortable walking at all hours. Street lighting is critical to the safety and comfort of pedestrians during the night. In some areas this light can be provided by smaller street lamps 8-12 feet in height, in scale with the pedestrian environment. In areas where there is more traffic and higher speeds, traditional highway lighting may be required. For main highway travel both street lamps and highway lighting may meet the needs of both pedestrians and motorists (Burden, January 2002).

Street furniture such as benches, trash receptacles, flower and shrub planters, and kiosks, encourage people to walk. Benches help seniors and the disabled, who need places to rest every 5-10 minutes when walking. Street furniture in groupings can provide small gathering places allowing opportunities for social interaction while further reminding motorists that streets have many public uses (Burden, January 2002).



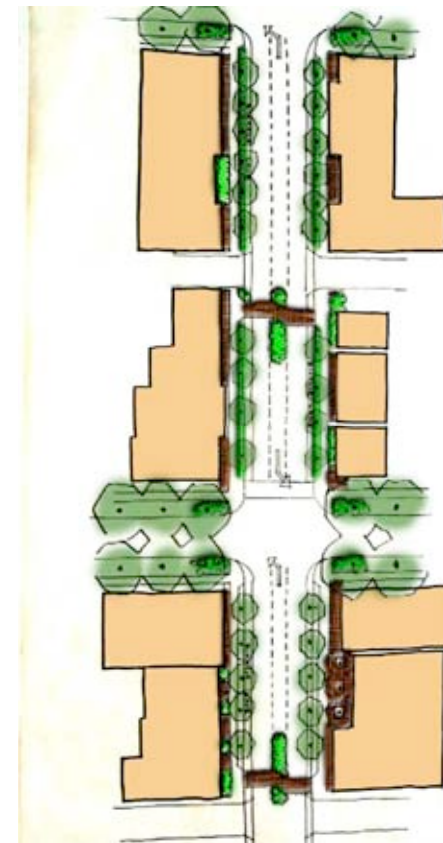
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Trails are non-motorized connectors through neighborhoods. They often follow their own independent rights of way or utility corridors. Trails can connect homes to parks, schools, transit stops and other common destinations.

Two of the goals of the Hoopa Valley Indian Reservation Transportation Plan include:

1. Improving Highway 96 corridor through central Hoopa to include sidewalks, street lights at key intersections and pedestrian crossing areas, bike lanes, pedestrian crosswalks, traffic calming and beautification; and,
2. Developing bicycle and pedestrian trails, including river crossings, which are physically separated from Reservation highways and roads.

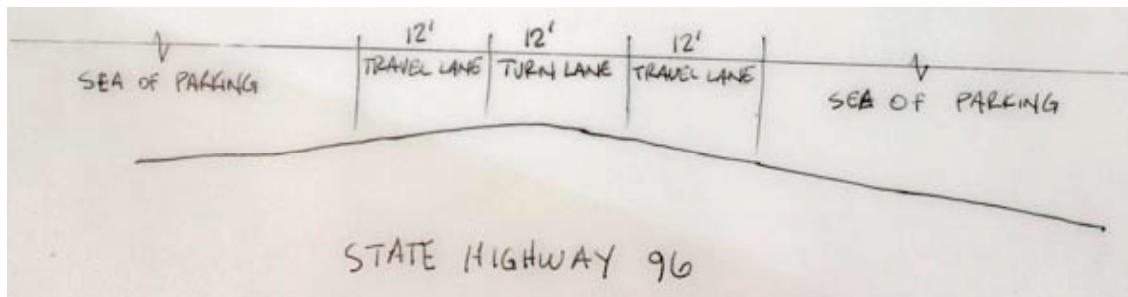
The need for improvements to Highway 96 that provide pedestrian connections via continuous curbs, gutters, and sidewalks, grass strips for lighting and landscaping, striped bike lanes, and pedestrian crosswalks received unanimous support among Design Fair participants



*Sidewalks, parking strips, bike lanes, street trees and street lights would define the pedestrian zone of Highway 96.*

## Traffic Calming

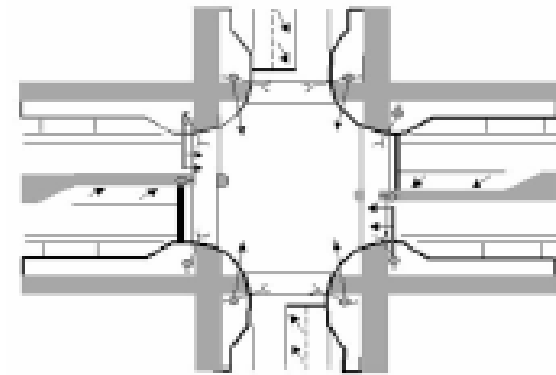
The right-of-way for Highway 96 is approximately 100 feet. Currently, that right-of-way incorporates a 12-foot travel lane north bound, a 12-foot travel lane south bound, and a 12-foot turn lane. This leaves 64 feet (32 feet on each side of the highway) that are graveled or paved. In the downtown area, this creates a sea of parking and asphalt between the highway and edge of right-of-way. This area provides plenty of room for traffic calming and pedestrian enhancement treatments.



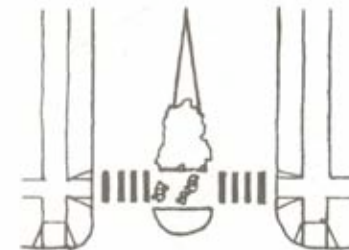
A combination of physical treatments can be used to calm, direct, and control traffic. Treatments include bulb outs, medians, and roundabouts.

Bulb outs (or curb extensions) at intersections extend the sidewalk or curb line into the street, shortening the distance a pedestrian must travel to cross the roadway. Bulb outs also narrow the roadway causing the motorist to slow down and improve visibility for pedestrians and motorists (Burden, January 2002).

Medians can be designed with turning pockets at intersections or at restricted locations. Medians provide opportunities to enhance the area through landscaping. Typically, safety is enhanced due to a reduction in vehicle speed and an increase in separation between opposing

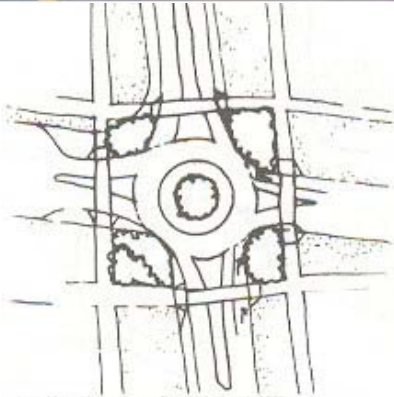


*Bulb outs are usually used at intersections where pedestrian crossings and moving traffic pose hazards.*



*Medians serve as refuge islands for pedestrians and bicyclists crossing a street mid-block or at intersections.*

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*The landscaped median on the Tribal Campus parkway illustrates the effect a median could have on Highway 96 .*

directions of traffic and a reduction in points of conflict where turns are allowed (Burden, January 2002).

Medians serve as refuge islands for pedestrians and bicyclists crossing a street mid-block or at intersections.

**Roundabouts** are located at intersections of collector or arterial streets with one or more crossing roadways. A roundabout is a circular, raised island that forms a hub for traffic that flows around it and the streets that connect to it. Traffic circulates within roundabouts in a counter-clockwise direction and exits the roundabout by turning right onto the desired street. No left-turning movements are needed. Roundabouts are designed so that vehicles circulate at 15—20 mph.

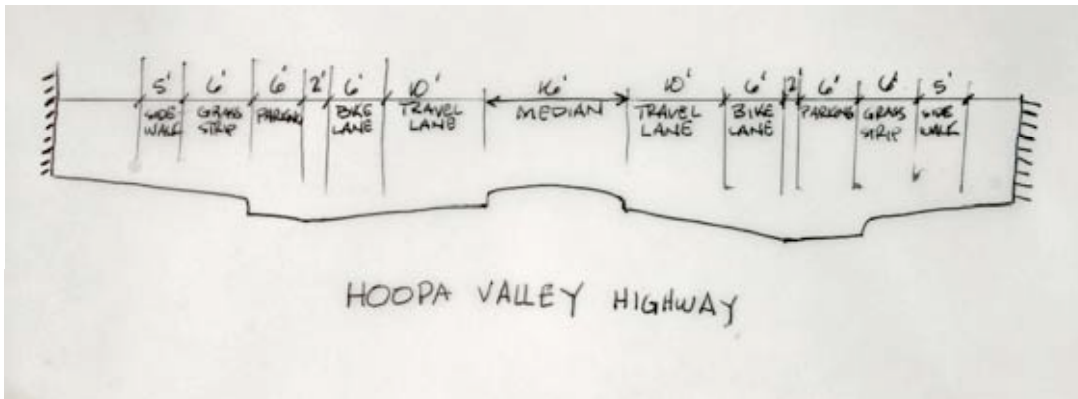
Roundabouts are usually more expensive to install but less expensive to maintain than traffic signals and can reduce crashes 50-90% at intersections previously controlled with traffic signals or stop signs. They can also handle 30% more traffic than intersections with signals. Roundabouts need to be constructed to accommodate pedestrian and bicyclists with crossing points and median.

**Recommendations:**

A combination of methods are recommended to improve pedestrian connections and calm traffic in downtown Hoopa (Figure 1. Hoopa Phase One Improvements and Figure 2. Extended Pedestrian Connection to Downtown).

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The right-of-way for Highway 96 approximates 100 feet (50 feet each side of centerline) and is composed of two 12 foot travel lanes (northbound and southbound) and a 12 foot left turn lane. The remaining 36 feet of the right of way is gravel, dirt, and grass or paved for parking and driveways.



The Conceptual Plan recommends a new cross section that will utilize the balance of the Highway 96 right-of-way (36 feet) for pedestrian improvements.



*Improvements to Highway 299 in Willow Creek incorporate dedicated bike lanes.*



*This sidewalk is well separated from vehicle travel by on street parking and a parking strip.*

### *Sidewalks, Grass Planting Strips & Bike Lanes*

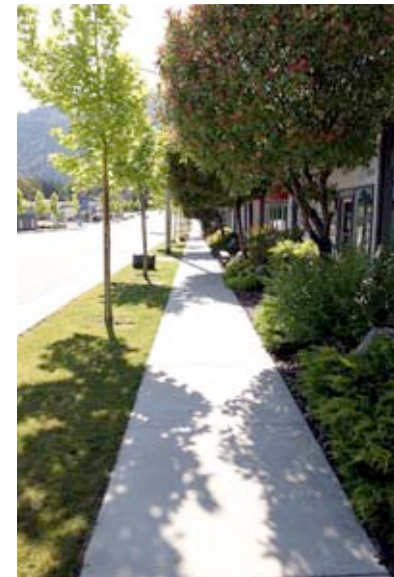
To improve walkability along the Highway 96 corridor through central Hoopa the Conceptual Plan recommends installation of sidewalks, grass planting strips, pedestrian crosswalks and bike lanes. To improve pedestrian safety and comfort, lighting, seating and landscaping will be installed within the grass planting strip.

The new sidewalks, grass planting strips, and bicycle lanes would be installed:

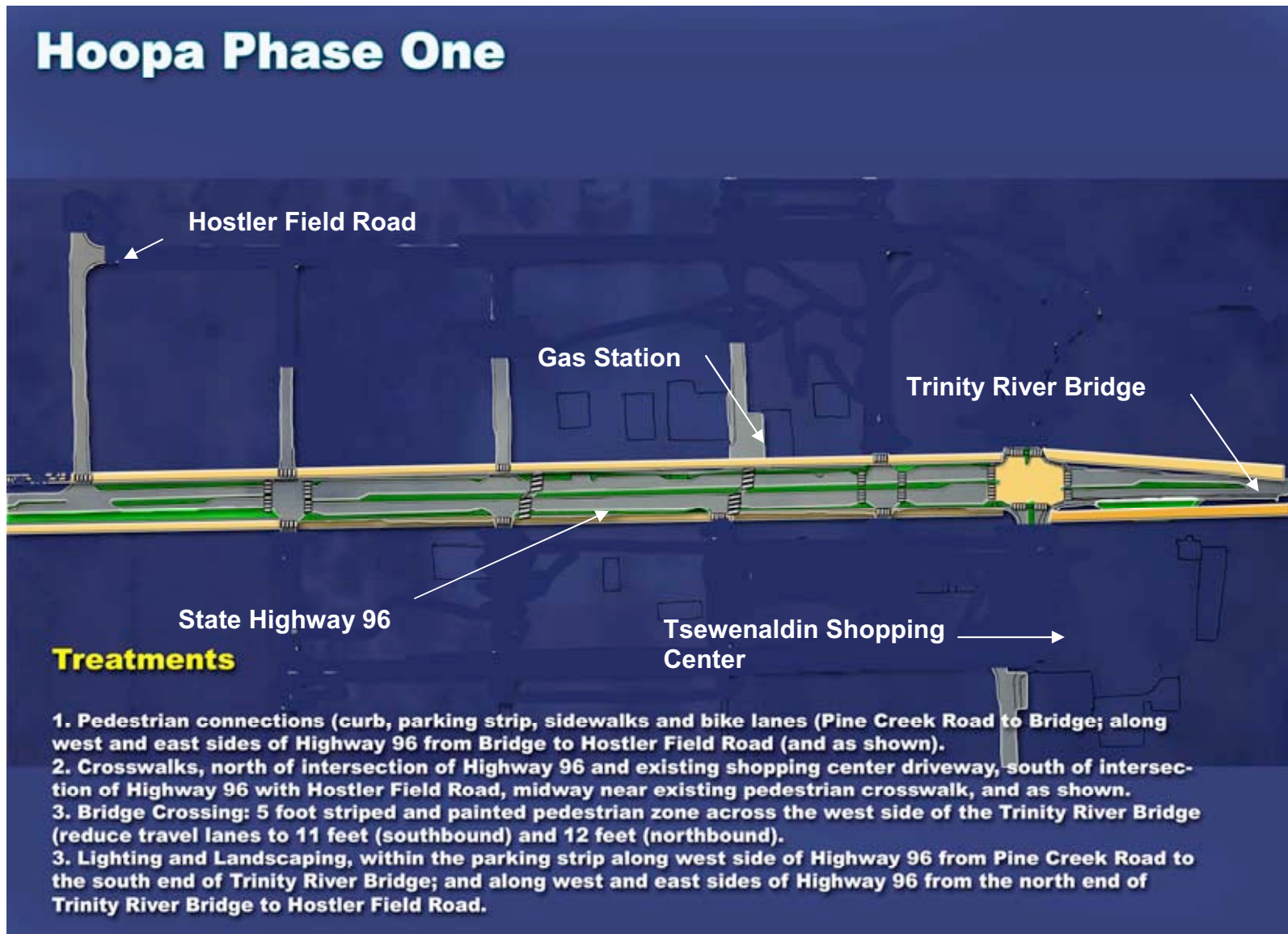
- ◆ **along the west side of Highway 96 from Pine Creek Road to south end of the Trinity River Bridge; and,**
- ◆ **along both the west and east sides of Highway 96 from the north end of Trinity River Bridge to Hostler Field Road.**



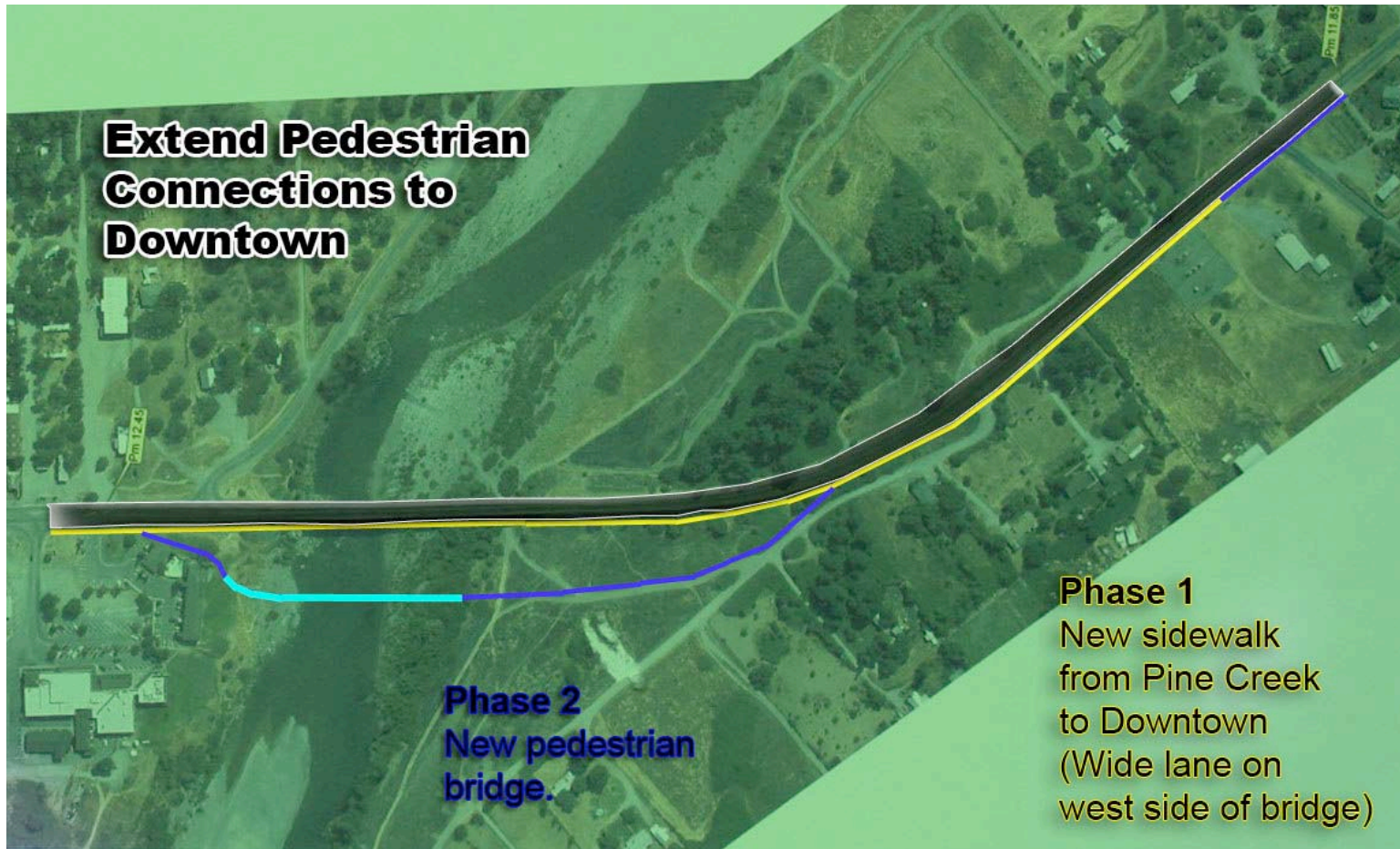
### **Complete the Streets!**



### **Fix the Edges First!**



**Figure 1. Hoopa Phase One Improvements**



**Figure 2. Extended Pedestrian Connections to Downtown**

### *Pedestrian Crosswalks & Bridge Crossing*

#### Pedestrian Crosswalks:

To improve walkability and safety along the downtown corridor, new pedestrian crosswalks would be installed;

- ◆ **north of the intersection of Highway 96 and existing shopping center driveway (converted to four way crosswalk in future phase);**
- ◆ **south of the intersection of Highway 96 with Hostler Field Road; and,**
- ◆ **midway near existing pedestrian crosswalk.**



*Pedestrian crosswalks should be highly visible to the oncoming motorist. Material and color changes help identify the pedestrian crosswalk along with appropriate signage.*



*This designated crosswalk and landscaped median are used to create a pedestrian friendly environment.*



*The Tribal campus parkway incorporates a designated cross walk that is visible to both pedestrians and motorists.*





*Trinity River Bridge—Before*



*Trinity River Bridge—After*

### Bridge Crossing:

To improve safety for pedestrians crossing the bridge, a pedestrian zone would be created to include:

- ◆ **5 foot striped and painted pedestrian zone along the west side of the Trinity River Bridge - reduce travel lanes to 11 feet (southbound lane) and 12 feet (northbound lane);**
- ◆ **Replacing the railing to meet current pedestrian and bicycle height requirements; and,**
- ◆ **A flashing beacon could be installed to add to the safety of pedestrians crossing the bridge.**

A pedestrian crossing on the existing bridge is proposed as a short-term improvement while longer term options include a new pedestrian bridge independent of the highway bridge crossing and, ultimately, replacement of the existing bridge with a new bridge which safely incorporates pedestrian traffic.

### Future Pedestrian Crossing:

In the near future, a pedestrian bridge crossing the Trinity River independent of the highway bridge could be constructed utilizing the old right-of-way for the highway for alignment. This pedestrian bridge could connect with the sidewalks along the south side of Highway 96 from Pine Creek Road to the Bridge and the sidewalks along the west side of Highway 96 north of the Bridge (See Figure 2).

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New Highway Bridge:

According to Caltrans, the Highway 96 bridge over the Trinity River is not scheduled for replacement or rehabilitation at this time. A recommendation for railing replacement is currently listed. If the railing replacement is programmed, the replacement railing would meet current pedestrian and bicycle height requirements.

The bridge width would be an issue as it would not meet current standards. Bridge width is normally brought up to standard when replacing the bridge rail unless a design exception is approved.



The bridge has a two girder superstructure with rather long deck overhangs. This type of structural system does not lend itself to adding additional cantilever length to the deck overhang. The bridge is currently not rated for full permit loads and any increase in the deck would reduce the permit truck carrying capacity.

It may be possible to widen this bridge to provide new railings and additional width for bicycles and pedestrians although the cost would be substantial, in the 5 to 10 million dollar range. According to Caltrans, replacement costs would be in the neighborhood of 10 to 20 million dollars. Given the high cost of replacing the existing bridge, this is clearly a long-term solution.

*This bicycle and pedestrian bridge parallels the road bridge in Folsom California.*

### Riverside Trail

Several informal pedestrian trails follow portions of the Trinity River between the downtown area and the ceremonial grounds. A dedicated Riverside Trail could allow pedestrian access along the bank of the Trinity River but should address safety issues associated with high water and fast current to insure that the trail is not a hazard to pedestrians, many of whom are children and youth.

A Riverside trail system would allow pedestrian access along the bank of the Trinity River from the Cultural Center (just upstream from the bridge) following the river downstream to the ceremonial grounds.

### Undergrounding Utilities

Placement of existing and future utilities underground could further enhance the aesthetics of the downtown area by eliminating poles and wires.

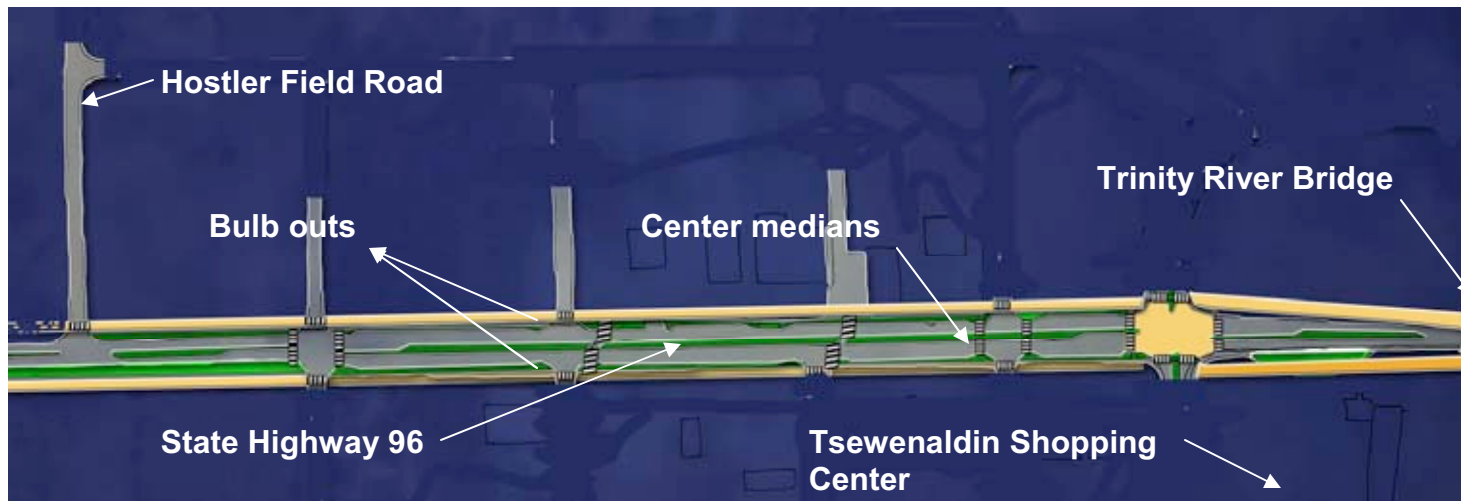


### *Traffic Calming*

In concert with improving pedestrian connections, the Conceptual Plan recommends improvements to Highway 96 that calm traffic by installing bulb outs on corners, medians with dedicated turn lanes down the center of the highway, and consolidating and defining driveway ingress and egress to businesses in the downtown Hoopa area.

### **Bulbouts & Medians**

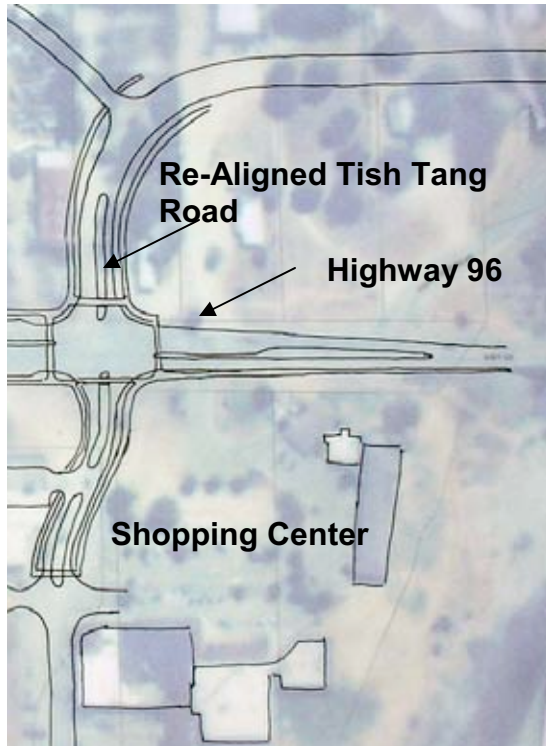
The placement of bulbouts and medians, in combination with sidewalks, grass planting strip, on-street parking, and bicycle lanes can all occur within the existing approximately 100 foot wide right of way of Highway 96. These improvements could be implemented along both the west and east sides of Highway 96 from the Trinity River Bridge to Hostler Field Road (Figure 3. Traffic Calming Improvements for Downtown Hoopa).



**Figure 3. Traffic Calming Improvements for Downtown Hoopa**

### Re-Alignment Of Tish Tang Road

The Conceptual Plan recommends re-alignment of Tish Tang Road to create a four-way intersection with the newly configured access drive to the shopping center (grocery store, cultural museum, casino), Tsewenaldin Inn and post office. This would involve closing off the existing entry drive to the Tsewenaldin Inn. The new intersection will include pedestrian crosswalks and medians with turning pockets to safely direct pedestrian and vehicular traffic accordingly (Figure 4. Re-Alignment of Tish Tang Road).



**Figure 4. Re-Alignment of Tish Tang Road**

*Realignment of Tish Tang Road and the closure of the driveway to the motel could create a new 4-way intersection with bulb outs, medians with turning pockets, and pedestrian crossings.*

## Access Controls

The Conceptual Plan proposes access controls to direct motorists to exit and enter the highway at designated driveways eliminating hazards associated with uncontrolled access and egress to the Highway.

Dedicated entry and exit drives to businesses and residents would be defined by curb cuts and aprons in the continuous sidewalk on both west and east sides of Highway 96 from the north end of the Trinity River Bridge to Hostler Field Road.

A major conflict area between Joe's Place (formerly Club Hoopa), and Laura's Kitchen will be eliminated by providing curb, gutter and sidewalk with designated driveway entry and exist points (Figure 5. Proposed Access Controls).

Currently, long lines at the Patriot gas station often encroach upon adjacent parking areas blocking access to Joe's Place and the Thunder Bird. The Tribal Council has discussed moving the diesel fueling station to a new facility near the Modular facility south of downtown. A new diesel station would not only reduce the number of vehicles lined up for fuel but also eliminate big diesel trucks from the downtown area in favor of a more industrial location.



*Access controls can be applied where there is a need for directing vehicles to designated entry and exit points.*



*Access controls can eliminate short-cuts by vehicles.*

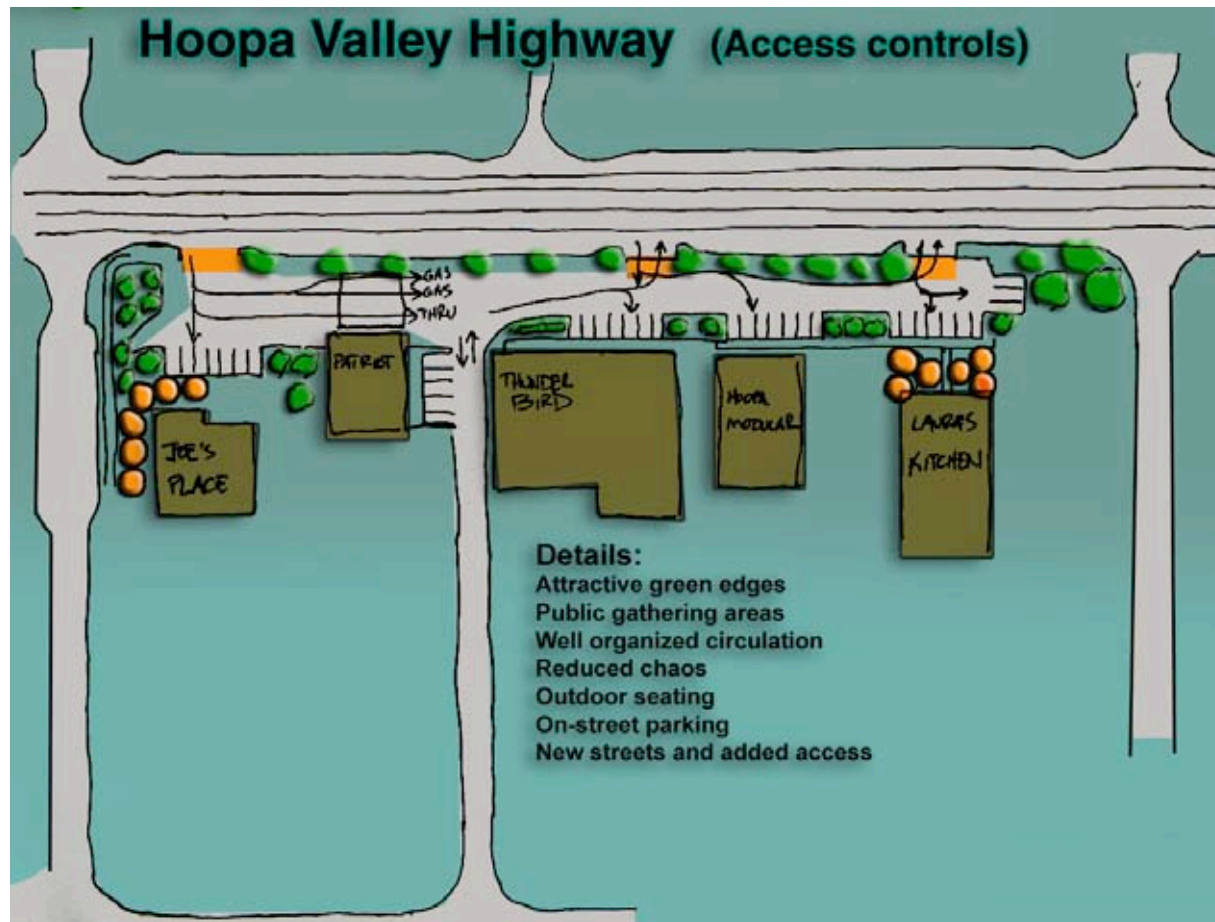


Figure 5. Proposed Access Controls along portions of Highway 96

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*Access controls can direct traffic off and onto the highway.*

Access controls could also eliminate the conflict point between the existing entry drive to the Tsewenaldin Inn combining it with a reconfigured access drive to the shopping center. A tapered median will slow traffic crossing the bridge from the south and a left lane-turning pocket will allow safer cross traffic turning movements into the shopping center. A median to the north of the new intersection (with a left lane turning pocket to Tish Tang Road) will further control access and egress from Highway 96.

The same access controls can be applied to other areas of downtown where uncontrolled access and egress allow vehicles to enter and exit the highway at will rather than at designated driveways.

Pedestrian crossing points at driveways will be striped or designated with different materials and/or colors to further reduce hazard conditions. Landscaping and lighting in the planting strip will enhance the overall appearance of the area and make it more pleasant for pedestrians and downtown business.



*Pedestrian crossing points at driveways can be striped or designated with different materials.*

