



CITY OF BLACK DIAMOND
October 29, 2008 Workstudy Agenda
25510 Lawson St., Black Diamond, Washington

1. 7:00 P.M. – Call to Order, Roll Call
2. Comprehensive Plan Chapter 7, Transportation - Mr. Pilcher
3. Draft Street Standards - Mr. Boettcher
4. Adjournment

Chapter 7. Transportation

7.1. Introduction

7.1.1. Background

Black Diamond's transportation system is essential to the City's ability to move people and goods efficiently. Over the long term, this system also affects the location and pattern of growth. The City will also regularly update the comprehensive transportation plan to address potential safety and congestion problems, and to direct Black Diamond's transportation future as the City continues to grow.

The Growth Management Act (GMA) includes planning requirements that link transportation directly to land use decisions and fiscal planning. The Transportation Element of the Comprehensive Plan, also called the Comprehensive Transportation Plan, is structured within the context of these GMA requirements.

7.1.2. Need for the Comprehensive Transportation Plan

In 1996, the City of Black Diamond completed its first Comprehensive Transportation Plan. A 2001 plan amendment included the transportation impacts of growth in the City's potential annexation areas. The 2007-08 update provides a revised look at the existing transportation system; addresses changes in legislative requirements; reflects changes in economic conditions; evaluates current needs; and reviews the adequacy of the planned transportation improvements to meet future travel needs and conditions.

The primary purposes and uses of the transportation plan include the following:

- **Determining Existing Transportation Deficiencies** - An inventory of the transportation system identifies the existing needs of the community.
- **Meeting Growth Management Act Requirements** - Black Diamond is required by the Growth Management Act to develop a comprehensive plan including a transportation element that includes a list of future system improvements and a multi-year financing plan.
- **Qualifying for Funding** - State agencies require communities to have a comprehensive transportation plan that demonstrates the community's vision of their future.
- **Planning for the City** - Both public and private sectors can use the comprehensive transportation plan when making decisions about the transportation system.

7.1.3. Elements of the Comprehensive Transportation Plan

The transportation plan has the following key elements:

- **Transportation Goals and Policies** - a list of goals and policies the City will focus upon to develop and maintain an efficient transportation system;
- **Transportation Improvement Program** – a list of transportation improvements to mitigate traffic congestion;
- **Funding Strategy** – a plan for funding the improvements and a contingency plan with additional funding sources; and
- **Concurrency Management System** - a system the City will use to make sure the transportation network will be able to accommodate development as it occurs.

7.2. Level of Service

A level of service (LOS) standard measures the performance of an existing transportation system and the adequacy of the planned future improvements. Additionally, LOS standards establish the basis for the concurrency requirements in the GMA. Agencies are required to “adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with

development.” (RCW 36.70A.070(6)(b)). Therefore, setting the LOS standard is an essential component of regulating development.

7.2.1. Level of Service Definitions

Level of service (LOS) is both a qualitative and quantitative measure of roadway operations. Level of service, as established by the *Highway Capacity Manual* uses an “A” to “F” scale to define the operation of roadways and intersections as follows:

LOS A: Primarily free flow traffic operations at average travel speeds. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delays at signalized intersections are minimal.

LOS B: Reasonably unimpeded traffic flow operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and control delays at signalized intersections are not significant.

LOS C: Stable traffic flow operations. However, ability to maneuver and change lanes may be more restricted than in LOS B, and longer queues, adverse signal coordination, or both may contribute to lower than average travel speeds.

LOS D: Small increases in traffic flow may cause substantial increases in approach delays and, hence decreases in speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes or some combination of these factors.

LOS E: Significant delays in traffic flow operations and lower operating speeds. Conditions are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

LOS F: Traffic flow operations at extremely low speeds. Intersection congestion is likely at critical signalized intersections, with high delays, high volumes, and extensive queuing.

7.2.2. LOS and Concurrency

The concurrency provisions of the Growth Management Act require that local governments permit development only if adequate public facilities are, or can be guaranteed to be, available within six years to support the new development.

The GMA requires each local jurisdiction to identify future facility and service needs based on its level of service (LOS) standards. To ensure that future development will not cause the city’s transportation system performance to fall below the adopted

LOS, the jurisdiction must do one or a combination of the following: modifying the land use element, limiting or “phasing” development, requiring appropriate mitigation, or changing the adopted standard.

7.2.3. Level of Service Standard

The plan uses a level of service “C” (LOS C) standard for the analysis based on the City Council’s recommendation for arterials and collectors within the city limits. This standard is higher than other cities in the area, indicating the City’s desire to avoid congestion and the willingness to identify and fund future transportation improvements. The cities of Covington and Maple Valley use LOS D as their minimum operation standards. In Maple Valley, a LOS D is the standard for most roadways with LOS E as the standard for the Maple Valley Highway (SR 169), Kent-Kangley Road, and Witte Road.

If expected funding for improvements to meet future transportation needs is found to be inadequate, then the City may pursue one of the following options:

- Lower the LOS standard to D or F for the system or for portions of the system that cannot be improved without a significant expenditure;
- Revise the City’s current land use plan to reduce density or intensity of development that will “fit” with the planned transportation system; or
- Phase or restrict development to allow more time for the necessary LOS-driven transportation improvements to be completed by the development community and/or responsible agency or jurisdiction(s).

7.2.4. Level of Service Methodology

The City of Black Diamond has established specific methods to calculate the LOS for evaluating the performance of the roadways, intersections and transit. This section describes those methods.

Roadway Level of Service

The City uses two measures to evaluate the performance of an arterial roadway. The first measure calculates a ratio of the PM peak hour traffic volume to the hourly road link capacity, providing an estimate of the amount of available roadway capacity. The reported value is the average of all intersection links in the peak direction. The second measure compares the operating travel speed with the posted speed limit based on an average for all non-controlled roadway links in the peak direction. This measure uses a percent of the posted speed limit to define the LOS result. The

following applies the volume to capacity and the average travel speed to the LOS A to F criteria.

LOS A: Volume/Capacity Ratio less than or equal to 0.60 and Average Travel Speed greater than or equal to 90% of the posted limit.

LOS B: Volume/Capacity Ratio greater than 0.60 and less than or equal to 0.70 and Average Travel Speed less than 90% and greater than or equal to 70% of the posted limit.

LOS C: Volume/Capacity Ratio greater than 0.70 and less than or equal to 0.80 and Average Travel Speed less than 70% and greater than or equal to 50% of the posted limit.

LOS D: Volume/Capacity Ratio greater than 0.80 and less than or equal to 0.90 and Average Travel Speed less than 50% and greater than or equal to 40% of the posted limit.

LOS E: Volume/Capacity Ratio less greater than 0.90 and less than or equal to 1.00 and Average Travel Speed less than 40% and greater than or equal to 33% of the posted limit.

LOS F: Volume/Capacity Ratio greater than 1.00 and Average Travel Speed less than 33% of the posted limit.

Intersection Level of Service

For signalized and unsignalized intersections, the LOS is calculated using the procedures described in the latest edition of the *Highway Capacity Manual* (2000 edition).

State Highway Level of Service

1998 amendments to the Growth Management Act require local jurisdictions to address state-owned transportation facilities, as well as local transportation system needs in their comprehensive plans. House Bill 1487 requires that the transportation element of local comprehensive plans include the LOS standards for Highways of Statewide Significance (HSS). HB 1487 clarified that the concurrency requirement of the GMA does not apply to HSS or other transportation facilities and services of statewide significance. HB 1487 also requires local jurisdictions to estimate traffic impacts to state-owned facilities resulting from land use assumptions in the Comprehensive Plan.

The Washington State Department of Transportation (WSDOT) adopted LOS standards for HSS facilities is LOS D for urban areas (RCW 47.06.140). The LOS target is established for Comprehensive Plans and for reviewing developer impacts along urban HSS facilities.

The WSDOT also analyzes “screen lines” for deficiencies along state routes using a standard of 70% of the posted speed. This screen line analysis allows WSDOT to identify the “most congested” locations along its HSS facilities. A speed of approximately 70% of the posted speed equates to conditions where a highway achieves the maximum throughput of vehicles.

In 2007, the WSDOT added SR 169 to the list of HSS facilities. The State’s *2007-2026 Highway System Plan* indicates that SR 169 is expected to operate below the 70% speed threshold (termed ‘operating less than efficiently’) during peak hours in 2030.

Transit Level of Service

The Growth Management Act (RCW 36.70A) requires communities to also adopt level of service standards for transit routes. The City has established guidelines to monitor the performance of the transit system as follows:

- Encourage King County Metro to expand service as the demand dictates;
- Monitor existing transit facilities to determine if additional routes are needed or if existing headways should be decreased (or frequency increased);
- Monitor the need for park and ride facilities; and
- Develop design standards for bus-pullouts, passenger waiting facilities, and other transit facilities.

7.3. Existing Transportation System

The City of Black Diamond forms the southeastern edge of King County’s urban area. The traffic circulation system within the City is an incomplete grid system, reflective of the original settlement pattern, varied topography, and lack of substantial growth up to the present. The area’s road system consists of a state highway (SR 169), the City’s arterials, collectors, and local access roads. Because the grid system is incomplete, many local access roadways are, in effect, long cul-de-sacs. Local access roads are also often narrow by current standards. Although the narrow widths and lack of locations for vehicles to turn-around are a serious problem for emergency

services, the smaller area devoted to roads contributes significantly to the existing rural character of the community and reduces storm water impacts.

Black Diamond is bisected by SR 169, a north-south highway, providing regional access from Renton to Enumclaw as well as local access. This route is also known as 3rd Avenue within the downtown area. Along the City's northern boundary, SE 288th Street is an east-west arterial that is shared with the City of Maple Valley. The Roberts Drive arterial provides local east-west access west of SR 169 as well as a link from Black Diamond to the City of Auburn and the Green River Valley employment centers to the west. The Lawson Street/Green River Gorge Road is an east-west arterial providing local access east of SR 169 as well as access to the rural areas and communities to the east.

The Black Diamond/Ravensdale Road is a north-south arterial linking Black Diamond and Ravensdale and providing a secondary link to SR 516 (Kent-Kangley Road). The SE Lake Sawyer Road is a north-south arterial that forms the City's western boundary and also provides a connection to SR 516.

7.3.1. Existing Roadway and Intersection Characteristics

SR 169, within the planning area, is a two-lane principal arterial that generally divides the City of Black Diamond into east and west sections. SR 169 serves an area extending between the cities of Renton and Enumclaw, providing both regional (to SR 18, SR 516 and Interstate 405) and local access.

Posted speed limits along SR 169 vary depending on the amount of development adjacent to the highway. Areas immediately outside the city limits of Black Diamond are posted at 50 mph. Within the city limits, legal speeds are reduced to 35 mph except for a small 50 mph section from Jones Lake Road to the southern city limits. All cross-streets intersecting with SR 169 are controlled by stop signs.

SE 288th Street is a two-lane road that runs east-west. The road is a minor arterial that changes to SE 291st Street as it approaches SR 169. The road serves the Black Diamond residents north of Lake Sawyer and also serves as the only access for Maple Valley residents living north of SE 288th Street and south of the Burlington Northern Railroad line. SE 291st Street is stop sign-controlled at SR 169 and 216th Avenue SE. At all other intersections, the cross-street traffic is stop sign-controlled. The posted speed is 35 mph.

Roberts Drive/Auburn-Black Diamond Road provides access to the City of Auburn and is a two-lane minor arterial. The road changes name to Roberts Drive east of Lake Sawyer Road S.E. in Black Diamond. The roadway branches into two facilities near Covington Creek allowing access to the City of Kent (Kent-Black Diamond Road).

All cross-streets intersecting Roberts Drive are stop sign-controlled. Roberts Drive is controlled by a stop sign at its intersection with SR 169. Posted speeds are generally 50 mph outside the city limits of Black Diamond and 25 to 35 mph once inside the city.

[Green Valley Road](#) is a two-lane minor arterial that connects SR 169 and the City of Auburn. This street is classified by King County as a collector. The roadway is posted for a maximum speed of 40 mph, but operating speed is constrained to 10 to 15 mph in certain areas due to its curvilinear horizontal alignment with steep grades. Green Valley Road is stop-controlled at SR 169. It should be noted that the annexation of property adjacent to Green Valley Road in 1995 included a condition that direct transportation access would not occur from the annexed area onto Green Valley Road.

[Lake Sawyer Road/224th Avenue SE/216th Avenue SE](#) is a two-lane minor arterial that provides access to a predominantly residential area west of Lake Sawyer. The street generally parallels SR 169 between Roberts Drive and SR 516. The roadway is stop sign-controlled at its intersection with Roberts Drive. There are traffic signals at the intersections of 216th Avenue SE/SR 516, 216th Avenue SE/Covington-Sawyer Road, and SE 296th Street/219th Avenue SE. All other cross-street traffic intersections along Lake Sawyer/216th Avenue SE are stop sign-controlled. Posted speeds vary between 35 mph and 45 mph.

[Covington-Sawyer Road](#) is a two-lane minor arterial that connects with 216th Avenue SE on the western border of Black Diamond. It provides access to SR 18 and SR 516.

[Morgan Street](#) is a two-lane collector from Roberts Drive to Railroad Avenue. Railroad Avenue extends as a two-lane collector from Morgan Street southward to SR 169. Functionally, Morgan Street and Railroad Avenue provide alternative connections between Roberts Drive and SR 169, bypassing the downtown area which is located a few city blocks to the east. The intersection of Morgan Street and Roberts Drive is stop sign-controlled on the minor approach (Morgan Street). Railroad Avenue (also referred to as Jones Lake Road) is controlled by stop sign at its intersection with SR 169. The posted speed limit on Morgan Street and Railroad Avenue is 25 mph.

[Lawson Street](#) is an east/west minor arterial with its western terminus one block west of SR 169 and continuing east and northeast out of the City of Black Diamond. Near the outskirts of the city the roadway changes to Green River Gorge Road. The arterial provides access between SR 169 and residential developments in Black Diamond and rural areas east of the city. The posted speed limit along this route is 25 mph within the city limits. Near Mud Lake, the speed limit increases to 45 mph. Lawson Street is stop-controlled at its intersection with 3rd Avenue (SR 169).

Black Diamond-Ravensdale Road is a two-lane minor arterial linking Black Diamond and Ravensdale and serves as a secondary connection between Kent-Kangley Road SR 169. The posted speed limit along this road is 45 mph within Black Diamond city limits. Cross-street traffic along Black Diamond-Ravensdale Road is stop-controlled.

Baker Street (between SR 169 and Railroad Avenue) is a two-lane arterial collector located in the downtown area of Black Diamond. The roadway provides access to the post office and school; it has a posted speed limit of 25 mph. It is stop sign controlled at SR 169 and Railroad Avenue.

All remaining roadways in the City of Black Diamond are local roads with two-lane cross-sections. Most local roadways have posted 25-mph speed limits.

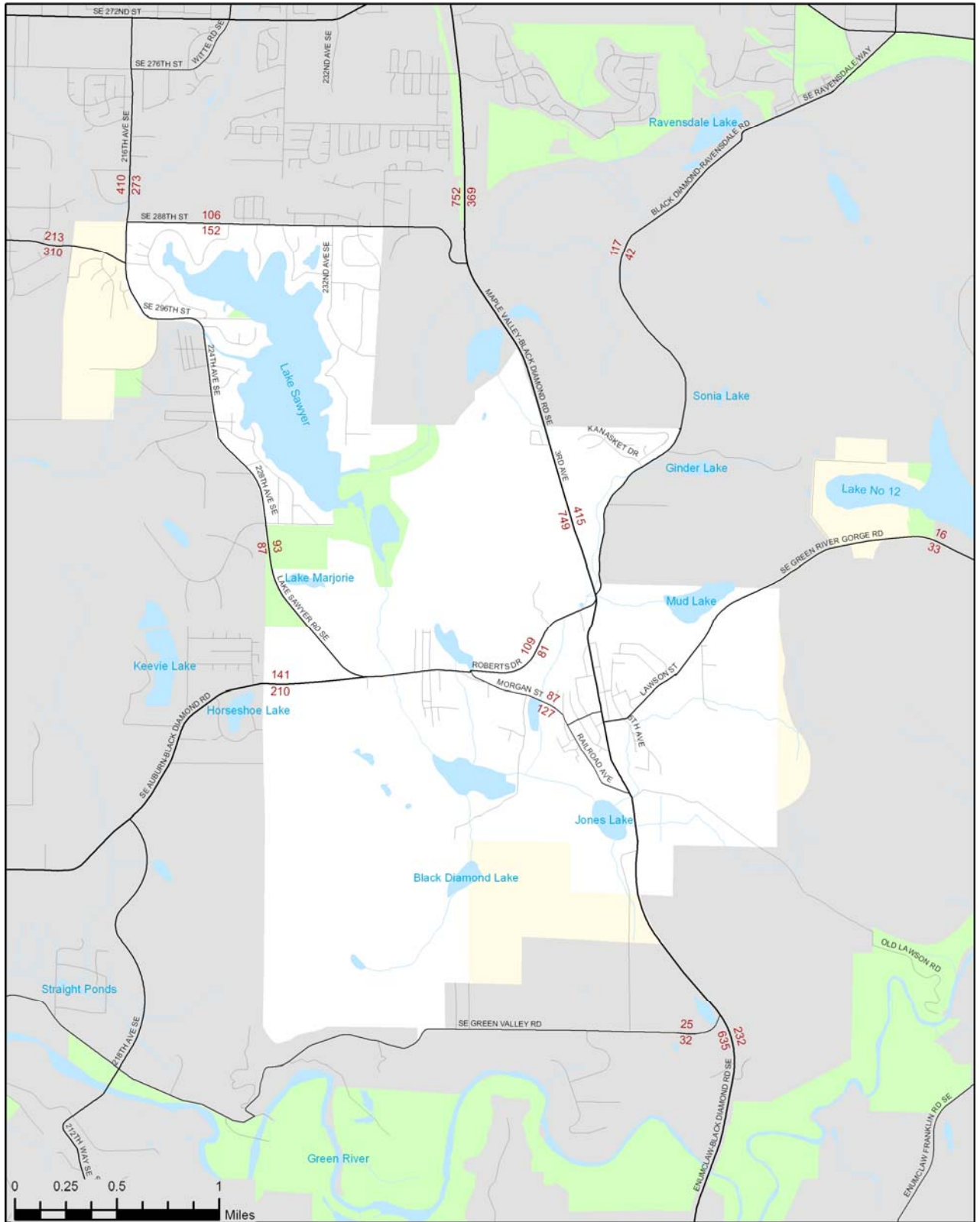
7.3.2. Existing Roadway Volumes and Travel Conditions

Figure 7-1 depicts the study area for the updated transportation plan and shows 2006 evening peak hour traffic volumes. Available traffic volumes were collected from WSDOT and King County Roads Division. Additional daily and PM peak period traffic volumes counts were completed on December 5 to 7, 2006 to update roadway traffic volumes.

Average daily traffic (ADT) volumes were examined within the traffic study area. Immediately north of Black Diamond the ADT increases to 13,900 vehicles per day (vpd). Roberts Drive serves approximately 4,100 and SE Covington-Sawyer Road approximately 6,200 vpd. There are an estimated 8,500 daily vehicle trips on 216th Avenue SE north of 288th Avenue SE. Black Diamond-Ravensdale Road east of SR 169 serves approximately 1,500 vpd, and Green River Gorge Road west of 270th Way carries approximately 700 vpd. Other local roads within Black Diamond do not have ADT count history, but recent peak hour counts indicate that the daily vehicular trips are unlikely to exceed 2,500 vpd.

All travel volumes were analyzed using the City's LOS methodology. Table 7-1 provides a LOS summary of intersections, while Table 7-2 lists the arterial LOS.

Figure 7-1. Study Area and Existing PM Peak Hour Traffic Volumes



September 23, 2008

Table 7-1. Existing Level of Service Summary Intersections (2006)

Intersection	Control	Direction	LOS	Delay (s)
SE 288th Street/232nd Avenue SE	Stop-Controlled	Northbound	A	9.7
Covington-Sawyer Road/216th Avenue SE	Signal	Average	A	7.8
216th Avenue SE/219th Avenue SE	Signal	Average	B	13.9
Black Diamond Ravensdale Road/SR 169	Stop-Controlled	Westbound	D	32.2
SE Green River Gorge Road/270th Way SE	Stop-Controlled	Southbound	A	8.6
Roberts Drive/SR 169	Stop-Controlled	Northbound	D	28.0
Auburn-Black Diamond Rd/Lake Sawyer Road SE	Stop-Controlled	Northbound	B	11.1
Roberts Drive/Morgan Street	Stop-Controlled	Eastbound	B	10.8
Baker Street/SR 169	Stop-Controlled	Eastbound	C	20.0
Baker Street/Railroad Avenue (Jones Lake Road)	Stop-Controlled	Eastbound	A	9.3
Lawson Street/SR 169	Stop-Controlled	Northbound	C	18.8
Lawson Street/5th Avenue	Stop-Controlled	Eastbound	A	9.8
SE 288th Street/216th Avenue SE	Stop-Controlled	Northbound	C	17.5
Black Diamond Ravensdale Road/Kanasket Street	Stop-Controlled	Northbound	A	9.2

Table 7-2. Existing Level of Service Summary Arterial Roadways (2006)

Arterial	Volume/ Capacity (%)	Speed (% of Posted)	LOS	
			(V/C)	Speed
Black Diamond - Ravensdale Road	15	100	A	A
Auburn - Black Diamond Road	17	99	A	A
Roberts Drive	43	100	A	A
Lake Sawyer Road	40	98	A	A
Baker Street	8	100	A	A
Lawson Street	14	100	A	A
Morgan Street	28	99	A	A
Railroad Avenue - Jones Lake Road	22	99	A	A
SR 169 North of City Limits	52	93	A	A
SR 169 within City limits	53	93	A	A
SR 169 south of City limits	56	95	A	A

LOS based on HCS Speed criteria for urban street segments

In general, roadways and intersections within the City of Black Diamond operate at an acceptable level of service. Consistent with the City’s adopted Level of Service standard, roadways and intersections must operate at LOS C or better. Roadways in the City operate at LOS A and B, with travel speeds maintained at close to the speed limit. The intersections of 3rd Avenue (SR 169)/Black Diamond-Ravensdale Drive and 3rd Avenue (SR 169)/Roberts Drive operate below the LOS C standard. All other roadways and intersections in Black Diamond function with acceptable LOS.

7.3.3. Other Modes

Rail Service

Presently, the City of Black Diamond has no railroads located within the City limits. Rail lines that historically provided service from Seattle through Renton to Black Diamond have been decommissioned. The last coal trains left Black Diamond in 1969. The old rail line passed through town in a north-south direction paralleling Railroad Avenue.

Public Transportation Service

Black Diamond currently has a low population density and is distant from major Puget Sound urban employment centers. Public transportation service is available but is limited. Metro currently provides three routes that serve the City: 143, 149, and 912. Table 7-4 summarizes existing transit services in Black Diamond. Routes 143 and 149 provide 25 to 30 minute service during commute hours and Route 149 provides 60 to 90 minute service during off-peak hours. Route 912 provides off-peak hour service between Enumclaw and Covington.

Table 7-4. King County Metro Transit Routes Serving Black Diamond

Route	Beginning Location	Destination	Black Diamond @ 3rd Ave/Baker St	
			Headway: Minimum-Maximum (min)	Duration
143	Downtown Seattle	Black Diamond (via Renton)	20-30	5:34 pm - 6:40 pm
	Black Diamond	Downtown Seattle (via Renton)	25-28	5:29 am - 6:24 am
149	Renton	Black Diamond	25-120	5:14 am - 4:08 pm
	Black Diamond	Renton	37-130	7:08 am - 6:47 pm
912	Covington	Enumclaw (via Black Diamond)	95-100	9:32 am - 2:27 pm
	Enumclaw	Covington (via Black Diamond)	90-104	10:29 am - 3:23 pm

Since the 1996 Comprehensive Transportation Plan, two new routes have been added -- King County Metro Routes 143 and 149 -- which provide service to regional destinations and to the Renton Transit Center. A park and ride lot located at the Masonic Lodge at 3rd Avenue/Baker Street provides 30 spaces for weekday parking for transit users. Another nearby facility, the Maple Valley Park and Ride, is located at SE 231st Street/SR 169, and provides 122 spaces.

The existing transit service meets the City's defined LOS criteria. However, in the future, additional service as well as provisions for bus pullouts, bus stops, and park and ride lots will become necessary, as the population increases.

Surface Freight Transportation

There are no freight terminal facilities located in the City of Black Diamond. However, truck operations related to mineral extraction, logging and landfill commonly use the road network, primarily on SR 169.

Pedestrian Facilities

The City has limited sidewalk facilities along its arterial and collector road network. While adopted City road construction standards now require sidewalks on all new roads, many of the roads in the remaining areas of town were developed to rural standards with gravel shoulders or no shoulder at all. Only two arterials in Black Diamond have sidewalks: SR 169 in the downtown area on the east side of the street; and 216th Avenue SE between SE 288th Street and Covington-Sawyer Road on the west side. There is a small stretch of sidewalk along Baker Street near the elementary school, on the south side of Roberts Road near the library, and a sidewalk on SE 300th Street near Kentlake High School. The newly developed subdivisions along Kanasket Drive and McKay Lane also contain sidewalks.

Bicycle Facilities

No formal planned bicycle network exists within the City. A small stretch of bicycle lanes was added to Roberts Road as part of the library project. Bicyclists currently use the existing roadways as informal routes, although there are no markings or signs to support the street usage for bicycles. Black Diamond residents have voiced a desire to include bicycle facilities within the transportation environment.

Shoreline/Water Transportation

There are no navigable waterways for freight or passenger transportation in the Black Diamond area. The region's primary river, Green River, is used primarily for recreational purposes.

Aviation Transportation

The nearest major airport facility is SeaTac airport located approximately 22 miles to the west. The City of Black Diamond does not have a local airport; however, a privately owned field with a runway length of 1,500 feet is located along Roberts Drive west of SR 169. Nearby public use airports include Kent's Crest Airpark (6 miles), the Auburn Municipal Airport (14 miles) and the Renton Municipal Airport (18 miles).

Parking Facilities

On street parking is presently provided informally throughout Black Diamond in conjunction with the local street network. Parking is restricted on SR 169. Additional public parking is currently needed, particularly in Old Town, and along the SR 169 corridor for weekend bicyclists driving to Black Diamond to ride, and for weekday commuters who wish to use transit.

7.3.4. City of Black Diamond Functional Classification System

Roadway classifications define the character of service that a street is intended to provide. The City of Black Diamond has classified its roadway system and adopted roadway design standards based on the roadway's functional and physical characteristics. The functional classification system is a hierarchical system providing for the gradation of traffic flow from an access function to a movement function as defined in Table 7-5.

Table 7-5. Functional Classification System Definition of the Roadway Functions

Classification	Function	Continuity	Spacing (miles)	Direct Land Access	Minimum Roadway Intersection Spacing	Speed Limit (mph)	Parking	Comments
Principal Arterial	Primary - Intercommunity and intrametro area traffic movement Secondary - land access	Required	1/2 in CBD; 1 in urban residential; 1-5 in suburban and fringe	Limited - major generators only	1/2 mile	35-45 (fully developed areas)	Prohibited	
Minor Arterial	Primary - Intercommunity and intrametro area traffic movement Secondary - land access	Required	1/8 - 1/2 in CBD; 1/2 - 1 in urban; 1-3 in suburban and urban fringe	Restricted - some movements may be prohibited; number and spacing of driveways controlled	1/4 mile	30-35	Generally Prohibited	Backbone of the street system
Collector	Primary - collect/distribute traffic between local roads and arterial system; Secondary - land access; Tertiary - interneighborhood traffic movement	Desirable	Not less than 1/4 mile from higher Classified arterials	Safety controls; limited regulation	300 feet	25-30	Limited	Through traffic should be discouraged
Local (Residential)	Land Access	None	As needed	Safety controls only	300 feet	25	Permitted	Through traffic should be discouraged

The following list provides the planned classifications by roadway.

Principal Arterials

- SR 169

Minor Arterials

- SE 288th Street
- Roberts Drive
- Green River Gorge Road
- Southeast Loop Road*
- North Connector*
- Black Diamond-Ravensdale Road
- Lake Sawyer Road
- Pipeline Road*

Collectors

- Annexation Road*
- Morgan Street
- Baker Street (west of SR 169)
- South Connector*
- Jones Lake Road
- Abrams Road

Local Access

- All remaining roadways within the City of Black Diamond

Note: * = New Roadways (For location, See Figure 7-3) A summary of the design criteria and characteristics for these different classifications of roadways is provided in Table 7-6. The table serves as only a general guide for the different classifications; the City's Road Design Standards should be referenced for further clarification.

Table 7-6. Road Classifications and Development Standards

Classification	Min. ROW (ft)	Min. Paved Width (ft)	Other
Arterial (major and minor)	74'-96'	42' - 64'	sidewalk, bike lane, planting strip storm drainage
Collector Road	60'-72'	30'-42'	sidewalk, bike lane, planting strip, storm drainage or swales
Local Access (Industrial)	50'	22'	sidewalk, planting strip
Local Access (Commercial)	60'-68'	34'	sidewalk, planting strip
Local Access (Rural and Urban)	48'-60'	20'-32'	sidewalk, planting strip

Source: City of Black Diamond Engineering and Design Standards.

7.4. Current Transportation Plans and Improvements

The City is working to identify the near term improvements that address transportation needs for its community.

7.4.1. Planned Roadway Improvements

The current planned roadway improvements consist of projects programmed by the City, County and WSDOT.

WSDOT

WSDOT has jurisdiction over SR 169 through the City of Black Diamond. While WSDOT has been developing a Route Development Plan for SR 169, the plan has not been completed. A conversation with WSDOT's Urban Planning Office and review of meeting minutes of the SR 169 Working Group, indicate the potential to widen SR 169 to as many as six lanes from Jones Road (in Maple Valley) to I-405 and four to five lanes from SE 291st Street. Within Black Diamond, WSDOT has proposed minor widening to allow for a two-way-left turn lane north of the historic core of Black Diamond and a truck climbing lane south of Green Valley Road. For purposes of this plan, the City is assuming a 3-lane section with bike lanes for SR 169, with potential widening at intersections to accommodate turn lanes.

King County

King County has identified future improvements in the Enumclaw Planning Area, which includes Black Diamond (detail is in the County’s 2008 *Transportation Needs Report*). The County’s list of improvements in or around the City of Black Diamond is shown in Table 7-7.

Table 7-7. King County Identified Black Diamond Area Facilities Improvements (2008 King County Road Needs Report)

Project No.	Project Action	Location	Priority	Cost
T-33	Black Diamond-Ravensdale Road - Non-Motorized	SR 169 to Kent Kangley	Low	\$2,028,000
OP-RD-41	Covington-Lake Sawyer Rd– Minor Capacity	From Thomas Rd to 216 Ave SE	Medium	\$7,733,000
RC-135	Black Diamond-Ravensdale Rd – Reconstruction (0.6 miles)	From SE Kent Kangley Rd to 268 Ave SE	Medium	\$597,000
RC-142	SE Green Valley Rd - Reconstruction	From 243 Ave SE to SR 169	High	\$1,423,000
RC-6	Covington-Lake Sawyer Rd - Reconstruction	From Covington C/L to 216 Ave SE	High	\$1,093,000
GR-35	Black Diamond-Ravensdale Road – Guardrail	City limits to Ravensdale Way	High	\$12,000
GR-68	224th Ave SE - Guardrail	From SE 296th St to 228th Ave	High	\$81,000

City of Black Diamond

The City of Black Diamond has identified several road improvements shown in Table 7-8. The City maintains a *Six-Year Transportation Improvement Program (TIP)*. The six-year program proposes improvements to existing substandard roads and includes repairing and overlaying existing roadways, paving gravel roadways, constructing sidewalks, and widening roadways.

Table 7-8. Black Diamond Six-Year Transportation Improvement Program 2009-2014

Rank	Year	Location	From/To	Type of Improvement
1	2008	Railroad Ave Construction	Merino Street to Baker Street	Rebuild Existing Roadway/Storm drainage/Parking
2	2008	Lake Sawyer Road	Auburn Black Diamond Road to 320th block	Overlay
3	2009	233rd Avenue SE	SE 293 Pl to South to end	Repair and overlay existing

Rank	Year	Location	From/To	Type of Improvement
				roadway
4	2009	Morgan Street Sidewalk Phase 2	Abrams Avenue to Robert's Drive	Install new sidewalk
5	2009	Auburn Black Diamond Road	Bruckner's Way to West City Limits	Repair and overlay existing roadway
6	2010	Lawson Street & Newcastle Drive	Lawson Street to Newcastle Drive	Repair and overlay existing roadway
7	2010	Roberts Drive Pedestrian Trail/Sidewalk	SR 169 to Morganville Neighborhood	Install new pedestrian trail/sidewalk
8	2010	SE 288th Street	236th Ave SE to 216th Ave SE	Overlay
9	2011	B.D./Ravensdale Road Intersection	East City Limits to SR 169	Minor widening, radius construction/ improvement, overlay, alignment
10	2012	SR 169 Widening	300 ft. South of Lawson Street to 300 ft. North of Baker Street	Widen SR 169 to three lanes and widen approaching intersections
11	2012	Roberts Drive Reconstruction	SR 169 to Rock Creek Bridge	Overlay existing roadway, repair broken panels, widen to standard
12	2012	Pacific Street Neighborhood Improvements	Lawson Street to Southerly Terminus of Pacific/ Fifth Ave South	Widen and Pave existing gravel roads, install storm drainage improvements
13	2013	Morganville Intersection Improvements	N/A to N/A	Widen turning radius on intersections.
14	2013	Lake Sawyer Road Culvert and Guardrail	N/A to N/A	Replace CMP Culverts to meet fish passage. Install guard rails.
15	2013	Jones Lake Road/SR 169	Intersection to N/A	Add left turn lanes or refuge lanes
16	2014	Sixth Avenue/Baker Street	Lawson Street to SR 169	Minor widening and overlay of existing asphalt roadway
17	2014	Fifth Avenue North	Lawson Street to Northerly End	Minor widening and overlay of existing asphalt roadway with installation of storm drainage
18	2014	Commission Avenue	Morgan Street to App. 300' SW of Morgan Street	Repair and overlay existing roadway
19	2014	Alley from Park Street	Park Street to SR 169	Pave an existing gravel roadway
20	2014	Lawson Hill Sidewalk	City Limits to SR 169	Install new sidewalk
21	2014	Lawson Street & Newcastle Drive	City Limits to SR 169	Overlay existing roadway
22	2014	Lake Sawyer/Black Diamond Road	307th PL SE to SE 292 Street	Overlay existing roadway
23	2014	Plass Road	SR 169 to City Limits/Existing Pavement	Pave an existing gravel roadway

Source: City of Black Diamond August 2008

7.5. Actions Needed to Meet LOS Standard

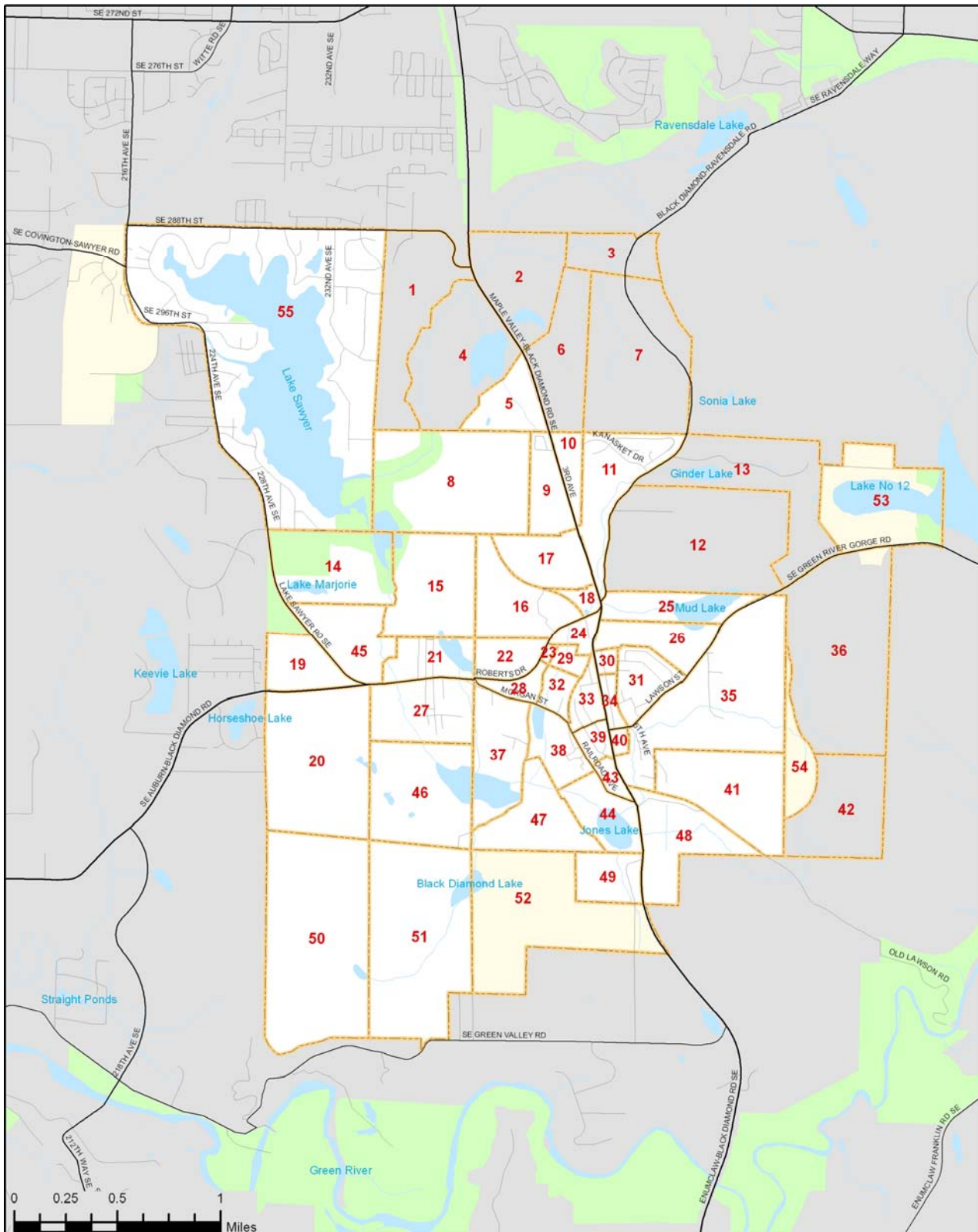
As the City adopted LOS standard, two intersections operate at below standard requiring improvements under existing conditions. The intersections of Black Diamond–Ravensdale Road/SR 169 and Roberts Drive/3rd Avenue both operate below standard for existing conditions. At Black Diamond–Ravensdale Road/SR 169 intersection, the State Route would be widened to create southbound left turn lane and an acceleration lane for westbound left turning vehicles. The intersection of Roberts Drive/3rd Avenue would be relocated to the south to provide better spacing with adjacent intersection and to allow construction of turn lanes on SR 169. These actions are included in the 2008-2014 improvements listed in Table 7-9.

7.6. Travel Forecasts/Modeling Activities

The Black Diamond Transportation Planning Model was revised as part of the update to the Comprehensive Transportation Plan with “Vissum” modeling software to identify future travel conditions in the City. The new information updates the City’s 1995 and 1998 transportation planning models using a similar analysis zone structure and new traffic counts.

Updated land use, population and employment forecasts for 2014 and 2025, identified in Chapter 3 of the Comprehensive Plan, were assigned to the Traffic Analysis Zone (TAZ) system by the project consultants. The model evaluated a scenario for 2025 that would allow for 7,004 housing units and 3,174 jobs to be located within the City and Urban Growth Area. Appendix A contains the household and job estimates for each TAZ. Figure 7-2 illustrates the TAZ system used in the traffic model.

Figure 7-2. Traffic Analysis Zones



September 23, 2008

7.6.1. Future Land Uses and Transportation Concepts

The City intends that the Black Diamond Comprehensive Plan Transportation and Land Use Elements work together to maintain the City's "small town" character in the face of increasing regional traffic-related impacts. Regional traffic growth on SR 169 may be expected to continue as long as vehicular capacity is increased on that route. Similar conditions would be expected on other arterials that facilitate regional traffic. The need for planned transportation improvements will depend on the location, density and timing of area development occurs and may vary depending on market forces, availability of utilities and actions taken by the jurisdiction.

Forecast Horizons

The Transportation Improvement Program (TIP) is linked to the City's planned land uses and the anticipated traffic volumes. There are two traffic forecasts analyzed in the Comprehensive Transportation Plan:

- Short Term (6-year): 2008 to 2014
- Long Term: 2015 to 2025

The short term forecast coincides with the City's TIP and represents current growth trends and expected short term development within the City. Future levels and timing of land development were based on conversations with City staff, local land owners, and development firms. Changes to development patterns and priorities may vary the need for and the completion order of the transportation improvements. The long-term traffic forecast represents the future growth in housing and employment that will support the expected 2025 population of 16,980.

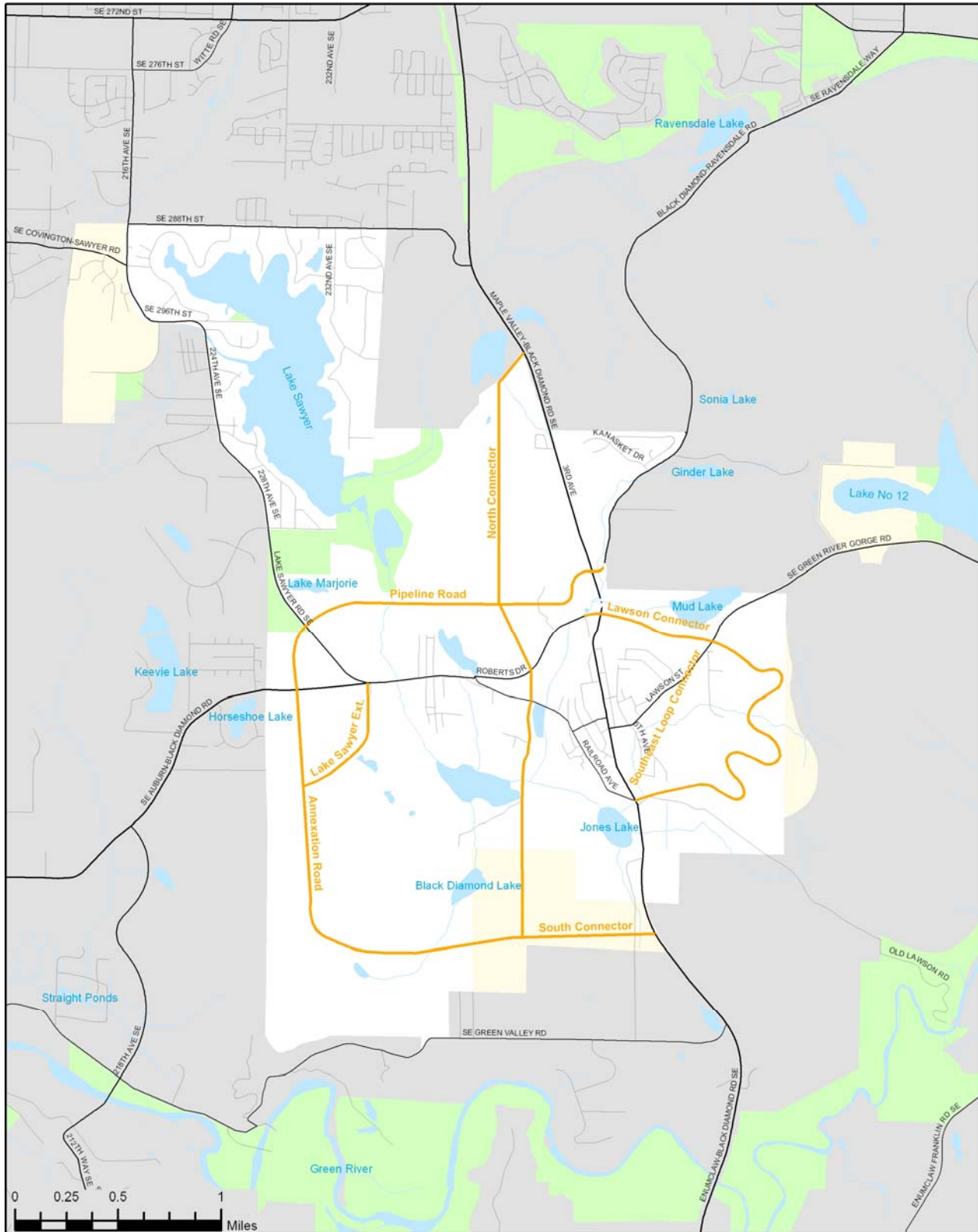
7.7. Transportation Improvement Recommendations

This section of the transportation plan establishes intersection and roadway improvement programs for the periods 2008 to 2014 and 2015 to 2025.

7.7.1. Arterial Roadway Improvements

A conceptual configuration for the future roadway system is shown in Figure 7-3. New arterial roads include: Pipeline Road, Annexation Road, Lawson Connector, South Connector, Southeast Loop Connector, and North Connector.

Figure 7-3. Future Road Network Concept



The proposed roadways shown in Figure 7-3 are not specific to site or location. The intent is to show a basic concept. Exact locations would be determined after engineering and environmental review. These new roads will distribute future traffic growth throughout the City that would otherwise have been concentrated on the few existing major arterials.

The Pipeline and North Connector Roads would enhance the circulation for industrial development. The Annexation Road would provide north-south and east-west circulation through the southwestern portion of the City's Expansion Area. Other new facilities are proposed to improve general circulation.

Agency Coordination

Improvements on SR 169 will require coordination with WSDOT; however, the Comprehensive Plan should include a vision for SR 169 through the City. The City could use the vision to begin discussions with the State of Washington to coordinate the future design of the road. Then as development occurs along the highway, improvements (such as lanes, sidewalks, bike lanes, median planting, turn pockets, driveways, and signals) could be implemented consistent with the overall design. The City will continue to participate in the development of the SR 169 Route Development Plan and in its future implementation.

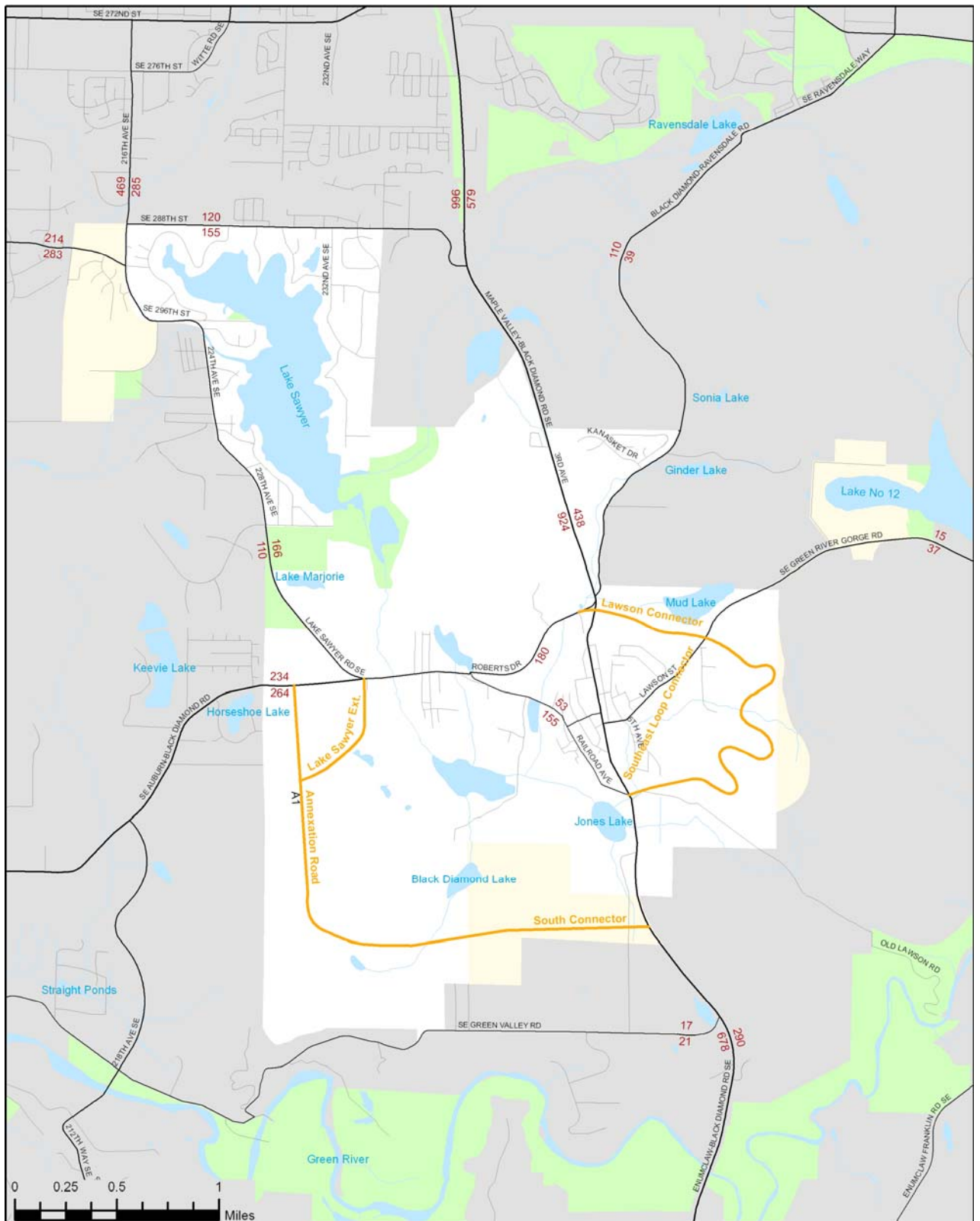
Intersection Control Requirements

Although the construction of new collectors roads and connecting arterials will help distribute traffic, key intersection will warrant traffic control and intersection improvements to meet the City's LOS standards in the future. The City will require a roundabout intersection improvement as the preferred solution to address the increasing turning movements at intersections. Where it is shown that the traffic movements cannot be handled and or the site conditions will not allow for a roundabout, signalization of the intersection can be considered. The necessity for and location of intersection improvements would be established at the time development occurs. The City will look to avoid locating signals in Black Diamond's historic downtown area. Many intersection control improvements are expected and warranted during the 20 year planning period. The improvement for roads and intersections will be implemented incrementally with developments as traffic volumes increase.

7.7.2. Roadway Conditions: 2014

This plan anticipates future conditions for the year 2014 to derive the six-year improvement program. The PM peak hour volumes anticipated on study area roadways for 2014 are depicted in Figure 7-4. The 2014 analysis includes the roadway projects identified in the existing Six-Year 2008-2014 TIP plus additional improvements needed to ensure that the roadway system meets the City's LOS C standard.

Figure 7-4. 2014 PM Peak Hour Traffic Volumes



September 23, 2008

2008 to 2014 Recommendations

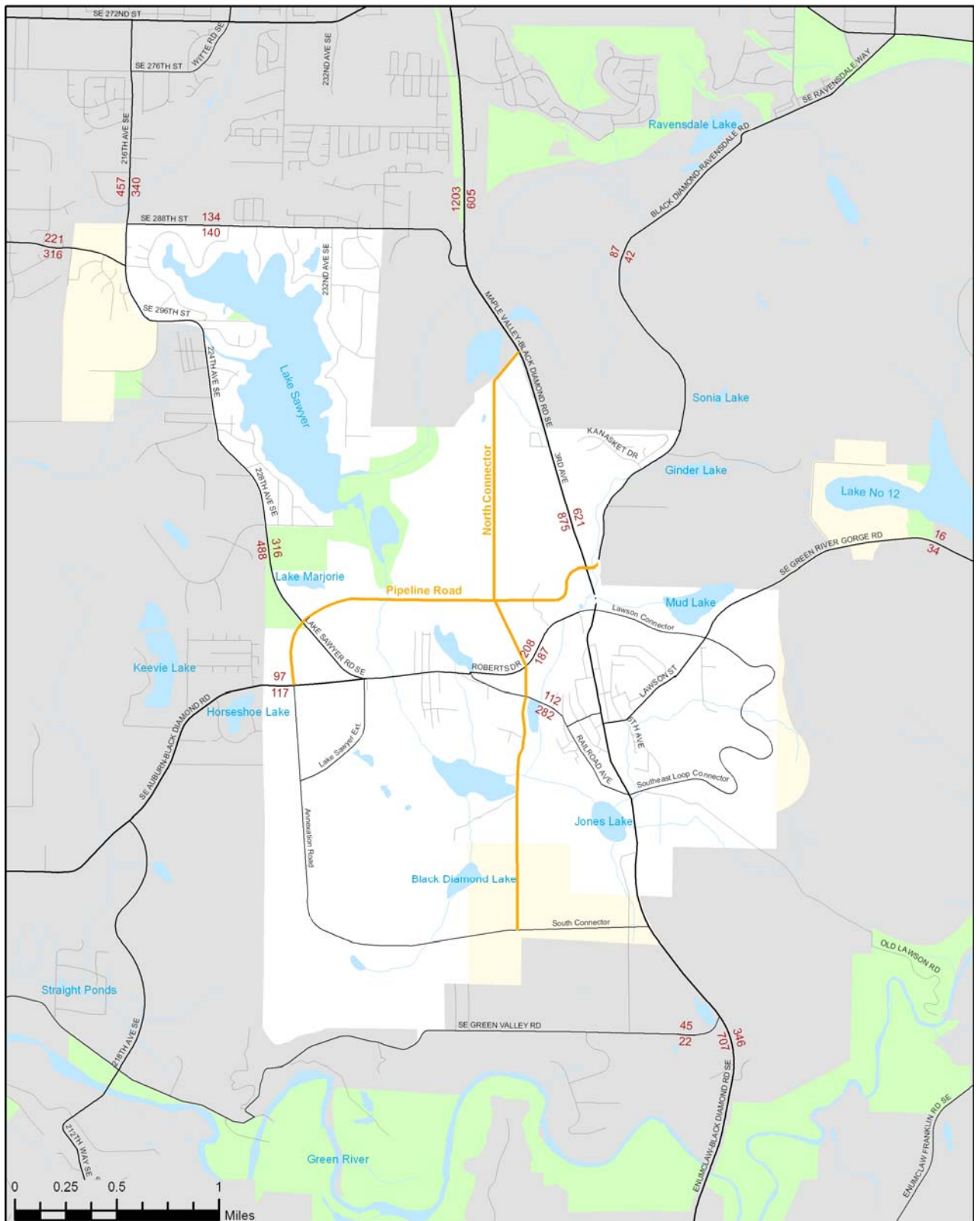
Development and increasing traffic from neighboring jurisdictions will increase traffic volumes throughout the City. Table 7-9 and Figure 7-5 list the 2008 to 2014 recommended actions. The transportation improvements recommended are expected to meet the projected travel needs throughout the City.

Table 7-9. 2008-2014 Transportation Improvements

Improvement	Action	Comments
A1, Annexation Road	Construct 36' wide collector roadway	Provides access to new development
A2, Lake Sawyer Extension	Construct 24' wide collector roadway	Provides access to new development
A3, Roberts Drive Realignment	Construct 24' wide collector roadway	Realigns Roberts Drive to match with Lawson Connector
A4, Lawson Connector	Construct 36' wide minor arterial roadway	Provides access and serves as vital connection to areas to the east of SR 169
A5, Loop Connector	Construct 36' wide collector roadway	Provides access and improves circulation in area
A6, South Connector	Construct 36' wide collector roadway	Provides access and improves circulation in area
A7, Black Diamond-Ravensdale Road/SR 169	Channelization Improvements	Improves intersection operations
A8, SR169/Roberts Dr/Lawson Connector Street	Roundabout or Signal	Improves intersection operations
A9, Jones Lake Rd/Loop Connector/SR 169	Roundabout or Signal	Improves intersection operations
A10, Existing Roadways	Widen/Pave/Overlay	Per Six-Year TIP

Note: Ultimate road design will be subject to engineering requirements and design guidelines.

Figure 7-5. Transportation Improvements for 2008 – 2014



September 23, 2008

Level of Service – 2014

With the completion of the recommended 2008 to 2014 projects, the City’s roadways and intersections would meet the LOS C standard. Table 7-10 indicates Level of Service for volume/capacity criteria and arterial operating speeds for 2014. All roadways operate at LOS A following the City’s criteria. For intersections, Table 7-11 indicates the intersection LOS operation for 2014.

Table 7-10. Future Level of Service Summary (2014)

Arterial	Volume/Capacity (Max %)	Average Speed (% of Posted)	LOS	
			(V/C)	Speed
Black Diamond - Ravensdale Road	16	100	A	A
Auburn - Black Diamond Road	18	99	A	A
Roberts Drive	50	98	A	A
Lake Sawyer Road	44	96	A	A
Baker Street	6	100	A	A
Lawson Street	6	100	A	A
Morgan Street	24	99	A	A
Railroad Avenue - Jones Lake Road	17	99	A	A
SR 169 North of City Limits	64	88	A	B
SR 169 within City limits	44	91	A	A
SR 169 South of City limits	58	95	A	A
Annexation Road	13	100	A	A
Lawson Connector	32	99	A	A
South Connector	9	100	A	A

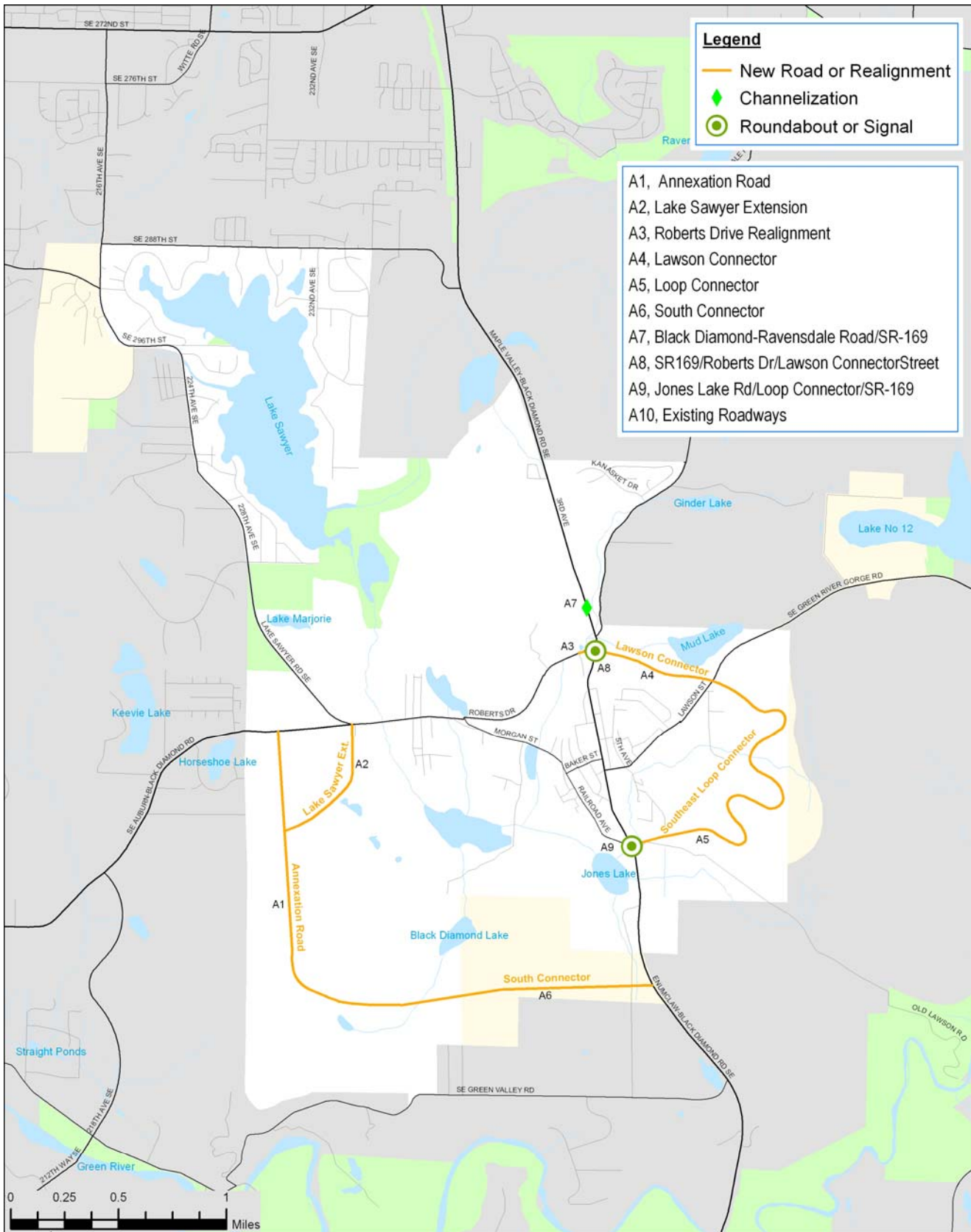
Table 7-11. Future Intersection Level of Service Summary (2014)

Intersection	Control	Direction	LOS	Delay (s)
SE 288th Street/232nd Avenue SE	Stop-Controlled	Northbound	A	9.5
Covington-Sawyer Road/216th Avenue SE	Signal	Average	A	8.2
SE 296th Street & 219th Avenue SE	Signal	Average	B	14.0
Black Diamond Ravensdale Road/SR 169	Stop-Controlled	Westbound	C	20.8
SE Green River Gorge Road/270th Way SE	Stop-Controlled	Southbound	A	8.5
Roberts Drive/SR 169	Roundabout/Signal	Average	B	16.7
Lawson Street/Lawson Connector	Stop-Controlled	Southbound	B	11.7
Auburn-Black Diamond Rd/Lake Sawyer Road SE	Stop-Controlled	Northbound	C	18.2
Roberts Drive/Morgan Street	Stop-Controlled	Eastbound	B	11.8
Auburn-Black Diamond Rd/Annexation Road	Stop-Controlled	Northbound	B	10.3
Baker Street/SR 169	Stop-Controlled	Eastbound	B	14.7
Baker Street/Railroad Avenue (Jones Lake Road)	Stop-Controlled	Westbound	B	10.5
Lawson Street/SR 169	Stop-Controlled	Eastbound	B	13.5
Lawson Street/5th Avenue	Stop-Controlled	Southbound	A	9.8
Railroad Avenue (Jones Lake Road)/SR 169	Roundabout/Signal	Average	A	9.3
Lake Sawyer Extension/Annexation Road	Stop-Controlled	Northbound	A	9.5
South Connector & SR 169	Stop-Controlled	Eastbound	C	18.5
SE 288th Street/216th Avenue SE	Stop-Controlled	Northbound	C	21.7
Black Diamond Ravensdale Road/Kanasket Street	Stop-Controlled	Southbound	A	9.3

Roadway Conditions: 2025

The traffic volumes anticipated for the year 2025 are depicted in Figure 7-6. The City expects that additional arterial roads will be needed in the planning area. SR 169 and Roberts Drive will continue to carry the largest volumes of traffic. The Morgan Street and the Railroad Avenue connection between Auburn-Black Diamond and SR 169 would serve as a prominent collector road. Southbound PM peak hour volumes on SR 169 could be as high as 1200 vehicles per hour (at the north city limits). Traffic volumes on the existing minor arterial roads would also be impacted. Black Diamond-Ravensdale Road volume, for example, would increase from 200 (2006) to 350 (2025) vehicles during the PM peak hour.

Figure 7-6. 2025 PM Peak Hour Traffic Volumes



2015 to 2025 Recommendations

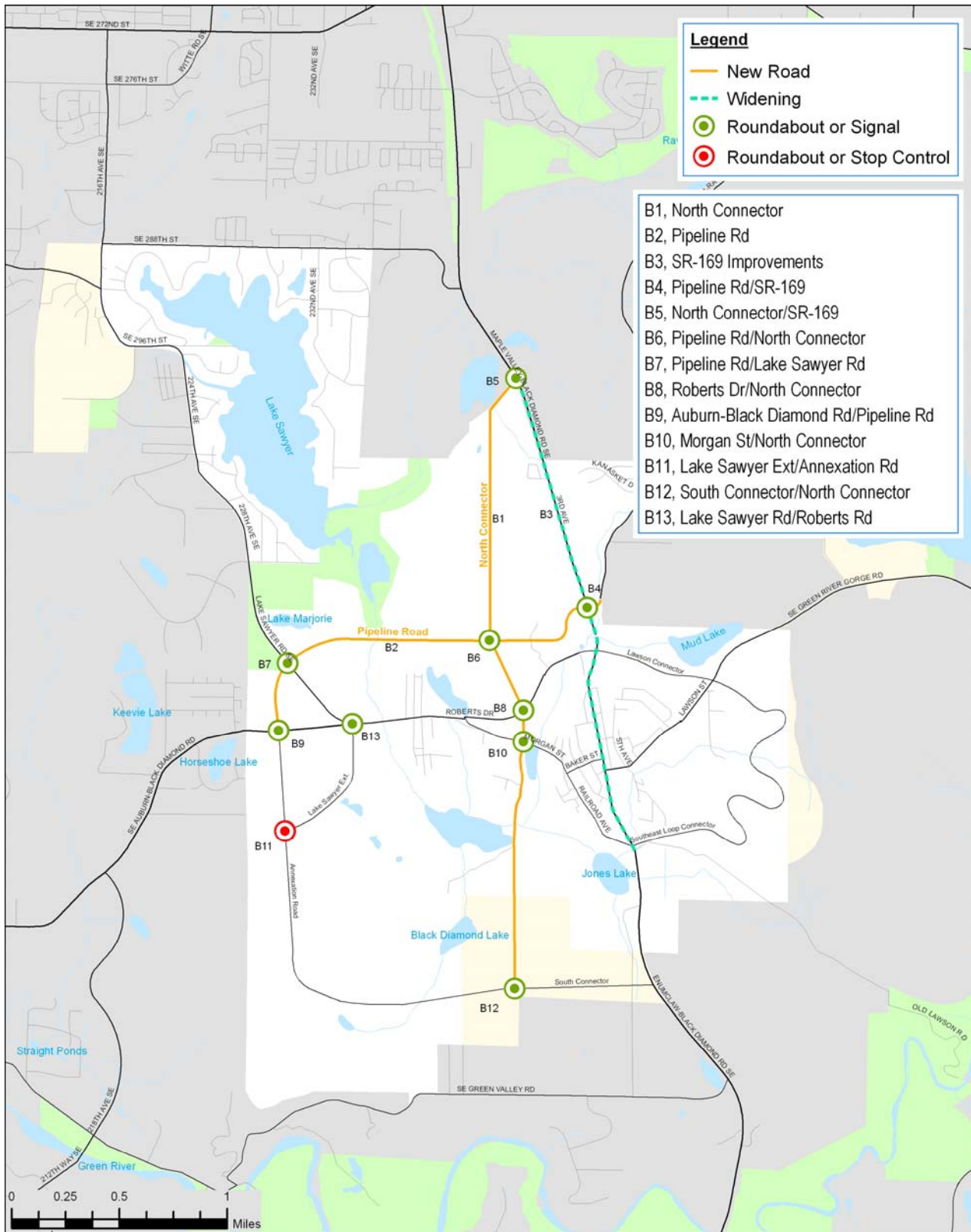
Future transportation recommendations for the 2015-2025 time horizon are shown in Table 7-12 and Figure 7-7. The program improves existing facilities, provides connections to “fill-in” the existing system, and constructs new facilities to meet the projected travel needs throughout the City of Black Diamond.

Table 7-12. 2015-2025 Horizon Transportation Improvements

Improvement	Action	Comments
B1, North Connector	Construct 36' wide minor arterial roadway	Provides access and improves circulation in area
B2, Pipeline Road	Construct 36' wide minor arterial roadway	Provides alternative east -west arterial to Auburn - Black Diamond Road
B3, SR 169 Improvements	Widen to 3 lanes with TWLTL from North Connector to Jones Lake Rd	Alleviates left turn congestion along existing facility
B4, Pipeline Road/SR 169	Roundabout or Signal	Improves intersection operations
B5, North Connector/SR 169	Roundabout or Signal	Improves intersection operations
B6, Pipeline Road/North Connector	Roundabout	Improves intersection operations
B7, Pipeline Road/Lake Sawyer Rd	Roundabout	Improves intersection operations
B8, Roberts Drive/North Connector	Roundabout	Improves intersection operations
B9, Auburn-Black Diamond Rd/Pipeline Rd	Roundabout	Improves intersection operations
B10, Morgan St/North Connector	Roundabout	Improves intersection operations
B11, Lake Sawyer Ext/Annexation Rd	Roundabout	Improves intersection operations
B12, South Connector/North Connector	Roundabout	Improves intersection operations
B13, Roberts Drive/Lake Sawyer	Roundabout	Improves intersection operations

Note: The projects listed identify needed facilities within the city if the projected growth takes place during the 20 year period. Not all of the projects will be the City's responsibility to provide. New development, which necessitates the new roads, will contribute to the new roads. New development will also be responsible for providing on-site roads and circulation, which is not identified in the TIP.

Figure 7-7. Transportation Improvements for 2015 –2025



October 17, 2008

2025 Level of Service

With the listed improvements for 2015 to 2025, the City’s arterial and collector road system should operate within acceptable Levels of Service. Table 7-13 shows the volume to capacity and speed LOS measures with the proposed roadway improvements. Table 7-14 indicates the intersection LOS operation for 2025. With the intersection improvements described in Table 7-12, all intersections will meet the City’s LOS C standard.

Table 7-13. Future Level of Service Summary (2025)

Arterial	Volume/Capacity (Max %)	Average Speed (% of Posted)	LOS	
			(V/C)	Speed
Black Diamond - Ravensdale Road	22	100	A	A
Auburn - Black Diamond Road	42	100	A	A
Roberts Drive	18	98	A	A
Lake Sawyer Road	54	95	A	A
Baker Street	6	100	A	A
Lawson Street	6	100	A	A
Morgan Street	28	98	A	A
Railroad Avenue - Jones Lake Road	21	99	A	A
SR 169 North of City Limits	86	71	C	B
SR 169 within City limits	42	94	A	A
SR 169 South of City limits	53	95	A	A
Annexation Road	61	95	A	A
Lawson Connector	35	98	A	A
South Connector	60	95	A	A
North Connector - North of Morgan	88	81	C	B
North Connector - South of Morgan	88	64	C	C

Table 7-14. Future Intersection Level of Service Summary (2025)

Intersection	Control	Direction	LOS	Delay (sec)
SE 288th St/232nd Ave SE	Stop-Controlled	Northbound	A	9.3
Covington-Sawyer Rd/216th Ave SE	Signal	Average	A	8.6
SE 296th St & 219th Ave SE	Signal	Average	B	14.3
North Connector/ SR 169	Roundabout/Signal	Average	B	14.8
Black Diamond Ravensdale Rd-Pipeline Rd/SR 169	Roundabout/Signal	Average	C	28.3
SE Green River Gorge Rd/270th Way SE	Stop-Controlled	Southbound	A	8.6
Pipeline Rd/North Connector	Roundabout/Signal	Average	C	22.9
Roberts Dr/SR 169	Roundabout/Signal	Average	C	20.6
Pipeline Rd/Lake Sawyer Rd SE	Stop-Controlled	Eastbound	C	24.5
Lawson St/Lawson Connector	Stop-Controlled	Southbound	B	11.7
Auburn-Black Diamond Rd/Lake Sawyer Rd SE	Roundabout/Signal	Average	A	7.8
Roberts Dr/Morgan Street	Stop-Controlled	Eastbound	B	14.1
Roberts Dr/North Connector	Roundabout/Signal	Average	B	10.8
Auburn-Black Diamond Rd/Annexation Rd-Pipeline Rd	Roundabout/Signal	Average	B	14.2
Morgan St/North Connector	Roundabout/Signal	Average	B	16.2
Baker St/SR 169	Stop-Controlled	Eastbound	B	14.5
Baker St/Railroad Ave (Jones Lake Rd)	Stop-Controlled	Westbound	B	10.2
Lawson Street/SR 169	Stop-Controlled	Eastbound	C	17.5
Lawson Street/5th Avenue	Stop-Controlled	Southbound	A	9.5
Railroad Ave (Jones Lake Rd)/SR 169	Stop-Controlled	Westbound	A	6.7
Lake Sawyer Ext/Annexation Rd	Roundabout/ All-Way Stop	Average	B	14.0
South Connector & SR 169	Stop-Controlled	Eastbound	C	22.2
SE 288th St/216th Ave SE	Stop-Controlled	Northbound	C	17.0
Black Diamond Ravensdale Rd/Kanasket St	Stop-Controlled	Southbound	A	10.0

7.7.3. Public Transportation

Metro is expected to continue the three transit routes into the 2014 horizon year depending on ridership levels and available funding. Service frequency may be increased, however, depending upon demand in the Black Diamond, Maple Valley, and the Enumclaw areas. By the 2025 forecast year, additional park-and-ride facilities and transit service may be needed along SR 169. Other transit facilities may be necessary to serve new residential and employment within the City. The likely locations would be along Roberts Drive or Lake Sawyer Road. Long-range planning actions should identify potential parking facilities that could be used as park-and-ride facilities while being shared with other land uses.

7.7.4. Pedestrian and Bicycle Facilities

Sidewalks, walkways, and bicycle paths are integral parts of road design, as they are typically located within the roadway right-of-way. Sidewalks should be located on roads providing access to downtown areas, schools, parks, shopping centers, office buildings, and along transit routes. Sidewalk design standards should be applied by the City to address areas with high pedestrian activity, to increase pedestrian comfort and to allow for street plantings.

Bicycle lanes or paths are especially useful where bicycle traffic is high; especially near parks, schools, and other uses generating bicycle traffic. Bicycles can sometimes be accommodated without a bicycle lane on low volume local or collector roads. A five-foot minimum bicycle lane should be developed on higher volume roadways.

Bicycles are not appropriate on sidewalks designed for pedestrians. In low volume areas where bicycles and pedestrians share the sidewalk, an eight-to-ten foot wide path is needed. In areas with high bicycle traffic volumes, a separate five-foot bicycle path is needed.

Black Diamond recognizes the importance of pedestrian facilities for recreation and commuter uses. The Black Diamond Park Plan (1989) set development of the City's trail system as its first objective:

"Develop a trail system which will connect Black Diamond's historic district, neighborhoods, Jones Lake and Morganville with an integrated King County regional trail system and state trail system along the Green River."

Also, the Park Plan's 5th Objective states:

"Wherever possible encourage the construction and interconnection of trails."

The trail system is a major component of the City's proposed non-motorized transportation system. The City will identify future trail improvements in its update to the City's Park Plan.

Recommendations

Presently, the City has an incomplete sidewalk system. Sidewalks are provided at various locations within the City. The City road construction standards now require sidewalks on all new roads. It is recommended that sidewalks, walkways, or trails be constructed on all new and reconstructed facilities within the city limits.

There is not a system of bicycle paths or lanes in Black Diamond. New roadways should include bike lane provisions along arterial and collector facilities in Black Diamond. It is recommended that bike lanes be constructed along existing arterial and collector roadways in the future when they are scheduled for rehabilitation or reconstruction.

As stated in the transportation policies (T-7), the City encourages the development of a network of off-road facilities for non-motorized travel. The City should seek these facilities in connection with new development and should attempt to identify potential off-street bicycle routes (Class I) for cyclists wherever sufficient public demand and space can be made available. These non-motorized transportation improvements will be identified in the update to the City's Parks Plan.

The recommended non-motorized facilities in this plan will have a positive impact on the transportation system. The Plan's support for bicycle facilities would also help encourage alternatives for shorter length trips.

7.7.5. Transportation Demand Management Strategies

Transportation Demand Management (TDM) is a term encompassing a broad range of measures designed to promote alternatives to the single-occupant vehicle (SOV). By promoting these alternatives, mobility can be maintained without expanding the capacity of the road network.

TDM strategies generally include increased public transportation service, ride-sharing programs and other transportation systems management strategies, such as improved signal coordination and timing.

Commute Trip Reduction

Washington State's Commute Trip Reduction Law (RCW 70.94.521) requires all employers with more than 100 full-time employees in counties with populations

greater than 150,000 (including King County) to implement a commuter trip reduction (CTR) plan. Although presently there are no employers within Black Diamond that employ more than 100 employees, anticipated employment growth may necessitate a CTR program in the future.

Reducing congestion includes strategies to reduce demands on the transportation system. Some elements of a CTR plan include:

- provision of preferential parking or reduced parking charges, or both for HOV's (high-occupancy vehicles) and institution of paid parking for single occupant vehicles;
- provision of commuter ride matching services to facilitate employee ridesharing for commute trips;
- provision for subsidies for transit passes or employee use of HOV's;
- vehicles for car pooling and van pooling;
- permitting flexible work schedules to facilities employer's use of transit, car pools, and van pools;
- cooperation with transportation providers to provide additional service to the work site;
- provision for bicycle parking facilities, lockers, changing areas, showers for employees who bicycle or walk to work;
- establishment of a program to permit employees to work part or full time at home or at an alternative work site closer to their homes (telecommuting);
- establishment of a program of alternative work schedules such as compressed work week (four day work week); and
- employer-guaranteed ride home for employees who use alternative transportation modes. This program allows employees to use a company vehicle or provides a taxi reimbursement if there is a family emergency or they are required to work outside their normal work hours.

The City of Black Diamond encourages drivers of single occupancy vehicles to consider alternate modes of travel such as carpools, vanpools, transit, non-motorized travel, and alternative work schedules.

Land Use Policy

A City's ability to regulate land use is the most effective way available to manage travel demand. Land use plans and the planning and zoning sections of city codes are

the principal instruments for implementing land use policy. Some examples of land use policy instruments are discussed below:

Prohibition on Development

Prohibiting development is the most effective way of impacting traffic. Without development, traffic impact from a parcel is virtually non-existent. Imposing low density agricultural or open space zoning, where appropriate pursuant to GMA, is an example.

Zoning and Land Use Designation

Zoning and land use designation of individual parcels are very important in determining traffic impacts. In general, retail (particularly fast-food and convenience stores) generates the most traffic per employee or square foot of development. Conversely, industrial developments (such as heavy manufacturing and warehousing) generally have lower traffic impacts. Most other commercial activities (offices, medical, etc.) and residential areas fall somewhere in between these extremes.

Standards for Transportation Facilities

City codes may also regulate the number and location of driveways, the required minimum (and in some cases, maximum) number of parking spaces, the number and convenience of bicycle parking spaces, and sidewalk requirements. These requirements can provide for good design that can maximize the efficiency of the roadway system and can promote use of commute alternatives.

Recommendations

The City of Black Diamond should encourage demand management of the transportation system. This can be accomplished by the following:

- Encourage the use of buses, carpools, and vanpool programs through both private programs and the direction of Metro Transit;
- Promote flexible work schedules allowing use of transit, carpools, or vanpools;
- Promote reduced employee travel during the daily peak travel periods through flexible work schedules and programs to allow employees to work part- or full-time at home or at an alternate work site closer to home; and
- Encourage employers to provide TDM measures in the work place through such programs as preferential parking for high-occupancy vehicles, improved access for transit vehicles, and employee incentives for using High Occupancy Vehicles.

- Develop zoning and land use policies that promote land uses and development that are consistent with the City’s goals and visions and which require new development to adequately provide for the transportation needs of that development.

7.7.6. Parking Facilities

Residents of Black Diamond have expressed a concern for the lack of available parking in the “Old Town” area of Black Diamond, which is generally defined as the commercial area between SR169 and Jones Lake Road along Baker Street. As roads are improved or rebuilt, formal on-street parking should be considered.

In addition, vacant lots in the vicinity could be identified and considered for off-street parking within the “Old Town” area. The City should encourage, allow, or facilitate private construction of parking lots.

Likewise, available areas to provide parking facilities for weekend bicyclists driving to Black Diamond to ride should be identified. On-street parking should continue to be discouraged along the SR 169 corridor.

7.8. Funding Strategy

The Comprehensive Transportation Plan recognizes the planning and improvement programming process as ongoing and provides a basis for initiating the funding strategy. A funding analysis is included that examines the available sources to pay for the recommended improvements and new roadways. This analysis recommends those strategies which would be most beneficial for Black Diamond to pursue when identifying funding for the improvements outlined in the Six-Year Transportation Improvement Program (TIP).

During the TIP process each year, the City confirms the construction costs of the recommended improvements and new roadways and matches the appropriate funding strategy to construct the planned improvements. The TIP review also allows the City to reevaluate the need and timing for additional improvements.

Proposed Six-Year Financing Plan

The City is required to create a six-year financing plan for both transportation and capital facilities.

The Six-Year TIP is the result of an interactive process that balances the goals of all comprehensive plan elements. Financial planning for transportation uses the same

process as the financial planning for capital facilities; however, the timing and funding for transportation are restricted by the concurrency requirement and the binding nature of level of service standards.

Costs

The costs associated with transportation planning and transportation improvement programming include the following:

- Maintenance and operation of the existing and proposed system;
- Costs for designing and constructing new and/or expanded facilities;
- Capital costs;
- Transportation program costs; and
- General costs associated with administering, planning, and operating the system.

Costs associated with the transportation environment in Black Diamond include the cost of maintaining the existing City transportation facilities (roads, etc.); upgrading or expanding the vehicular road network, expanding the pedestrian system; and, providing bicycle facilities, system control (signage, markings, etc.), as well as transportation system planning and design. It should be noted that the City is not fiscally responsible for the costs associated transportation improvements required by new development.

Funding Sources

A number of financial strategies are available to the City to finance the transportation improvements identified in the Comprehensive Transportation Plan. **Table 7-15** lists these strategies, their availability, and recommendations for the City to consider when implementing the improvement program. Historically, the City has relied on general fund monies and contributions from land developers to construct roadway improvements.

Table 7-15. Summary of Possible Local Funding Sources for Transportation Improvements

Comments	Potential of Revenue Generation	Realistic Acceptance	Comments
Local Motor Vehicle Fuel Tax	Good	In-place	Funds distributed on a per capita basis
Local option Sales Tax	Good	Difficult	Requires County implementation

Comments	Potential of Revenue Generation	Realistic Acceptance	Comments
Impact Fees	Good	Good	Allows equitable funding of system improvements; some resistance by development community
Developer Contributions	Good	In-place	Development may support facilities that provide direct access; not likely to fund general system needs
Local Improvement Districts	Good	Difficult	Good for local access assessments for specific needs (e.g. sidewalks in commercial area); not good for mitigating through volumes
Bond Financing	Good	Moderate	Contrary to “pay-as-you-go” policy; may be little public acceptance if considered region wide bond measure
State and Federal Grants	Competitive	Fair	City has had some success in obtaining funds

Strategies

To provide a more consistent strategy for funding roadway improvements, the City should consider a more “pro-active” strategy for transportation funding.

Historically, the City has relied on general fund monies and contributions from land developers to construct roadway improvements within the City. This strategy has resulted in a “piece-meal” development of the transportation system, where small improvements are made to an intersection rather than implementing improvements based on an overall plan for an intersection. The following section compares the City’s current method of relying on developer contributions and to an impact fee-based strategy.

Developer Contributions

Description: Site developers contribute or build transportation facilities as part of their mitigation of traffic impacts to the road network. This strategy relies on Traffic Impact Analysis studies to identify intersections that no longer operate at acceptable standards. The City then requires developers to make necessary improvements to bring the intersection or roadway back to the City’s standard. The use of developer contributions requires careful review of traffic studies and proposed mitigation measures by City staff.

Benefits: The primary benefit is the potential for immediate concurrency of the traffic impacts created by the development. The improvement is in-place and open to

traffic as the development becomes operational. Contributions can also accelerate construction of some long-range transportation facility projects within the local jurisdiction. Both the developer and the City have the option of determining exactly when the improvement will be constructed. The option exists to have the developer do the work or fully fund a City administered project.

Disadvantages: The primary disadvantage is that developer improvements are focused on fixing the “immediate problem” and can result in solutions that may not be desired by the city. As mentioned earlier this “piece-meal” approach can often result in some unforeseen off-site impacts that may cause more traffic congestion or result in improvements that will need to be torn-out in the future to accommodate future improvements. If an intersection already operates below the standard, developers are only required to pay their “fair share” of the cost of an improvement -- often requiring the City to fund a portion of the improvement. Further issues can arise over how to deal with developments which are approved after the original developer has completed a major improvement (late-comers agreements).

City Application: There are several recommendations that have been made to not only accommodate growing background traffic volumes, but also to meet the needs of future development. Direct contributions by the planned development in that area would expedite construction of these roadway links. Improvement construction is closely linked to the actual development of the land. In some cases, development of the City’s recently annexed areas as identified in the Black Diamond Urban Growth Area Agreement of 1996 require that certain transportation improvements (e.g. Pipeline Road) be in place prior to the time of development and/or the impacts of this development upon the road system.

Impact Fees

Description: Local jurisdictions may assess impact fees on development to mitigate the impact caused by growth. This is based on the general acceptance of the principle that development adds to traffic congestion. Washington State law enables local jurisdictions to fund transportation improvements by assessing and collecting impact fees

Methodology: Impact fees can be assessed in several ways. The most popular way determines the traffic generated by the proposed development and applies a per trip fee. The per trip fee is developed through a traffic impact fee study, which determines the amount to be assessed. The assessment is based on the number of trips generated by expected levels of land development and the costs of the improvements needed to meet the future traffic development. The per trip fees are converted into land use-related measures such as dwelling units or square feet.

The city must develop and administer an accounting system. The funds are closely monitored to ensure that they are expended within a suitable time-frame (generally within six years from the date of payment) following development of the parcel on transportation-related improvements near the development.

Benefits: The city directly receives the funds, marked for specific transportation improvements, directly from the source of traffic generation – the developer. These funds can be used to leverage grant funding by meeting the local matching requirements for cities.

Disadvantages: In general, the fees collected would not be expected to fully-fund the planned improvement thus requiring funding from additional sources. Careful analysis is needed to determine the appropriate fee structure that considers factors such as traffic related to adjacent communities and general growth in traffic levels. Questions can be raised on the methodology used to develop the “per trip fee” and the validity of assessing a generic broad-based fee on unique traffic impacts. Implementation of an impact fee system may also cause some areas to remain undeveloped, which would have otherwise been developed.

City Application: Impact fee systems are useful for communities that experience rapid development of multiple large vacant parcels. In the City of Black Diamond, the primary cause for needed transportation improvements is the future growth associated with and caused by planned development of several large undeveloped parcels. An impact fee analysis is needed to determine whether or to what extent an impact fee system would generate the revenue needed for the system improvements and to determine the appropriate fee structure. Following the Black Diamond City Council adoption of an ordinance enabling impact fee collection, a suitable accounting system will need to be developed to ensure collection of fees on all future developments.

7.9. Plan Administration

7.9.1. Funding Matrix

Table 7-16 presents the recommended improvements, their estimated cost, and the time frame in which they would be constructed, along with a suggested funding source. Future detail for each project will be developed as part of the annual TIP process.

This section summarizes concurrency for the City to use in administering the comprehensive transportation plan.

7.9.2. Concurrency

Legislative Requirement

The Growth Management Act requires that each city and county incorporate a Concurrency Management System (CMS) into their comprehensive plan transportation element. A CMS is a policy to determine whether adequate public facilities are available to serve new developments.

“Local jurisdictions must adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development”. (RCW 36.70A.070).

The term “concurrent with the development” is defined to mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six-years of development.

Table 7-16. Transportation Improvement Project – Cost Estimates (2008 Values)

Figure 7-10. 18 Year Transportation Improvement Program													2008 Cost Estimates		
Improvement	From	To	Length (miles)	Total Project Cost	2008	2009	2010	2011	2012	2013	2014	2015-2025	Type of Improvement	Potential Funding	
New Roads															
Annexation Road	Robert's Drive	Appx. Location on SR	1.5	\$10,166,371								\$10,166,371	New roadway construction	Development	
Pipeline Road	SR 169	Lake Sawyer/Black	1.5	\$9,142,984								\$9,142,984	New roadway construction	Development	
Roberts Drive Reconstruction	SR-169	Rock Creek Bridge	1.09	\$2,100,000					\$2,100,000				Construct 36' wide minor arterial roadway	Grant/Local/Development	
North Connector	SR 169	South Connector	1.9	\$6,813,145								\$6,813,145	Construct 36' wide minor arterial roadway	Development	
Lake Sawyer Road Extension	Auburn-BD Rd	Annexation Rd	0.4	\$2,682,581								\$2,682,581	Construct 36' wide minor arterial roadway	Development	
South Connector	Annexation Rd	SR-169	1.5	\$5,996,613								\$5,996,613	Construct 36' wide minor arterial roadway	Development	
Overlays															
Lake Sawyer Road	Auburn Black Diamond Rd.	320th blk	0.5	\$100,000	\$100,000								Overlay	Grant/Local	
233rd Avenue SE	SE 293 Pl	South to end	0.1	\$35,000		\$35,000							Repair and overlay existing roadway	Local	
Auburn Black Diamond Road	Bruckner's Way	West City Limits	0.06	\$100,000		\$100,000							Repair and overlay existing roadway	Local	
SE 288th St	236th Ave SE	216th Ave SE	0.7	\$230,000			\$230,000						Overlay existing roadway	Grant/Local	
Pacific Street Neighborhood Improvements	Lawson St.	Southerly Terminus of Pacific/ Fifth Ave	0.2	\$500,000					\$500,000				Widen and Pave existing gravel roads, install storm drainage improvements	Grant/Local	
Commission Avenue	Morgan Street	Appx 300' SW of Morgan St.	300'	\$20,000							\$20,000		Repair and overlay existing roadway	Local	
Alley from Park Street to Railroad Ave to SR-169	Park St.	SR-169	0.06	\$31,000							\$31,000		Pave an existing gravel roadway	Local	
Lawson Street	City Limits	SR-169	1.06	\$500,000							\$500,000		Overlay existing roadway	Local	
Lk Sawyer/ Black Diamond Road	307th PL SE	SE 292 ST	1.2	\$225,000							\$225,000		Overlay existing roadway	Grant/Local	
Plass Road	SR-169	City Limits/Existing Pavement	0.3	\$85,000							\$85,000		Pave an existing gravel roadway	Local/ LID	
Overlay with minor widening															
Sixth Avenue/ Baker Street	Lawson St.	SR-169	0.25	\$26,000							\$26,000		Minor widening and overlay of existing asphalt roadway	Local	
Fifth Avenue North	Lawson St.	Northerly End	0.2	\$26,000							\$26,000		Minor widening and overlay of existing asphalt roadway with installation of storm drainage	Local	
Minor Road Improvements															
Lake Sawyer Road Safety Improvement and Culvert Replacement	South Creek Crossing	North Creek Crossing	N/A	\$300,000							\$300,000		Safety Improvement/Install guard rail both sides of roadway. Install new culvert(s).	Grant/Local	
Major Road Improvements															
SR-169 widening	300 ft. South of Lawson St.	300 ft. North of Baker St.	0.2	\$1,350,000					\$1,350,000				Widen SR 169 to three lanes and widen approaching Intersections	Grant/Local/Development	
Railroad Ave Construction	Merino Street	Baker Street	0.21	\$1,700,000	\$1,700,000								Rebuild Existing Roadway/Stormdrainage	Grant/Local	
Traffic Controls															
SR169/Roberts Dr/Lawson Connector/Street				\$435,484							\$544,355		Roundabout or Signal	Development/Local	
Jones Lake Rd/Loop Connector/SR-169				\$435,484							\$544,355		Roundabout or Signal	Development/Local	
Pipeline Road/SR-169				\$435,484								\$544,355	Roundabout or Signal	Development	
North Connector/SR-169				\$435,484								\$544,355	Roundabout or Signal	Development	
Pipeline Road/North Connector				\$435,484								\$544,355	Roundabout	Development	
Pipeline Road/Lake Sawyer Rd				\$435,484								\$544,355	Roundabout	Development	
Roberts Drive/North Connector				\$435,484								\$544,355	Roundabout	Development	
Auburn-Black Diamond Rd/Pipeline Rd				\$435,484								\$544,355	Roundabout	Development	
Morgan St/North Connector				\$435,484								\$544,355	Roundabout	Development	
Lake Sawyer Ext/Annexation Rd				\$163,306								\$163,306	Roundabout	Development	
South Connector/North Connector				\$435,484								\$544,355	Roundabout	Development	
Channelization															
SR 169/Jones Lake Road				\$300,000							\$300,000		Channelization Improvements	Grant/Development	
Intersection Improvements in Morganville Neighborhood				\$80,000							\$80,000			Grant/Local	
Lawson St. & Newcastle Dr. Intersection Repair				\$25,000			\$25,000							Grant/Local	
B.D / Ravensdale Road Intersection				\$227,000				\$227,000						Grant/Local/Development	
Sidewalk															
Morgan Street Sidewalk Phase II	Abrams Avenue	Robert's Drive	0.3	\$580,000		\$580,000							Install new sidewalk	Grant/Local	
Robert's Drive Pedestrian Trail/Sidewalk	SR 169	Morganville Neighborhood	0.8	\$1,500,000			\$1,500,000						Install new pedestrian trail/sidewalk	Grant/Local	
Lawson Hill Sidewalk	City Limits	SR 169	1.06	\$450,000							\$450,000		Install new sidewalk	Grant/Local	
TOTALS				\$49,809,839	\$1,800,000	\$715,000	\$1,755,000	\$227,000	\$3,950,000	\$680,000	\$2,451,710	\$39,319,839			

Strategies that could be used in order to maintain compliance with concurrency include:

- Increasing roadway capacity or adopting transportation system management (TSM) strategies to accommodate the increase in demand use to development; and
- Adopting TDM strategies, such as increased transit access and rideshare programs, to offset the increase in demand.

Often it is a combination of improvements and strategies that create the most effective CMS.

CMS Implementation

The Growth Management Act also requires cities to formalize a CMS into a process that shows measurable results. The City established a position on concurrency in a Concurrency Policy (T-12). The City's CMS program is further defined below.

A. LOS standards and providing adequate funding

The City recommends the following LOS standards:

Roadway: LOS C for all surface roadways and intersections within the City of Black Diamond.

Transit: LOS standard is expressed in terms of a goal to monitor existing transit facilities and to improve transit operations as demand dictates.

Other: LOS standard is expressed in terms of a goal to provide pedestrian and bicycle facilities throughout the City of Black Diamond.

A Transportation Improvement Program with a potential Funding Plan has been prepared in connection with the Comprehensive Plan. All facilities meet the LOS standards based upon existing, six-, and twenty-year forecasts. The potential Funding Plan identifies possible sources for improvements identified in the comprehensive transportation plan.

B. Monitoring/Analyzing Available Transportation Capacity

The City of Black Diamond requires traffic impact analyses (TIA) for developments that impact the transportation system. A TIA is a specialized study of the impacts a development will have on the surrounding transportation system. It is specifically concerned with the generation, distribution, assignment, and accessibility of traffic to and from the development, and the impact of development traffic on the adjacent

roadway system. The City of Black Diamond's guidelines for TIAs are similar to those of other communities in western Washington regarding when a TIA is required for a development and the scope of work needed to effectively analyze the impacts of site generated traffic. Generally, if a development adds 10 or more vehicles in the PM peak hour a TIA is required. If deemed necessary by the City, the TIA may also address transit and other modes for impact assessment. The City uses the adopted LOS standards as guidelines for assessing concurrency and mitigation.

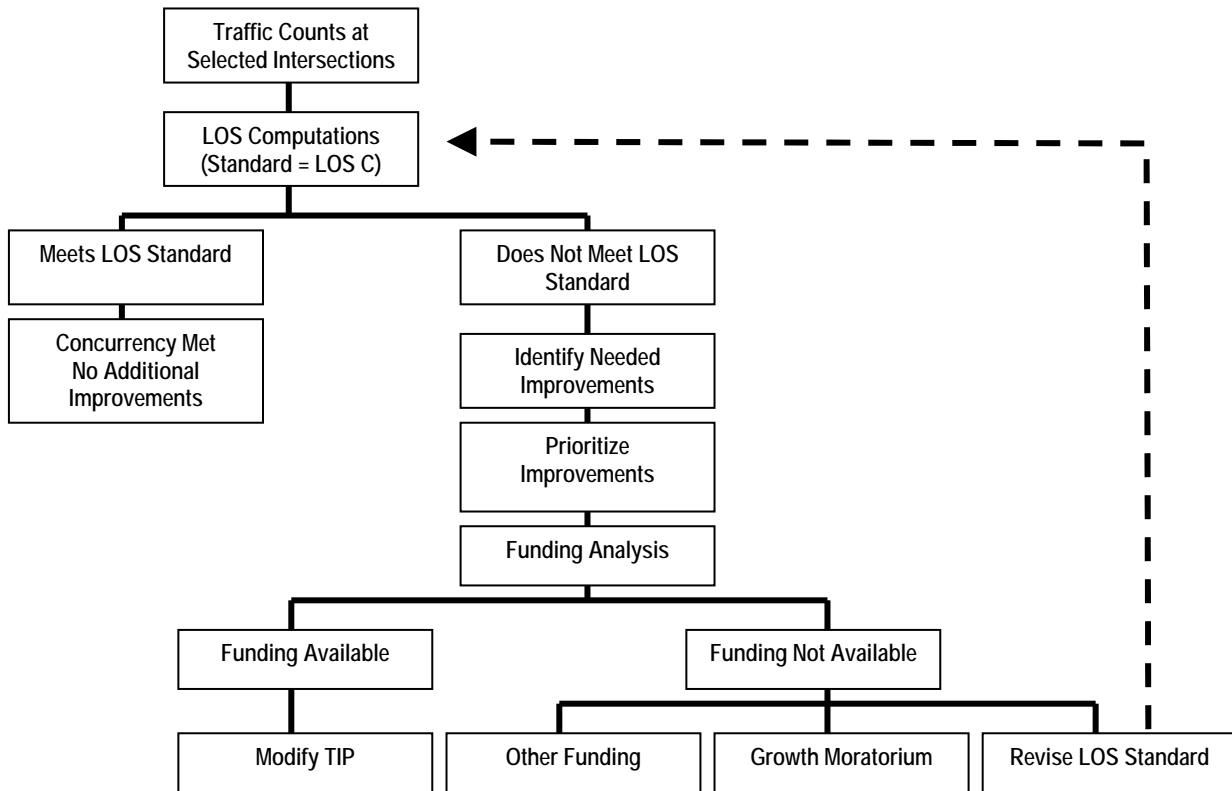
A system to monitor concurrency was developed and is illustrated in Figure 7-8. The most important process is monitoring available funding for necessary improvements. As noted in the chart, there are four options for the City to consider:

- **Other Funding Sources** - look for other funding sources, such as dedicating the second 1/4 of 1 percent of the Real Estate Excise Tax for street projects.
- **Reassess LOS standards** - GMA allows a community to change LOS standards annually. Any changes to LOS standards should be done in connection with annual TIP reviews.
- **Reassess Land Use** - GMA requires that if the funding for capital improvements (such as roads) cannot be met, the land use or levels of development within the plan should be re-assessed.
- **Growth Moratorium** - per GMA requirements. If funding cannot be met, and the LOS standard unchangeable, then GMA requires development to be stopped until either issue can be resolved.

C. Analyzing External Influences on Concurrency Management System.

The City's LOS standards will also be used to evaluate impacts to the transportation system created by development outside the City. The City's annual TIP development process will evaluate if concurrency standards have been exceeded and identify the improvements needed to maintain the City's standards. The City should seek appropriate funding sources to mitigate through traffic impacts.

Figure 7-8. Concurrency Management System



7.10. Transportation Plan

The Black Diamond Comprehensive Transportation Plan emphasizes that the transportation system should be designed to provide safe and efficient vehicular circulation, while at the same time maintaining a pedestrian-oriented "small town" environment. The City plans to continue developing its transportation network as a grid system. The Plan will utilize a grid of similar smaller roads as well as linking existing and planned neighborhoods to accommodate future growth. Street construction standards are to be used to reinforce the transportation goals and policies.

The Plan's policy guidance includes using the existing transportation system efficiently and encouraging transportation alternatives, such as transit, HOV use, and pedestrian and bicycle facilities. Cooperation between affected jurisdictions (City of Black Diamond, State of Washington, King County and the Puget Sound Regional Council) in planning for state highways and county roads is also supported by City policies. The presence of both state and county roads as the primary arterial system requires coordination with King County and Washington State in the planning of these roads.

7.10.1. Alternative Modes

The Comprehensive Plan identifies that a comprehensive network of non-motorized facilities, including trails, sidewalks, and bicycle facilities to be developed. These facilities would enhance non-motorized mobility options and reduce automobile dependency. Similarly, an off-street parking plan for Old Town, a park-and-ride for City residents, and visitor parking to serve bicyclists who come to Black Diamond to ride on weekends are identified as desired elements of the Plan.

7.10.2. Funding Strategies

To provide for the necessary transportation facilities, the Plan identifies an ongoing program of transportation facility planning and development funded through impact fees, developer contributions, and public funds. The Plan identifies that the private-sector should fund its fair share of transportation facility improvement costs.

7.10.3. Transportation Improvement Program

Road improvement projects for existing deficiencies are identified for the short term (2008 to 2014) as required by GMA. New roads are identified for both the short-

term and the long-term (2015 to 2025) for better circulation for vehicles. The road system identified in Figure 7-5 and Figure 7-7 form the basis for the long-term motorized transportation improvements. Non-motorized transportation improvements will be identified in the City's update to the Trails Plan.

The improvements proposed for the short and long term are intended to mitigate the impacts of anticipated traffic growth. Construction of additional roads identified in the proposed Arterial and Collector System Plan will serve to divert and spread traffic flows.

7.10.4. Transportation and Land Use Element Coordination

The Black Diamond Comprehensive Plan Transportation and Land Use Elements are intended to work together to maintain the City's "small town" character in the face of increasing regional traffic. Surrounding King County land uses and other regional land use patterns may produce adverse effects on Black Diamond traffic. Land use patterns that perpetuate automobile dependency would be expected to increase traffic in Black Diamond. It should be noted that an isolated change of land uses within the City may not, by itself, be expected to produce improved City-wide mobility.

7.10.5. Transportation Facilities and LOS Standards Coordination

Intergovernmental coordination is essential for the cost-effective provision of transportation services. The City does not possess the resources nor is it fiscally responsible for addressing all the of the transportation circulation system needs that might be identified through transportation planning. The City has reviewed the plans of the County and State Department of Transportation and has assessed the impact of their plan on the transportation facilities in Black Diamond. The level of service standards and proposed transportation improvements to be adopted by this element are not inconsistent with the level of service standards or plans of other jurisdictions. In addition, the City is committed to actively seek financial resources necessary to achieve the goals of the Comprehensive Transportation Plan.

7.11. Transportation Goals and Policies

Transportation goals and policies provide a framework for the comprehensive transportation plan and also a means for making decisions. The goal of providing a high quality transportation system must be constantly balanced with the goal of minimizing public expenditures. Similarly, the goal of quality transportation must be balanced with the effects a particular project may have on the environment.

The goals and policies presented below should be used to help guide the City’s decision making. Because it is possible that some goals and policies could conflict with one another in particular circumstances, the City and the public may be called upon to balance the various goals. The analysis of any given proposal should consider all modes of transportation and all methods of efficiently managing the transportation system. Included in the text is a discussion of the concepts that support the goals and policies.

7.11.1. Transportation Goals and Policies

The goals set forth below form the foundation for this transportation plan. The planning policies describe how the goals will be measured and evaluated.

Goal T-1: Establish an adequate and well-maintained transportation system that provides safe and cost-efficient movement of people and goods

Design, Construction and Maintenance Policies

The following policies guide the design, construction, operation, and maintenance of the City’s transportation system. An underlying objective is to develop a multi-modal transportation system to serve all existing and future land uses. The policies address design and construction standards of transportation facilities to accommodate all types of transportation safely and efficiently. Level of Service standards, maintenance standards, and the need for Transportation Demand Management strategies are also addressed.

Policy T-1 Roadway Design Policy: To ensure adequate and safe access to property via a system of public and private roads.

A range of design and construction standards for all facilities have been adopted by the City. All roadway design will be coordinated with King County, Washington State, the Federal Highway Administration, and Metro Transit to achieve compatible design criteria, where applicable. The standards will comply with federal and state design criteria.

Policy T-2 Connectivity Policy: To provide an interconnected network of roads and trails for ease and variety of travel.

The City of Black Diamond recognizes that increasing connections throughout the City not only reduces traffic congestion but also increases the sense of unity in the community. Therefore, the City will limit the use of cul-de-sacs, dead end roads, loops, and other designs that form barriers. The City will encourage the use of trails

and other connections that provide ease of travel between neighborhoods and community centers.

Policy T-3 Level of Service Standard Policy: To adopt levels of service that reflect the preference of the community.

The City will adopt a level of service “C” for peak-hour traffic flow on roadways and intersections within the Black Diamond city limits. The levels of service are based upon the *Highway Capacity Manual* and are detailed in the Transportation Element.

Policy T-4 Maintenance Policy: To maintain the City’s transportation system at a level that is comparable with the design standards applied to new facilities.

The City will establish programs and schedules, such as a pavement overlay program, for the level and frequency of maintenance on its roadways, bikeways, and sidewalks.

Policy T-5 Access Policy: To limit and provide access to the road network in a manner consistent with the function and purpose of each roadway.

The City will seek consolidation of access points to state highways, arterials, and major collectors. This will complement the highway and arterial system, reduce interference with traffic flows on arterials, and discourage through traffic on local roads.

Policy T-6 Transportation Demand Management (TDM) Policy:

The City of Black Diamond will encourage demand management of the transportation system by:

1. Encouraging the use of High Occupancy Vehicles - Buses, carpools, and vanpool programs through both private programs and the direction of Metro Transit;
2. Promoting flexible work schedules allowing use of transit, carpools, or vanpools;
3. Promoting reduced employee travel during the daily peak travel periods through flexible work schedules and programs to allow employees to work part- or full-time at home or at an alternate work site closer to home; and
4. Encouraging employers to provide TDM measures in the work place through such programs as preferential parking for HOVs,

improved access for transit vehicles, and employee incentives for sharing rides.

Policy T-7 Pedestrians, Bicycles, and Transit Policy:

To lessen the dependence and influence of the automobile and to encourage travel by other means and to provide for the safety of pedestrians and bicyclists. City actions will:

1. Develop design standards for new roadways that incorporate features required by pedestrian, bicycle and transit facilities;
2. Promote transit by developing design standards that provide accessibility through bus pullouts, pedestrian access to bus stops and bus shelters; and,
3. Seek to complete its sidewalk system and pursue development of a network of off-road facilities for non-motorized travel.

Policy T-8 “Old Town” Parking Policy:

To encourage the construction of additional parking in the historic “Old Town” area of Black Diamond.

The City recognizes that parking in the “Old Town” area of Black Diamond is essential to the continued growth and prosperity of the businesses in this area of the City. Therefore, the City will promote the addition of parking spaces in the “Old Town” area of Black Diamond, possibly to include the use of a Local Improvement District to fund these parking improvements.

Goal T-2: Provide a transportation system that preserves the “small town” character of the City and minimizes the environmental impact to critical areas.

Road Character and Right-of-Way Policies

Policies contained in this subsection promote the unique “small town” characteristics of Black Diamond and address issues regarding land use development emphasizing desired locations for development throughout the City of Black Diamond. These policies also address the City’s view on right-of-way issues.

Policy T-9 “Small Town” Character Policy:

To enhance the “small town” character that the City currently possesses.

This can be done by the following:

1. Discourage widening of SR 169 to a four or five lane facility thus creating a “thoroughfare” that will tend to divide the City;
2. Encourage landscaping, parkway trees, and compatible architecture in the design and construction of roadways, especially SR 169, and other facilities along selected corridors. Minimize obtrusive signs through provisions in the zoning code;
3. Limit the number of traffic signals within the City of Black Diamond by considering the use of roundabouts as the first solution where appropriate; and
4. Adopt new road standards and development guidelines to minimize paving widths; preserve desirable trees and vegetation through minimized right-of-way clearing; and allow creative designs.

Policy T-10 Environmental Protection and Conservation Policy:

To design transportation facilities within the City of Black Diamond that minimizes adverse environmental impacts resulting from both their construction and operation.

The City will fulfill this need by:

1. Aligning and locating transportation facilities away from environmentally sensitive areas;
2. Requiring storm drainage system designs to avoid direct drainage into environmentally sensitive areas;
3. Mitigating unavoidable environmental impacts; and
4. Soliciting and incorporating the concerns and comments of interested parties provided such comments are consistent with the goals, objectives, and policies of the Comprehensive Plan.

Policy T-11 Right-of-Way Policy:

To retain all existing transportation system rights-of-way, and to identify, acquire, and protect such rights-of-way for future roadway and bikeway facilities.

The recommendations provided in this Transportation Plan will be used by the City to identify current and future transportation system

needs. The City will identify specific transportation corridors and protect needed rights-of-way as soon as possible. Some methods used to acquire and preserve rights-of-way include:

1. Requiring dedication of rights-of-way as a condition for development when the need for such rights-of-way is linked to the development;
2. Requesting donations of rights-of-way to the public;
3. Purchasing rights-of-way by paying fair market value when donations and/or required dedications are not possible;
4. Acquiring development rights and easements from property owners; and,
5. Protecting rights-of-way from encroachment by structures, substantial landscaping, or other obstruction is also encouraged by the City. Protection methods may include minimum setback requirements for property improvements and development of guidelines regarding installation and maintenance of landscaping within the public right-of-way.

Goal T-3: Provide a transportation system that has the adequate financing needed to fund the necessary transportation improvements. Funding will come from both public and private sector participation.

Funding, Concurrency, and Impact Mitigation Policies

The City faces the challenge of making the best use of the limited funds available to finance transportation projects. Issues addressed by these policies include concurrency, identifying favorable funding sources, and deciding impact mitigation assessments.

Policy T-12 Concurrency Policy:

To ensure that transportation improvements or strategies are constructed or financed concurrent with development. This also includes concurrency with plans of other transportation agencies.

The City requires either a construction or financial commitment for necessary transportation improvements from the private or public sector within six years of development. To monitor these commitments, the City's Concurrency Management System includes the following:

1. Assessing level of service;
2. Determining compliance with the adopted level of service standards;
3. Identifying facility deficiencies; and,
4. Making appropriate revisions to the Six-Year TIP.

Policy T-13 Funding Sources Policy:

To secure adequate long-term funding sources for transportation through all feasible and available methods.

These methods may include:

1. Taking advantage of state funds, such as the Transportation Improvement Account (TIA), and the Public Works Trust Fund (PWTF);
2. Encouraging Washington State Department of Transportation improvements on the state highway system;
3. Encouraging the use of Local Improvement Districts (LID) by property owners to upgrade roads to meet City road standards;
4. Requiring impact mitigation payments and/or seeking voluntary contributions from developers; and
5. Seeking funding from the federal and all other available grant sources.

Policy T-14 Financial Impact Mitigation Policy:

Require developers contribute their fair share towards the transportation improvements required to meet the LOS standards.

Impact mitigation efforts may include:

1. Requiring developers to assist in providing additional transportation facilities and services in proportion to the impacts and needs generated by development; and,
2. Encouraging developers to design projects that generate less vehicular traffic.

Goal T-4: A transportation system that is compatible with Washington State, King County, neighboring cities, and other transportation providers.

Coordination and Consistency Policies

The policies contained in this subsection address such issues as multi-agency planning and coordination, consistency of transportation improvement programs and designs among jurisdictions, and cooperation among agencies that fund, build and operate the transportation system within the City of Black Diamond.

Policy T-15 Traffic Impact Analysis Policy:

Require that a Traffic Impact Analysis (TIA) be prepared for new developments.

The City will require a TIA for new developments that are proposed in the city limits of Black Diamond that generate ten (10) or more vehicles in the PM peak hour or are otherwise determined to have the potential for an adverse impact upon the City's transportation system. The study should include site access points, arterial and collector roadways and intersections of arterials and collectors that are impacted by 10 or more PM peak hour trips, and may not be limited to intersections located within the City of Black Diamond. The TIA shall be prepared by a licensed traffic engineer and will be accepted after approval by the City.

Policy T-16 Intergovernmental Agency Coordination Policy:

To coordinate planning, construction, and operations of transportation facilities and projects with other governmental agencies.

This policy supports and complements the transportation functions of Washington State, King County, neighboring cities, Puget Sound Regional Council, Metro Transit, and other entities responsible for transportation facilities and services in the City of Black Diamond.

Policy T-17 Multi-modal Coordination Policy:

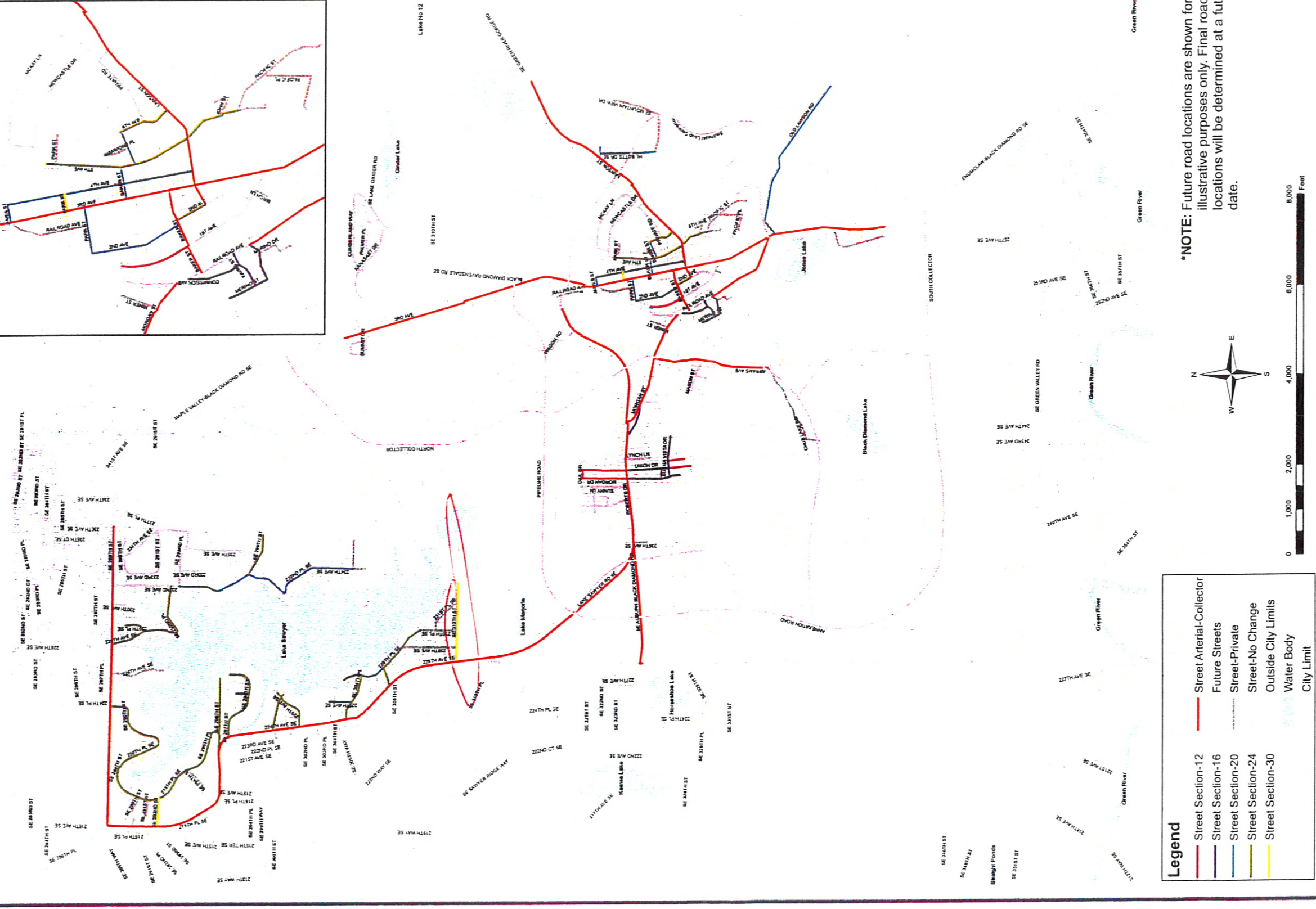
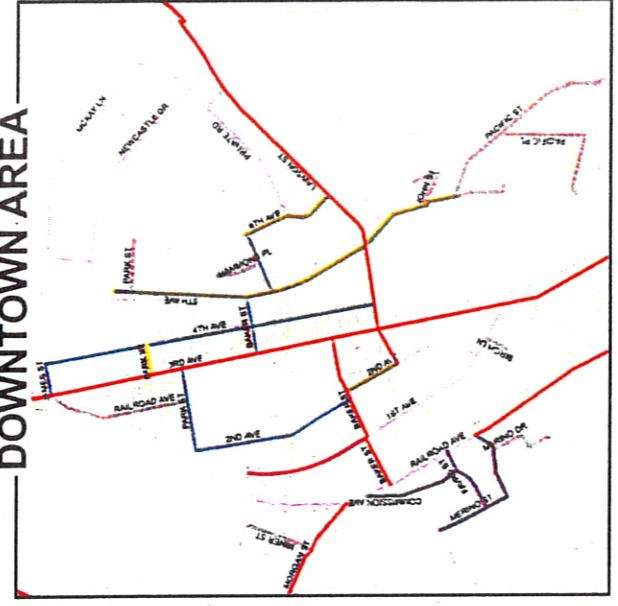
To coordinate planning and operation of efficient and varied means of transportation for the City of Black Diamond's transportation system.

This will be accomplished by the following:

1. Metro Transit provides transit service in the Black Diamond urban area. The City invites Metro to evaluate expanding regular fixed transit service within Black Diamond.

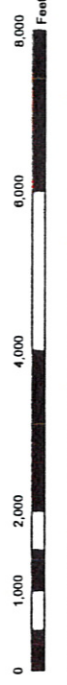
2. The City will continue to coordinate with Metro Transit to provide transit connections between Black Diamond and other parts of King County.
3. The City will support development of regional park-and-ride lot facilities by Metro Transit and the Washington State Department of Transportation. The City encourages such lots on sites promoting compatible land uses and along primary travel corridors for travel to King and Pierce County urban areas.
4. The City will provide for pedestrian and bicycle facilities in the City's road system through provisions in the City's design standards.

DOWNTOWN AREA



Legend

— Street Section-12	— Street Arterial-Collector
— Street Section-16	— Future Streets
— Street Section-20	— Street-Private
— Street Section-24	— Street-No Change
— Street Section-30	— Outside City Limits
	— Water Body
	— City Limit

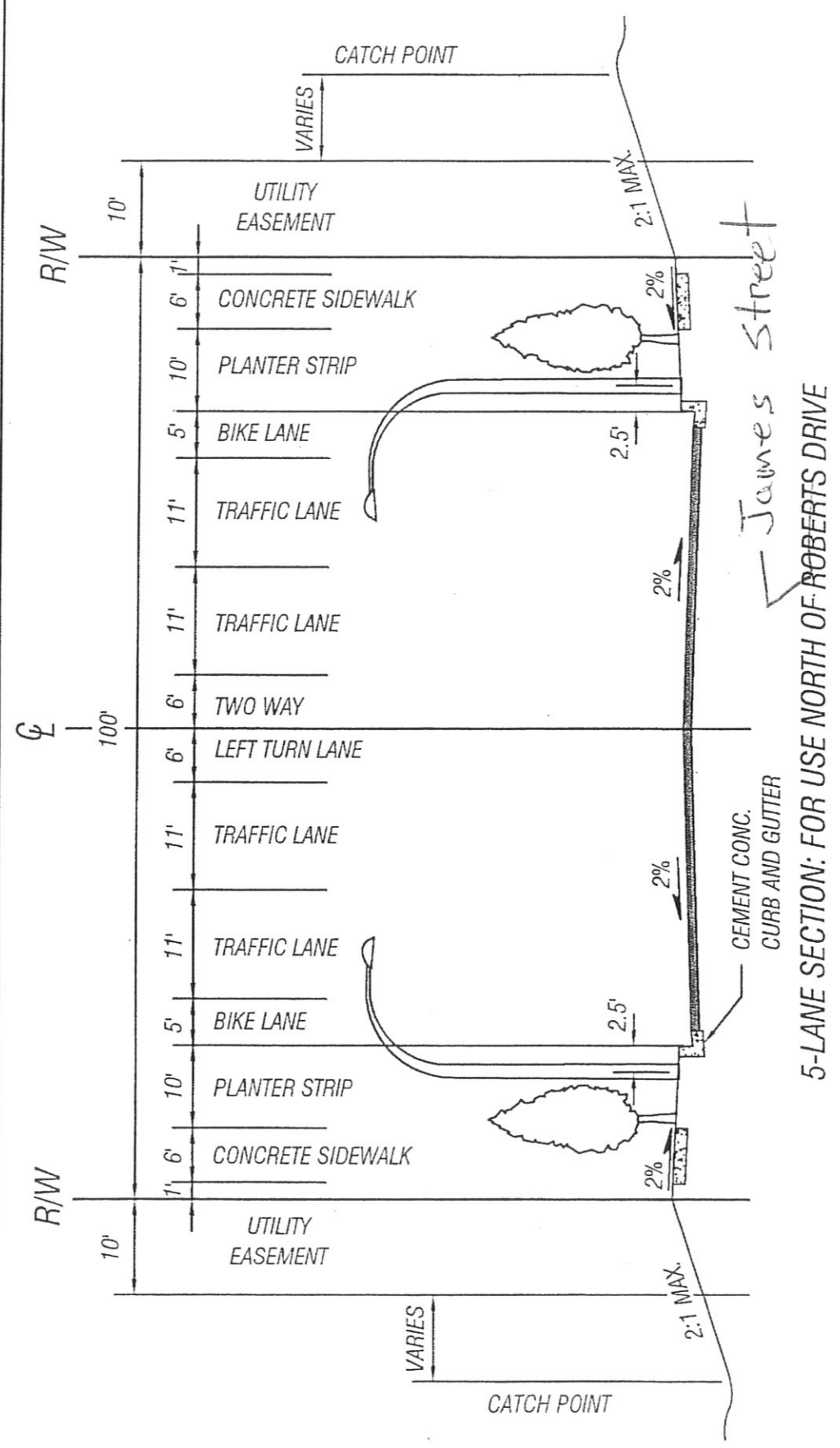


***NOTE:** Future road locations are shown for illustrative purposes only. Final road locations will be determined at a future date.

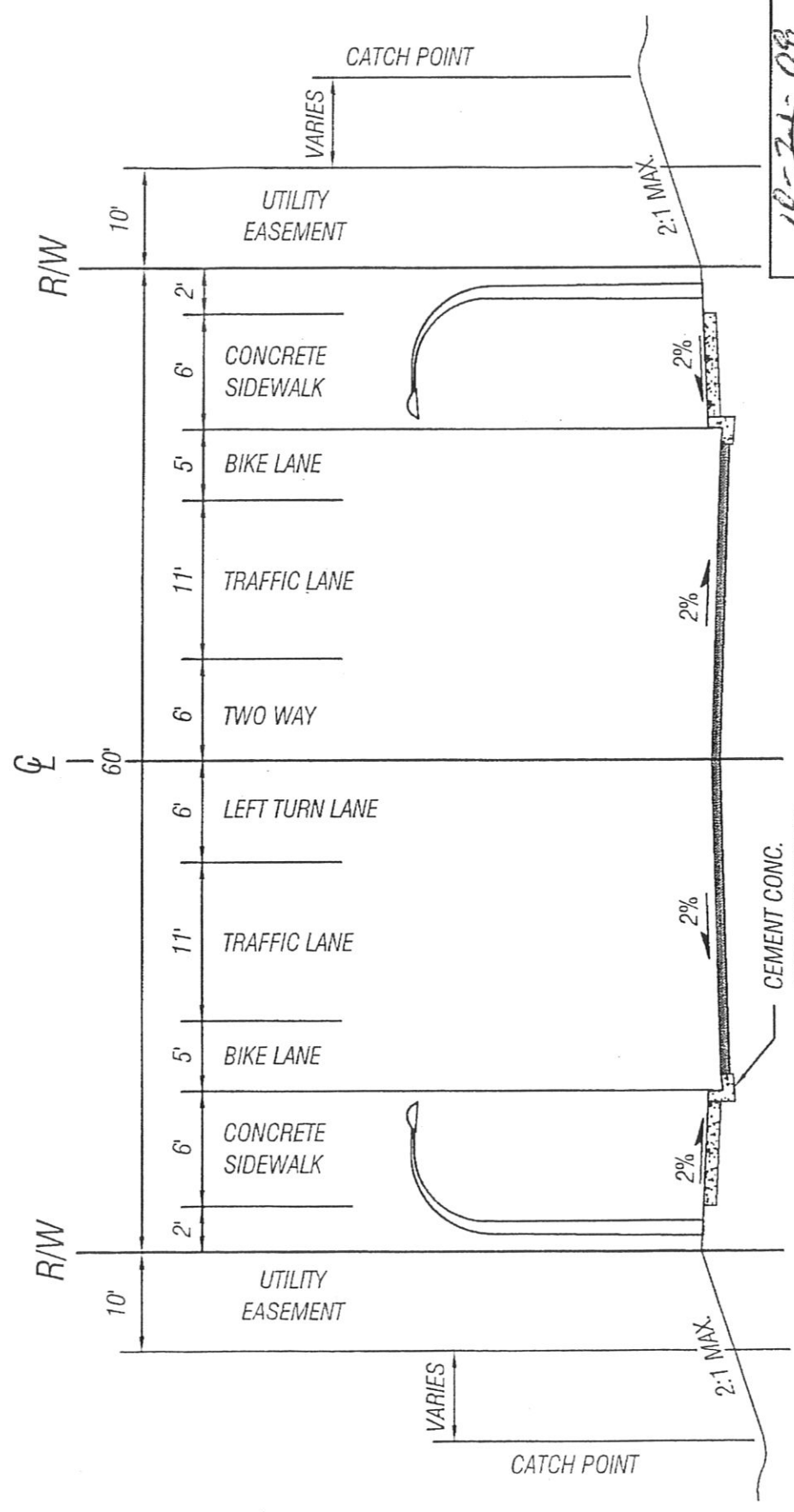


PacWest Engineering, LLC
 5400 Pacific Highway East, Unit 9-0
 Fife, WA 98424
 Phone (253) 926-3400
 Fax (253) 926-3402

CITY OF BLACK DIAMOND
 Street Classification Map
 Transportation Planning Study, September 2008



5-LANE SECTION: FOR USE NORTH OF ROBERTS DRIVE

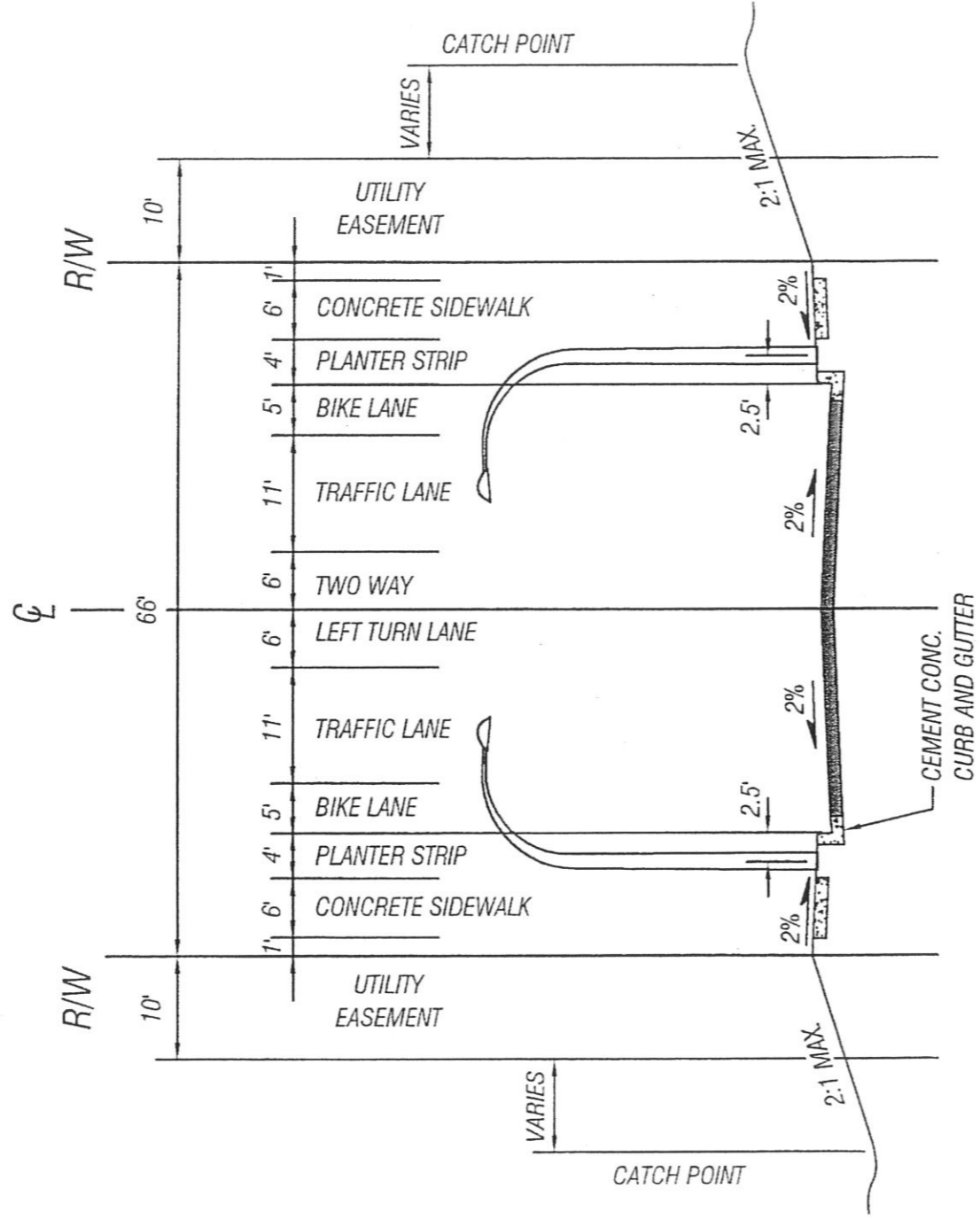


3-LANE SECTION: FOR USE SOUTH OF ROBERTS DRIVE



PRINCIPAL ARTERIAL
 SR-169
 STANDARD DWG TR-1 NOT TO SCALE 01/01/08





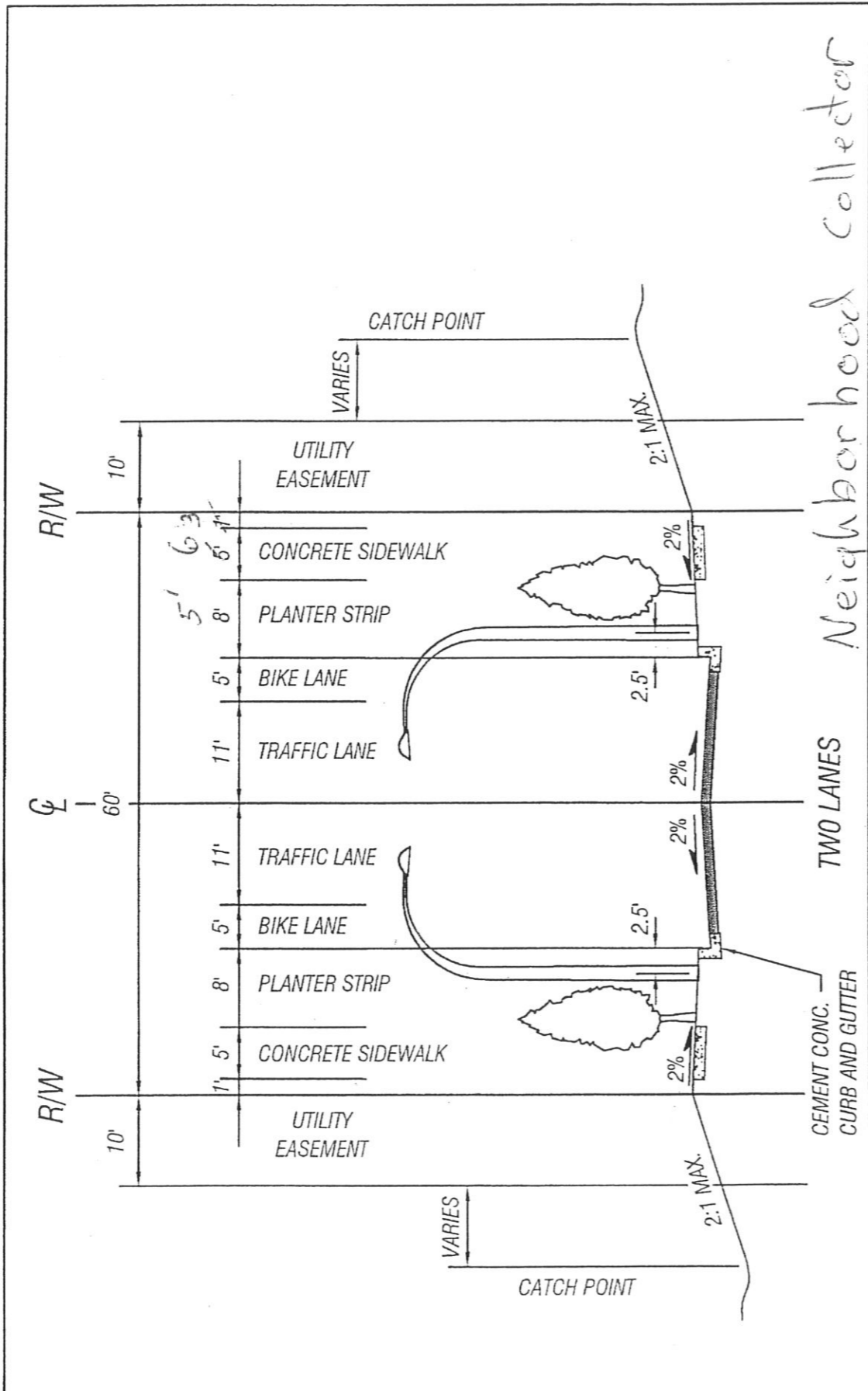
10-21-08
 LEONARD L. SMITH
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 State of Washington
Robert J. Smith



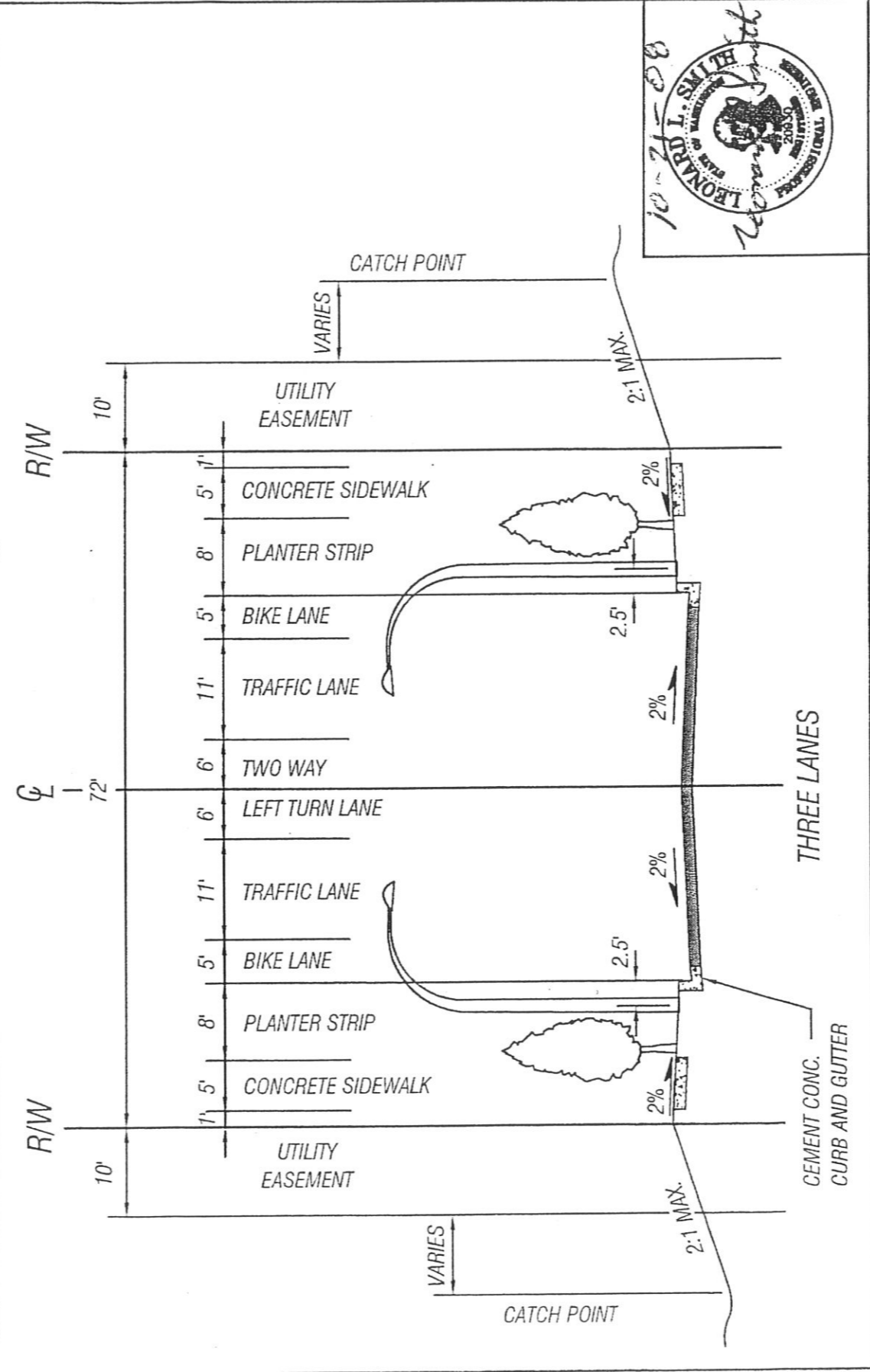
MINOR ARTERIAL

STANDARD DWG TR-2 NOT TO SCALE 01/01/08





Neighborhood collector



10-27-08
Leonard L. Smith

PacWest Engineering
Fife, Washington

COMMERCIAL COLLECTOR

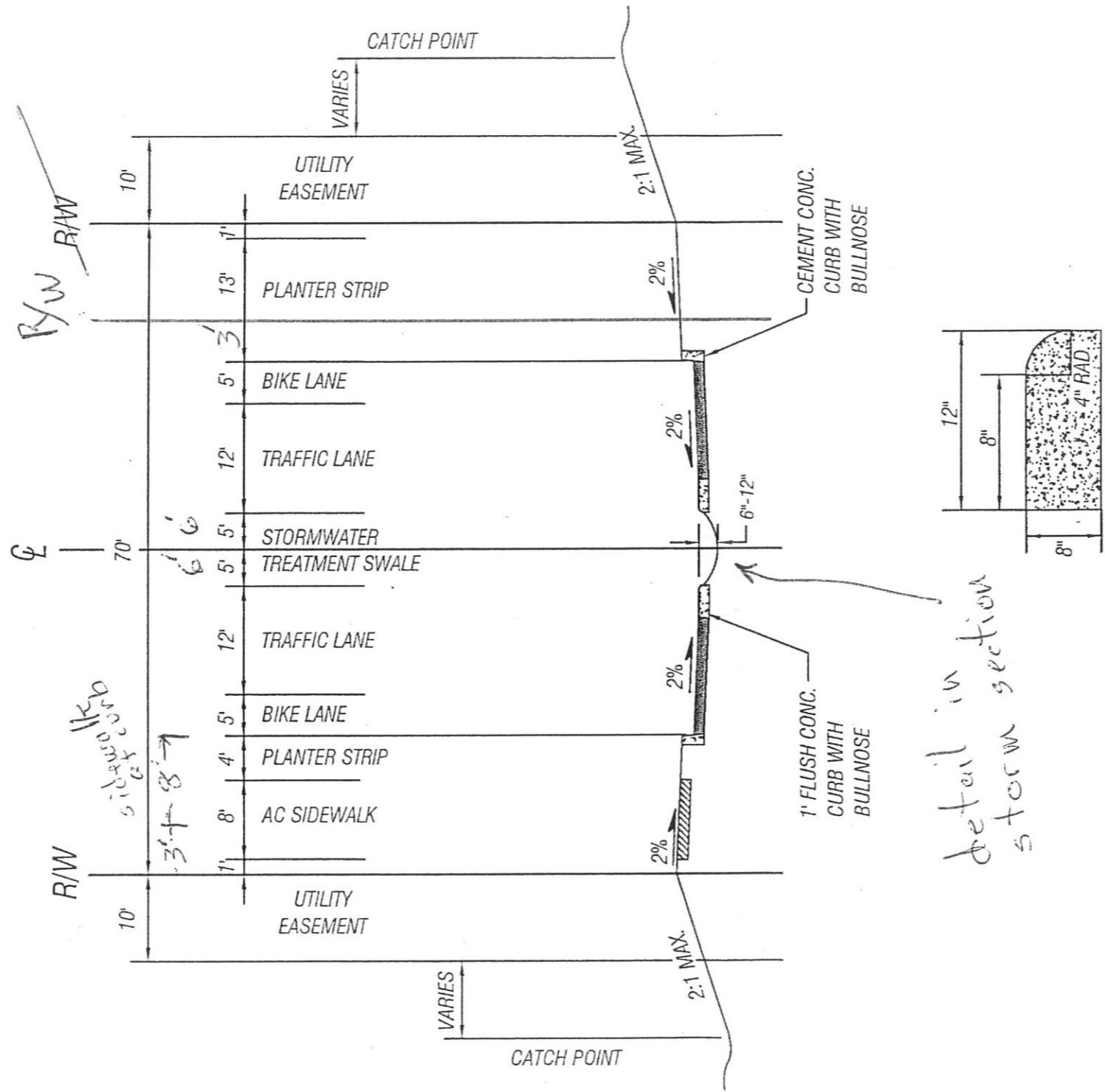
STANDARD DWG TR-3

CITY OF
BLACK DIAMOND

01/01/08

NOT TO SCALE

01/01/08



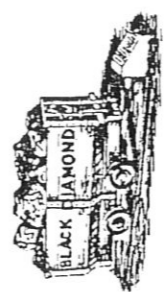
NOTE:

1. STREET LIGHTS AT INTERSECTIONS ONLY.
2. USE OF THIS STANDARD REQUIRES APPROVAL BY THE PUBLIC WORKS DIRECTOR.

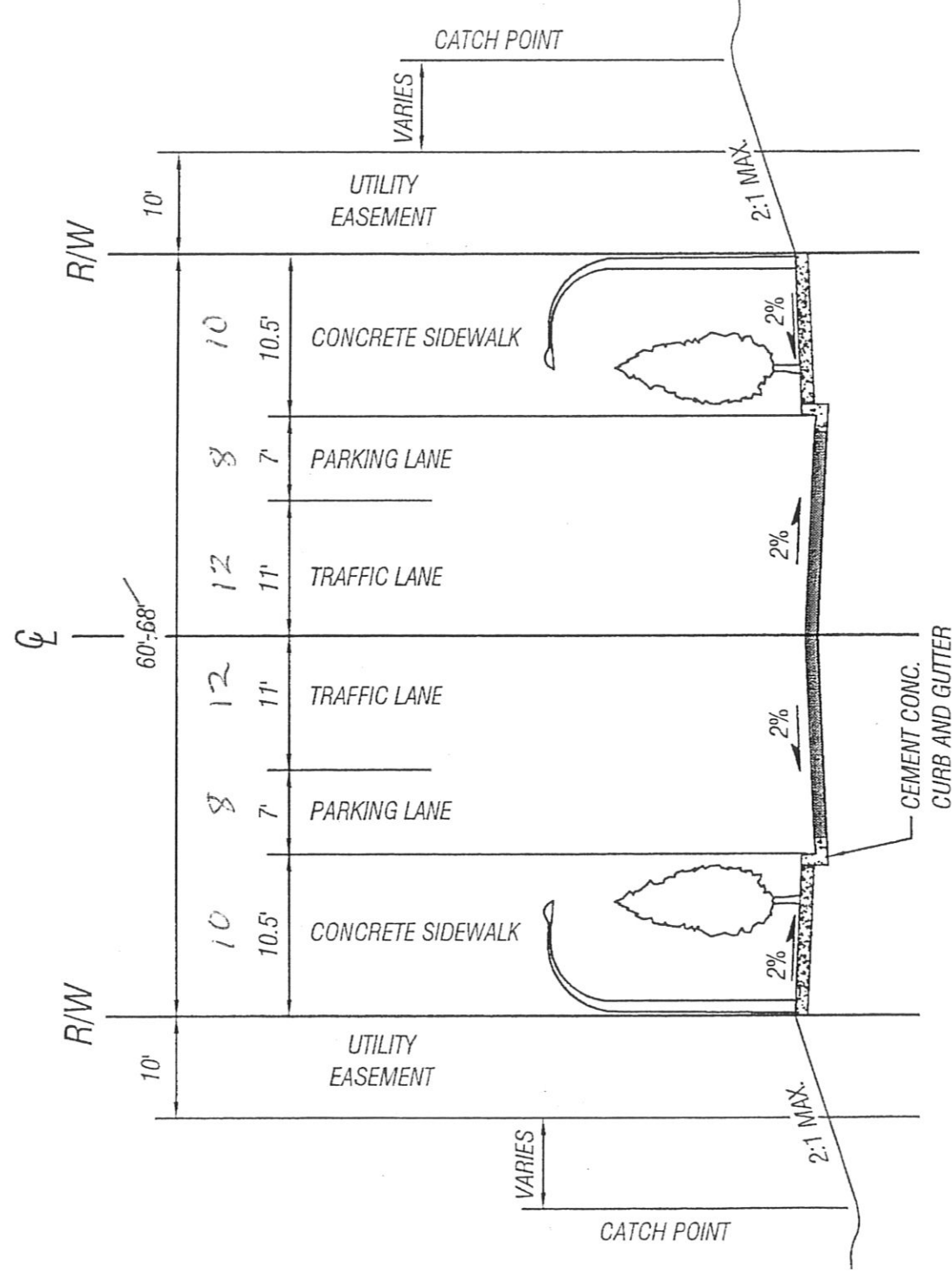


NEIGHBORHOOD COLLECTOR

CITY OF
BLACK DIAMOND



STANDARD DWG TR-4 NOT TO SCALE 01/01/08



NOTE:

1. STREET LIGHTS AT INTERSECTIONS ONLY.
2. PEDESTRIAN LIGHTING REQUIRED BETWEEN INTERSECTIONS. PUBLIC WORKS DIRECTOR MAY WAIVE PUBLIC PEDESTRIAN LIGHTING REQUIREMENT IF SUFFICIENT LIGHTING EXISTS ON ADJACENT PRIVATE PROPERTIES.
3. PEDESTRIAN LIGHTS TO BE LOCATED 6" FROM THE BACK OF SIDEWALK.
4. 4' TREE-WELLS TO BE LOCATED ADJACENT TO CURB.



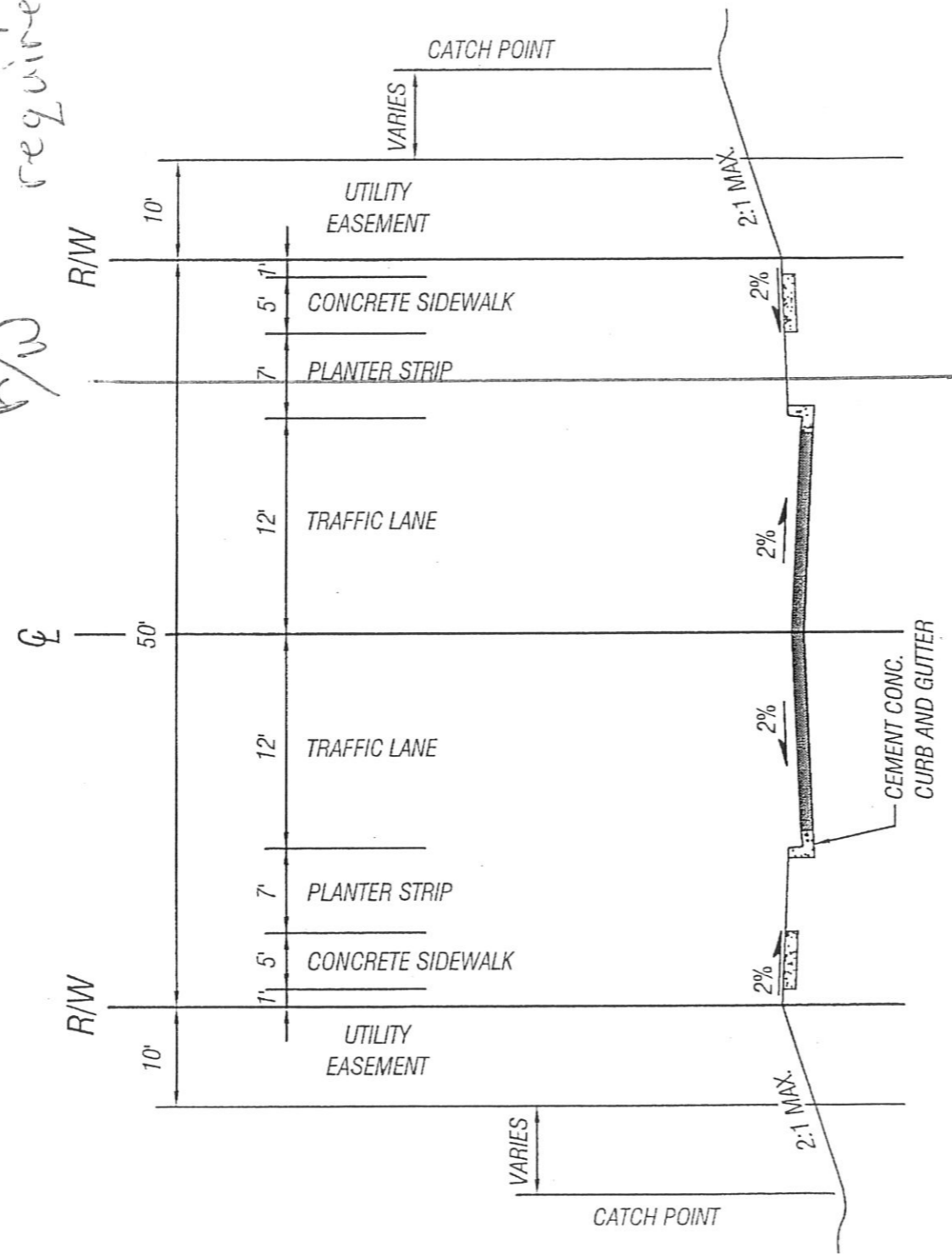
LOCAL ACCESS COMMERCIAL

CITY OF
BLACK DIAMOND



STANDARD DWG TR-6 NOT TO SCALE 01/01/08

*meandering sidewalk in
easement w/
landscape
requirement*

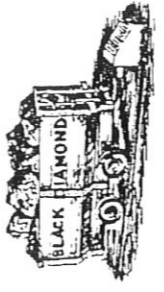


NOTE:
TURNING RADIUS AT INTERSECTIONS SHALL
BE BASED ON A WB-40 VEHICLE

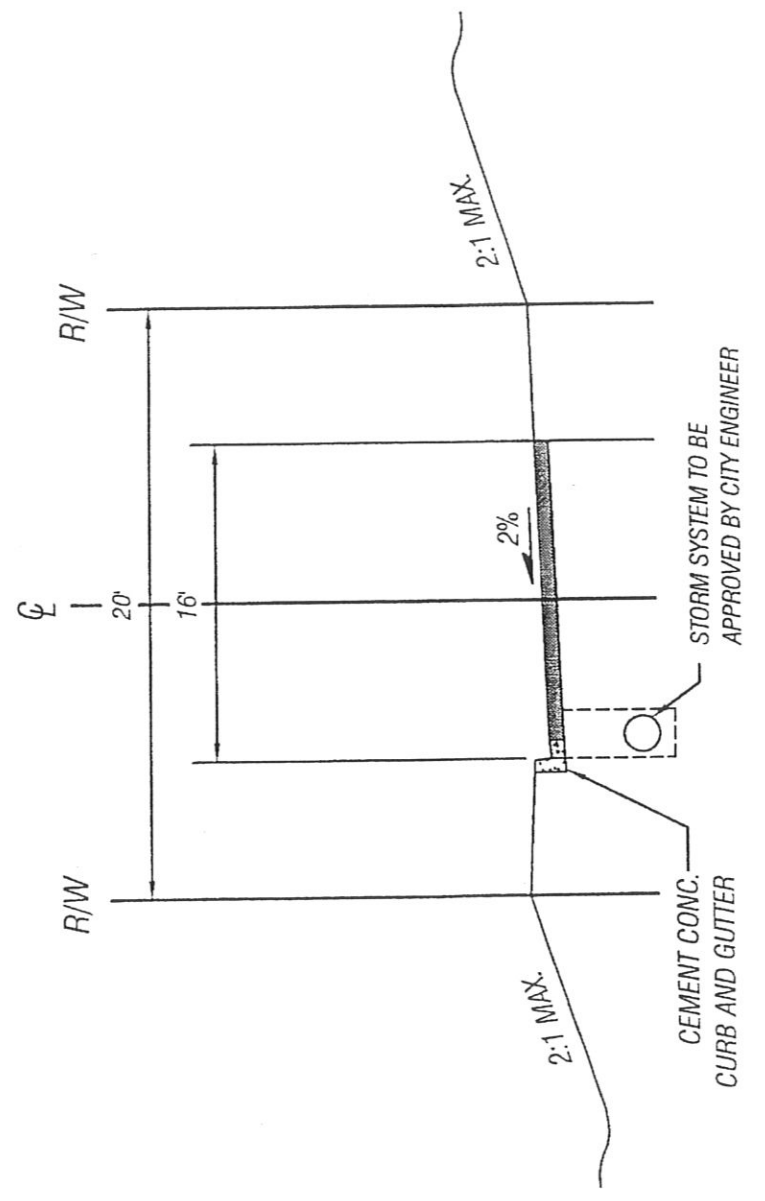


LOCAL ACCESS INDUSTRIAL

CITY OF
BLACK DIAMOND



STANDARD DWG TR-5 NOT TO SCALE 01/01/08



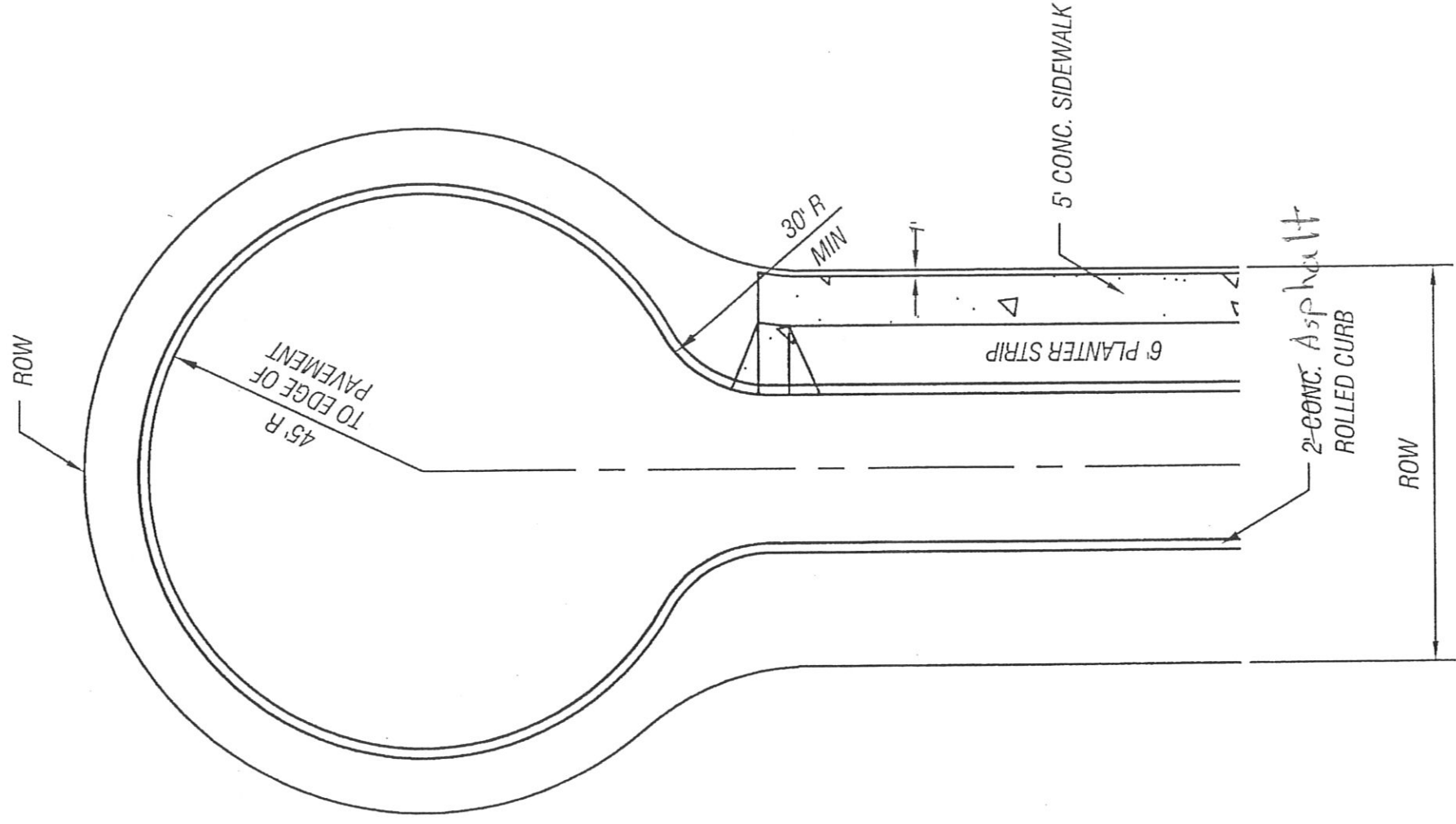
**CITY OF
BLACK DIAMOND**

ALLEY SECTION

STANDARD DWG TR-8 NOT TO SCALE 01/01/08

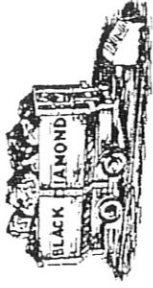


PacWest Engineering
Fife, Washington

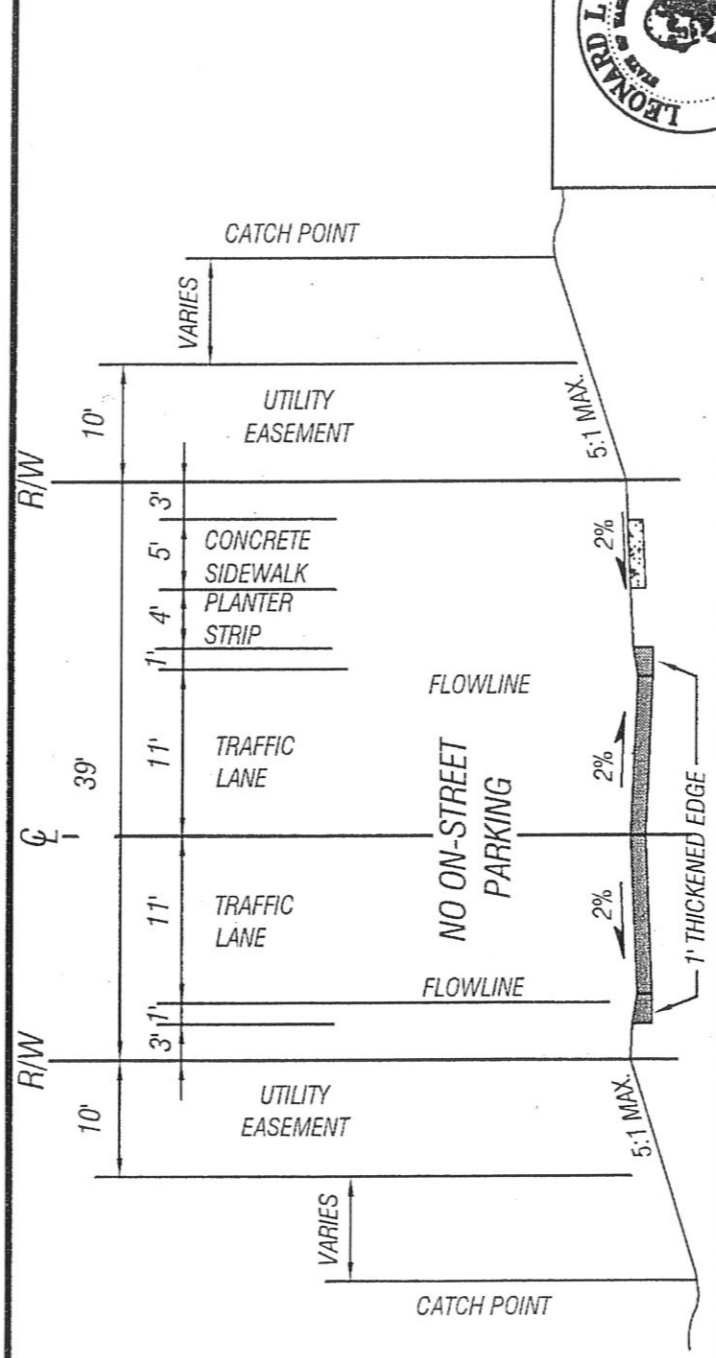
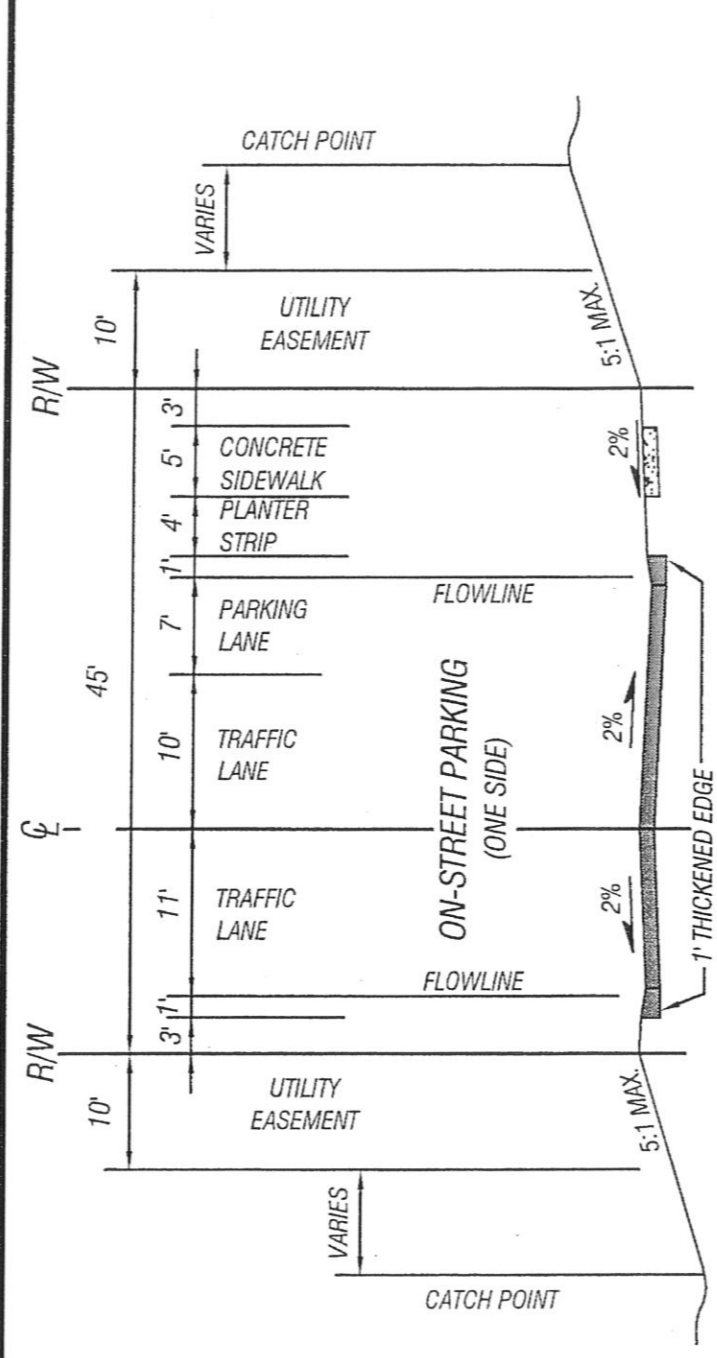
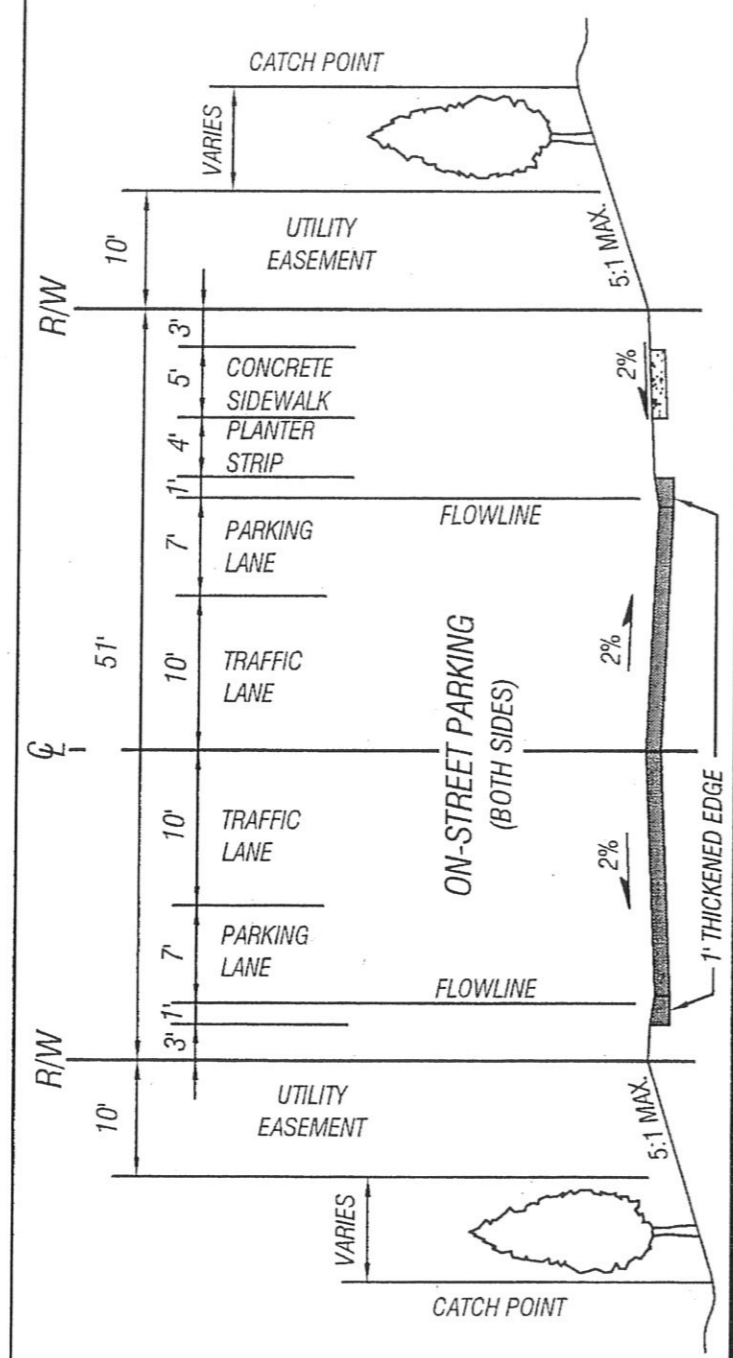


CUL-DE-SAC

CITY OF
BLACK DIAMOND



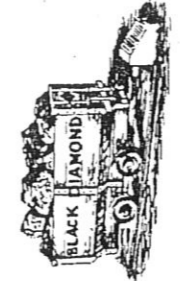
STANDARD DWG TR-9 NOT TO SCALE 01/01/08



NOTE: ON-STREET PARKING IS REQUIRED ALONG BOTH SIDES OF A LOCAL ACCESS RESIDENTIAL STREET UNLESS APPROVED BY THE PUBLIC WORKS DIRECTOR. THE NEED FOR ON-STREET PARKING WILL BE ANALYZED BASED ON THE DENSITY OF THE SURROUNDING USES AND THE AVAILABILITY OF ON-SITE PARKING.

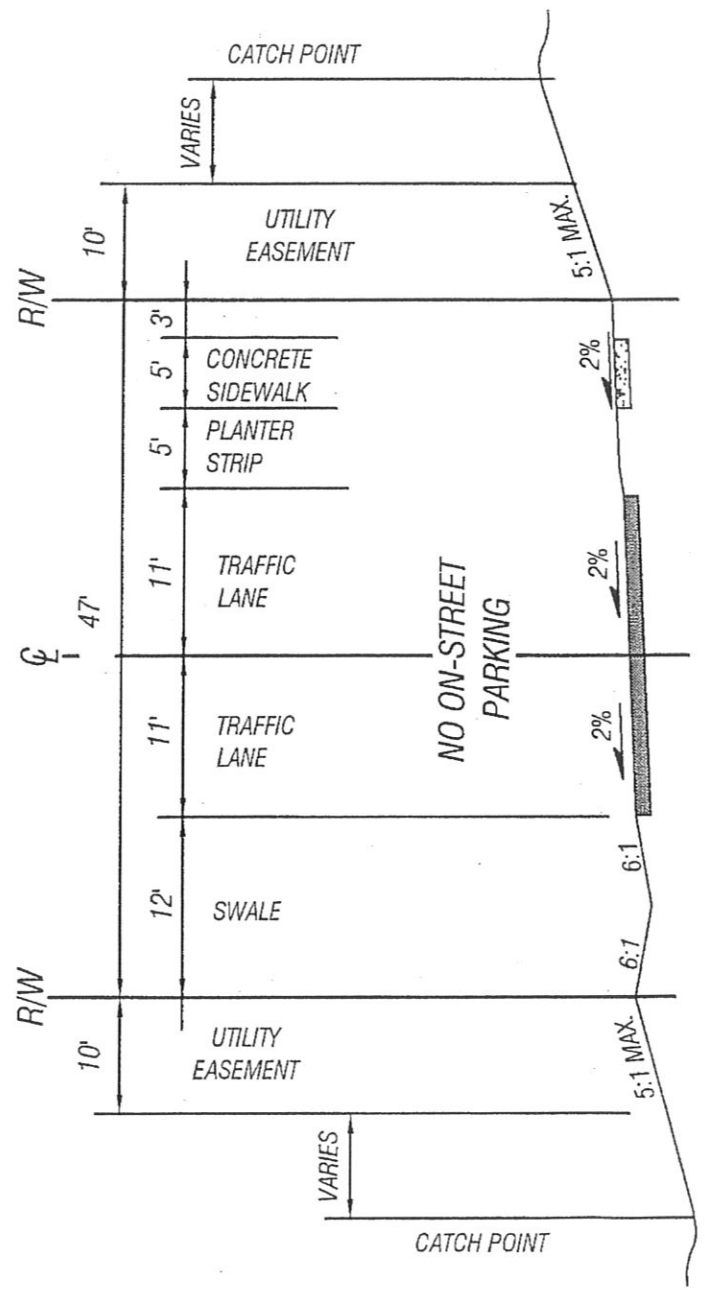


**CITY OF
BLACK DIAMOND**



**LOCAL ACCESS
RESIDENTIAL**

STANDARD DWG TR-7 NOT TO SCALE 01/01/08



NOTE: ON-STREET PARKING IS REQUIRED ALONG BOTH SIDES OF A LOCAL ACCESS RESIDENTIAL STREET UNLESS APPROVED BY THE PUBLIC WORKS DIRECTOR. THE NEED FOR ON-STREET PARKING WILL BE ANALYZED BASED ON THE DENSITY OF THE SURROUNDING USES AND THE AVAILABILITY OF ON-SITE PARKING.

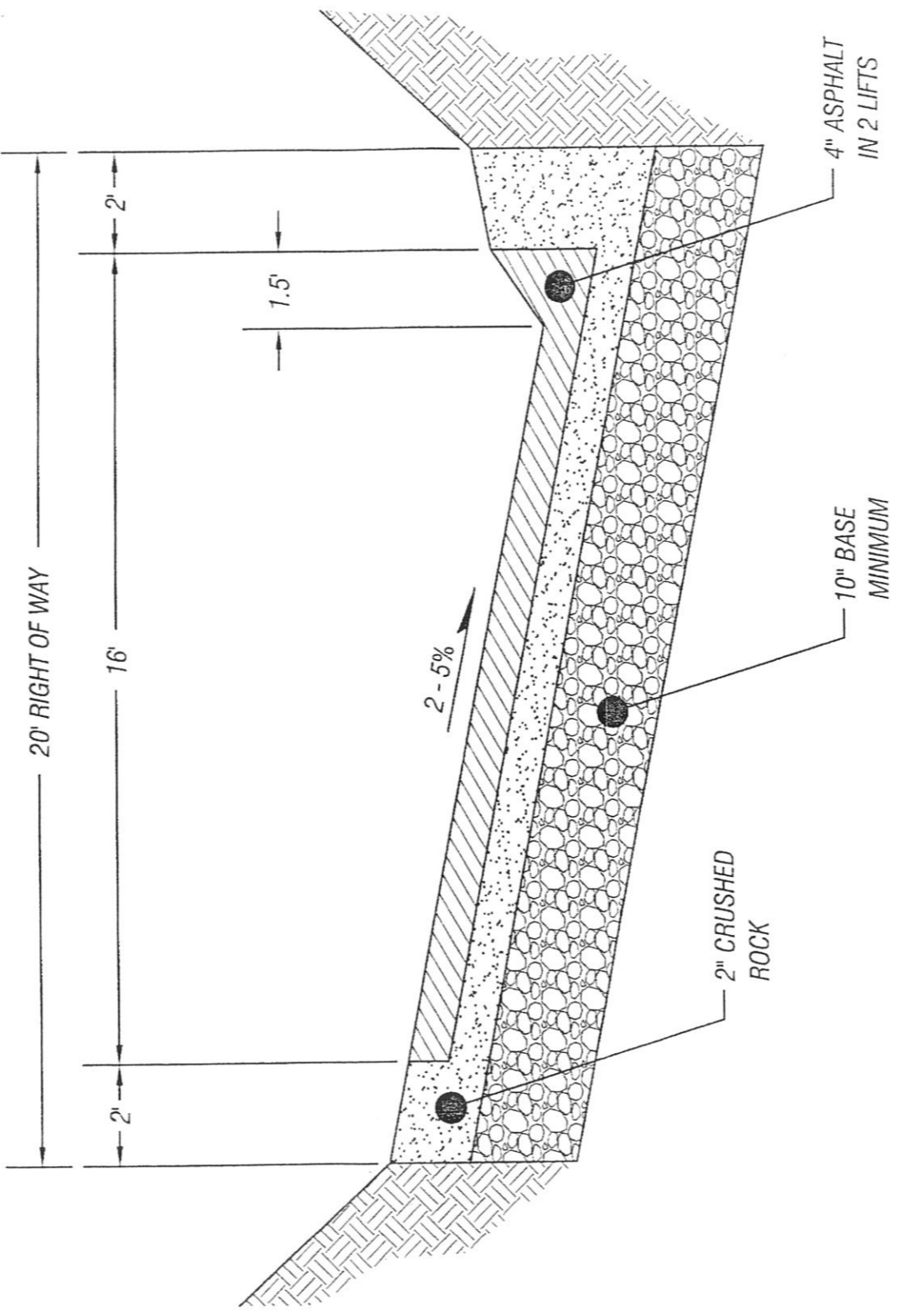


LOCAL ACCESS
RESIDENTIAL



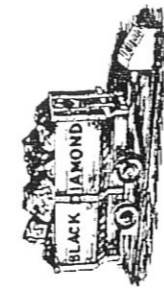
STANDARD DWG TR-7A NOT TO SCALE 01/01/08

IN-FILL DEVELOPMENT IN DEVELOPED
PORTIONS OF OLD BLACK DIAMOND



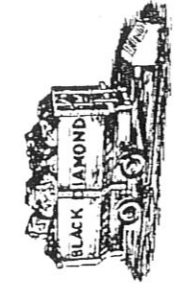
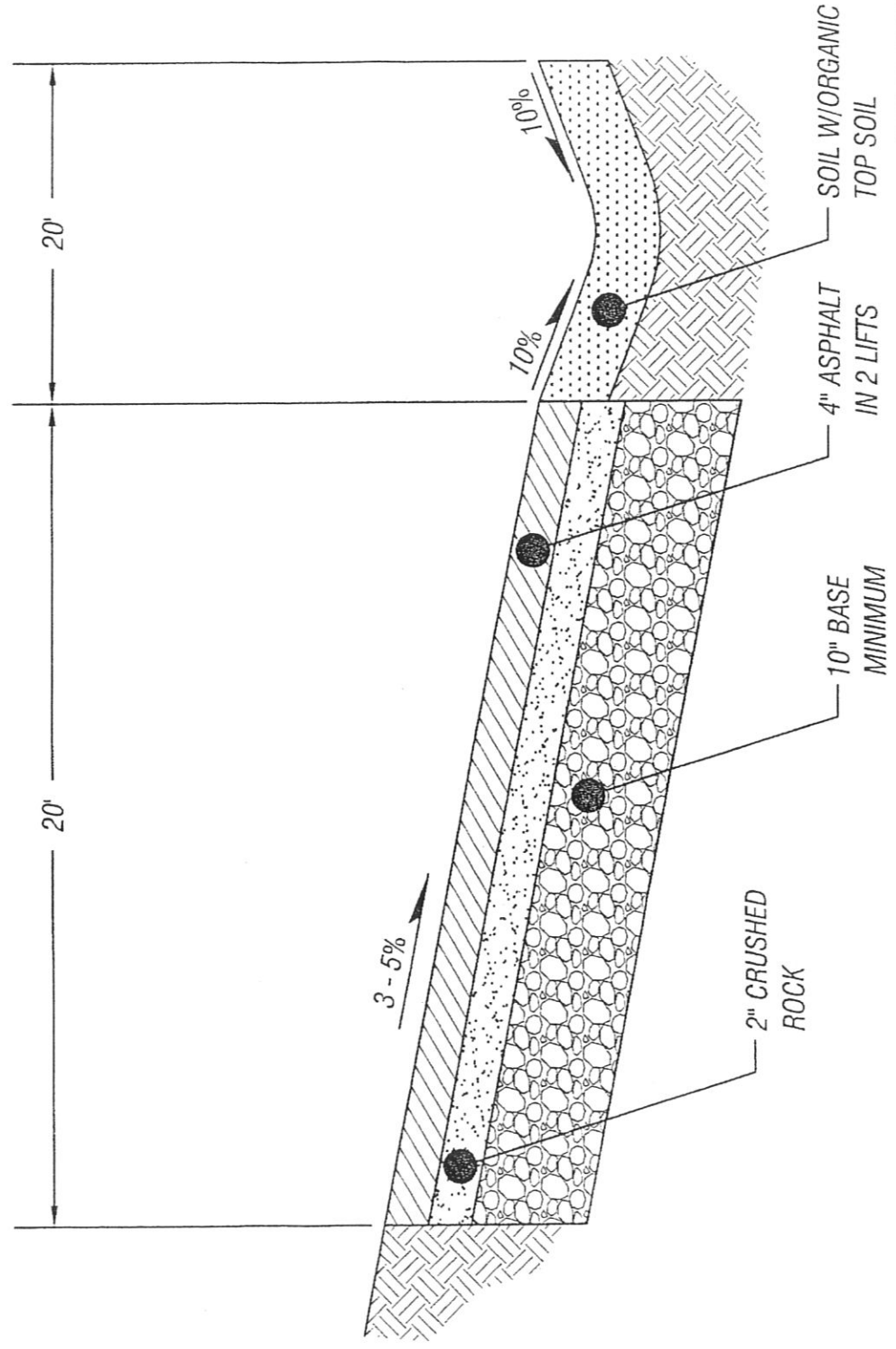
IN-FILL SECTION 1

CITY OF
BLACK DIAMOND



STANDARD DWG TR-24 NOT TO SCALE 10/01/08

IN-FILL DEVELOPMENT IN DEVELOPED
PORTIONS OF OLD BLACK DIAMOND



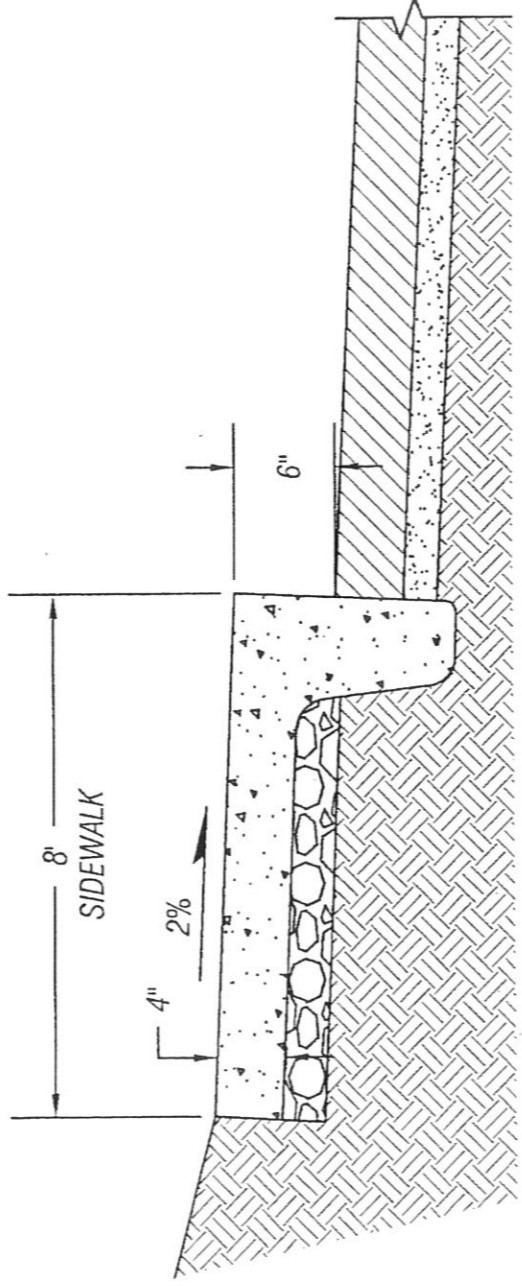
CITY OF
BLACK DIAMOND

IN-FILL SECTION 2



STANDARD DWG TR-25 NOT TO SCALE 10/01/08

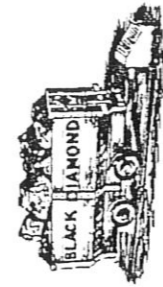
IN-FILL DEVELOPMENT IN DEVELOPED
PORTIONS OF OLD BLACK DIAMOND



PacWest Engineering
Fife, Washington

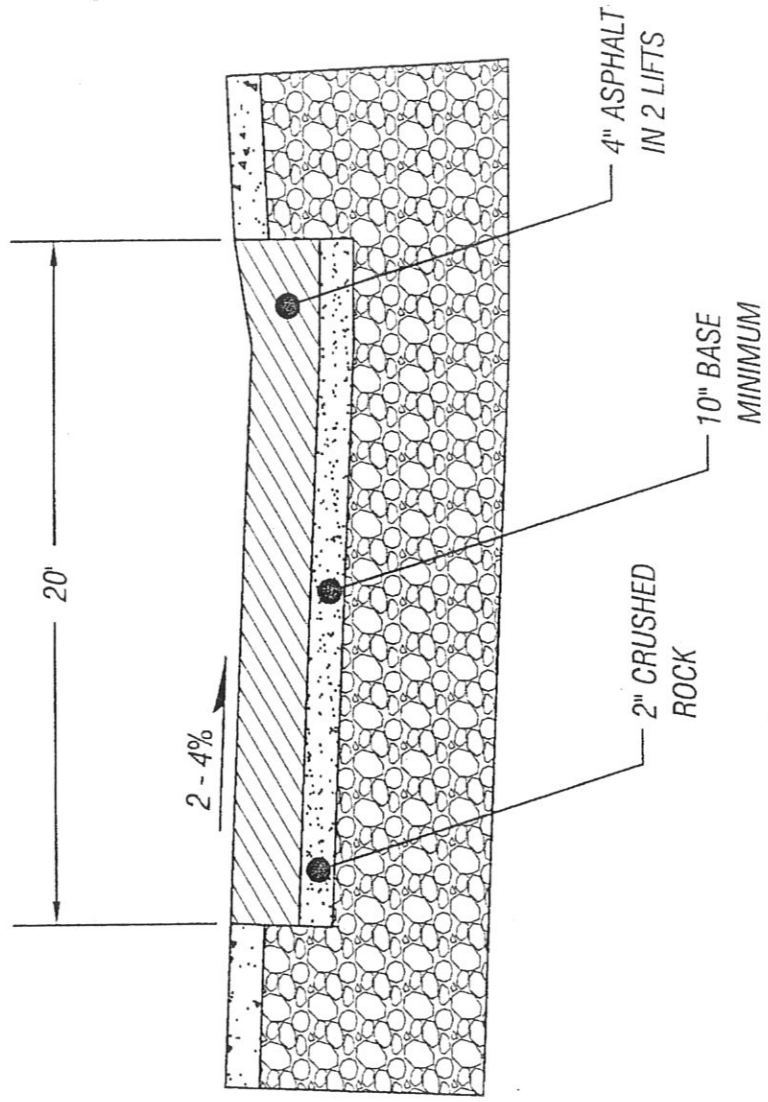
IN-FILL SECTION 3

CITY OF
BLACK DIAMOND



STANDARD DWG TR-26 NOT TO SCALE 10/01/08

IN-FILL DEVELOPMENT IN DEVELOPED
PORTIONS OF OLD BLACK DIAMOND



PacWest Engineering
Fife, Washington

IN-FILL SECTION 4



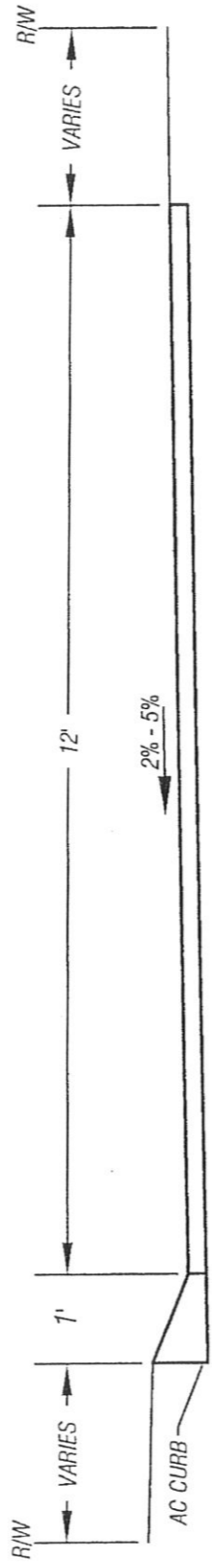
CITY OF
BLACK DIAMOND

STANDARD DWG TR-27

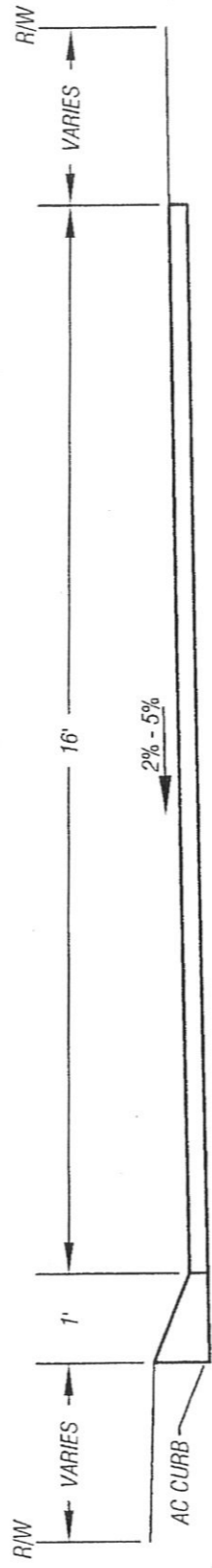
NOT TO SCALE

10/01/08

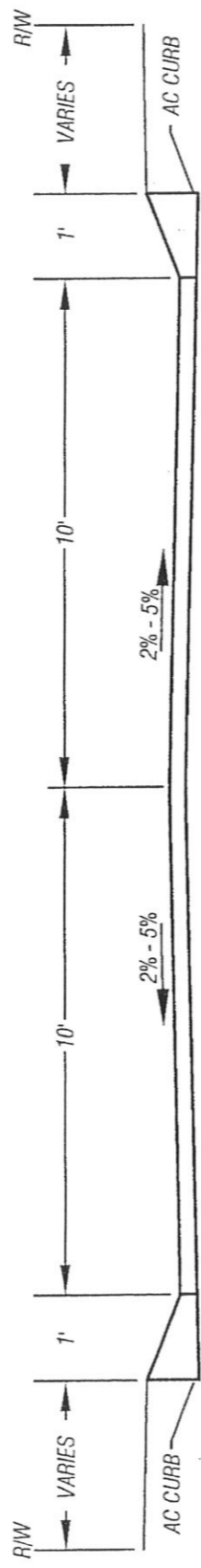
**STREET SECTION
ST-12**



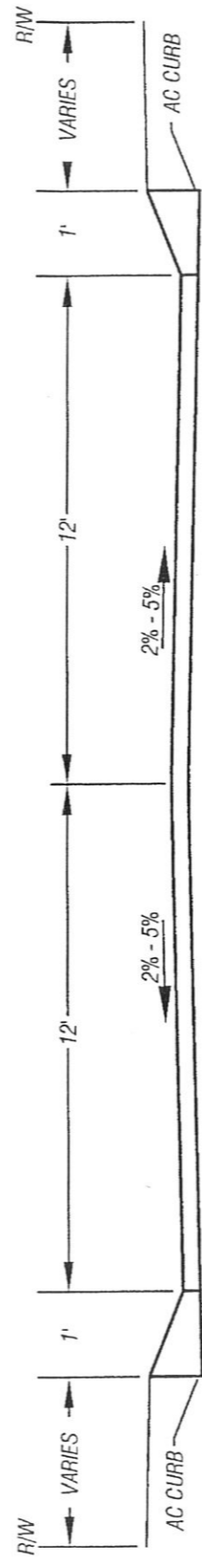
**STREET SECTION
ST-16**



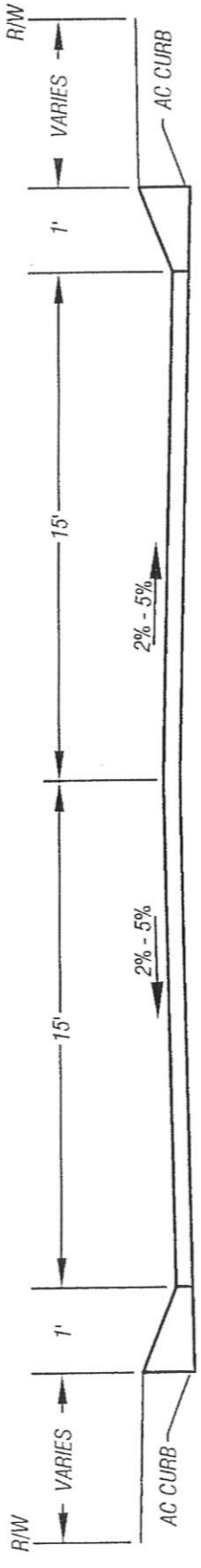
**STREET SECTION
ST-20**



**STREET SECTION
ST-24**



**STREET SECTION
ST-30**

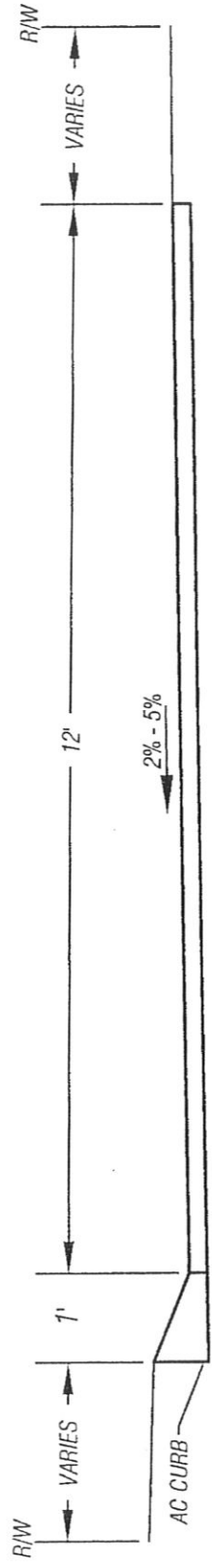


**IN-FILL DEVELOPMENT
STREET SECTIONS**

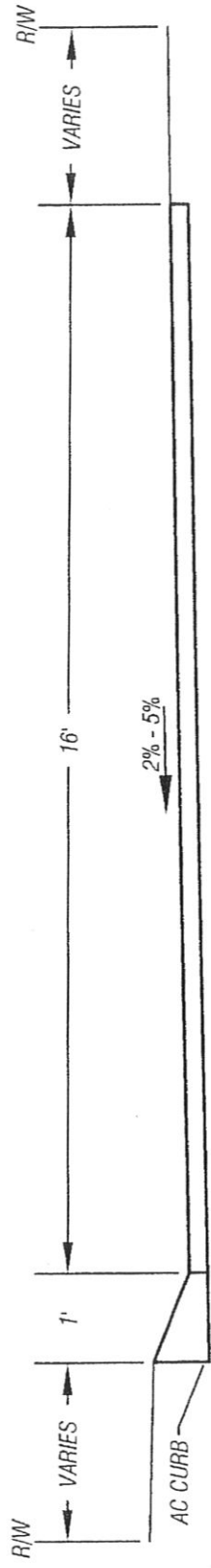


STANDARD DWG TR-23 NOT TO SCALE 10/01/08

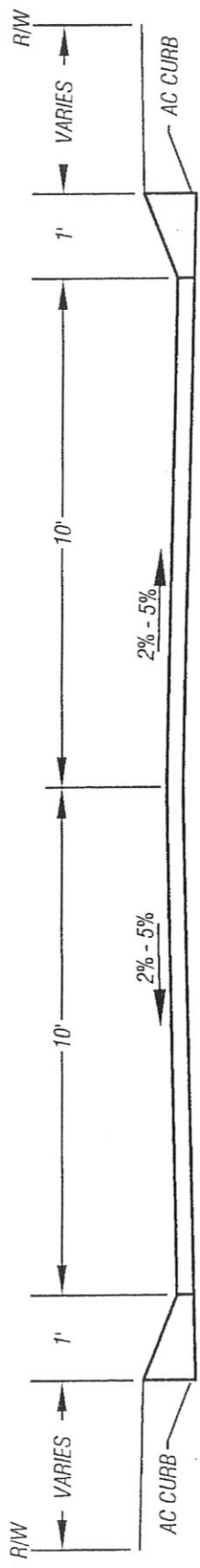
**STREET SECTION
ST-12**



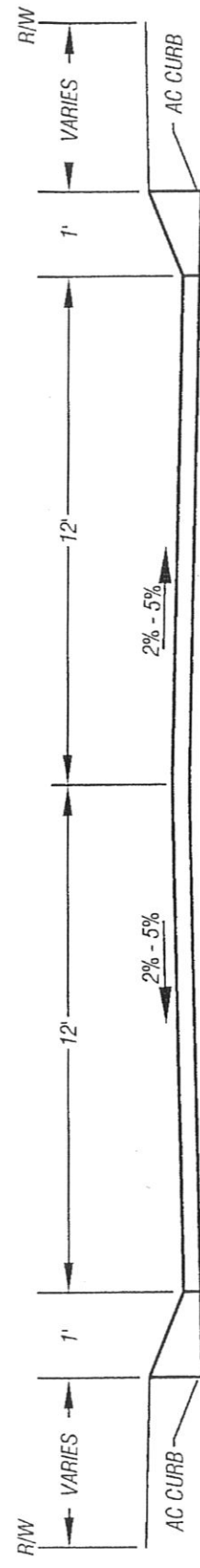
**STREET SECTION
ST-16**



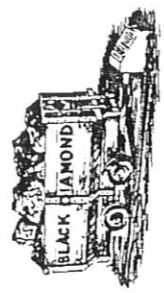
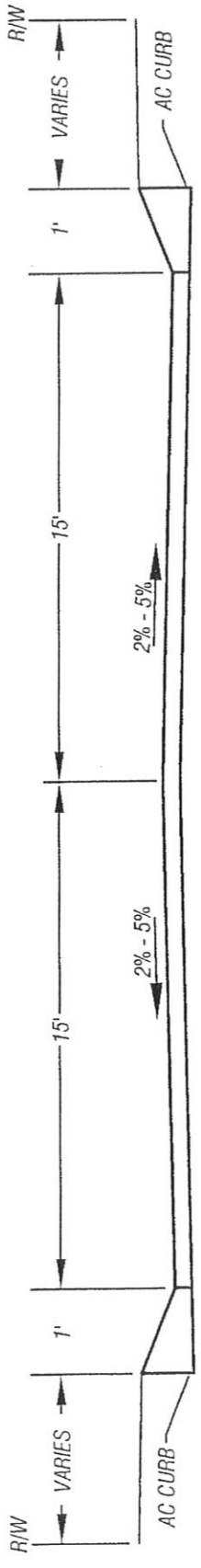
**STREET SECTION
ST-20**



**STREET SECTION
ST-24**



**STREET SECTION
ST-30**



**CITY OF
BLACK DIAMOND**

**IN-FILL DEVELOPMENT
STREET SECTIONS**

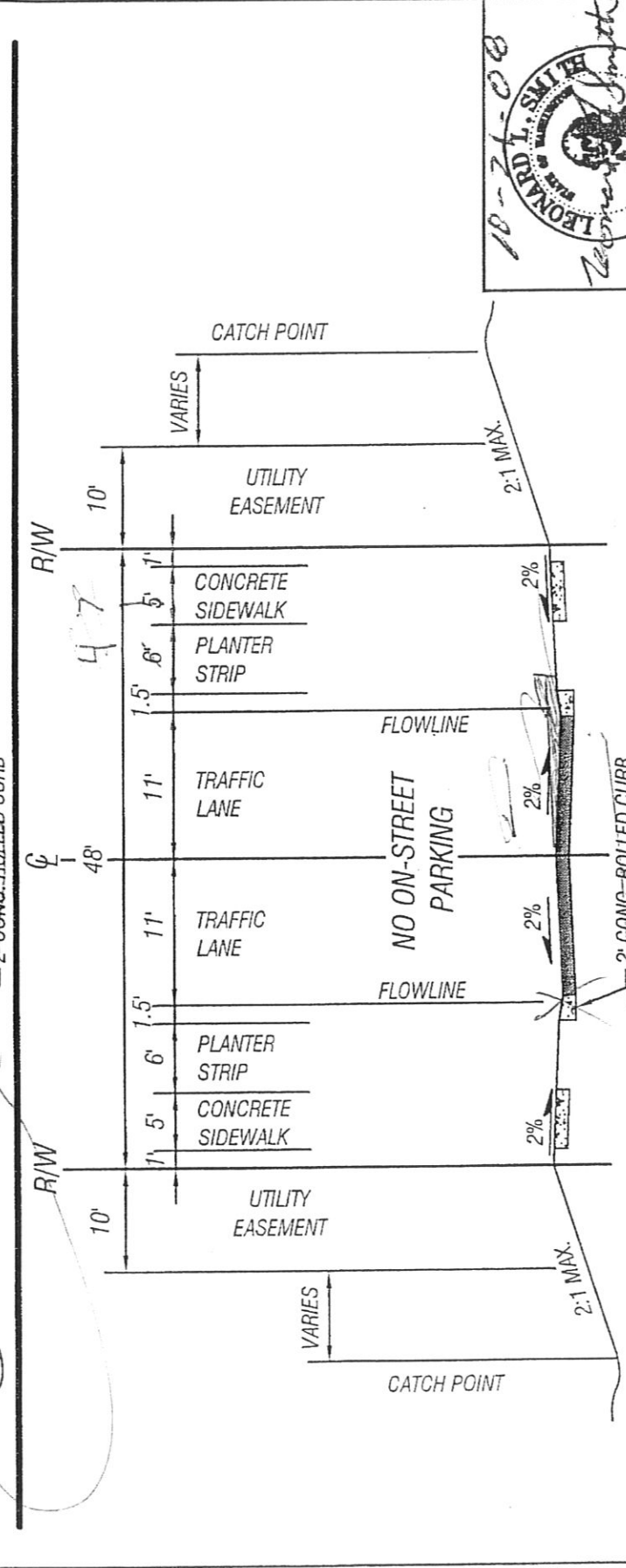
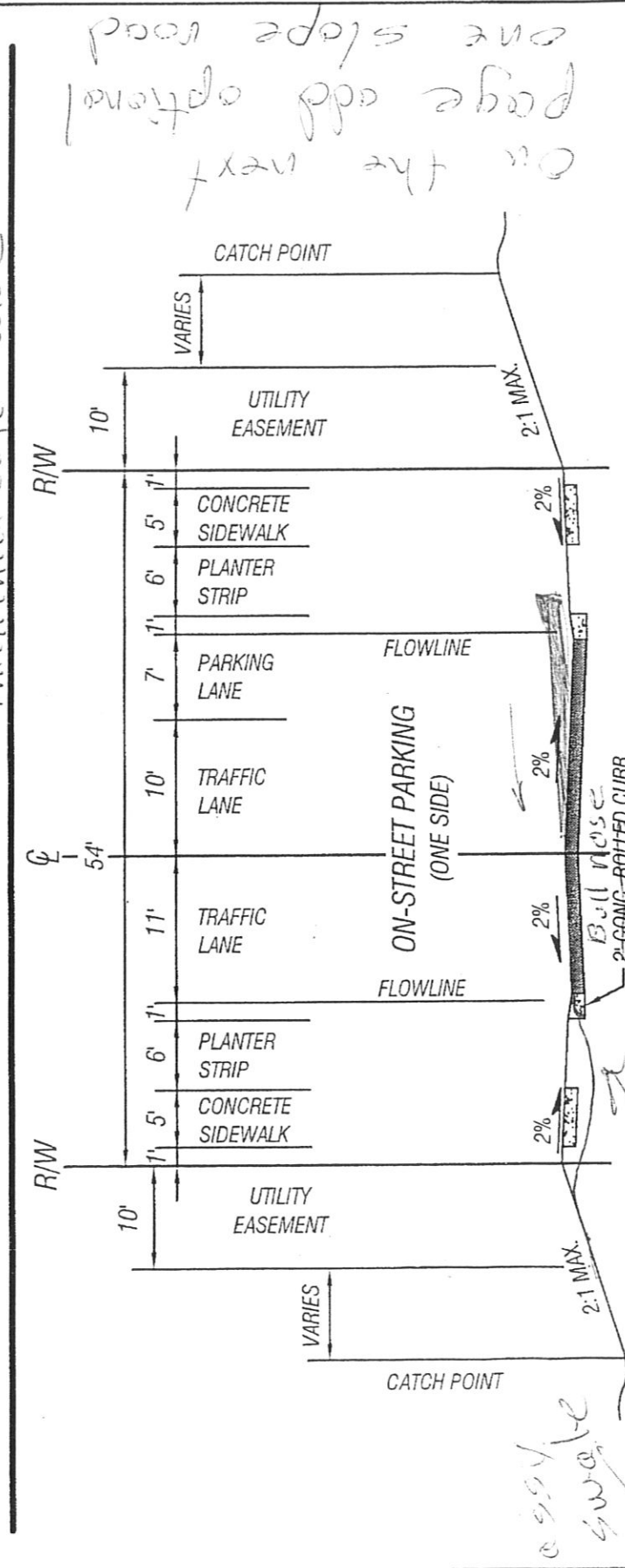
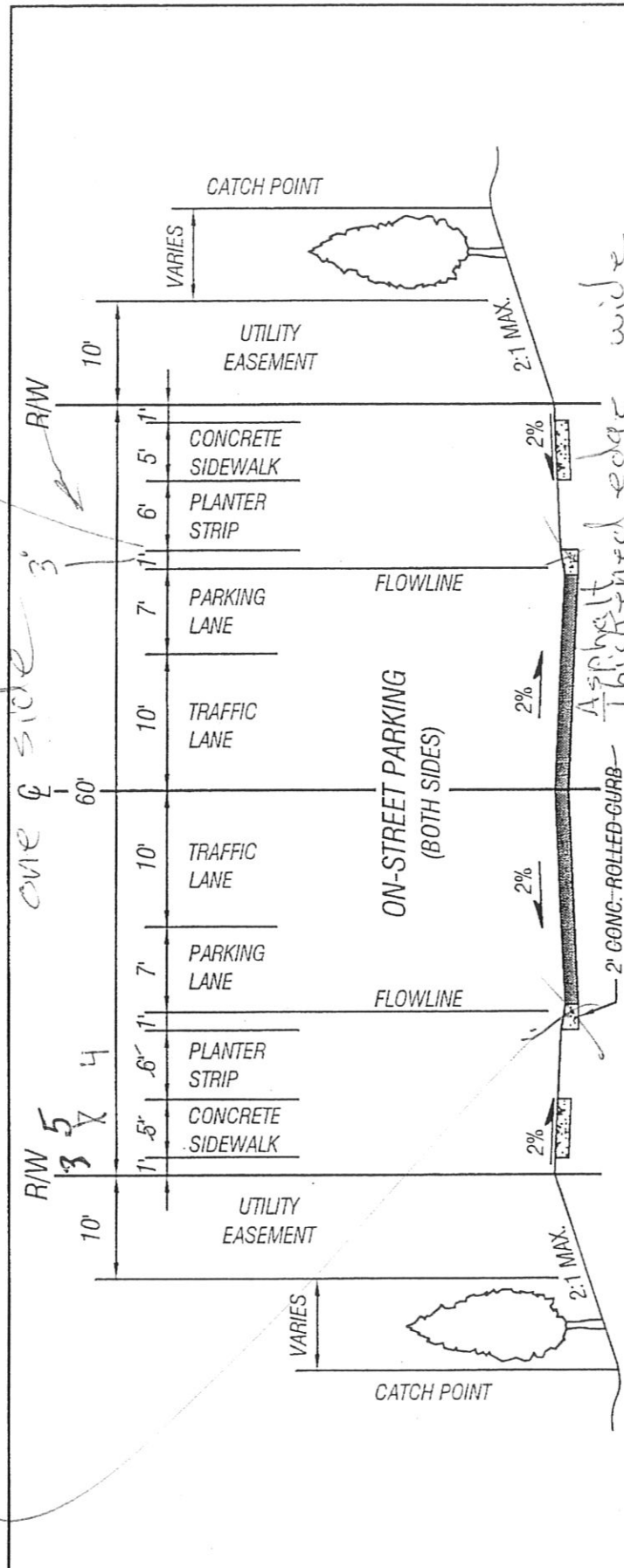


STANDARD DWG TR-23 NOT TO SCALE 10/01/08

No concrete rolled curb

side walk one side

On the next page add optional grassy slope

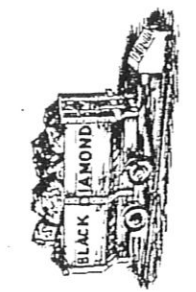


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LOCAL ACCESS RESIDENTIAL

CITY OF BLACK DIAMOND



STANDARD DWG TR-7 NOT TO SCALE 01/01/08