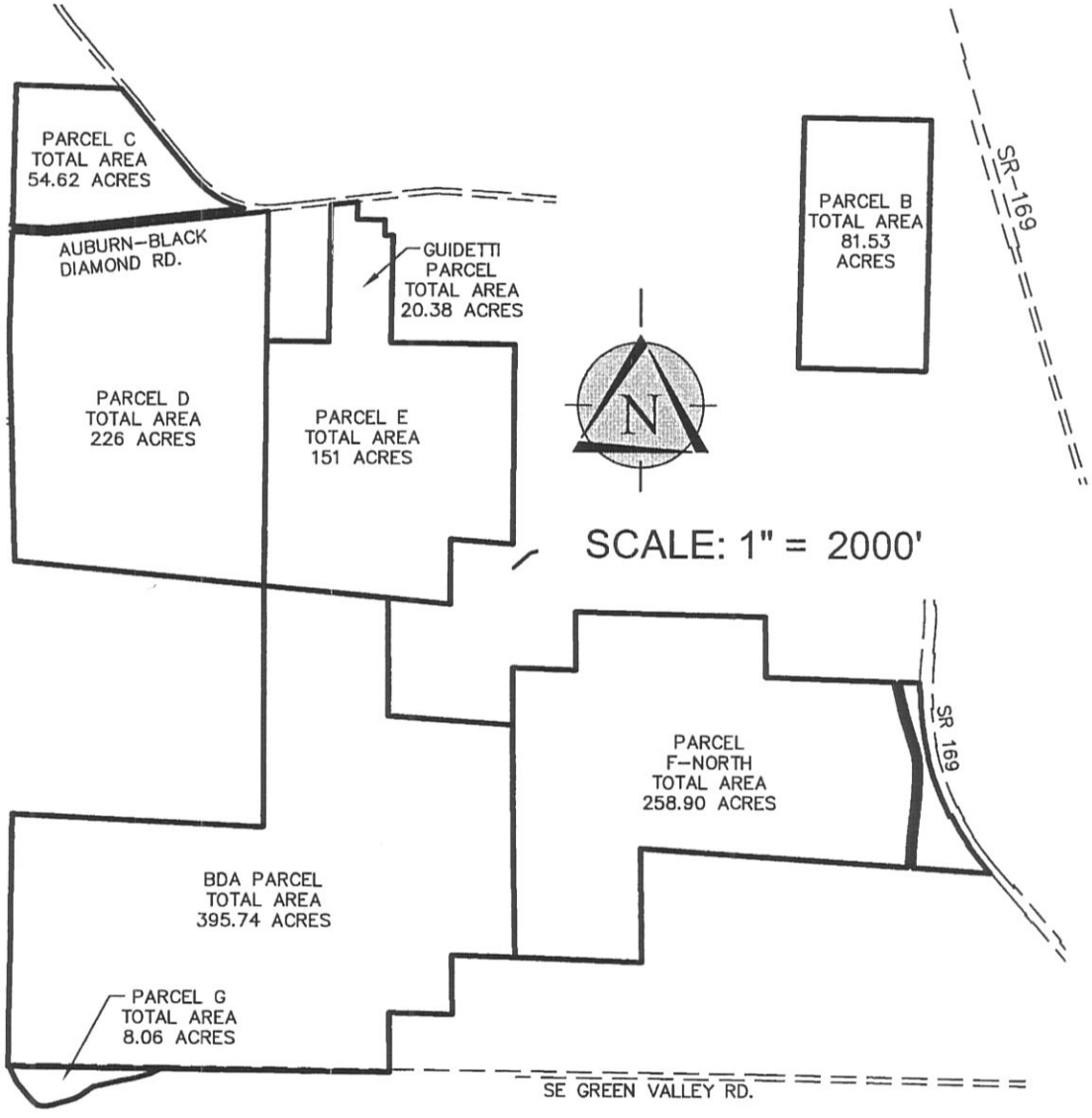
## Exhibit A

## Project Boundaries and MPD Site Plan

(Removed Pursuant to Examiner's Recommended Implementing Conditions. Please see Exhibit "U")

# Exhibit B

## Legal Description and Parcel Map




TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-6929
425.821.8448
www.triadassoc.com
Land Development Consultants

PARCEL NAMING EXHIBIT

# THE VILLAGES

CITY OF BLACK DIAMOND, WASHINGTON

| | |
|---|---|
| MANAGER: | |
| DESIGNED: | |
| CADD: | |
| CHECKED: | |
| DATE: | 04–06–11 |
| SCALE: | HORIZ.: 1"=2000' |
| | VERT.: |

JOB NUMBER 10-001

SHEET NUMBER 1 OF 1

**EXHIBIT "B"**
**LEGAL DESCRIPTION OF PROPERTY SUBJECT TO THE AGREEMENT**

**PARCEL B**:

THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCELS C, D, AND E**

ALL OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W. M., IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTHEAST QUARTER THEREOF;

ALSO EXCEPT THAT PORTION OF THE NORTHWEST QUARTER THEREOF LYING NORTHERLY OF THE CENTERLINE OF MAPLE VALLEY-LAKE SAWYER ROAD;

ALSO EXCEPT THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER THEREOF.

**PARCEL BDA:**

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER;
THE SOUTH HALF OF THE NORTHEAST QUARTER;
THE SOUTHWEST QUARTER;
THE NORTH HALF OF THE SOUTHEAST QUARTER;
THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER;
THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER,
ALL IN SECTION 22, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL F – NORTH:**

THAT PORTION OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, AND THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER, LYING WESTERLY OF THE WESTERLY MARGIN OF THE ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY;

TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE SOUTH HALF OF THE NORTHWEST QUARTER;

AND TOGETHER WITH:

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER;

AND TOGETHER WITH:

THE SOUTH HALF OF THE NORTHEAST QUARTER LYING SOUTHWESTERLY OF THE SOUTHWESTERLY MARGIN OF ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY.

AND TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, AND THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER;

**PARCEL G:**

LOT A OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L05L0096 AS RECORDED UNDER RECORDING NO. 20051209900002, SITUATE IN SECTION 27, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL GUIDETTI:**

THAT PORTION OF THE EASTERLY 660 FEET OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21, NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING SOUTHERLY OF THE AUBURN-BLACK DIAMOND HIGHWAY;

EXCEPT THE EAST 381.24 FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., LYING SOUTHERLY OF AUBURN-BLACK DIAMOND HIGHWAY AND THE EAST 90 FEET OF THE NORTH 165.70 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON;

(ALSO KNOWN AS PARCEL 1 UNDER SURVEY RECORDED UNDER RECORDING NUMBER 20030917900009.)

# Exhibit C

## MPD Permit Approval

ORDINANCE NO. 10-946

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, KING COUNTY, WASHINGTON, APPROVING THE MASTER PLANNED DEVELOPMENT FOR THE VILLAGES; AMENDING THE CITY'S ZONING MAP TO DESIGNATE CERTAIN PROPERTY "MASTER PLANNED DEVELOPMENT – MPD"; PROVIDING FOR SEVERABILITY AND ESTABLISHING AN EFFECTIVE DATE**

**WHEREAS**, in accordance with a request by BD Village Partners, LP ("the Applicant"), the City of Black Diamond determined that an Environmental Impact Statement ("EIS") should be prepared concerning the Applicant's Villages Master Plan Development proposal pursuant to the State Environmental Policy Act, RCW 43.21C ("SEPA"); and

**WHEREAS**, the City retained an independent consulting firm, Parametrix, to prepare the EIS; and

**WHEREAS**, on May 28, 2008 and pursuant to WAC 197-11-408 and Black Diamond Municipal Code ("BDMC") Section 18.98.060(A)(4)(b), Parametrix held a scoping meeting to obtain input from the public and other public agencies as to the proposed scope of the EIS; and

**WHEREAS**, on June 11, 2008, Parametrix held an additional meeting with other public agencies, including the Cities of Maple Valley and Covington, and the Washington Department of Transportation, to discuss the scope of the EIS's analysis concerning the proposed MPD's anticipated transportation impacts; and

**WHEREAS**, pursuant to Black Diamond Municipal Code ("BDMC") Section 18.98.060(A)(1), on January 27, 2009 the Applicant attended a pre-application conference with City of Black Diamond staff, prior to submitting its application for the Villages Master Planned Development ("Villages MPD"); and

**WHEREAS**, on February 7, 2009, the Applicant held a public information meeting concerning the Villages MPD application, pursuant to BDMC 18.98.060(A)(2); and

**WHEREAS**, on February 10, 2009, pursuant to BDMC 18.98.060(A)(3), the Applicant made a presentation concerning the overall planning and design concept of the proposed Villages MPD to the Black Diamond Planning Commission, and the Commission provided preliminary feedback to the Applicant regarding the consistency of this concept with the City's adopted standards, goals and policies; and

**WHEREAS**, on March 17, 2009, a second public information meeting was held concerning the proposed Villages MPD; and

**WHEREAS**, on May 28, 2009, the Applicant submitted an application for the Villages MPD approval to the City of Black Diamond; and

**WHEREAS**, on August 12, 2009, Parametrix held additional meetings with the government agencies listed above, to conduct a pre-release discussion of the draft EIS element related to the transportation impacts analysis; and

**WHEREAS**, at the June 11, 2008 and August 12, 2009 transportation meetings, Parametrix explained the methodology the EIS would use to analyze transportation impacts, the size and parameters of the EIS study area and study area intersections, and the expected trip distribution percentages, and the other public agencies concurred in Parametrix's approach; and

**WHEREAS**, on September 2, 2009, the City of Black Diamond issued a Draft Environment Impact Statement ("DEIS"); and

**WHEREAS**, on September 29, 2009, the City of Black Diamond held a public hearing on the DEIS; and

**WHEREAS**, on September 30, 2009, the City of Black Diamond extended the comment period, during which it would accept written public comment on the DEIS, until October 9, 2009; and

**WHEREAS**, on December 11, 2009, the City of Black Diamond announced the availability of the Final Environmental Impact Statement ("FEIS"); and

**WHEREAS**, on December 28, 2009, appeals of the FEIS were filed by Christopher P. Clifford on behalf of Annette Smith, Gilbert and Marlene Bortleson, Jay and Kelley McElroy, Melanie Gauthier, Michael Smith, Judith Carrier, Gerold Mittlestadt, Steve Sundquist; Vicki and William Harp and their daughter, Cindy Proctor; Joe May; and

**WHEREAS**, on December 31, 2009, the Applicant submitted a revised application for the Villages MPD to the City of Black Diamond; and

**WHEREAS**, pursuant to BDMC Section 18.98.060(A)(d), the Villages MPD application was forwarded to the Black Diamond Hearing Examiner; and

**WHEREAS**, pursuant to BDMC Section 19.04.250, the FEIS appeals were forwarded to the Black Diamond Hearing Examiner; and

**WHEREAS**, the Hearing Examiner scheduled consolidated hearings on the MPD application and the FEIS appeals, pursuant to WAC 197-11-680(3)(a)(v) and RCW 36.70B.120; and

**WHEREAS**, the Hearing Examiner held an open record hearing commencing on March 6, 2010 and continuing from day to day until March 22, 2010;and

**WHEREAS**, the Hearing Examiner accepted additional rebuttal presentations in accordance with the deadlines he had previously set, until April 12, 2010; and

**WHEREAS**, on April 15, 2010, the Hearing Examiner issued the Hearing Examiner Decision affirming the FEIS for the Villages MPD; and

**WHEREAS**, on May 10, 2010 the Hearing Examiner issued his Findings, Conclusions and Recommendation recommending approval of the Villages MPD, and issued an Errata and a signed copy of the Recommendation the following day, on May 11, 2010; and

**WHEREAS**, on June 21, 2010, the City Council convened its closed record hearing to consider the Villages MPD application; and

**WHEREAS**, the City Council continued the closed record hearing from day to day, and heard oral argument from and considered written materials submitted by parties of record from June 24, 2010 to July 14, 2010; and

**WHEREAS**, the City Council continued the closed record hearing from day to day to deliberate concerning the MPD application and to discuss potential litigation concerning it, from July 19, 2010 to August 24, 2010; and

**WHEREAS**, on August 24, 2010, the Black Diamond City Council approved a motion to direct the City Attorney to prepare a written ordinance approving the Villages MPD subject to conditions as discussed by the Council; and

**WHEREAS**, the City Council desires to approve the Villages MPD subject to certain specified conditions of approval as set forth herein, and to rezone certain parcels within the MPD to the zoning designation of "Master Planned Development – MPD");

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BLACK DIAMOND, WASHINGTON, DOES ORDAIN AS FOLLOWS:

**Section 1. Findings of Fact.** The City Council hereby adopts the Findings of Fact set forth in Exhibit A attached hereto and incorporated herein by this reference.

**Section 2. Conclusions of Law.** The City Council hereby adopts the Conclusions of Law set forth in Exhibit B attached hereto and incorporated herein by this reference.

**Section 3. Approval of Master Planned Development.** Based on the Findings of Fact and Conclusions of Law adopted in Sections 1 and 2 above, the City Council hereby approves the Villages Master Planned Development, as set forth in the application dated December 31, 2009 and as delineated on the revised Land Use Plan map (Figure 3-1) dated July 8, 2010, subject to the conditions of approval set forth in Exhibit C attached hereto and incorporated herein by this reference.

**Section 4. Rezone.** Although pursuant to Black Diamond Municipal Code Section 18.98.130(B) a formal rezone of parcels within the Master Planned Development boundary is not required, in order to remove any uncertainty or confusion as to the applicable zoning designation, the City of Black Diamond Zoning Map is hereby amended to designate the parcels legally described and depicted in Exhibit D attached hereto and incorporated herein by this reference as "Master Planned Development – MPD."

**Section 5. Severability.** Each and every provision of this Ordinance shall be deemed severable. In the event that any portion of this Ordinance is determined by final order of a court of competent jurisdiction to be void or unenforceable, such determination shall not affect the validity of the remaining provisions thereof, provided the intent of this Ordinance can still be furthered without the invalid provision.

**Section 6. Effective Date.** This Ordinance shall be in full force and effect five (5) days after publication as required by law. A summary of this Ordinance may be published in lieu of the entire Ordinance, as authorized by State law.

Introduced on the 14th day of September, 2010.

Passed by the City Council on the 20th day of September, 2010.

Rebecca Olness

Mayor Rebecca Olness

ATTEST:

Brenda L. Martinez

Brenda L.Martinez, City Clerk

APPROVED AS TO FORM:

Chris Bacha, City Attorney

Published: 9/28/10

Effective Date: 10/3/10

# EXHIBIT A

## FINDINGS OF FACT

1. The record considered by the City Council consists of the following:

   A. Several hundred exhibits admitted into evidence before the Hearing Examiner. The Exhibit lists are set forth in Attachment 1 to these Findings of Fact, and summarized as follows:

      i. Index of "H" Documents: These exhibits were admitted during the hearings.

      ii Black Diamond MPD Hearing Exhibits: These documents, which include the City staff report and written comments from citizens, were submitted during the hearing and admitted at the end of the hearing process.

      iii. Index of Prehearing Documents: These documents were identified in pre-hearing exhibit lists submitted by the SEPA Appellants, the Applicant, and counsel for the City.

      iv. Emails for the Villages-Lawson Hills MPDs: These were emails that the SEPA Appellants, the Applicant, counsel for the City, and the Examiner exchanged on SEPA appeal issues.

   B. Audio recordings of proceedings before the Hearing Examiner on the FEIS Appeals and the Villages MPD application.

   C. A transcript of proceedings before the Hearing Examiner on the FEIS appeals and the Villages MPD application.

   D. Audio recordings of the proceedings before the City Council during the City Council's closed record hearing on the Villages MPD application.

   E. Written materials submitted by the parties of record to the City Council during the City Council's closed record hearing on the Villages MPD application. These materials were indexed as "C" exhibits, as shown in the list in Attachment 2 to these Findings of Fact.

2. Proposal Description. The Master Planned Development ("MPD") includes 1,196 acres, to be developed with the following uses: a maximum of 4,800 low, medium and high density dwelling units; a maximum of 775,000 square feet of retail, offices, commercial and light industrial development; schools; and recreation and open space. The MPD land uses are shown on the Land Use Plan map Figure 3-1 dated July 8, 2010. The MPD will also result in the rezoning of portions of the property from the

current R6 Single Family Residential and CC Community Commercial designations to a designation of Master Planned Development MPD. The details of the Villages MPD are outlined in the Master Planned Development application, dated May 11, 2009 and as revised on December 31, 2009. A significant feature of the project is that 505 acres, or 42% of the project area, will be open space.

3. MPD Project Area. The Villages MPD project area consists of two subareas, the Main Property and the North Property (also known as Parcel B). The "Main Property" is located primarily south of Auburn-Black Diamond Road at Lake Sawyer Road, extending approximately 2 miles south and eventually east to SR-169 along the southern city limits. A portion of the Main Property (a.k.a. Parcel C) is located on the north side of Auburn-Black Diamond Rd., west of Lake Sawyer Rd. The "North Property" (approx. 80 acres) is located to the west of SR 169, approximately two miles north of the Main Property and north of SE 312th Street (if extended). The North Property is south of and adjacent to the North Triangle property that is part of the proposed Lawson Hills MPD project. The MPD project area is shown on the Land Use Plan map, Figure 3-1 (dated July 8, 2010) accompanying the MPD application.

4. MPD Project Density. If developed to the full extent proposed in the MPD application dated May 11, 2009 and as revised on December 31, 2009, the Villages MPD will have an average density of 4.01 units per gross acre (4,800 units/1,196 acres = 4.0133) and an average density of 8.71 units per net acre (4,800 units/551 acres with residential or mixed use designations (as shown on the Land Use Plan map in Figure 3-1) = 8.711).

5. MPD Project Traffic.

A. Chapter 3 of the Villages FEIS includes an analysis of the transportation impacts of the Villages MPD, as well as a discussion of possible mitigation of those impacts. The FEIS discussion of transportation impacts was based on a detailed analysis included in the Transportation Technical Report ("TTR") attached to the Villages FEIS as Appendix B.

B. The TTR analyzed the transportation impacts of the Villages MPD that would occur in a study area with 46 intersections, covering a geographic area ranging from Maple Valley, Covington, Auburn, Black Diamond and other areas within unincorporated King County. As discussed at page 2-1 of the TTR, the eastern limit of the study area is generally bounded by SR 169, with the northern boundary at SR 169/SE 231$^{st}$ Street in Maple Valley, and the southern boundary at SR 169/SE Green Valley Road. The western study area limit extends up to SR 516/160$^{th}$ Avenue SE in the City of Covington and SE Auburn-Black Diamond Road/SE Green Valley Road in the City of Auburn. Because traffic volumes are higher and traffic operations are worse during the PM peak hour, the TTR analyzed intersection operations during the PM peak hour, with the exception of a

few key intersections in the project vicinity, where operations were also analyzed for the AM peak hour.

C. Using traffic counts collected in 2007, the TTR analyzed existing transportation levels of service ("LOS") for the 46 study area intersections, by comparing the existing intersection operations to the LOS adopted by the jurisdiction in which the individual intersections are located. As depicted on Table 4, pages 2-14 – 2-15 of the TTR and as explained on pages 3-16 of the Villages FEIS, three study area intersections currently operate worse than the adopted LOS standard:

- SE 288th Street/216th Avenue SE: LOS D (vs. adopted Black Diamond standard of LOS C)
- SR 169/Black Diamond Ravensdale Road: LOS F (vs. adopted Black Diamond standard along SR 169 of LOS D)
- SR 169/SR 516: LOS E (vs. adopted Maple Valley standard of LOS D)

D. Based on the Institute of Traffic Engineers ("ITE") Trip Generation Manual (8th Edition), the Villages MPD will generate 6,019 total new PM peak hour vehicle trips, as shown in tables in Appendix A to the TTR.

E. After an 11 percent reduction for internal trip capture and a 10 percent reduction for pass by and diverted link trips respectively, the Villages MPD will generate 5,152 net new PM peak hour trips, as shown on Tables 9 – 10 of the Villages TTR. The internal trip capture rate of 11 percent was based upon the ITE Trip Generation Handbook, a widely accepted source for estimating internal trip capture. Perlic testimony, Transcript at 1,499 - 1,500. The internal trip capture rate and pass by and diverted link trip reduction rates were conservatively low estimates, so as not to underestimate the total net new traffic trips that would be generated by the Villages MPD.

F. Mr. Perlic distributed the 5,152 net new PM peak hour trips over the roadway network within the City of Black Diamond using the City of Black Diamond transportation demand model. For the study area roadway network outside of the City of Black Diamond, Mr. Perlic used the Puget Sound Regional Council ("PSRC") model, adjusted with the use of engineering judgment. The use of the PSRC model was appropriate because it is a regional model, whose full regional roadway network is needed to address the regional nature of many of the new vehicle trips that will be generated by the Villages MPD. The results of the trip distribution are shown on page 3-9 and Figures 6-11 of the Villages TTR.

G. Using the trip distribution percentages, the FEIS analysis then assigned trips from those percentages to individual intersections. The assigned trips

were combined with existing traffic, plus assumed growth in background traffic of 1.0% annually for the Covington area along SR 516, and 1.5% annual growth rate for all other intersections in the study area. In many areas the historical annual growth in traffic volume was less than this rate, and in some areas the current trend is a decline in growth. Consequently, as the City of Maple Valley's expert Natarajan Janarthanan agreed, the use of these background traffic growth rates was conservative, in that they potentially overstated the total amount of traffic at individual intersections and the potential need for future infrastructure improvements.

H. The FEIS analysis then considered the operations of the 46 study area intersections in the year 2025, assuming the total numbers of assigned trips described in Finding No. 5(G) above. The intersection operations analysis considered the average level of service for the entire intersection, rather than analyzing the level of service of individual intersection legs (although the TTR did analyze individual turning movements). As Mr. Perlic and the SEPA Appellants' expert Ross Tilghman testified, it is standard practice to analyze the entire intersection because mitigation is tied to failure of the whole intersection. Tr. pages 1,527 and 607. The FEIS analysis concluded at page 3-18 that 22 of 46 intersections would have failing levels of service. The year 2025 projected levels of service are shown in Exhibit 3-6 of the FEIS, and in Table 16 (pages 3-55 – 3-57) of the TTR.

I. The FEIS and TTR analyses described above contains a reasonably thorough discussion of significant adverse transportation impacts of the Villages MPD. The choice of methodology and engineering decisions made therein are all within the parameters of reasonably justified professional engineering judgment. The FEIS and TTR analyses are adequate and sufficient to support approval of the Villages MPD with conditions.

J. The FEIS analysis also identified infrastructure improvements as mitigation for the projected LOS failures. These improvements are listed in Exhibit 3-7 of the Villages FEIS. In addition to these improvements, the Applicant has also committed under certain conditions to pay a specified percentage of additional improvements located within the City of Maple Valley. The improvements listed in the FEIS, together with the additional improvements offered by the Applicant, are sufficient to mitigate the LOS failures projected by the Villages FEIS and TTR as well as the impacts projected by the City of Maple Valley, and are therefore adequate, appropriate and sufficient to support approval of the Villages MPD with conditions. Additional review of transportation impacts will be performed and potential additional mitigation identified in conjunction with specific projects, as called for by conditions of MPD approval.

K. Challenges to the FEIS and TTR analyses by parties of record are not supported by the balance of the evidence, for the following reasons:

i. Use of the PSRC Travel Demand Model. The FEIS and TTR appropriately utilized the PSRC regional model, rather than the City of Maple Valley's model:

a. The Maple Valley model's trip distribution was based on an incorrect split between trips generated by residential uses and trips generated by commercial uses. Because trips from these kinds of different land uses have different travel patterns, this error increased the percentage of MPD project trips that would be distributed along SR-169 into Maple Valley and overstated the extend of traffic impacts in Maple Valley. This error and its significance are explained in the Declaration of John Perlic at pages 10 - 13 and 17 - 18.

b. The Maple Valley model also incorrectly distributed more trips northward along SR-169 vs. west and northwest along Covington-Lake Sawyer Road and 216$^{th}$ Avenue SE. The PSRC regional model accounts for trips traveling to major employment centers in the Kent Valley, Seattle and Bellevue. Mr. Perlic adjusted the PSRC trip distribution manually to account for the fact that these longer regional trips would make a choice to avoid the congested SR-169 and travel west and northwest to take a different route. This will be particularly true for trips originating from the Villages, because those trips would essentially have to "backtrack" to get out to SR-169 rather than taking a more direct route west or northwest. The Maple Valley model, by contrast, is "cordoned off" with respect to regional work trips, and therefore could not take them properly into account. Further, the Maple Valley model did not take intersection delay along SR-169 into account, and automatically assigned trips to that route if capacity existed. These erroneous assumptions artificially inflated the percentage of trips distributed to SR-169, and inflated the extent of projected impacts in Maple Valley.

c. The Maple Valley distribution and assignment was then analyzed using inappropriately low peak hour factors, which artificially worsened intersection levels of service. In some cases the Maple Valley model used a peak hour factor ("PHF") lower than existing peak hour factors, when available literature documents that PHF increases as traffic volumes increase.

d. Other flaws in the Maple Valley model's analysis are detailed in Mr. Perlic's Declaration, which the Council finds credible.

ii. Internal Trip Capture. The FEIS analysis' internal trip capture rate was based on the ITE Trip Generation Handbook, which both Mr. Perlic and Matt Nolan of King County agreed (Tr. at 520 - 523) was the standard method for determining trip generation. Further, in its written comments on the DEIS, the City of Maple Valley expressed concern that the internal trip capture rate was actually too low and would thus overstate impacts from the project.

iii. Background Traffic Growth. The FEIS and TTR background traffic growth projections were conservative and therefore reasonable, and within the bounds of professional engineering judgment. The other parties did not demonstrate that the background traffic growth rates were erroneous. To the extent that actual growth in background traffic turns out to be lower than projected, this can be addressed in future traffic analysis performed as required by the MPD conditions of approval and/or as part of specific projects.

iv. Peak Hour of Analysis. Use of the PM peak hour analysis was sufficient to establish necessary mitigation for traffic increases. While some SEPA Appellants would have preferred the FEIS address other times, including AM peak hours, it is customary to use the highest travel hour so mitigation is imposed for the worst-case traffic scenarios. Mr. Perlic testified to this effect.

v. Level of Service Intersection Analysis. It was not necessary for the FEIS and TTR to discuss the anticipated increases in travel times resulting from increased traffic. The FEIS and TTR addressed levels of service and contained a reasonable and appropriate discussion of the impacts resulting from increased traffic volumes and decreased levels of service. The LOS analysis, rather than a travel time analysis, is the more customary manner to address traffic issues. The Growth Management Act requires an LOS analysis to gauge the performance of local transportation systems. RCW 36.70A.070(6)(a)(iii)(B). City and County elected officials deal with level of service on a regular basis in their review of planning documents required by the Growth Management Act and their review of land use applications. Mitigation is based on level of service; thus a discussion of LOS is more meaningful than increased travel times. Mitigation is shown when the levels of service become unacceptable. It is reasonable to conclude that decision-makers are familiar with LOS analysis; additional analysis of anticipated increases in travel time was not necessary.

vi. Peak Hour Factor. Application of the 0.97 peak hour factor does not invalidate the FEIS and TTR analyses. While there was some testimony that a 0.92 peak hour factor is the accepted standard,

applying that factor to an intersection already at 0.92 or higher would be superfluous, and a higher factor is appropriate. 85% of the 39 study area intersections existing today (7 of the study area intersections will be created as a result of the MPD) have an existing peak hour factor of .92 or higher. There was also testimony that peak hour factors increase over time as congestion increases, and that an increase of .05 is an appropriate rule of thumb for planning purposes. In addition, the peak hour factor can be adjusted based on actual conditions in future traffic analysis performed as required by the MPD conditions of approval and/or as part of specific projects.

vii. Queuing Analysis. Queue analyses are more appropriately done at the project level, because the determination of whether there is a significant adverse impact will occur in conjunction with construction, rather than as part of a projection of impacts 15 years into the future. Queue analyses at the project level will allow consideration of signal timing, actual volumes, intersection design, and will more accurately predict what the specific mitigation needs would be, such as whether a left turn lane is needed to be added, and the necessary length of that left turn lane. Tr. pages 1,472-1,512.

viii. Railroad Avenue. The City's Comprehensive Plan designates Railroad Avenue as a collector road, with a level designation of C, and whose purpose is to collect and distribute traffic between local roads and arterial system. Railroad Avenue has sufficient capacity to handle projected increases in traffic, even with on-street parking. Tr. pages 1,535-1,536. While Railroad Avenue is part of the City's Old Town historic district overlay, and Black Diamond Comprehensive Plan policies state that the historical character "should be retained and enhanced, and this area should become the focus of tourist and specialized retail activities," there are several other roads in the area, such as the main roads through North Bend and Snoqualmie, with historical characteristics similar to Railroad Avenue (including parking) that have been able to retain their rural character in spite of development and increases in traffic. Moreover, analyzing impacts to a road's "rural character" would be speculative and subjective.

L. Future Transportation Analysis. Notwithstanding the above Findings concerning the reasonableness and appropriateness of the FEIS and TTR's analyses of potential transportation impacts and identification of mitigation for them, all travel demand models and transportation impact analyses rely upon engineering assumptions and the exercise of engineering judgment about future conditions. As such, neither the PSRC model nor the City of Maple Valley model is optimally suited to predict the long-term traffic impacts for the Black Diamond community. And, the length of the Village's 15-year build out period increases the risk that one

or more assumption could turn out to be incorrect. This risk, which may be exacerbated by the scale of the MPD development, warrants the preparation of additional transportation analyses at appropriate, future intervals, as called for by conditions of the MPD approval in Exhibit C below.

6. Traffic Safety.

A. As a general matter, it is reasonable to expect the number of accidents to increase in proportion to increases in traffic volumes. This general proposition does not always hold true, however. Exhibit H-22 is a Washington State Department of Transportation accident history detail report, showing reported collisions that occurred on Southeast Green Valley Road from Auburn/Black Diamond Road to SR-169, January 1, 2001 through 2009. Ex. H-22 includes a period during 2008 during which traffic volumes increased substantially due to a detour resulting from a bridge closure; however, despite the increased traffic during that period, the number of accidents did not increase above the average for this nine-year reported period. Tr. at 1,541 - 1,543. Exhibit H-22 demonstrates that vehicle accident rates are somewhat random and are not necessarily directly tied to increases in traffic volumes.

B. There are no high incident accident intersections in the FEIS transportation study area. Those accidents that did occur in the study area were random and not tied to any particular, identified hazards on the roads. Some of the safety impacts will be mitigated by the improvements called for in the FEIS, and the randomness of the accidents makes it difficult to predict and impose more specific mitigation that would decrease the risk. There is no known way to analyze safety impacts except to evaluate the particular configuration of a high incident location. Tr. at 1,541 - 1,543.

C. Green Valley Road has been designated under King County's Historic Heritage Corridor. Traffic on Green Valley Road is projected to increase by as much as 300 – 400%. Tr. at 476. Green Valley Road currently has very low traffic volumes, and although the anticipated increase in traffic volumes resulting from the project will not exceed Green Valley Road's capacity, increased traffic may result in safety concerns. Green Valley Road has limited or no roadway shoulders, trees and fences in very near proximity to the roadway, and very curvilinear alignment. Additionally, some witnesses testified that Green Valley Road has a high number of large animals that regularly cross the road, as well as a high volume of bicyclists, hikers, joggers, tubers, swimmers, outdoor groups, and fishermen using the shoulder of the road. These factors justify a study of traffic impacts and recommended mitigation to provide for safety and compatibility between the varied uses of Green Valley Road. The study

should include an analysis of measures designed to discourage and/or prevent MPD traffic from utilizing the road, such as the installation of traffic calming devices, while ensuring that such measures can be designed in a manner consistent with the road's designated status.

7. Stormwater Quality.

A. Lake Sawyer. Lake Sawyer is a significant water body. It is the fourth largest lake in King County, covering 280 acres. Ex. NR-TV-11, p. ES-1. Its watershed encompasses 8,300 acres. Ex. H-9, p. vii. Over 200 people live upon its shorelines. The lake is used extensively for recreational purposes such as sailing, water skiing, scuba diving, swimming, picnicking, wildlife observation and aesthetic enjoyment. Ex. NR-TV-11, p. ES-1. Public access is provided by two city parks, one on the northwest side of the lake and another on the southern end of the lake. The lake provides habitat for three federally listed species: Steelhead, Coho and Chinook salmon. TV FEIS at 4-71, 4-73.

B. Phosphorus. Phosphorus poses a significant threat to Lake Sawyer water quality. In lakes of the Puget Sound Lowlands, phosphorus is often the nutrient in least supply, meaning that biological productivity is often limited by the amount of available phosphorus Lake Sawyer Water Quality Implementation Plan (Ex. H-9) at 6 (*citing* Abella, 2009). Thus, for lakes such as Lake Sawyer, phosphorus is usually the main nutrient that drives the eutrophication process. When lakes are polluted with excessive levels of nutrients and have high biological activity, they are considered eutrophic. When a lake reaches a eutrophic state the consequences are serious. Blue-green algae bloom, creating toxics that are lethal to aquatic life, birds and shore animals, including cats and dogs. The blue-green algae form a scum over lake surfaces, causing beach closures. Testimony of Abella, 3/8/10, p. 555. The toxins are also under study as a cause for liver ailments in humans. *Id.* A eutrophic state also harms coldwater fish. Coldwater fish need to stay in the lower, colder layers of a lake. A eutrophic state deprives the lower waters of necessary oxygen and leaves it in the warmer upper layers. Zisette testimony, 3/6/10, pp. 72 - 73.

C. Previous Lake Sawyer Water Quality Problems. In the 1970's, evidence of failing septic systems in the Lake Sawyer watershed resulted in a decline in water quality in Lake Sawyer and the rivers that feed into it. To correct this problem, the City of Black Diamond constructed a sewage treatment plant in 1981. Treated effluent was discharged into a natural wetland, which ultimately discharged into Lake Sawyer. Lake Sawyer Water Quality Implementation Plan ("Implementation Plan") Ex. H-9 at 1. The treated effluent caused a significant degradation of Lake Sawyer water quality. As phosphorous levels went up, algae blooms occurred.

According to witnesses, a green scum covered the lake, rendering the lake virtually unusable for recreational and other public activities. Testimony of Wheeler, Tr. 3/19, pp. 3647 - 3648. Due to the water quality problems caused by the treated sewer water, the Department of Ecology required the diversion of the effluent from the natural wetland to a secondary treatment plant in Renton via a King County sewer line. Ex. H-9 (Implementation Plan) at 1. This diversion was completed in 1992. *Id.*

D. Lake Sawyer Listing. As a result of Lake Sawyer's water quality problems, DOE listed Lake Sawyer as an "impaired water body" pursuant to the requirements of the Clean Water Act. The Clean Water Act requires a total maximum daily load (TMDL) to be developed for impaired water bodies. The TMDL is subject to approval by the US Environmental Protection Agency. The TMDL sets a limit to the amount of phosphorous that is allowed into a water body. Implementation Plan, Ex. H-9 at 3. The Lake Sawyer TMDL for phosphorous approved by the EPA in 1993 established a target in-lake, summertime average phosphorus concentration of 16 micrograms per liter. Ex. H-9 (Implementation Plan) at 1, 9, and 12. To meet this target, the TMDL also established a loading capacity, expressed in volume, of 715 kilograms of phosphorous per year. Id. at 9 (Table 1). This means that all sources of phosphorous may not exceed a total of 715 kilograms per year.

E. Current Lake Sawyer Water Quality. Lake Sawyer had average summertime (June-August) phosphorous concentrations of 12 to 23 micrograms/L from 1990 to 1998. Ex. H-9 at 1, 12 (Figure 5). From 1999 to 2007 the average summertime phosphorous levels have been in the 8 to 16 microgram/L range. *Id.*. The TMDL target of 16 micrograms/L has been met since 1998, with levels down to 8 or 9 micrograms/L in 2007. Ex. H-9 at 12. The Implementation Plan shows that this current state of the lake, with a total phosphorus concentration of 8 or 9 micrograms/L, is not temporary but is anticipated to be stable, absent further development.

F. King County Lake Sawyer Management Plan. In 2000 King County prepared the Lake Sawyer Management Plan, Ex. NR-TV-11 ("LSMP"). It is considered a supporting document of the Lake Sawyer TMDL. Ex. H-9 at 1. The purpose of the LSMP was to complete a Phase 1 study initiated in 1989-90. LSMP at 1 - 5. The primary purpose of the Phase 1 Study was to assess the impact of the water treatment plant diversion on water quality, update the lake's nutrient and water budgets, and to evaluate and recommend restoration alternatives that will maintain and protect Lake Sawyer's water quality and beneficial uses. *Id.* The LSMP was based upon years of data collection and employed the input of several stakeholders representing public and private organizations. It included a detailed projection of phosphorous levels at full build out of the Lake Sawyer watershed, with and without recommended mitigation. The

LSMP identifies several mitigation measures directed at the Lake Sawyer watershed to control phosphorous loading. LSMP, Chapter 6. If these measures fail to reach or maintain lake management goals, the LSMP identifies "contingency in-lake measures" to improve water quality. LSMP at 6 - 22. These measures consist of buffered alum treatment (treating the lake with alum) and hypolimnetic aeration and circulation (pumping oxygen into the lake through a piping system).

G. Department of Ecology Lake Sawyer Water Quality Implementation Plan. In 2009 DOE released the Lake Sawyer Total Phosphorous Maximum Daily Load Water Quality Implementation Plan ("Implementation Plan"), Ex. 9. It is considered the follow up document to the Lake Sawyer Total Phosphorous TMDL. Ex. H-9 at 2. It provides a framework for corrective actions to address sources of phosphorous pollution in Lake Sawyer and the surrounding watershed. Unlike the LSMP, it did not include any modeling of future lake conditions. Like the LSMP, the Implementation Plan was based upon the input of several stakeholders participating in the Lake Sawyer Steering Committee, consisting of representatives of: DOE; King County; City of Black Diamond; King County Conservation District; Washington Department of Fish and Wildlife; the Muckleshoot Indian Tribe; and local watershed residents. The corrective actions identified in the Implementation Plan largely mirrored the mitigation recommended in the LSMP, with the important distinction that the Implementation Plan also contemplated the City's adoption of the 2005 Stormwater Management Manual for Western Washington. The Implementation Plan concludes that with compliance with the Western Washington Phase II Municipal Stormwater Permit, the adoption of and compliance with the 2005 DOE Manual, and a monitoring program for the implementation projects, the City of Black Diamond would meet the requirements of the TMDL. Ex. H-9 at 31 - 32. There is no evidence to suggest that these measures, including the 2005 DOE manual, are inadequate.

H. Credibility of the LSMP and the Implementation Plan. The LSMP and the Implementation Plan build upon years of research and hundreds of pages of scientific analysis. The plans are the result of significant collaboration of all major stakeholders. The Implementation Plan's conclusions that compliance with the 2005 Stormwater Management Manual for Western Washington will constitute compliance with the TMDL were made by the Department of Ecology, whose primary mission and expertise are the protection of environmental resources, such as Lake Sawyer. Given DOE's mission and expertise, the City Council finds the Implementation Plan's conclusions credible. There is nothing in the record to suggest that DOE would have any self-interest or political reason to find TMDL compliance when that was not the case. The Applicant raised the issue of DOE approval prior to the Appellants' rebuttal and nothing was offered by the Appellants to explain why DOE would reach such a conclusion if there

was no reasonable basis for it. While some parties of record argued that the data and methodology shows that the MPD projects will load phosphorous in excess of TMDL and that this phosphorous loading will approach (but not exceed on its own) the eutrophication point for Lake Sawyer, these parties did not dispute the data or methodology used in the LSMP or the Implementation Plan to assess the effectiveness of mitigation. Therefore, their arguments and evidence are insufficient to refute the conclusions of DOE's Implementation Plan.

I. The Villages MPD is Within LSMP's Total Phosphorous Loading Assumptions.

i. Reliance on LSMP Loading Assumptions. Although the Applicant has not chosen to conduct its own analysis of how much phosphorous the MPD's will discharge to Lake Sawyer, the Applicant has relied upon the phosphorous loading estimates of the Lake Sawyer Management Plan ("LSMP"), prepared by King County in 2000. Through extensive analysis and testimony, the Applicant established that the MPD projects are consistent with the assumptions used by the LSMP in predicting total phosphorous loading.

ii. LSMP Overstates Potential Total Phosphorus Loading. The record of this proceeding conclusively establishes there are three (and potentially four) factors that result in an overstatement of phosphorous loading in the LSMP model:

a. The LSMP overstates the amount of the MPD development area that drains to Lake Sawyer. The Applicant's geotechnical consultants performed 110 test borings to determine the location of impermeable surfaces and the resultant subsurface flows of stormwater. Tr. 2641. Through this geotechnical analysis the Applicant determined that 30% of the project area does not drain into Lake Sawyer as assumed in the LSMP. Kindig Testimony, 3/12/10, pp. 2032 - 2033. No party rebutted this testimony or geotechnical analysis.

b. The LSMP overstates the amount of potential development in the MPD project area. As shown in Exhibit H-8 and as testified by Al Fure, the LSMP overstates the development of the MPD's by 25%. Tr. at 2,007 (Fure testimony, 3/12).

c. The LSMP model utilized an inappropriately high total phosphorus baseline. The LSMP model relied upon the in-lake phosphorous concentrations from March 1994 through April 1995. Wheeler Ex. 20(e), Appendix C, Figure E6. The concentrations during this base period ranged from 20 to 60 micrograms/L, significantly higher

than the TMDL concentration of 16 microgram/L. As shown at p. 12 of the Implementation Plan, the 2007 phosphorous concentration was 8 or 9 micrograms/L. *Id.* The "typical year" baseline used in the LSMP model was 84% over the TMDL concentration. Wheeler Ex. 20. The significant disparity between current phosphorous concentrations and those used in the baseline of the LSMP model is probably due to the five year recovery period of the lake from the treatment plant diversion in 1992. *Id.* Yet, Table 6-7 of the LSMP, which provided the projections on future phosphorous loading, noted that "it is assumed that internal loading will not change in the future," when more recent data (shown in the Implementation Plan) demonstrates that internal loading has, in fact, changed.

d. A fourth factor may be the City's adoption of the 2005 DOE Stormwater Manual. The LSMP was based upon the assumption that new development would be regulated by the Department of Ecology's 1992 Stormwater Manual. Tr. at 558 (Abella testimony, 3/8/10). Development of the Villages MPD, however, will be regulated by the DOE 2005 Manual. As Ms. Abella testified, the 2005 DOE Manual provides "better by far" phosphorous safeguards than the 1992 manual. Tr. at 564 (Abella Testimony, 3/8/10). However, some of the benefits of the 2005 Manual may already be integrated into the LSMP model. One of the recommended stormwater controls in the LSMP is the adoption of the 1998 King County Surface Water Design Manual. LSMP, p. 6-6 to 6-7. In the alternative, the LSMP recommends adoption of the "Lake Protection Standard", a component of the King County Surface Water Design Manual. In recommending these standards, the LSMP focuses upon the fact that they have a phosphorous treatment reduction goal of 50%, which is the same standard required under the 2005 DOE Manual. If the 2005 DOE Manual does not provide any level of phosphorous protection better than the 1998 King County Manual, the City's adoption of the 2005 DOE Manual is simply an adoption of one of the LSMP mitigation measures and its actions fall squarely within the LSMP modeling. However, if the 2005 DOE Manual provides better protection than the 1998 King County Manual, as Ms. Abella testified is the case, this is a fourth reason why the LSMP model overstates the potential phosphorous loading from future build out.

e. There is no evidence in the record that identifies any factors that would result in an underestimation of phosphorous loading in the LSMP. While Ms. Abella testified that the LSMP was outdated, she could only conclude that an updated LSMP could "go either way" in changing the outcome of phosphorous loading predictions.

Ms. Abella testified that the LSMP is based upon data and development regulations from 1995. Tr. at 174. She noted that development projections in the LSMP may not be accurate, due to possible changes in Black Diamond comprehensive plan policies and development regulations and Black Diamond annexations that occurred subsequent to 1995. *Id.* at 179. The Applicant addressed Ms. Abella's concerns about projected MPD development in the preparation of Ex. H-8 and the testimony of Al Fure, which, as discussed above, demonstrated that the LSMP actually overestimated potential development within the MPD project areas and, therefore, overestimated potential phosphorus loading from new development.

J. The Villages MPD Will Comply With DOE Manual Requirements and the TMDL.

i. The Villages MPD will comply with the requirements of the DOE 2005 Manual, and will therefore be within the TMDL. Dr. Kindig testified that, as designed, the Villages MPD meets the DOE conditions for consistency with the TMDL. Tr. at 2,025-26. Not only was Dr. Kindig's testimony on this point unrefuted, but Robert Zisette, the SEPA Appellants' water quality expert, agreed that the mitigation implementation measures identified in the Implementation Plan are incorporated into the Villages MPD proposal. Tr. at 3,625 (Zisette testimony, 3/19/10). Therefore, according to DOE's conclusion in the Implementation Plan, the Villages MPD will comply with the TMDL.

ii. The SEPA Appellants asserted that compliance with the mitigation measures outlined in the LSMP (and presumably the Implementation Plan) would not be sufficient to comply with the Lake Sawyer TMDL or to prevent Lake Sawyer from reaching eutrophic status. The SEPA Appellants' expert, Mr. Zisette, performed an interpolation of the modeling used to predict phosphorous loading for total build out, and determined that the phosphorous loading attributable to the MPD proposals, with LSMP stormwater controls, would generate an additional 353 kg/yr above the 715 kg/year TMDL limit. See Wheeler Prehearing Ex. 20. In making this calculation, Mr. Zisette used approximately the same MPD area calculated by the Applicant as draining into Lake Sawyer, employing the area outlined in Exhibit H-7. Mr. Zisette's TMDL calculations, however, did not reveal any new information not readily apparent to DOE when it concluded (in the Implementation Plan) that development in accordance with the 2005 Stormwater Manual would comply with the TMDL. Additionally, beyond adjusting downward for development area, Mr. Zisette's calculations did not alter any of the assumptions used in the LSMP model which, as found above, significantly overstated the potential

total phosphorus loading to Lake Sawyer. The LSMP model predicted a total phosphorous load of 2,255 kg/yr at build out, which is 1,540 kg/yr above TMDL; the baseline "typical year" in the LMSP model was already 627 kg/yr above the TMDL. Mr. Zisette's calculation merely showed that the MPD's proportionate share of this excess phosphorous is 353 kg/yr. Mr. Zisette's interpolation was not the kind of analysis of the total phosphorus volume loading of the Villages MPD to Lake Sawyer that he testified (Tr. at 3,596) that the Applicant should have performed. Given the objectivity and expertise of DOE, and the significant improvement in the current Lake Sawyer water quality that was not factored into the LSMP modeling, the City Council finds credible DOE's conclusions that compliance with the NPDES Phase II Stormwater Permit and the 2005 DOE Manual, and with additional monitoring and conditions of approval noted above, the Villages MPD will comply with the TMDL. Those conclusions are hereby adopted.

iii. The SEPA Appellants also asserted that the MPD could cause Lake Sawyer to exceed 24 micrograms/L, which they alleged, based on Table 4-10 of the LSMP, is the scientific dividing line between a mesotrophic and eutrophic lake. The meaning or eutrophic risk of this "dividing line" is not explained in the LSMP, however. The TMDL is set at a point where there is a 5% chance of reaching eutrophic status. *See* LSMP, Appendix F, 2/11/93 Wong Memo. And, the 24 micrograms/L is significantly more than the TMDL, which at 16 micrograms/L has a 50% less phosphorous concentration. Further, while the SEPA Appellants point to Table 6-3 of Appendix I to the LSMP, which provides that the current condition of Lake Sawyer is at 23 micrograms/L and that build out of the watershed, with watershed controls, will reach 31 micrograms/L, neither Table 6-3 nor Table 4-10 reflects current conditions. As discussed previously, the Implementation Plan shows the current state of the lake at 8 or 9 micrograms/L, and these levels are anticipated to be stable, absent further development. The lake concentration has been under 16 micrograms/L since 1998. There is nothing in the record to suggest that the Villages and Lawson Hills MPDs, alone, will push the Lake Sawyer total phosphorous concentration beyond 24 micrograms/L, given the lake's current conditions.

K. Estimation of Total Phosphorus Volume Loading. The Applicant did not determine the total volume of phosphorous the Villages MPD would add to Lake Sawyer. This phosphorus volume loading is not unreasonably difficult to compute, because the Applicant has data on both projected stormwater volumes and expected phosphorous concentrations. The Applicant did not rebut testimony on this point. Information as to the annual projected total phosphorus volume load from the Villages MPD to

Lake Sawyer would assist the City in meeting the future water quality monitoring called for by the TMDL, and in determining whether the Villages MPD is, in fact, in compliance with the TMDL established for Lake Sawyer.

L. Total Phosphorus Concentrations in Rock Creek. Mr. Rothschilds, one of the members of the public who testified on water quality issues, raised concerns over phosphorous impacts to Rock Creek that had not been discussed during the SEPA appeals. The Applicant submitted a rebuttal declaration by Dr. Kindig, Ex. 121, which detailed that Mr. Rothchilds had not considered the impacts of additional flows from development in his estimates of Rock Creek phosphorous concentrations. Dr. Kindig established that the resulting phosphorous concentrations after the build out of both MPDs would be 0.026 milligrams/L. There is no evidence in the record to suggest that these concentrations would be adverse to Rock Creek.

M. Low Impact Development. Low-impact development techniques are also proposed as part of the Villages MPD, and are recommended conditions of approval. These techniques will also significantly mitigate stormwater impacts. The MPD project site contains permeable soils that are amenable to low-impact development techniques.

8. Stormwater Quantity. One party of record, Jack Sperry, shared photos of, and others shared concern over, past flood events. The added stormwater generated by the MPDs will not make a significant difference in the quantity of water that reaches Lake Sawyer during storm events. As discussed in the declaration of Al Fure, Ex. 123, the developed areas of the Villages and Lawson Hills MPDs occupy only 4% of the Lake Sawyer watershed. A little more than a third (326/922 acres) of the MPD developed areas are within the Lake Sawyer watershed. Using the volumes generated by the January 7, 2009, flooding events, the MPDs would have added an additional depth of 1.85 inches to the storm event, if the storm quantity was instantaneously delivered to the Lake. It would take several days for all of the water from such storm event to reach Lake Sawyer from the MPDs. Therefore, the MPD does not serve as a significant flood threat to Lake Sawyer properties.

9. Noise.

A. Existing noise levels. As summarized in the Villages FEIS at page 3-25, existing noise levels along SR-169 in the vicinity of the Villages MPD project area have been measured between 54 and 66 decibels (dBA), depending largely on the speed of vehicles. Noise levels have been measured at 62 dBA on Roberts Drive/Auburn-Black Diamond Road at the City offices, but noise levels in residential areas at a distance from major roads drop to between 46 and 53 dBA, with noise levels in more rural and undeveloped areas as low as 31 dBA. Appendix C to the

Villages FEIS identified the five locations where sound level measurements (SLMs) were taken to establish the base line or existing environmental noise level along SE Auburn-Black Diamond Road/Roberts Drive. Richard Steffel, the Applicant's noise expert, testified in a rebuttal declaration that the SLMs were taken after a traffic detour on SR-169 was discontinued to ensure that unusual traffic conditions were not present to influence the findings of the noise analysis. The Villages FEIS and its technical appendix addressing noise impacts (Appendix C) do not disclose the anticipated duration of each of the construction activities listed in the table in the Villages FEIS Exhibit 3-12. Tr. at 795-96.

B. Projected Noise Impacts from Villages MPD. As discussed in the Villages FEIS at Exhibit 3-12, MPD construction noise is estimated to be 80 to 96 dBA at 50 feet from the source, 74 to 90 dBA at 100 feet from the source, and 68 to 84 dBA at 200 feet from the source.

C. Noise Standards. Generally speaking, 55 dBA is an acceptable level of outdoor noise in a residential area pursuant to the "environmental designation for noise abatement" classification system utilized by Washington State and the U.S. Department of Housing and Urban Development Index. Villages FEIS at 3-27. The Federal Highway Administration Noise Criteria indicate that 52 dBA is an acceptable noise level for the interior of a residence. *Id.* at 3-28. Construction noise originating from temporary construction sites is exempt from noise regulation by the Department of Ecology. Because the Villages MPD is anticipated to be built out over a fifteen-year period, the noise standards adopted by DOE and other agencies do not adequately address construction noise impacts associated with the scale and construction duration of the Villages MPD.

D. Parties Affected by Noise Impacts. The parties most likely to be affected by construction noise include residents adjacent to the site, including single-family residential development to the east on both sides of Roberts Drive, and one residential family to the west of the property south of Roberts Drive, the Harps, who could experience peak noise levels up to 90 dBA. Villages FEIS at 3-29; testimony of Jerry Lilly (SEPA Appellants' expert) and Richard Steffel (Applicant's expert). The Harps' residence is located within 35 feet of the Villages main property. At least one member of each household referenced on page 3-29 of the Villages FEIS suffers from medical conditions which may be exacerbated by the construction noise. Harp Appeal of the Villages FEIS, pp. 8 - 9.

E. Duration of Construction Noise Impacts. The Villages MPD application (page 1-6) indicates that it is estimated that approximately 4,753,000 cubic yards of cut and 1,685,000 cubic yards of fill would be required for development of the main Villages site. Because dirt removed must be

used as fill, trucks will not be used to export the entire 4.7 million cubic yards of dirt. If the Applicant performs 4.7 million cubic yards of cut, and retains the 1.685 million cubic yards on site as required, approximately 3,680,000 cubic yards of dirt would have to be removed from the site. This is equivalent to approximately 153,000 truckloads of exported material. If ten truckloads are removed per hour, eight hours per day, five days per week, that would be 400 truckloads a week for about 7.35 years. As acknowledged by Exhibit 3-12 of the Villages FEIS, dump trucks generate 82 – 94 dBA of noise when measured 50 feet from the source and 76 – 88 dBA when measured 100 feet from the source. The 90 dBA clearing activities will likely be of short duration, since there are only so many trees adjacent to the three residential properties that will most likely to be affected by such noise.

F. Noise Mitigation. During its rebuttal presentation, the Applicant volunteered to provide certain specified mitigation to address construction noise impacts. City staff also recommended a condition requiring establishment of a construction haul route, with a corresponding prohibition of construction haul use of specified City streets. The City Council finds that incorporation of the Applicant's volunteered mitigation, and the construction haul requirements recommended by staff as conditions of MPD approval, will appropriately mitigate the construction noise impacts of the Villages MPD.

10. Schools.

A. School District. The Villages MPD project area is located in the Enumclaw School District ("District"). The District's schools are already over capacity, according to testimony by school officials.

B. School site standards. The District's capital facilities plan ("CFP") identifies acreage needs for new schools. Ex. 14, attached Ex. A, p. 15. However, the CFP appended to Ex. 14 fails to identify an explanation/justification for the acreage standards. Nevertheless, it is the most suitable standard provided in the record because it is incorporated into the City's Comprehensive Plan. In addition, BDMC 18.98.080(A)(19) requires that:

> *[t]he number and sizes of sites shall be designed to accommodate the total number of children that will reside in the MPD through full build out, using school sizes based upon the applicable school district's adopted standard....*

This standard links the size of the "school" to adopted District standards, but does not expressly tie the size of the "site" to the CFP acreage needs used to calculate District school impact fees. Because the acreage

requirements in the CFP are used to calculate school impact fees and are not necessarily intended to serve as minimum site standards for the construction of all schools, the acreage standard can be applied in a flexible manner, so long as sufficient acreage is provided to meet the District's adopted school size standard incorporated in BDMC 18.98.080(A)(19).

C. District/Applicant School Mitigation Negotiations. The District and the Applicant have been involved in extensive negotiations on a school mitigation agreement since August, 2006. The record reflects that the latest draft is satisfactory to both the District and the Applicant.

D. School Facilities Needed. The draft school mitigation agreement (Ex. NR–TV-8) indicates that the District identified the need for new schools to serve 1,800 elementary students, 1,100 middle school students, and 1,200 high school students. Likewise, Ms. Graham testified that during the process of preparing the DEIS, Parametrix identified the need for seven schools to serve the project areas of the Villages and Lawson Hills MPDs. The District identified the school needs and the District and Applicant "firmed up" the location of the elementary and middle schools in April 2009, and the location of the high school in late August or early September 2009. Tr. at 878-79. If the District proposes to locate a school in unincorporated King County, a conditional use permit must be obtained from King County.

E. Analysis of Traffic Impacts of School Construction. The FEIS and TTR transportation analysis addressed the cumulative, AM peak hour traffic impacts of schools needed to serve approximately the same number of students contemplated by the draft school mitigation agreement. FEIS, Appendix B at Table 10, p. 3-7; Tr. at 2,535 (Perlic testimony). Because school-generated traffic does not affect the PM peak hour, any change in the AM peak hour school traffic analysis due to a change in school site location would likely not affect the FEIS and TTR impact analysis and mitigation for PM peak hour conditions. Tr. at 2,541-42. (Perlic testimony). The SEPA Appellants and other parties of record have not demonstrated that this analysis was deficient, in that they did not provide any evidence suggesting which, if any, of Mr. Perlic's calculations would be rendered inadequate and how that may affect the proposed MPD construction and the associated planned road and intersection improvements.

F. Alleged Water Quality Impacts from School Construction. One party of record, Gil Bortleson, alleged that building the twin school sites south of the Villages along Green Valley Road would create a "high risk" of drying out approximately ten shallow wells serving neighboring residents in rural King County. Tr. at 137. In addition, Mr. Bortleson alleged that increased

runoff from the school sites would drain to the west, potentially flooding septic systems located in that area. Tr. at 144. Mr. Bortleson's allegations are speculative. Mr. Bortleson did not review any site plan for the proposed school construction prior to giving his testimony and assumed that the entire twin school site, 70 acres of land, would be paved or graded, creating 70 acres of new impervious surface. Tr. at 148. Mr. Bortleson also was not able to give any testimony with respect to the quantity of water that currently infiltrates to the wells that would not infiltrate to the wells after the project. Tr. at 153. He also was not able to answer any question regarding the amount of surface water infiltration needed to sustain the operation of the at-risk wells. Tr. at 154. Further, these alleged impacts can be more effectively evaluated when a specific proposal for school construction is submitted for permit review.

G. Lake Sawyer Park. Some parties of record objected to the potential use, contemplated in the draft school mitigation agreement among the Applicant, the School District, and the City, for joint school/City use of Lake Sawyer Park. Such joint use is consistent with Black Diamond Comprehensive Plan Policy CF-14, which calls for the City to "Maintain a joint-use agreement for all facilities and land."

11. Fiscal Impacts.

A. FEIS Analysis. The FEIS Fiscal Impact Analysis ("FIA") determined that the Lawson Hills MPD would have a positive fiscal impact and the Villages a negative fiscal impact, with the Villages MPD reaching a million dollar annual deficit by 2030. FEIS FIS at 4; Villages FEIS at 3-95. The FIA assumes $152 retail sales per square foot, and a $354,000 value for single-family homes and a $125,000 value for multi-family units, based upon house sales in Black Diamond four to five years ago. The Villages and Lawson Hills MPD proposals may only build residences in the first phases of development. *See* Villages and Lawson Hills MPD Applications, Chapter 9. As noted in the ECS 11/16/09 memo (Ex. J to the Villages FEIS), single-family residential developments typically produce deficits, and it is therefore likely that the first phases of MPD development will produce deficits if those phases are limited to residential development.

B. Applicant Analysis. Mike Whipple, the Applicant's fiscal expert, provided written comment regarding the divergent results reached by the Applicant's FIA and that adopted into the Villages FEIS. *See* MPD Ex. 124. Mr. Whipple's analysis found that the fiscal impacts for both MPDs would be positive. MPD Ex. 124, p. 4. As reflected in the Villages FEIS, pp. 3 - 96, Mr. Whipple noted that slight changes in assumptions can lead to differing results in the fiscal impact analysis. The primary differences in assumptions appear to concern retail sales and housing values. Mr. Whipple wrote that the FEIS FIA dollar amount of retail sales per square foot is significantly below the average for retail sales and is not supported by any market study. Mr. Whipple based his retail sales estimates upon the lower end of estimates prepared utilizing the Urban Land Institutes' "Dollars and Cents of Shopping Centers, 2002" and "2007 Retail Taxable Sales Estimates" prepared by HDL Companies. For housing values, Mr. Whipple assumed that single-family homes would sell for $420,000 and multi-family homes for $150,000. Mr. Whipple stated these housing values were based upon current market studies, although he did not mention whether these studies were conducted before the recent downturn in real estate sales.

C. Parametrix Sensitivity Analysis. The City also subjected the FEIS FIA to peer review by Parametrix in a "sensitivity analysis." Parametrix employed the methodology of both Mr. Whipple and the FEIS FIA to determine what would happen under four scenarios: (1) adjusting housing values; (2) assuming all parks maintained by an HOA; (3) assuming all streets maintained by an HOA; and (4) reducing police costs (the DEIS incorrectly calculated the number of new police officers needed; it is unclear if this error was remedied for the FEIS). Parametrix made these changes to assess both short- and long-term impacts on each MPD

individually and cumulatively. Under each scenario, Parametrix found a net positive fiscal impact, although the amount of the change in anticipated housing values was not identified.

D. Comparison of Fiscal Analyses. Neither study makes any assumptions or employs any methodology that could be considered unreasonable or excessively self-serving. The primary difference in the models used by the Applicant and for the FEIS are the assumptions made about future housing values and commercial activity for the City of Black Diamond over the next 15 years. Selecting one FIA over another would require a determination of which FIA more accurately predicts the performance of the economy for Black Diamond during the FIA's duration. Predicting the economy is an impossible task, or at least beyond the capabilities of current economic science. The FIAs only serve as a general guide to economic impacts, and those impacts must be considered inconclusive given the limitations of predicting economic performance 15 years in advance.

E. Fiscal Neutrality Factors. There are several factors that put the City in a good position to assure fiscal neutrality.

i The Applicant has agreed to a condition that will make it responsible for any fiscal shortfalls projected after each phase of development. The Applicant proposes the following condition:

> The applicant shall be responsible for addressing any projected city fiscal shortfall that a fiscal analysis, prepared at each phase, shows is a result of the Villages MPD. The exact terms and process for performing the fiscal analysis and evaluating fiscal impacts shall be outlined in the Development Agreement, and shall include a specific "MPD Funding Agreement," which shall replace the existing City of Black Diamond Staff and Facilities Funding Agreement.

ii. The sensitivity analysis conducted by Parametrix determined that under both FIAs, measures such as HOA ownership and maintenance of roads and/or parks would result in a net positive fiscal impact. Consequently, it is reasonable to conclude that any long term projected shortfalls could be addressed by privatizing infrastructure. Combining Applicant responsibility with the options of privatization provides reasonable assurance that the projects will not have an adverse fiscal impact upon the current residents of Black Diamond. In order to ensure that the MPD does not lower staffing levels of service as required by BDMC 18.98.050(A)(5), a condition of approval could be

worded to also require that the projects generate sufficient revenues to maintain required staffing levels.

iii. Additional fiscal analysis is required every five years, and at the start of each phase. The Applicant's recommended condition will be combined with that of the Staff's. As recommended by Staff, a fiscal analysis will be required five years into the project when it is likely that the Applicant's development is mostly residential and hence impacts may be most severe.

F. Table 3.4 of the application shows proposed land uses, and shows that a school uses are conditionally permitted within the office and retail designations. If a high school were located in an office or retail designation, because the amount of land a high school would occupy the amount of retail/office development would be significantly reduced. For this reason, Exhibit C below contains a requirement for preparation of an updated fiscal analysis for any proposal to locate a high school within any lands designated on Figure 3-1 (Land Use Plan) for commercial/office/retail use. This condition will also assist in assuring fiscal neutrality.

12. Wildlife.

A. Wildlife Species Likely to be Found on MPD Project Site. In order to determine the types of wildlife and habitat present on the sites for the purposes of the FEIS analysis, a resource study was conducted, which involved multiple site investigations throughout several different months and years, in addition to research of records and documents from DFW and other agencies. Tr. at 178 - 180 and 2,407. This included days of site investigations in 2005, 2007, and 2008. The results of this study are presented in the FEIS, which contains at page 4-72, Ex. 4-14 a summary of wildlife species expected to inhabit the Villages MPD site. The appendix to the FEIS contains a detailed list of all species considered. FEIS Appendix N, at July 16, 2008 WRI Memorandum pp. 11 - 15 and App. B thereto. Jason Knight, the consultant who prepared the technical analysis included in the FEIS, also noted that band tailed pigeons need mineral springs at their breeding site, and such springs are not found at the MPD project sites. While the band tailed pigeons may be found there during their migration, evidence presented support the findings that they do not inhabit or nest at the sites. Tr. at 60 - 61 and 2410-11. Mr. Knight added that no endangered or threatened species were found at the sites, which is also consistent with the findings by the DFW. He opined that development may benefit elk population because elk feed on landscaping plants that are more likely to be present as a result of development.

B. Wildlife Corridors. The width of the wildlife corridors on the Villages MPD site will be between 300 and 900 feet. The King County network biologist's minimum recommended width for a wildlife corridor is 150 feet. The width of the wildlife corridors proposed as part of the Villages MPD is adequate because it is at least double the minimum recommended by King County's network biologist, and provides sufficient space for wildlife to travel around spots where natural barriers such as flooded wetlands are present. Tr. at 2410-16 and 2454.

C. Impacts to Wildlife. Wildlife impacts are an inevitable impact of development. The only way to completely mitigate them is to provide for a one-to-one replacement of lost habitat with new habitat. Most development could not proceed under these conditions, and such a requirement would not be reasonable. The Villages MPD proposes to retain 42% of the project area in open space, a large portion of which will serve as a wildlife corridor. This open space retention is a relatively large set-aside for any development project, and the wildlife corridor within the open space is of sufficient width to provide for wildlife migration. This provides appropriate mitigation for any significant, adverse impacts to wildlife. And, significantly, the record also establishes that there is no threatened, endangered or otherwise protected species that has a habitat within the project area.

13. Wetlands. No evidence was presented on the issue of impacts to Core Wetlands or that the City's Sensitive Areas Ordinance is inadequate to protect these wetlands.

14. Landslide Hazards. Although at least one party of record asserted that landslide hazards had been inadequately analyzed, no evidence of landslide hazards was presented other than photographs of landslides. There also was no evidence presented on whether the City of Black Diamond's Sensitive Areas Ordinance is inadequate to address landslide hazards. Further, the Villages FEIS identifies landslide hazard areas and provides an in-depth assessment of mitigation for such hazards. *See* TV Appendix D, AESI Technical Report, p. 3-54, 4-2, 4-3, 4-11, 4-18, 4-21, 4-28-29, and 6-13 and 6-14. There was no evidence presented to show this analysis was inadequate.

15. Mine Hazards. The TV FEIS identifies mine hazard areas and concludes that only a small number of low-hazard mine areas are located within the Villages MPD. Villages FEIS at 4-8, 4-14, 4-15 and Exhibit 4-6. The City's Sensitive Areas Ordinance will ensure that these hazards will be sufficiently addressed. Some parties of record asserted that mine hazards had been inadequately addressed. One party of record in particular was primarily concerned with the dumping of toxic waste at mine sites. However, there was no evidence presented on mine hazards by any parties of record other than the Applicant, and there is no evidence in the record to suggest that the FEIS was inadequate on its analysis of mine hazards, including toxic waste issues at mine sites. Several people testified about mine hazard issues during the MPD portion of the hearing,

but there was no evaluation provided of the adequacy of the FEIS on this issue. There was also no evidence presented on whether the City of Black Diamond's Sensitive Areas Ordinance is inadequate to address mine hazards. A condition of approval requiring a notice on title disclosing the existence of present and former mine hazard areas will provide disclosure to potential buyers of homes within the MPDs.

16. Health Care Services. The Lawson Hills FEIS and the Villages FEIS indicate at page 3-89 that three hospital/medical care facilities operate near the City of Black Diamond, including Enumclaw Community Hospital in Enumclaw, Valley Medical Center in Renton, and Auburn General Hospital in Auburn. Advanced Life Support services are provided by King County Medic and are funded through a separate county-wide tax assessment. In addition, emergency medical care is provided by Mountain View Fire and Rescue (also known as King County Fire District No. 44). Specifically, the Villages and Lawson Hills FEISes locate medical facilities on the map in Exhibit 3-39. The FEIS analysis also indicates that additional fire fighters or volunteer EMTs will be required to serve the Villages MPD population, and that updated facilities as well as increased staff and infrastructure may be required for other medical facilities. Lawson Hills FEIS and the Villages FEIS, p. 3-90 - 3-91. Although one party of record alleged that Black Diamond has been identified by King County Public Hospital District #1 as an "underserved" area for health care, there was no additional testimony or evidence presented on health services other than the bare assertion in the Clifford Appeal that the FEIS was inadequate with respect to health services.

17. Historic and Cultural Resources. One party of record asserted that the Villages MPD will have an adverse impact upon historic and cultural resources, specifically a collapsed mine site that still contains the remains of some miners, and the potential existence of some Native American archaeological sites. That party did not pursue these claims during the hearings (beyond alleging traffic impacts to historic downtown areas, dealt with elsewhere in these Findings of Fact). There is no evidence in the record to establish that the Villages MPD has any significant adverse impacts upon cultural and historic resources.

18. Trails and Parks.

A. Amount of Parks. The Villages MPD exceeds the amount of parks required by the 2008 Black Diamond Parks, Recreation and Open Space Plan. The Villages MPD provides double the amount of neighborhood and community parks required by the Plan, and the number of pocket parks meets the Plan's standard.

B. Amount of Open Space. There are two prior agreements relating to open space: the Black Diamond Urban Growth Area Agreement ("BDUGAA") and the Black Diamond Area Open Space Protection Agreement ("BDAOSPA"). The open space called for by these agreements has been provided. The BDUGAA called for conveyance to King County of 645.2 acres of land located in the unincorporated county, and 63.3 acres to the

City as an offset for the West Annexation area; and conveyance of 339 acres in unincorporated King County to the County and 81.7 acres as an offset for the South Annexation area. The BDUGAA also required protection or conservation of 347 acres of potential in-city open space on or before annexation of the West Annexation area, and protection or conservation of 195 acres of potential in-city open space on or before annexation of the South Annexation Area. The potential in-city open space was to be protected conserved through purchase or transfer of development rights, or dedication or conveyance of conservation easement to the City or County. BDUGAA (City Staff report, Ex. 7) at 12-13. The BDAOSPA identified the specific lands and provided for mechanisms for their transfer and/or dedication at closing, which was the effective date of annexation of the West Annexation area. Consequently, the lands identified in the BDUGAA for conveyance, protection and/or conservation have been so conveyed, protected and/or conserved. The Villages MPD itself includes 77 acres of open space, trails and parks, 177 acres of wetlands, and 251 acres of buffers, for a total of 505 acres (or 42% of the MPD project site) as open space. Figure 3-1 (July 8, 2010) Land Use Plan map.

C. Timing of Proposed Parks and Trails Construction. The phasing plan proposed by the Applicant calls for park construction at various stages of specified occupancy. Villages MPD Application at 9-10. This timing is contrary to BDMC 18.98.080(A)(4)(a), which requires that all park improvements be completed prior to any occupancy or final site or plat approval, whichever occurs first. This noncompliance is remedied by inclusion of a condition in Exhibit C below to require construction of parks prior to occupancy or final site or plat approval. For on-site trails and other recreational facilities other than parks, timing of construction is governed by p. 9-3 of the MPD applications, which generally requires that they must be built prior to occupancy. This requirement does not apply to off-site trails.

D. Integration Into Trail Network. A condition clarifying that off-site trails and recreational facilities may be required as a condition of phased development, as authorized by law, to mitigate the impacts of a particular phase, will enable the City to require off-site trail improvements and connections to facilitate the immediate integration of each phase into an area-wide trail network.

19. Water Availability. As to water availability, the Water Supply and Facilities Funding Agreement ("WSFFA") (Exhibit 9) dated August 11, 2003, provides for water supply through major property owner upgrades of the Black Diamond water system, including upgrades to the city springs, and delivery of city spring water to Black Diamond, and the purchase of new water supply from the City of Tacoma, with a requirement for reimbursement of costs incurred for the upgrades by credits on future

capital facility charges. The project has also been designed, generally, through infiltration systems and circumvention of wetlands, to avoid any risk of adverse impact to private wells and springs that could be affected by the Villages MPD, as established in the AESI reports in Appendix D to the Villages FEIS. There is no evidence to suggest that the use of these water sources will impact or impair existing water rights of other residents.

20. Tree Removal. The Applicant has agreed to comply with the tree preservation ordinance. *See* MPD Ex. 114, p. 21. The tree preservation ordinance has a comprehensive replacement program for trees that are removed, except for properties that have 40% open space. *See* BDMC 19.30.070. The City's tree preservation ordinance sets the standard for tree protection in Black Diamond, and is sufficient to protect the community from the removal of trees.

21. Greenhouse Gas Emissions.

A. Quantity of Emissions. Vehicle emissions are a significant source of greenhouse gases. Villages FEIS Appendix Q, "Air Quality", p. 10. The FEIS estimates the volume of vehicle emissions by using the average number of vehicle miles per day in Washington State per person. Villages FEIS, Appendix Q, "SEPA GHG Emissions Worksheet", at 10. While some parties of record (the SEPA Appellants) argued that this state-wide average grossly understates the average mileage of MPD residents because the MPDs are far from employment and commercial centers, as noted by the Applicant the use of the state-wide average is required by King County for assessment of green house gases in King County unincorporated areas. Applicant Closing Brief, pp. 77 - 78. It is also not necessarily intuitive that average daily trips for Black Diamond residents would be significantly higher than the state-wide average. Due to the long distance from commercial and employment centers, Black Diamond residents are probably more likely to carpool, take transit, telecommute, otherwise work from home, or not work at all. The state-wide average also includes all of the other rural areas of the state, including Eastern Washington, where distances to commercial and employment centers exceed those of Black Diamond. The SEPA Appellants presented no evidence of what average daily trips Black Diamond residents would take, or the length of those trips. The record does not support the assertion that the state-wide vehicle mileage used in the greenhouse gas estimates is significantly less than the average mileage of future Black Diamond residents.

B. Parametrix Peer Review. In cross-examination of Steve Pilcher, the SEPA Appellants also asserted that the greenhouse gas analysis was not consistent with the peer review requirements of Parametrix. Tr., pp. 3342 - 3344. SEPA Appellants' counsel referenced a Parametrix statement that no alternative land use scenario was analyzed in the air quality analysis. The Villages FEIS, however, does examine air quality impacts under an

alternative land use scenario, consistent with the concerns expressed by Parametrix. Villages FEIS at 4-93 – 4-95, alternative 3.

C. Mitigation for Greenhouse Gas Emissions. The SEPA Appellants identified several mitigation measures they asserted should be required to reduce greenhouse emissions. Wheeler Prehearing Ex. 19. Many of these recommended measures are already identified in the Villages FEIS, both in the text of the FEIS and in its technical appendices. Villages FEIS at 6-14; Appendix Q, "Air Quality," at 14 - 15. The project design already incorporates several elements that will help reduce greenhouse gases, such as an emphasis upon mixed use; bicycle and pedestrian trails; low impact development; and Built Green and LEED certified/Energy Star homes. Appendix Q, "Air Quality," at 14. As noted in the Villages FEIS technical discussion on greenhouse impacts, there is no standard for greenhouse emissions associated with development projects and the extent to which a single project affects climate change is unknown. Given this context, the mitigation outlined in the Villages FEIS and technical appendices for green house gases is reasonable, appropriate, and adequate.

22. Employment.

A. The Black Diamond 2009 Comprehensive Plan includes the City's employment targets for 2025. The Comprehensive Plan at pages 5-31 – 5-32 states that the City's target employment for the year 2025 is 2,952 jobs, an increase of 2,525 jobs over the year 2000 job total of 427 jobs. Comprehensive Plan at 5-31, Table 5-3 (2025 Target Employment). These jobs correspond to a total household target of 6,032 households. Comprehensive Plan at 5-29 – 5-30, Tables 5-1 and 5-2. Considering Tables 5-1, 5-2 and 5-3 together yields a job/household ratio of 0.468 (2,952 ÷ 6,032 = 0.468).

B. Table 3-9 of the Comprehensive Plan indicates a goal of attaining 0.5 jobs per household by the year 2025. This roughly corresponds to the 0.468 jobs per household that results from Tables 5-1, 5-2 and 5-3.

C. Page 3-11 of the Comprehensive Plan states that "the City's employment target is to provide one job per household within the City by the year 2025, which would translate to a jobs target of 6,534 jobs. However, employment projections used in this update are more conservative in order to recognize that the City's population will need to grow first so that it provides a larger market base that can attract and support a larger market base. . . ." Comprehensive Plan at 3-11 – 3-12. Therefore, the Comprehensive Plan indicates that the City's updated projection is to have 2,677 new jobs by 2025. Comprehensive Plan at 3-12. These jobs are to be allocated among "833 acres of employment land. . .proposed in the City limits . . . ." *Id.* This equates to 3.21 jobs per acre of employment land.

D. The Comprehensive Plan also indicates that "development capacity was calculated for the commercial and industrial designations within the City, as shown in Figure 5-1. . . .The data indicate the City contains the capacity for 5,761 total jobs or 5,334 new jobs (from 2000)." Comprehensive Plan at 5-31.

E. The Villages FEIS Fiscal Analysis in Appendix J contains an analysis of the amount of retail/office square footage to be developed, and projects that such development will generate 1,365 employees.

23. Findings Deemed Conclusions of Law. Any Findings of Fact set forth herein that are deemed to be conclusions of law should be considered as such. Any Conclusions of Law set forth in Exhibit B below that are deemed to be Findings of Fact are adopted herein by reference as if fully set forth.

# EXHIBIT A

## Attachment 1

**BLACK DIAMOND**
**EXHIBIT LIST**

**("H" Documents)** EXHIBIT A

April 15, 2010

| No. | Provided by | Description |
|---|---|---|
| H-1 | Rogers | DEIS Scoping Meeting Attendance List |
| H-2 | | Villages and Lawson Hills Staff Report Amendments |
| H-3 | Maple Valley | Declaration of Janarthanan dated 3/12/10 (same as Ex. 15 in MPD Hearings Exhibit List) |
| H-4 | | Peak Hour Factor Spread Sheet |
| H-5 | | Elk Photos |
| H-6 | Davidson | Wildlife Journals (2) |
| H-7 | | Lake Sawyer Basin Map |
| H-8 | | Lake Sawyer Tributary Basin Exhibit |
| H-9 | Rogers | Lake Sawyer Total Phosphorous TMDL, Water Quality Implementation Plan, dated 6/09 |
| H-10 (a-c) | Bricklin | Intersection Photos |
| H-11 | Judith Carrier | 10/27/09 Letter from Colin Lund, Yarrow Bay Holdings, to Leonard Smith, Black Diamond |
| H-12 - 19 | Bricklin | Queue Analysis (Provisionally admitted) |
| H-20 | Bricklin | King County DOT Level Three Traffic Impact Analysis |
| H-21 | Bricklin | Design Manual Traffic Analysis p. 610-1 through 610-10 |
| H-22 | Clifford | WSDOT Accident History Detail Report dated 3/15/10 |
| H-23 (a-m) | Rogers | ASI Technical Report Documents |
| H-24 (a) | Maple Valley | Sterbank to Taraday e-mail dated 3/16/10, 3:23 pm<br>Barney to Sterbank e-mail dated 3/17/10, 2:14 pm<br>Barney to Sterbank letter dated 3/17/10<br>Barney to Jonarthanan letter dated 3/17/10<br>Barney to Taraday letter dated 3/17/10 |
| H-24 (b) | Maple Valley | E-mails from Examiner to SEPA Appellants re subpoena |
| H-24 (c) | Maple Valley | Lawson Hills and Villages Revised Schedule |
| H-24 (d) | Maple Valley | Prehearing Order |
| H-24 (e) | Maple Valley | City of Black Diamond Hearing Examiner Rules of Practice and Procedure |

| | | |
|---|---|---|
| H-24 (f) | Maple Valley | Clark to Todd 3/5/10 e-mail re Records Request from Black Diamond |
| H-25 | Sterbank | 3/16/10 Voice of the Valley Article (MV Councilmember calls for support to BD appellants) |
| H-26 | | Cumulative Volumes on Local Roads with Lawson Hills and the Villages MPD |
| H-27 (a) | | |
| H-27 (b-f) | Bricklin | Queue analysis |
| H-28 | Bricklin | NCHRP Report 599 (cover and Table 19 and Figure 14 only) |
| H-29 | | Synchro Studio 7 User Guide |
| H-30 | Bricklin | NCHRP Report 599 p. 47-49 plus cover and foreword |

EXHIBIT B

**BLACK DIAMOND MPD HEARINGS EXHIBIT LIST**
**The Villages/Lawson Developments SEPA Appeals**
**April 15, 2010**

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 1 | Handwritten note | Undated | Kristen Bryant | Black Diamond | MPD Hearings - Desire to submit comments |
| 2 | Article with photograph | 11/05 | Angela Taeschner | Black Diamond | Bald Eagle Protection in Washington State |
| 3 | Comment letter | 03/11/10 | Steven R. Garuich | Black Diamond | The Village MPD Application Comments |
| 4 | Comment letter | 03/11/10 | Mike and Wendy Ward | Black Diamond City Council & Mayor Olness | Concerns about FEISs for MPDs |
| 5 | Comment letter | 03/07/10 | Sue and Robert Fish | City of Black Diamond Hearing Examiner | Opinions and concerns |
| 6 | Comment letter | Undated | Richard R. Ostrowski | -- | Written testimony on MPDs |
| 7 | Comment letter | 03/10/10 | Justin Giger and Tyler Ward | Black Diamond City Council | For the abolishment of the plan to build the Yarrow Bay Housing Communities |
| 8 | Comment letter | 03/07/10 | Lynne Christie | Black Diamond Mayor and City Council | Opinions and concerns |
| 9 | Comment letter | Undated | Rick and Nanette Stocks | -- | Yarrow Bay Development in Black Diamond - Village and Lawson Impacts |
| 10 | Oral Testimony Notes with Map | 03/11/10 | Tom Hanson | -- | Villages/Black Diamond - Needed Mitigations |
| 11 | Comment letter with attachments | 03/11/10 | Jack C. Sperry | The City of Black Diamond, Washington | The Villages and Lawson Hills MPDs (Potential for Lake Sawyer Flooding) |
| 12 | Comment letter | -- | Jay and Kelley McElroy | -- | Villages and Lawson Hills MPDs |
| 13 | Comment letter | 03/11/10 | Carrie Hartman | City of Black Diamond | Public Comments, Yarrow Bay MPDs |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 14 | Comment letter with attachments | 03/11/10 | Denise L. Stiffarm (K&L Gates) for Enumclaw School District | City of Black Diamond Hearing Examiner | |
| 15 | Declaration and written testimony with attachments | 03/12/10 | Natarajan "Jana" Janarthanan, Ph.D. | -- | In Re: Applications for Lawson Hills and The Villages MPDs |
| 16 | Comment letter | 03/15/10 | Kevin Snyder, City of Auburn | City of Black Diamond Hearing Examiner | City of Auburn Public Testimony for Lawson Hills MPD and The Villages MPD |
| 17 | Public Testimony with attachments | 03/15/10 | Robbin Taylor | -- | Lawson Hills/The Villages re: mine sites and sink holes |
| 18 | Comment letter | 03/15/10 | Lisa Garvich | City of Black Diamond/ Hearing Examiner | Comments offered during public comment section of Lawson Hills/Villages MPD Hearing |
| 19 | Comment letter | 03/15/10 | Lisa Garvich | City of Black Diamond/ Hearing Examiner | Comments offered during public comment section of Lawson Hills/Villages MPD Hearing - BD Regional Park |
| 20 | Testimony re: Lawson Hills MPD Application | Undated | Ron Taylor | -- | Use of Botts Drive |
| 21 | Testimony notes | Undated | William Wheeler | Hearing Examiner for the City of Black Diamond | Comments on The Villages and Lawson Hills MPD application |
| 22 | Comment letter | 03/15/10 | Leah Grant and Michael Royston | Hearing Examiner Olbrechts, City Council members Hanson, Goodwin, Boston, Saas, Mulvihill, Mayor Olness | Comments on the MPDs for The Villages and Lawson Hills Developments |
| 23 | Comment letter with attachments | 03/15/10 | Judith Carrier | City of Black Diamond/ Yarrow Bay MPD Hearings | Villages South Connector/SR 169 Intersection, FEIS, Yarrow Bay Development |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 24 | Comment letter with attachments | 03/10/10 | Bill and Vicki Harp | Mr. Phil Olbrechts, Hearing Examiner, and Steve Pilcher, Director of Planning, City of BD | Comments on MPD - The Villages, Article on Yarrow Bay Development Hearing, Photographs |
| 25 | Comment letter with attachments | 02/28/10 | Erika Morgan | An open letter to our greater community | Black Diamond, Photographs of Black Diamond Lake |
| 26 | Comment letter | 03/15/10 | Ulla Kemman | The Hearing Examiner, Phil Olbrechts; The City Council, Black Diamond | Proposed MPD for the Villages and Lawson Hills |
| 27 | Comment letter | 03/15/10 | Daniel H. Ryning | Hearing Examiner; To Whom It May Concern | MPD Comments on Yarrow Bay proposals for "The Villages" and "Lawson Hills" |
| 28 | Comment letter | 03/15/10 | Ron and Pam Tomich | -- | Black Diamond Master Plan Development Hearings |
| 29 | Comment letter with attachment | 03/10/10 | Jacqueline Paolucci Taeschner | Hearing Officer, Mayor, City Council | Stewardship for the Land, the Animals and the People |
| 30 | Comment letter | 03/15/10 | Helen Jacobson | -- | Black Diamond Master Plan Development Hearings |
| 31 | Comment letter | 03/15/10 | Andrew & Karen Benedetti | Black Diamond; Hearing Examiner, Phil Olbrechts | City of Black Diamond Master Plan Development Hearing |
| 32 | Comment letter | 03/12/10 | Angela Therese Taeschner | To the Hearing Officer | Letter to be added to 3/11/10 testimony regarding Yarrow Bay Developments/Need to Rethink |
| 33 | Comment letter with attachments | 03/15/10 | Dan Shipley, President, Horseshoe Lake HOA | City of Black Diamond Hearing Examiner | The Villages Master Plan Development PLN09-0017 |
| 34 | Comment letter | 03/15/10 | Robert J. Rothschilds | Submitted to the Hearing Examiner | Lawson Hills and The Villages MPDs, Lake Sawyer water quality |
| 35 | Comment letter | 03/15/10 | Alan Gangl | Black Diamond Hearing Examiner | Master Plan Hearings - Yarrow Bay Development |
| 36 | Comment letter | 03/15/10 | Romana McManus | Hearing Examiner; Black Diamond City Council | Yarrow Bay MPD in Black Diamond |
| 37 | English Sonnet | -- | Carol Lynn Harp | -- | "Master Plan Development Folly" |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 38 | Comment letter | 03/15/10 | Bob and Janie Edelman | Black Diamond Mayor Olness and City Council | The Villages and Lawson Hills MPDs |
| 39 | Comment letter | 03/12/10 | Gene Duvernoy, President, Cascade Land Conservancy | Hearing Examiner Olbrechts | Lawson Hills and The Villages Master Planned Developments |
| 40 | Public Testimony | 03/15/10 | Karen Bryant | -- | Statements for Public Hearings on MPD from Yarrow Bay |
| 41 | Comment letter with attachment | 03/15/10 | Ericka Morgan | Mr. Examiner | MPD for Black Diamond |
| 42 | Comment letter | 03/15/10 | Eric, Cindy, Leah and Elyssa Sizemore | Black Diamond Council members | MPD Hearings |
| 43 | Comment letter | Undated | Richard C. Stewart | -- | The Villages and Lawson Hills Master Planned Developments |
| 44 | Comment letter | 03/15/10 | Jeff Merrill | -- | Black Diamond Master Plan Development Hearings |
| 45 | Comment letter | -- | Cheri Merrill | -- | The Villages and Lawson Hills Projects - Resident Concerns |
| 46 | Comment letter | -- | Glenis Richardson | Hearing Examiner | Black Diamond Development by Yarrow Bay |
| 47 | Comment letter | 03/13/10 | Eric Eknes | Phil Olbrechts, Hearing Examiner | Lawson Hills and The Villages MPDs |
| 48 | Comment letter | 03/15/10 | Glen E. Ross | -- | Lawson Hills and The Villages MPDs |
| 49 | Comment letter | -- | Kurt & Ann Kulesza | -- | Lawson Hills and The Villages MPDs |
| 50 | Comment letter | -- | Rick and Nanette Stocks, Joanni Scott, Brent and Sheri Miller, Sandra Denison, Robert Kendrick, Kim Rector, Jason and Renee Brealey | -- | Lawson Hills and The Villages MPDs |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 51 | Comment letter | 03/15/10 | Melanie Gauthier | Phil A. Olbrechts, Hearing Examiner | Lawson Hills and The Villages MPD Comments |
| 52 | Article, Voice of the Valley | 03/09/10 | -- | -- | "KC concerns with proposed Black Diamond MPDs" |
| 53 | Amendments and Errata Sheets | Undated | City of Black Diamond | -- | The Villages and Lawson Hills Staff Report Amendments |
| 54 | Letter | 02/24/10 | Mayor Margaret Harto, City of Covington | Steve Pilcher, AICP | The Villages and Lawson Hills MPD Public Hearings |
| 55 | Letter | 03/01/10 | Susan F. Ball | City of Black Diamond Hearing Examiner | Reference #PLN09-0017 and PLN09-0016 |
| 56 | Letter | 03/02/10 | Judy Taylor, President, Upper Green Valley Preservation Society | Steve Pilcher | Final EIS for Lawson Hills and Villages MPDs |
| 57 | Letter | 03/04/10 | Jacqueline Paolucci Taeschner | Mayor and City Council of Black Diamond | Stewardship for the Land, the Animals, and the People |
| 58 | Letter | 03/04/10 | Mayor Rebecca Olness | Jacqueline Paolucci Taeschner | "Stewardship" letter has been forwarded to the Hearing Examiner |
| 59 | Email | 03/05/10 10:19 am | Steve Pilcher | Stacey Borland | Forwarding 03/04/10 email from Shari Weiding regarding Lawson Hills and The Villages MPDs |
| 60 | Email | 03/05/10 10:35 am | Cindy Hartzer | Steve Pilcher, smokejumper | Yarrow Bay Developments |
| 61 | Letter | 03/03/10 | Ty and Janie Inglis | -- | Upcoming meetings for Yarrow Bay |
| 62 | Letter | 03/04/10 | Larry Neilson and Randy Hamblin | City of Black Diamond Hearing Examiner | The Villages and Lawson Hills MPD Public Hearings |
| 63 | Letter | 02/24/10 | Pam Linden | City of Black Diamond Hearing Examiner | Appeal of FEIS and MPD Permit |
| 64 | Letter | 02/25/10 | Larry Fisher, WA State Dept of Fish & Wildlife | Steve Pilcher, City of Black Diamond | DEIS, The Villages MPD, Rock Creek and others, Tributary to Lake Sawyer, King County WRIA 09.0085 |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 65 | Email | 03/02/10 | Steve Pilcher | Stacey Borland | Forwarding 03/02/10 email string from Larry D. Fisher |
| 66 | Letter | 03/05/10 | Daryl and Barbara Rush | City of Black Diamond Hearing Examiner | The Villages Master Plan Development |
| 67 | Second Declaration with attachments | 03/17/10 | Natarajan "Jana" Janarthanan, Ph.D. | -- | In Re: Applications for Lawson Hills and The Villages MPDs. Exhibit contains as an attachment "City of Maple Valley Brief on Compliance with MPD Permit Decision Criteria" and Appendices A through G |
| 68 | Email Exhibit from Proctor | 06/10/09 | Loren Combs | Dawn Ketter | Changes from our last work session/Complete Mitigation Section |
| 69 | King Co. Comp Plan Appendix B with Chart | 03/08 | Proctor Exhibit | -- | Cost Burden Homeownership |
| 70 | Proctor MPD Exhibit Letter | 03/04/10 | David Bricklin | Black Diamond City Council | Amendments to Zoning Ordinance with Enclosure |
| 71 | Kent Reporter Newspaper article with photographs | 02/26/10 | Proctor Exhibit | | "Public hearing Wednesday for major commercial project on Kent's East Hill" by Steve Hunter |
| 72 | Minutes | 06/18/09 | Proctor Exhibit | | Black Diamond City Council Minutes |
| 73 | Memorandum with attachments | 03/10/10 | Bill and Vicki Harp | Phil Olbrechts, Hearing Examiner, and Steve Pilcher, Black Diamond Director of Planning | Comments on MPD - The Villages and Exhibit and four photographs |
| 74 | Written testimony | 03/19/10 | Robert J. Rothschilds | Hearing Examiner | Lawson Hills MPD application |
| 75 | Written testimony | 03/19/10 | Robert J. Rothschilds | Hearing Examiner | The Villages MPD application |
| 76 | Five photographs | 03/18/10 | ???? | Hearing Examiner | Five photographs of deer |
| 77 | Comment letter | 03/12/10 | Jim Kuzaro | Hearing Examiner | Lawson Hill MPD Development |
| 78 | Comment letter | 03/15/10 | Ramin Pazooki | Steve Pilcher, Director | Lawson Hills MPD (PLN09-016) |
| 79 | Comment letter | 03/15/10 | Ramin Pazooki | Steve Pilcher, Director | The Villages MDP (PLN09-017) |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 80 | Email | 03/15/10 | Kristen Bryant | Stacey Borland | Comments for Public Hearings on MPD proposal from Yarrow Bay |
| 81 | Email | 03/07/10 | Sue Waller | Rebecca Olness, Kristine Hanson, Bill Boston, Leih Mulvihill, William Saas, Craig Goodwin | Yarrow Bay MPD in Black Diamond |
| 82 | Email | 03/15/10 | Eric Sizemore | Black Diamond Council members | Black Diamond MPD hearings |
| 83 | Newspaper | 03/16/10 | ????? | -- | Tuesday, 3/16/10, edition of Voice of the Valley |
| 84 | Comment letter | 03/15/10 | Ty Peterson, Director or Comm. Dev., City of Maple Valley | Hearing Examiner, City of Black Diamond | Open record hearing comments re: The Villages and Lawson Hills MPD applications |
| 85 | Synopsis of written testimony of 3/15/10 | 03/17/10 | Clarissa Metzler Cross | To Whom It May Concern | Proposed development for Lawson Hills and The Villages |
| 86 | Comment letter | Undated | Burr W. Mosby | City of Black Diamond | Proposed traffic on Green Valley Rd. |
| 87 | Comment letter | 03/11/10 | Gretchen and Michael Buet | Yarrow Bay and the City of Black Diamond | Comments on traffic, rural nature, existing trees, Green Valley Road |
| 88 | Comment letter | Undated | Richard C. Stewart | -- | The Villages and Lawson Hills Master Planned Developments |
| 89 | Comment letter | Undated | Monica Stewart | -- | The Villages and Lawson Hills Master Planned Developments |
| 90 | Comment letter | Undated | Donna Gauthier | -- | Presentation submitted by Jack Sperry and Lawson Hill home |
| 91 | Comment letter | 03/17/10 | Kristen Bryant | -- | The Villages MPD |
| 92 | Comment letter | Undated | Cindy Sizemore | To Whom It May Concern | Proposed Yarrow Bay developments of Lawson Hills and The Villages |
| 93 | Comment letter with exhibits | 03/17/10 | Mark and Harriett Dalos | Hearing Examiner Phillip Olbrechts | The Villages and Lawson Hills MPDs |
| 94 | Written testimony | Undated | Kelley McElroy | Mr. Olbrechts | Black Diamond quality of life re: |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | | | | Master Planned Developments |
| 95 | Written testimony | Undated | Cynthia Wheeler | -- | MPD Comments for Both Lawson Hills and The Villages Projects |
| 96 | Letter w/attachments | 3/17/10 | Erika Morgan | Hearing Examiner | Addendum to previous statements about MPD on Villages Project |
| 97 | E-mail, w/ attachments and Public Comments | 2/2/10 | Cynthia Wheeler | B. Martinez | Comments Re Planning and Community Services Committee Notes and Andy Williamson |
| 98 | Written testimony | 3/15/10 | Cindy Proctor | Hearing Examiner | "Technical Talking Points" |
| 99 | Written testimony | 3/17/10 | Marlene Bortleson | Hearing Examiner | Stewardship of Green Valley Road |
| 100 | Statement | 3/17/10 | Laure A. Iddings | Hearing Examiner | Comments for MPDS Hearing |
| 101 | Statement | 3/17/10 | Beverly Harrison Tonda | -- | Comments Re "gravel dirt road" this is a public ROW |
| 102 | Letter | 3/4/10 | Larry Neilson and Randy Hamblin | Hearing Examiner | The Villages and Lawson Hills MPD Public Hearings |
| 103 | "English Sonnet" | No date | Carol Lynn Harp | -- | "Master Plan Development Folly" - Duplicate of Exhibit No. 37 |
| 104 | Commentary - *Land Use Law* | 09/90 | -- | -- | "Rural Cluster Zoning: Survey and Guidelines" |
| 105 | Article from *Community Farming and Agriculture* | 6/10/08 | -- | -- | "What is Rural Cluster Development?" |
| 106 | Black Diamond City Council Minutes | 4/2/09 | -- | -- | Regarding Council concern about up-zoning to 30 DU/AC |
| 107 | Black Diamond City Council Minutes | 6/18/09 | -- | -- | With various attachments |
| 108 | Report -*King Co Historic & Scenic Corridors Project* | Dec. 09 | Karen Meader | -- | Green Valley Road and Osceola Hoop Heritage Corridors; Chapter 4, Corridor Management |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | | | | Considerations |
| 109 | Resolution No. 10-675 | 3/4/10 | -- | -- | Authorizing Amendment No. 1 to the RH2 Contract for Technical Review of Services, w/attachments |
| 110 | "English Sonnet" "New/Improved | No date | Carol Lynn Harp | -- | "Master Plan Development Folly" |
| 111 | *Law Seminars International* | 11/19/09 | Tim Trohimovich, Co-Director of Planning and Law, author | -- | "What Role Does the FMA Play in Reducing Greenhouse Gas Emissions?" |
| 112 | Petition to Oppose Joint Use of Lake Sawyer Regional Park | Numerous dated signatures | -- | -- | 42 pages |
| 113 | Letter | 3/18/10 | Bruce Earley | City of Black Diamond | City Council and MPD Hearing Examiner of Yarrow Bay Developments |
| 114 | Memorandum | 3/22/10 | Nancy Bainbridge Rogers | Phil Olbrechts | Applicants' Rebuttal to Public Testimony on the Lawson Hills and The Villages MPDs |
| 115 | Written Testimony | 3/22/10 | Marlene Bortleson | Hearing Examiner | "Proposed Massive Yarrow Bay development" and "Rural Concerns" |
| 116 | Letter | 3/17/10 | Barbara Rush | Hearing Examiner | The Villages Master Plan Development |
| 117 | E-mail chain | 3/22/10 | Phil Olbrechts | Nancy Rogers , et al | Revised Scheduling |
| 118 | Memo | 3/22/10 | Cory and Diane Olson | Members of the Black Diamond City Council | Comments for the 3/22/10 MPD Application Hearing |
| 119 | Letter w/ attachment | 3/22/10 | Kelley and Jay McElroy | Phil Olbrechts, City Council | "The Villages mainly but Lawson Hills as well" |
| 120 | Pleading | 3/17/10 | Jim Johnson | Hearing Examiner | Declaration of Jim Johnson re: Lawson Hills/The Villages SEPA Appeals |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 121 | Pleading | 3/17/10 | Andrew Kindig, Ph.D. | Hearing Examiner | Declaration of Andrew C. Kindig, Ph.D re Lawson Hills and The Villages SEPA Appeals |
| 122 | Pleading | 3/22/10 | Alan Fure | Hearing Examiner | Declaration of Alan Fure re: Sammamish Critical Areas Ordinance |
| 123 | Pleading | 3/22/10 | Alan Fure | Hearing Examiner | Declaration of Alan Fure regarding testimony of Jack Sperry |
| 124 | Pleading, w/attachment | 3/18/10 | Mike Whipple | Hearing Examiner | Declaration of Mike Whipple |
| 125 | Villages Revised Conditions | 3/19/10 | -- | -- | "Applicant's Requested Revised Conditions -- The Villages MPD" |
| 126 | Lawson Revised Conditions | 3/19/10 | -- | -- | "Applicant's Requested Revised Conditions -- Lawson Hills MPD" |
| 127 | Villages Revised Conditions | 3/19/10 | -- | -- | "Applicant's Requested Revised Mine Hazard Condition - The Villages MPD" |
| 128 | Lawson Revised Conditions | 3/22/10 | -- | -- | "Applicant's Requested Revised Mine Hazard Condition - Lawson Hills MPD" |
| 129 | Applicant Proposed Condition | Undated | -- | -- | Midpoint Review of Cumulative Transportation Impacts from The Villages MPD and Lawson Hills MPD |
| 130 | "Funding Responsibility" Table | Undated | -- | -- | Villages and Lawson Hills - Proportionate Share for Intersection and Roadway Improvements |
| 131 | Recording Cover Sheet w/attachments | 12/17/09 | -- | -- | "Conservation Easement Deed"-- Grantor, BD Village Partners LP |
| 132 | Handwritten "Comments" | 3/21/10 | Rick and Jailyn Bradbury | -- | Comments on both Villages and Lawson Hills |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 133 | Letter | 3/22/10 | David A. Bricklin | Phil Olbrechts | MPD Applications: The Villages and Lawson Hills - Supplement to previous letter |
| 134 | King County Countywide Planning Policies | October 2008 | -- | -- | Document approved by "Growth Management Planning Council" |
| 135 | King County Comprehensive Plan 2008 | October 2008 | -- | -- | Published by King County |
| 136 | Report 599 | 2008 | -- | -- | National Cooperative Highway Research Program -- Default Values for Highway Capacity and Level of Service Analyses |
| 137 | Handwritten comments | 3/22/10 | Cindy Wheeler | -- | MPD Comments |
| 138 | Handwritten note | 3/22/10 | Cindy Wheeler | -- | Section 18.98.080 (12) "Open Space" |
| 139 | Handwritten comments | 3/22/10 | Cindy Procter | -- | Rebuttal of Sterbank |
| 140 | Memo | 3/22/10 | Carrie Hartman | City of Black Diamond | Yarrow Bay Developments |
| 141 | Memo, w/attachments | 3/22/10 | William & Cynthia Wheeler | Hearing Examiner and Black Diamond City Council | Yarrow Bay MPDs for the Villages and Lawson Hills |
| 142 | Handwritten note | -- | -- | -- | A note addressing fixing "traffic issues before you proceed.." |
| 143 | Letter | 3/22/10 | Robert Kirschbaum and Rob Zisette, Herrera Environmental Consultants, Inc. | David Bricklin | Mitigation for the Villages and Lawson Hills MDPs (sic) |
| 144 | Memo | 3/22/10 | Ross Tilghman | David Bricklin | Confirmation of Future LOS Results on SR-169 in Black Diamond |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 145 | Public Testimony | -- | Peter Rimbos | -- | MPD Applications for the Villages and Lawson Hills |
| 146 | Public Testimony | -- | Peter Rimbos | -- | MPD Applications for the Villages and Lawson Hills - Transportation 2040 |
| 147 | Public Testimony | -- | Peter Rimbos | -- | MPD Applications for the Villages and Lawson Hills - "Rural by Design" - Some Key Features |
| 148 | Memo, w/attachments | 3/22/10 | Cindy Proctor | Phil Olbrechts, Steve Pilcher | The Villages Master Planned Development |
| 149 | Memo | 3/22/10 | Bill and Vicki Harp | Phil Olbrechts, Steve Pilcher | The Villages Master Planned Development |
| 150 | Letter, w/attachments | 3/2/10 | Jerry G. Lilly, PE, President, FASA | Cindy Proctor; William and Vicki Harp | The Villages, Black Diamond, FEIS Noise Study Review |
| 151 | Written testimony | 3/22/10 | Erika Morgan | -- | Comments re "Staff Report" on the EIS |
| 152 | Written testimony | 3/22/10 | Steve & Linda Chase | -- | "In regards to: BD/YB MPD Hearings" |
| 153 | Letter | 3/22/10 | Howard & Sharon Meece | Phil Olbrechts; Black Diamond City Council | MPD Yarrow Bay Villages |
| 154 | Letter | 3/22/10 | Melanie Gauthier | Phil Olbrechts | Lawson Hills and Villages MPD oral comments and additional written comments |
| 155 | Testimony, w/attachments | 3/22/10 | Judith Carrier | Phil Olbrechts; Black Diamond City Council | Black Diamond / Yarrow Bay urban development |
| 156 | Letter (to be added to testimony of 3/11/10) | 3/22/10 | Angela Therese Taeschner | Hearing Officer | Yarrow Bay Developments and the Need to Rethink |
| 157 | Handwritten testimony | 3/16/10 | Sean Taeschner | Hearing Commissioner | The Villages, Mine and Lawson Hill proposed developments |
| 158 | Memo | 3/22/10 | Christopher P. | Hearing Examiner and | Yarrow Bay MPDs for the Villages |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | | Clifford | Black Diamond City Council | and Lawson Hills |
| 159 | Memorandum w/attachment | 3/22/10 | Ross Tilghman | David Bricklin | Confirmation of Future LOS Results on SR-169 in Black Diamond **DISREGARD** - Duplicate of previous Exhibit No. 144 |
| 160 | Public Testimony | Undated | Julie Early | Mr. Examiner and Black Diamond City Council | Lawson Hills and The Villages MPDs |
| 161 | Letter with attachments | 03/18/10 | David Bricklin | Phil A. Olbrechts | MPD Applications: The Villages and Lawson Hills |
| 162 | Public Testimony | 03/18/10 | Nanette & Rick Stocks | Hearing Examiner | Yarrow Bay developments |
| 163 | Public Testimony | 03/17/10 | Joe May | Honorable Hearing Examiner, Phil Olbrechts | Proposed MPDs for The Villages and Lawson Hills |
| 164 | Agenda and attachments | 01/25/10 | -- | -- | Planning and Community Service Committee Meeting - 01/25/10 |
| 165 | Comments | 03/17/10 | Cindy Proctor | Phil Olbrechts and Steve Pilcher | Comments on MPD - The Villages |
| 166 | Letter | Undated | Sheri Miller | Mr. Hearing Examiner and City Council Members | Lawson Hills and The Villages impacts on Black Diamond |
| 167 | Email | 03/22/10 | Brian A. Clintworth | Permit Center | Yarrow bay development |
| 168 | Public Testimony | Undated | Peter Rimbos | -- | Black Diamond MPD Applications |
| 169 | Public Comments | Undated | Cindy Wheeler | -- | MPD Public Comments |
| 170 | Email | 03/22/10 | Dave Bricklin | Chris Clifford, Phil Olbrechts, appellants, et al. | MPD Comments |
| 171 | Cited excerpts from FEIS and supporting documents as referenced in Prehearing Brief | -- | Nancy Rogers | -- | No. 1 on Applicant's Exhibit List (The Villages) |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 172 | Regional map showing open space areas | -- | Nancy Rogers | -- | No. 3 on Applicant's Exhibit List (The Villages) (Used during Applicant's MPD Presentation) |
| 173 | Enlargements from EIS diagrams | -- | Nancy Rogers | -- | No. 5 on Applicant's Exhibit List (The Villages) (In record) (Ex 2-3 of Villages Alt 2 MPD; Ex. 3-25 of Villages Alt 2 Proposed Stormwater Facilities, Fig. 1 from Appendix P, Fisheries Tech. Report, Stormwater facility maps, Figs 7, 9, 10A, 10B, 11A, 11B, 12, 13, 14, 24, 27 and 28 from FEIS Appendix D, AESI Report |
| 174 | Cited excerpts from FEIS and supporting documents as referenced in Prehearing Brief | -- | Nancy Rogers | -- | No. 1 on Applicant's Exhibit List (Lawson Hills |
| 175 | Regional map showing open space areas | -- | Nancy Rogers | -- | No. 3 on Applicant's Exhibit List (Lawson Hills) (Used during Applicant's MPD Presentation) |
| 176 | Enlargements from EIS diagrams | -- | Nancy Rogers | -- | No. 4 on Applicant's Exhibit List (Lawson Hills) (In record) (Ex 2-2 of Lawson Hills Alt 2 MPD; Ex. 3-24 of Lawson Hills Proposed Stormwater Facilities, Fig. 5 from Appendix P, Fisheries Tech. Report, Stormwater facility maps, Figs 3, 4, 5a, 5b, and 13 from FEIS Appendix H (Visual) |
| 177 | Two Letters | 10/20/09, | Nancy Rogers | -- | Letter from Leonard Smith, dated |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | 10/27/09 | | | 10/20/09 and Letter from Colin Lund, dated 10/27/09 with Attachment A (NR-TV-16 on Prehearing Exhibit List ("PEL")) |
| 178 | Tech Memo | 1/29/10 | Nancy Rogers | – | Technical Memo from AESI re: The Villages Water Level Monitoring Data (NR-TV-19 on PEL) |
| 179 | KC Zoning Code | -- | Nancy Rogers | -- | KCC 21A.08.050 - Sections of King Co. Zoning Code, regarding schools in rural area (NR-TV-20 on PEL) |
| 180 | Agreement | 11/30/07 | Nancy Rogers | -- | City of Black Diamond, Yarrow Bay - SEPA Processing Agreement (NR-TV-9 and NR-LH-7 on PEL) |
| 181 | Notice Package | -- | Nancy Rogers | -- | Black Diamond Agency Scoping Notice Package, including Legal Notices, Meeting Attendees, Letters, Minutes, Revised Determination of Significance, Request for Comments (NR-TV-14 and NR-LH-12 on PEL) |
| 182 | Condition Language | -- | Nancy Rogers | -- | Applicant's Proposed Condition Language - Lawson Hills MPD Large Wet Pond Total Phosphorus Monitoring Program (NR-LH-5) |
| 183 | Map | -- | Nancy Rogers | -- | Section view showing topographic change from Flaming Geyser State Park and Lawson Hills MPD (NR-LH-15) |
| 184 | Map | -- | Nancy Rogers | -- | Topographical Map with City boundaries of The Villages site and Lawson Hills site overlaid on aerial photo (NR-TV-2 and NR-LH-2) |
| 185 | Map | -- | Nancy Rogers | -- | Section view showing topographic |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | | | | change from Flaming Geyser State Park to the Villages site (NR-TV-18) |
| 186 | Condition Language | -- | Nancy Rogers | -- | Applicant's Proposed Condition Language - The Villages MPD Large Wet Pond Total Phosphorus Monitoring Program (NR-TV-7) |
| 187 | Photograph | -- | Nancy Rogers | -- | Aerial photo of wildlife corridor map (red line shows corridor) (NR-TV-4) |
| 188 | Wet site page | -- | Nancy Rogers | -- | Washington State Parks' web site page on park hours at Flaming Geyser (NR-TV-10, NR-LH-8) |
| 189 | Tech Memo | 1/22/08 | Nancy Rogers | -- | Tech Memo from AESI, MPD Open House Comments Received (NR-TV-13 and NR-LH-11) |
| 190 | Maps | -- | Nancy Rogers | -- | Maps from EIS and MPD application re: South Connector to SER 169 (excerpts from 7/17/08 Wetland Assessment for The Villages, including Fig. 6c; Black Diamond Villages EIS Map - Main Property - Parcel F - Fig. 7e; MPD Application pg. 4-3, Fig. 4-1 - Circulation Plan (NR-TV-6) |
| 191 | Email exchange | 1/28/10 | Nancy Rogers | -- | Email exchange among Nancy Rogers, Dave Bricklin, and Mike Kenyon re: Hearings (NR-TV-15, NR-LH-13) |
| 192 | Report | 1/15/10 | Nancy Rogers | -- | Lake Sawyer Water Quality Report prepared by the King Co. Lake Stewardship Program (NR-TV-12, NR-LH-10) |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| 193 | Map | -- | Nancy Rogers | -- | City of Black Diamond colored 1996 Comprehensive Land Use Map (Fig. 5-7) (NR-TV-17 and NR-LH-14) |
| 194 | Agreement | -- | Nancy Rogers | -- | Comprehensive School Mitigation Agreement with Exhibits A - V (NR-TV-8 and NR-LH-6) |
| 195 | Report | 07/2000 | Nancy Rogers | -- | Lake Sawyer and Its Watershed Management Plan prepared by King County Surface Water Management (NR-TV-11, NR-LH-9) |
| 196 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | Lawson Hills - Yarrowbay Development Context Plan - created by Dahlin Group |
| 197 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | Lawson Hills - Yarrowbay Development Landuse Plans - created by Dahlin Group |
| 198 | Map/Diagram 11" x 17" | Undated | Nancy Rogers | -- | Lawson Hills - Yarrowbay Development proposed designs - created by Dahlin Group |
| 199 | Map/Diagram 11" x 17" | 03/06/09 | Nancy Rogers | -- | Lawson Hills - Yarrowbay Holdings, Black Diamond Open Space Exhibit |
| 200 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | The Villages - Yarrowbay Development Context Plan - Created by Dahlin Group |
| 201 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | The Villages - Yarrowbay Development Landuse Plan - Created by Dahlin Group |
| 202 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | The Villages - Yarrowbay Development Plan - Created by Dahlin Group |
| 203 | Map/Diagram 11" x 17" | 03/05/09 | Nancy Rogers | -- | The Villages - Yarrowbay Development Village Center - |

| No. | Type of Record | Date | Sender | Recipient(s) | Subject |
|---|---|---|---|---|---|
| | | | | | Created by Dahlin Group |
| 204 | Map/Diagram 11" x 17" | 03/01/10 | Nancy Rogers | -- | The Villages - Yarrowbay Development Overall Phase One Landscape Plan - Created by Dahlin Group |
| 205 | Map/Diagram 11" x 17" | 03/01/10 | Nancy Rogers | -- | The Villages - Yarrowbay Development Village Green - Created by Dahlin Group |
| 206 | Map/Diagram 11" x 17" | 03/01/10 | Nancy Rogers | -- | The Villages - Yarrowbay Development Civic Park - Created by Dahlin Group |
| 207 | Map/Diagram 11" x 17" | 03/01/10 | Nancy Rogers | -- | The Villages - Yarrowbay Development Pocket Park and Common Green - Created by Dahlin Group |
| 208 | Map/Diagram 11" x 17" | 12/14/09 | Nancy Rogers | -- | The Villages - Yarrowbay Development Village Square, Alternative 1 - Created by Dahlin Group |
| 209 | Map/Diagram 11" x 17" | 03/06/10 | Nancy Rogers | -- | The Villages - Yarrowbay Holdings, Black Diamond Open Space Exhibit |
| 210 | Map/Diagram 11" x 17" | Undated | Nancy Rogers | -- | Wildlife Corridors |
| 211 | Declaration of Natarajan "Jana" Janarthanan | 04/02/10 | Natarajan Janarthanan (sent by Jeff Taraday) | | Third Declaration of Natarajan "JANA" Janarthanan, Ph.D., PTP; Exhibits A through G |
| 212 | Pleading | 04/02/10 | Jeff Taraday for Maple Valley | | City of Maple Valley's Second Brief on Compliance with MPD Criteria |

**BLACK DIAMOND**
**PRE-HEARING EXHIBIT LIST**

EXHIBIT C

Lawson Hills/The Villages

April 15, 2010

| No. | Provided by | Description |
|---|---|---|
| JC-1-A | Judith Carrier | Area Road Map |
| JC-1-B | Judith Carrier | South Annexation Area O, King County GIS Data, 2007 |
| JC-1-C | Judith Carrier | King Co. DEIS letter dated 9/30/09, Attachment One Transportation Technical Report, author - Kurt Triplett's staff |
| JC-1-D | Judith Carrier | South Annexation Area G, King County GIS Data, 2007 |
| JC-1-E | Judith Carrier | Black Diamond Development Department Letter 2-16-2009, author - Steve Pilcher |
| JC-1-Fa | Judith Carrier | FEIS 2007 Exiting PM Peak Hour Traffic Conditions |
| JC-1-Fb | Judith Carrier | FEIS 2025 Alternative 2 PM Peak Hour Traffic Conditions |
| JC-1-G | Judith Carrier | FEIS Table 18: 2025 Baseline and Cumulative Alternative 2 PM Peak Hour LOS Summary |
| JC-1-H | Judith Carrier | FEIS p. 214 Comment letter and Black Diamond Response |
| JC-1-J | Judith Carrier | WSDOT Standard Accident History Detail Report 1-01-2001 through 5/31/2009 (6 pgs) |
| JC-1-Ja | Judith Carrier | Page 1 of 4 - WSDOT Detail Report |
| JC-1-Jb | Judith Carrier | Page 2 of 4 - WSDOT Detail Report |
| JC-1-Jc | Judith Carrier | Page 3 of 4 - WSDOT Detail Report |
| JC-1-Jd | Judith Carrier | Page 4 of 4 - WSDOT Detail Report |
| JC-1-Je | Judith Carrier | Page 1 of 1 - WSDOT Standard Accident History Report 6/01/09 through 09/30/09 |
| JC-1-Jf | Judith Carrier | WSDOT Reported Collisions That Occurred on Green Valley Road, From Auburn Black Diamond Rd. to State Route 169, 1/12/01 through 3/31/09 |
| JC-1-K | Judith Carrier | Pictures of Green Valley Road instability |
| JC-1-Ka | Judith Carrier | Green Valley Road Slide onto Roadway |
| JC-1-Kb | Judith Carrier | Slide area to top of slope |
| JC-1-Kc | Judith Carrier | Slide onto roadway |
| JC-1-L | Judith Carrier | Picture of eroded or poor Green Valley Road conditions |
| JC-1-M | Judith Carrier | Pictures of elk trails and tracks into timber from green Valley Road edge |
| JC-1-M-2 | Judith Carrier | Green Valley Road Game Trail #1 |
| JC-1-M-2a | Judith Carrier | Game Trail #2a |
| JC-1-M-2b | Judith Carrier | Game Trail #2b |
| JC-1-M-e | Judith Carrier | Deer Tracks in Woods closely paralleling Green Valley Road Edge |
| JC-1-M-f | Judith Carrier | Green Valley Road Game Trail #3 |
| JC-1-M-h | Judith Carrier | Green Valley Road Game Trail #4 |

| No. | Provided by | Description |
|---|---|---|
| JC-1-M-j | Judith Carrier | Green Valley Road Game Trail #5 |
| JC-1-M-k | Judith Carrier | Green Valley Road Game Trail #6 |
| JC-1-M-n | Judith Carrier | Green Valley Road Game Trail #7 |
| JC-1-M-o | Judith Carrier | Green Valley Road Game Trail #8 |
| JC-1-M-p | Judith Carrier | Green Valley Road Game Trail #9 |
| JC-1-M-q | Judith Carrier | South Side Green Valley Road Game Trail #10 |
| JC-1-M-b | Judith Carrier | Green Valley Road Game Trail #1 Elk Track |
| JC-1-M-g | Judith Carrier | Game Trail #4 |
| JC-1-M-r | Judith Carrier | South Side Green Valley Road Game Trail #10 Elk Track |
| JC-1-N | Judith Carrier | 12/2009 Final Report of the King County Historic Scenic Corridors Project |
| JC-1-Na | Judith Carrier | Green Valley Road Heritage Corridor, p. 35 |
| JC-1-Nb | Judith Carrier | Green Valley Road Heritage Corridor, p. 36 |
| JC-1-Nc | Judith Carrier | Green Valley Road Heritage Corridor, p. 37 |
| JC-1-O | Judith Carrier | DEIS Agriculture Commission Comment Letter (3 pgs) |
| JC-1-Pa | Judith Carrier | Pictures of Green Valley Road Preserved Farmland: Vukich Farm |
| JC -1-Pb | Judith Carrier | Pictures of Green Valley Road Preserved Farmlands including roadway characteristics: Sweet Brian Farm Organic Fruits and Vegetables, Honeytree Christmas Trees, Canterberry Farms (uses both sides of road), Heifer Farm (uses both side of road) |
| JC-1-Pc | Judith Carrier | Pictures of Green Valley Road Preserved Farmlands including roadway characteristics: Moseby Brothers Farms (uses both sides of the road) |
| JC-1-Qa | Judith Carrier | WSDOT SR 169 Route Development Report |
| JC-1-Qb | Judith Carrier | WSDOT SR 169 Route Development Map |
| JC-1-Qc | Judith Carrier | WSDOT SR 169 Route Development: Urban Planning Manager Letter, dated 2/12/10, Richard Warren, author |
| JC-1-R | Judith Carrier | WSDOT Urban Planning Manager Letter, dated 3/2/10, Chris Picard, author |
| CBD-1 | City of Black Diamond | Staff Report - Lawson Hills MPD - File No. PLN09-0016 |
| CBD-1-1 | City of Black Diamond | Lawson Hills - Master Application |
| CBD-1-2 | City of Black Diamond | Lawson Hills - MPD Application Binder dated 12-31-09 |
| CBD-1-3 | City of Black Diamond | Lawson Hills - City of Black Diamond Ordinance No. 08-885 |
| CBD-1-4 | City of Black Diamond | Lawson Hills - Notice of Application |
| CBD-1-5 | City of Black Diamond | Lawson Hills MPD FEIS |
| CBD-1-10 | City of Black Diamond | Lawson Hills - Public Hearing Notice |

| No. | Provided by | Description |
|---|---|---|
| CBD-1-11 | City of Black Diamond | Lawson Hills - Land use plan/constraints map overlay |
| CBD-1-12 | City of Black Diamond | Lawson Hills - Parametrix Alternative Roadway Analysis |
| CBD-1-13 | City of Black Diamond | Lawson Hills - Letter from City of Covington, dated 7/30/09 |
| CBD-1-14 | City of Black Diamond | Lawson Hills - Letter from Enumclaw School District dated 7/31/09 |
| CBD-1-15 | City of Black Diamond | Lawson Hills - E-mail communication from Greater Maple Valley Area Council dated 1/11/10 |
| CBD-1-16 | City of Black Diamond | Lawson Hills - Letter from WSDOT dated 1/25/10 |
| CBD-1-17 | City of Black Diamond | Lawson Hills - Letter from King County DDES dated 2/9/10 |
| CBD-2 | City of Black Diamond | Staff Report - The Villages MPD - File No. PLN09-0017, including Exhibit Nos. 1-25 |
| CBD-2-1 | City of Black Diamond | The Villages - Master Application |
| CBD-2-2 | City of Black Diamond | The Villages - MPD Application Binder dated 12-31-09 |
| CBD-2-3 | City of Black Diamond | The Villages - City of Black Diamond Ordinance No. 08-885 |
| CBD-2-4 | City of Black Diamond | The Villages - Notice of Application |
| CBD-2-5 | City of Black Diamond | The Villages MPD FEIS |
| CBD-2-10 | City of Black Diamond | The Villages - Public Hearing Notice |
| CBD-2-11 | City of Black Diamond | The Villages - Land use plan/constraints map overlay |
| CBD-2-12 | City of Black Diamond | The Villages - City of Black Diamond Ordinance No. 515 |
| CBD-2-13 | City of Black Diamond | The Villages - Parametrix Alternative Roadway Analysis |
| CBD-2-14 | City of Black Diamond | The Villages - Letter from City of Covington dated 7/30/09 |
| CBD-2-15 | City of Black Diamond | The Villages - Letter from Enumclaw School District dated 7/31/09 |
| CBD-2-16 | City of Black Diamond | The Villages - E-mail communication from Bill & Vicki Harp dated 8/3/09 |
| CBD-2-17 | City of Black Diamond | The Villages - Letter from City of Black Diamond to Bill & Vicki Harp dated 8/14/09 |
| CBD-2-18 | City of Black Diamond | The Villages - E-mail communication from Cindy Proctor dated 9/9/09 |
| CBD-2-19 | City of Black | The Villages - Letter from Lynn McArthur dated 10/21/09 |

| No. | Provided by | Description |
|---|---|---|
| | Diamond | |
| CBD-2-20 | City of Black Diamond | The Villages - Letter from King County DDES dated 11/19/09 |
| CBD-2-21 | City of Black Diamond | The Villages - E-mail communication from Greater Maple Valley Area Council dated 1/11/10 |
| CBD-2-22 | City of Black Diamond | The Villages - Letter from WSDOT dated 1/25/10 |
| CBD-2-23 | City of Black Diamond | The Villages - E-mail communication from Lorraine & William Seaman dated 2/7/10 |
| CBD-2-24 | City of Black Diamond | The Villages - E-mail communication from City of Black Diamond to Lorraine & William Seaman dated 2/8/10 |
| CBD-2-25 | City of Black Diamond | The Villages - Letter from King County DDES dated 2/9/10 |
| CBD-3 | City of Black Diamond | Shared Exhibit No. 6 to Staff Report - Draft School Mitigation Agreement |
| CBD-4 | City of Black Diamond | Shared Exhibit No. 7 to Staff Report - Black Diamond Urban Growth Area Agreement |
| CBD-5 | City of Black Diamond | Shared Exhibit No. 8 to Staff Report - Black Diamond Area Open Space Protection Agreement |
| CBD-6 | City of Black Diamond | Shared Exhibit No. 9 to Staff Report - Water Supply and Facilities Funding Agreement |
| CBD-7 | City of Black Diamond | Lawson Hills DEIS, including exhibits and appendices |
| CBD-8 | City of Black Diamond | The Villages DEIS, including exhibits and appendices |
| CBD-9 | City of Black Diamond | Joe May, Appeal of the FEIS for The Villages, dated 12/28/09 |
| CBD-10 | City of Black Diamond | William and Vicki Harp, Appeal of the FEIS, The Villages MPD, dated 12/28/09 |
| CBD-11 | City of Black Diamond | Cynthia and William Wheeler, Appeal of the FEIS, Lawson Hills, dated 12/28/09 |
| CBD-12 | City of Black Diamond | Melanie Gauthier Appeal of FEIS for Lawson Hills |
| CBD-13 | City of Black Diamond | Christopher Clifford's Lawson Hills EIS Appeal Statement |
| CBD-14 | City of Black Diamond | Christopher Clifford's The Villages EIS Appeal Statement |
| WH-1 | Wheeler/ Proctor | Final and Draft EIS for both The Villages and Lawson Hills |
| WH-2 | Wheeler/ Proctor | City of Black Diamond Project Files for The Villages and Lawson Hills |
| WH-3 | Wheeler/ Proctor | City of Black Diamond Sensitive Areas Ordinance Best Available Science Report |
| WH-4 | Wheeler/ Proctor | City of Black Diamond Sensitive Areas Ordinance 08-875 |

| No. | Provided by | Description |
|---|---|---|
| WH-5 | Wheeler/ Proctor | Black Diamond Urban Growth Area Agreement |
| WH-6 | Wheeler/ Proctor | WA State Dept. of Fish and Wildlife Habitat Map; letter from Larry Fisher, WDFW, to City of Black Diamond, dated 2/28/10 |
| WH-7 | Wheeler/ Proctor | Wildlife Documentation Photographs ( six double-sided sheets) |
| WH-8 | Wheeler/ Proctor | 2005 DOE Stormwater Manual (Supplied online at http://www.ecy.wa.gov/programs/ wq/stormwater/manual.html) |
| WH-9 | Wheeler/ Proctor | Lake Sawyer Regional Park School Facilities Joint Use Petition |
| WH-10 | Wheeler/ Proctor | Washington State DOT Letter (from Ramin Pazooki, dated 1/25/10) |
| WH-11 | Wheeler/ Proctor | King County DDES Letter (from Stephanie Warden to Steve Pilcher, 11/19/09) |
| WH-12 | Wheeler/ Proctor | Governmental Agencies Letters/Reports (Not a separate exhibit) |
| WH-13 | Wheeler/ Proctor | ESD Tri-Party Agreement |
| WH-14 | Wheeler/ Proctor | King County DDES Letter (from Miles to Pilcher, 2/9/09, with attachments) |
| WH-15 | Wheeler/ Proctor | Medical Impact Letter Re: Noise Stress (from Dr. G.R. Magley, dated 2/10) |
| WH-16 | Wheeler/ Proctor | Email correspondences re: EIS/ MPD/SEPA (various dates and authors) |
| WH-17 | Wheeler/ Proctor | ESD Tri-Party Agreement obtained through Public Disclosure Requests (PDRs); various letters: Combs to Botts, 9-17-09 (2 pgs); Nix to Davis, 11-16-09 (2 pgs); Combs to Ketter, 6-10-09 (1 pg); Combs to Balint, 9-25-09 (1 pg); Combs to Ketter, 9-24-09 (2 pgs); Unidentified sender, 2-8-10 (1 pg); Balint to Pilcher, 12-02-09 (1 pg); Pilcher to Kohl-mann, 12-02-09 (1 pg); Same as Exhibit 11 |
| WH-18 | Wheeler/ Proctor | SR 169 Corridor Plan (supplied online at http://www.wsdot.wa.gov/Projects/SR169/ RDP/Report.htm) |
| WH-19 | Wheeler/ Proctor | Greenhouse Gas Emission Report, by Tim Trohmovich, AICP, JD., 12/09 |
| WH-20 | Wheeler/ Proctor | Lake Sawyer 2009 Water Quality report, dated January 15, 2010; also other water quality reports provided by Herrera/Lake Sawyer Management Technical Appendices |
| WH-20A | Wheeler/ Proctor | Memo from Herrera Consultants (Kirschbaum and Zisette) to Bricklin Newman (3/3/10) |
| WH-20B | Wheeler/ Proctor | Triad memo from Matt to Lund, 9-11-08 |
| WH-20C | Wheeler/ Proctor | "Appendix O" - Response to Comments on the Lake Sawyer Draft Management Plan |

| No. | Provided by | Description |
|---|---|---|
| WH-20D | Wheeler/ Proctor | Memo from Silva to Thrasher, dated 12-29-99 (Water sample results attached); Appendix L: Land Use Parameters for Modeling; Appendix M: Ecology Equivalency Review Matrix; Appendix N: Conceptual Stormwater Plan for Rock Creek/Ginder Creek Drainage Area |
| WH-20E | Wheeler/ Proctor | Water Quality Sampling Results; Appendix C: Modeling and Water/Nutrient Budget Methods and Assumptions; Appendix D: Aquatic Plant Management Plan; Appendix E: Public Access Inventory; Appendix F: TMDL; Appendix G: Lake Sawyer Watershed Bioassessment Case Study: 1995; Appendix H: Timing of Juvenile Coho Salmon Emigration from the Lake Sawyer Drainage Basin; Appendix I: Contingency In-Lake Measures for Phosphorus Control in Lake Sawyer; Appendix J: QA/QC Plan; Appendix K: Watershed Sampling |
| WH-20F | Wheeler/ Proctor | Lake Sawyer Management Plan Title Plage, Appendix A: SEPA Checklist; Appendix B: Lake Sawyer Data: 1994-95 |
| WH-21 | Wheeler/ Proctor | Noise Reports, by Jerry Lily, 3/2/10; WHO Noise Guidelines |
| WH-22 | Wheeler/ Proctor | Transportation Report of Ross Tilghman of Tilghman Group, dated 2/26/10 |
| WH-22a | Wheeler/ Proctor | Chapter 7 Transportation from the 2009 City of Black Diamond Comprehensive Plan |
| WH-23 | Wheeler/ Proctor | Morgan Kame Terrace Mine DEIS (supplied online at http://www.ci.blackdiamond.wa.us/ Depts/CommDev/planning/Morgan%20 Kame%20DEIS/Draft%20EIS-Morgan% 20Kame%20Terrace.pdf) |
| WH-24 | Wheeler/ Proctor | Black Diamond Environmental Partners Comments and Attachment, letter from Jason Paulson to Steve Pilcher, 12/15/09 |
| WH-25 | Wheeler/ Proctor | PSRC 2040 Transportation Plan, Appendix B: Program and Project List |
| WH-26 | Wheeler/ Proctor | King County Growth Management Planning Council Motion No. 09-2 (GMC Growth Target Plan) |
| WH-27 | Wheeler/ Proctor | King County Comprehensive Plan (supplied online at http://www.your.kingcounty.gov/ mkcc/compplan/2008/2008-0124.2_AttachB. pdf |
| WH-28 | Wheeler/ Proctor | Relevant newspaper articles and publications ("Public hearing Wed. for major commercial project on Kent's East Hill," by Steve Hunter, 2/26/10) |
| WH-29 | Wheeler/ Proctor | King County Growth Management Planning Council's Countrywide Planning Policies (no citation of URL) |
| WH-30 | Wheeler/ Proctor | School siting Map/Board (this is a Board exhibit) |

| No. | Provided by | Description |
|---|---|---|
| WH-31 | Wheeler/ Proctor | City of Black Diamond Pre-DEIS/FEIS letter and Yarrow Bay's Response (PDR), Steve Pilcher letter to Lund, 6/23/09; Pilcher letter to YB Holdings, 8/11/09; Rogers letter to City of Black Diamond, 8/18/09 |
| WH-32 | Wheeler/ Proctor | Various Villages South Connector Maps (this is a Board exhibit) |
| WH-33 | Wheeler/ Proctor | City of Covington letter from Mayor Margaret Harto to Steve Pilcher, dated 2/24/09 |
| WH-34a | Wheeler/ Proctor | 1996 Black Diamond Comprehensive Plan |
| WH-34b | Wheeler/ Proctor | SEPA Addendum issued for 2009 Black Diamond Comp Plan update |
| WH-35 | Wheeler/ Proctor | ESD - Impact Fee Request, Capital Facilities Plan 2008 & 2009; Letter from Superintendent Mike Nelson to Mayor Botts, 8-25-09; letter from Nelson to Pilcher, 7/31/09; Enumclaw School District Capital Facilities Plans excerpts: 2008-2013 and 2009-2014 |
| WH-36 | Wheeler/ Proctor | Miscellaneous Open Space Letter (PDR); County Executive Triplett to County Council Chair Constantine, 11-23-09 |
| BD-1 | David Bricklin | CVs/Resumes and Witness List (as listed on Pre-Hearing Brief--rest of exhibits submitted by Wheeler/Proctor) |
| NR-TV-16 | Nancy Rogers | Letter from Leonard Smith , dated 10/20/09 and Letter from Colin Lund, dated 10/27/09 with Attachment A |
| NR-TV-19 | Nancy Rogers | Technical Memorandum dated 1/29/10 from AESI re: The Villages Water Level Monitoring Data |
| NR-TV-20 | Nancy Rogers | KCC 21A.08.050 - Sections of King County Zoning Code, regarding schools in rural area |
| NR-TV-9 NR-LH-7 | Nancy Rogers | City of Black Diamond - Yarrow Bay - SEPA Processing Agreement, dated 11/30/07 |
| NR-TV-14 NR-LH-12 | Nancy Rogers | Black Diamond Agency Scoping Notice Package, including Legal Notices, Meeting Attendees, Letters, Minutes, Revised Determination of Significance and Request for Comments on Scope of EIS |
| NR-LH-5 | Nancy Rogers | Applicant's Proposed Condition Language - Lawson Hills MPD Large Wet Pond Total Phosphorus Monitoring Program |
| NR-LH-15 | Nancy Rogers | Section View show topographic change from Flaming Geyser State Park and Lawson Hills MPD |
| NR-TV-2 NR-LH-2 | Nancy Rogers | Topographical Map with City boundaries of The Villages Site and Lawson Hills Site overlaid on an aerial photo. |
| NR-TV-18 | Nancy Rogers | Section view showing topographic change from Flaming Geyser State Park to the Villages Site |
| NR-TV-7 | Nancy Rogers | Applicant's Proposed Condition Language - The Villages MPD Large Wet Pond Total Phosphorus Monitoring Program |
| NR-TV-4 | Nancy Rogers | Aerial photo of wildlife corridor map (red line shows regional corridor) |

| No. | Provided by | Description |
|---|---|---|
| NR-TV-10<br>NR-LH-8 | Nancy Rogers | Washington State Parks web site page on park hours and updates at Flaming Geyser |
| NR-TV-13<br>NR-LH-11 | Nancy Rogers | Technical Memorandum dated 1/22/08 from AESI, MPD Open House Comments Received |
| NR-TV-6 | Nancy Rogers | Maps from EIS and MPD application regarding South Connector to SER 169 (Excerpts from 7/17/08 Wetland Assessment for The Villages, including Figure 6c; Black Diamond Villages EIS Map - Main Property - Parcel F - Figure 7e; MPD Application<br>Pg. 4-3, Figure 4-1 - Circulation Plan) |
| NR-TV-15/<br>NR-LH-13 | Nancy Rogers | Email exchange among Dave Bricklin, Nancy Rogers and Mike Kenyon re: Hearings dated 1/28/10. |
| NR-TV-12/<br>NR-LH-10 | Nancy Rogers | Lake Sawyer Walter Quality report prepared by the King Co. Lake Stewardship Program, January 15, 2010 |
| NR-TV-17/<br>NR-LH-14 | Nancy Rogers | City of Black Diamond colored 1996 Comprehensive Land Use Map (Fig. 5-7) |
| NR-TV-8/<br>NR-LH-6 | Nancy Rogers | Comprehensive School Mitigation Agreement with Exhibits A - V |
| NR-TV-11/<br>NR-LH-9 | Nancy Rogers | Lake Sawyer and Its Watershed Management Plan prepared by King County Surface Water Management dated July 2000 |
| NR-AL-1 | Nancy Rogers | No. 1 on Applicant's Exhibit List (The Villages) - Cited excerpts from FEIS and supporting documents as referenced in Prehearing Brief |
| NR-AL-2 | Nancy Rogers | No. 3 on Applicant's Exhibit List (The Villages) - Regional Map showing open space areas |
| NR-AL-3 | Nancy Rogers | No. 5 on Applicant's Exhibit List (The Villages) - Enlargements from EIS diagrams (Ex 2-3 of Villages Alt 2 MPD; Ex. 3-25 of Villages Alt 2 Proposed Stormwater Facilities, Fig. 1 from Appendix P, Fisheries Tech. Report, Stormwater facility maps, Figs 7, 9, 10A, 10B, 11A, 11B, 12, 13, 14, 24, 27 and 28 from FEIS Appendix D, AESI Report |
| NR-AL-4 | Nancy Rogers | No. 1 on Applicant's Exhibit List (Lawson Hills) - Cited excerpts from FEIS and supporting documents as referenced in Prehearing Brief |
| NR-AL-5 | Nancy Rogers | No. 3 on Applicant's Exhibit List (Lawson Hills) - Regional Map showing open space areas |
| NR-AL-6 | Nancy Rogers | No. 4 on Applicant's Exhibit List (Lawson Hills) Enlargements from EIS diagrams (Ex 2-2 of Lawson Hills Alt 2 MPD; Ex. 3-24 of Lawson Hills Proposed Stormwater Facilities, Fig. 5 from Appendix P, Fisheries Tech. Report, Stormwater facility maps, Figs 3, 4, 5a, 5b, and 13 from FEIS Appendix H (Visual) |
| MG-1 | Melanie Gauthier | Lawson Hills DEIS, including appendices |
| MG-2 | Melanie Gauthier | Lawson Hills FEIS, including appendices |

| No. | Provided by | Description |
|---|---|---|
| MG-3 | Melanie Gauthier | Lawson Hills MPD, including appendices |
| MG-4 | Melanie Gauthier | The Villages DEIS, including appendices |
| MG-5 | Melanie Gauthier | The Villages FEIS, including appendices |
| MG-6 | Melanie Gauthier | The Villages MPD, including appendices |
| MG-7 | Melanie Gauthier | Morgan Kame Terrace Mine Expansion DEIS |
| MG-8 | Melanie Gauthier | Melanie Gauthier Appeal of FEIS Lawson Hills, dated 12/28/09 |
| MG-9 | Melanie Gauthier | Christopher Clifford, et al., Lawson Hills and Villages Appeal, dated 12/28/09 |
| MG-10 | Melanie Gauthier | King Co. Dept. of Development and Environmental Services letter to Steve Pilcher, dated 2/9/10 |
| MG-11 | Melanie Gauthier | Two letters to Steve Pilcher from Ramin Pazooki, WSDOT, re Yarrow Bay Developments (The Villages and Lawson Hills) |
| MG-12 | Melanie Gauthier | Miscellaneous letters between City and BD Lawson Hills Partners and BD Villages Partners, concerning adequacy of information provided in the DEIS and MPD |
| MG-13 | Melanie Gauthier | City of Black Diamond letters to interested parties, dated 12/11/09, re: availability of FEIS documents |
| GB-1 | Gil Bortleson | Aerial photograph showing view of Flaming Geyser State Park and proposed Villages |
| GB-2 | Gil Bortleson | Aerial photograph showing vertical view of Flaming Geyser State Park and proposed Villages |
| GB-3 | Gil Bortleson | Illustration showing vertical view of Flaming Geyser State Park and proposed Villages |
| GB-4 | Gil Bortleson | Illustration showing proponent map of visualization from off-site Green Valley Road |
| GB-5 | Gil Bortleson | Photograph showing visual corridor of Flaming Geyser State Park from hillcrest of proposed Villages |
| GB-6 | Gil Bortleson | Table showing petition to preserve visual corridor of Flaming Geyser State Park |
| GB-7 | Gil Bortleson | Letter from local resident ot King County asking for visual corridor protection for Flaming Geyser State Park from rimtop development on south side of the Green River in 19874 |
| GB-8 | Gil Bortleson | Soils map showing area of high erosion potential below and above Green Valley Road. AkF on map. |
| GB-9 | Gil Bortleson | Geology map showing area susceptible to sliding below Green Valley Road. Qm on map. |
| GB-10 | Gil Bortleson | Photograph showing landslide debris on Green Valley Road |
| GB-11 | Gil Bortleson | Photograph showoing soil creep above Green Valley Road |
| GB-12 | Gil Bortleson | Photograph showing incidence of under-mining and slippage of |

| No. | Provided by | Description |
|---|---|---|
| | | Green Valley Road |
| GB-13 | Gil Bortleson | Photograph showing road crew repair of undermining and slippage of Green Valley Road |
| GB-14 | Gil Bortleson | Map showing proposed school sites in DEIS and FEIS |
| GB-15 | Gil Bortleson | Map showing proposed school sites from Enumclaw School District website (Tri-Party School Agreement) |
| GB-16 | Gil Bortleson | King County letter of response to school sites located outside the Urban Growth Area |
| GB-17 | Gil Bortleson | King County letter of response to school sites located outside the Urban Growth Area (continued) |
| GB-18 | Gil Bortleson | Table showing petition to keep Black Diamond schools in 2009 Black Diamond Urban Growth Area |
| GB-19 | Gil Bortleson | Map showing a large infiltration pond locate outside Black Diamond Urban Growth Area |
| GB-20 | Gil Bortleson | Aerial photograph of representative area near Green River Gorge susceptible to ground saturation during storms causing mudslides |
| GB-21 | Gil Bortleson | Photograph showing a downhill view of mudslide near Green River Gorge during intense storm causing ground saturation in January 2009 |
| GB-22 | Gil Bortleson | Photograph showing washout during the high-intensity rainfall of January 2009 in area shown in Exhibit 19 |
| GB-23 | Gil Bortleson | Photograph showing washout during the high-intensity rainfall of January 2009 in area shown in Exhibit 19 - continued |
| GB-24 | Gil Bortleson | Photograph showing domestic water supply from a spring in area shown in Exhibit 19. Shallow spring supplies 4 households with a low yield of ~2.5 gal. per min. during wet season. |
| GB-25 | Gil Bortleson | Photograph of year-round spring entering the Green River in area shown in Exhibit 19 |
| GB-26 | Gil Bortleson | Photographs showing resident elk herds near Green Valley Road and Flaming Geyser State Park |
| GB-27 | Gil Bortleson | Map showing King County Core-Wetland Open Space/Cranberry Slough in relation to proposed land use in FEIS alternative 2 |
| GB-28 | Gil Bortleson | Photograph showing Cranberry Slough located in King County Space near the proposed Triangle |
| GB-29 | Gil Bortleson | Graph showing Lake Sawyer Total Maximum Daily Load criteria versus time shown by year. |
| GB-30 | Gil Bortleson | Position Paper of Rural Green Valley Road Residents |

EXHIBIT D

**SIXTH REVISED EMAIL EXHIBIT LIST**

**List of Emails for Black Diamond**

**The Villages/Lawson Developments SEPA Appeals**

**April 15, 2010**

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 1 | 01/08/10 | 8:12 am | Steve Pilcher | MPD Hearings/SEPA appeal |
| 2 | 01/08/10 | 9:50 am | Phil Olbrechts | MPD Hearings/SEPA appeal |
| 3 | 01/08/10 | 10:08 am | Steve Pilcher | MPD Hearings/SEPA appeal |
| 4 | 01/08/10 | 10:12 am | Steve Pilcher | MPD Hearings/SEPA appeal |
| 5 | 01/08/10 | 10:26 am | Phil Olbrechts | MPD Hearings/SEPA appeal |
| 6 | 01/08/10 | 11:00 am | Phil Olbrechts | MPD Hearings/SEPA appeal |
| 7 | 01/08/10 | 11:44 am | Steve Pilcher | Ordinance No. 08-857, Hearing Examiner Position - Adding and Amending Chapters in BDMC.pdf |
| 8 | 01/08/10 | 3:10 pm | Phil Olbrechts | Proposed Procedural Rules |
| 9 | 01/08/10 | 3:11 pm | Phil Olbrechts | Proposed Procedural Rules |
| 10 | 01/11/10 | 9:19 am | Steve Pilcher | Materials arriving |
| 11 | 01/11/10 | 10:01 am | Steve Pilcher | Proposed Procedural Rules |
| 12 | 01/12/10 | 9:42 am | Steve Pilcher | Proposed Procedural Rules |
| 13 | 01/12/10 | 9:54 am | Nancy Rogers | Proposed Procedural Rules |
| 14 | 01/12/10 | 10:02 am | Steve Pilcher | Proposed Procedural Rules |
| 15 | 01/12/10 | 11:33 am | Bill Wheeler | Hearing Examiner Email of January 8, 2010 |
| 16 | 01/12/10 | 11:56 am | Phil Olbrechts | Hearing Examiner Email of January 8, 2010 |
| 17 | 01/12/10 | 11:59 am | Steve Pilcher | Hearing Examiner Email of January 8, 2010 |
| 18 | 01/12/10 | 12:25 pm | Steve Pilcher | Hearing Examiner Email of January 8, 2010 |
| 19 | 01/12/10 | 2:25 pm | Chris Clifford | Hearing Examiner Email of January 8, 2010 |
| 20 | 01/12/10 | 2:46 pm | Steve Pilcher | Proposed Procedural Rules |
| 21 | 01/13/10 | 2:12 pm | Cindy Proctor | Proposed Procedural Rules |
| 22 | 01/13/10 | 8:54 pm | Cindy Proctor | City of Black Diamond Attorney Request |
| 23 | 01/14/10 | 11:26 am | Cindy Proctor | Response to Proposed Procedural Rules - Appeal of Villages FEIS |
| 24 | 01/14/10 | 4:21 pm | Nancy Rogers | Response to Proposed Procedural Rules - Appeal of Villages FEIS |
| 25 | 01/19/10 | 2:09 pm | Joe May | Villages Appeal, Rules Procedures |
| 26 | 01/19/10 | 3:12 pm | Gil Bortleson | Appellant Notice |
| 27 | 01/19/10 | 3:29 pm | Bill Wheeler | Response to Hearing Examiner |
| 28 | 01/19/10 | 3:36 pm | Bill Wheeler | Response to Hearing Examiner |
| 29 | 01/19/10 | 4:05 pm | Melanie Gauthier | Response to BD Proposed Procedural Rules - Appeal of Lawson FEIS |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 30 | 01/19/10 | 4:23 pm | Gil Bortleson | Appellant Notice |
| 31 | 01/19/10 | 4:28 pm | Judith Carrier | Appeals Hearing for The Villages / Lawson Hills Developments |
| 32 | 01/19/10 | 4:49 pm | Nancy Rogers | Updated proposed hearing schedule |
| 33 | 01/19/10 | 4:57 pm | Bill Wheeler | Confirm Receipt of Response |
| 34 | 01/19/10 | 5:01 pm | Cindy Proctor | Updated proposed hearing schedule |
| 35 | 01/19/10 | 5:33 pm | Cindy Proctor | Updated proposed hearing schedule |
| 36 | 01/19/10 | 11:29 pm | Chris Clifford | Hearing time line |
| 37 | 01/20/10 | 12:05 am | Chris Clifford | Hearing time line correction |
| 38 | 01/20/10 | 1:19 pm | Mike Kenyon | Hearing time line correction |
| 39 | 01/20/10 | 6:18 pm | Phil Olbrechts | Development Reg's |
| 40 | 01/21/10 | 10:18 am | Steve Pilcher | Development Reg's |
| 41 | 01/21/10 | 11:42 am | Phil Olbrechts | Development Reg's |
| 42 | 01/25/10 | 4:34 pm | Phil Olbrechts | Updated proposed hearing schedule |
| 43 | 01/25/10 | 4:49 pm | Nancy Rogers | Updated proposed hearing schedule |
| 44 | 01/25/10 | 5:30 pm | Cindy Wheeler | Updated proposed hearing schedule |
| 45 | 01/25/10 | 5:45 pm | William and Vicki Harp | Updated proposed hearing schedule |
| 46 | 01/25/10 | 5:45 pm | Judith Carrier | Updated proposed hearing schedule |
| 47 | 01/25/10 | 5:55 pm | Judith Carrier | Updated proposed hearing schedule |
| 48 | 01/25/10 | 6:45 pm | Cindy Proctor | Updated proposed hearing schedule |
| 49 | 01/25/10 | 8:44 pm | Joe May | Updated proposed hearing schedule |
| 50 | 01/25/10 | 9:49 pm | Melanie Gauthier | Updated proposed hearing schedule |
| 51 | 01/26/10 | 10:15 am | Gil Bortleson | Updated proposed hearing schedule |
| 52 | 01/26/10 | 1:45 pm | Chris Clifford | Updated proposed hearing schedule |
| 54 | 01/26/10 | 7:16 pm | Phil Olbrechts | PreHearing Order |
| 55 | 01/27/10 | 10:59 am | Kay Richards | PreHearing Order |
| 56 | 01/27/10 | 11:05 am | Kay Richards | PreHearing Order |
| 57 | 01/27/10 | 12:31 pm | Kay Richards | Prehearing Order; Email Exhibit List |
| 58 | 01/27/10 | 1:10 pm | Kay Richards | Prehearing Order; Email Exhibit List |
| 59 | 01/27/10 | 4:50 pm | Phil Olbrechts | Pre-Hearing Order Distribution |
| 60 | 01/27/10 | 6:07 pm | Kay Richards | Prehearing Order; Email Exhibit List |
| 61 | 01/28/10 | 3:10 pm | Kay Richards | Prehearing Order; Email Exhibit List |
| 62 | 01/28/10 | 3:27 pm | Kay Richards | Prehearing Order; Email Exhibit List |
| 63 | 01/28/10 | 3:41 pm | Kay Richards | Cindy Wheeler's Request for Emails |
| 64 | 01/28/10 | 3:44 pm | Kay Richards | MPD Hearings/SEPA Appeal (#3) |
| 65 | 01/28/10 | 4:06 pm | Kay Richards | MPD Hearings/SEPA Appeal (#4) |
| 66 | 01/28/10 | 4:06 pm | Kay Richards | Ordinance No. 08-857, Hearing Examiner Position/Adding and Amending Chapters (#7) |
| 67 | 01/28/10 | 4:07 pm | Kay Richards | Materials Arriving (#10) |
| 68 | 01/28/10 | 4:09 pm | Kay Richards | Proposed Procedural Rules (#11) |
| 69 | 01/28/10 | 4:11 pm | Kay Richards | Proposed Procedural Rules (#12) |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 70 | 01/28/10 | 4:12 pm | Kay Richards | Proposed Procedural Rules (#14) |
| 71 | 01/28/10 | 4:13 pm | Kay Richards | Proposed Procedural Rules (#20) |
| 72 | 01/28/10 | 4:19 pm | Kay Richards | Development Reg's (#39) |
| 73 | 01/28/10 | 4:20 pm | Kay Richards | Development Reg's (#41) |
| 74 | 01/28/10 | 4:21 pm | Kay Richards | Development Reg's (#40) |
| 75 | 01/28/10 | 4:50 pm | Kay Richards | Villages and Lawson Hills |
| 76 | 01/28/10 | 4:54 pm | Steve Pilcher | Steve Pilcher just called with QUESTIONS |
| 77 | 01/28/10 | 4:59 pm | Kay Richards | Villages and Lawson Hills - MORE |
| 78 | 01/29/10 | 11:38 am | Kay Richards | Villages and Lawson Hills - MORE |
| 79 | 01/29/10 | 4:08 pm | Joe May | Permission Request |
| 80 | 02/01/10 | 4:16 pm | Dave Bricklin | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 81 | 02/01/10 | 4:29 pm | Steve Pilcher | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 82 | 02/01/10 | 4:29 pm | Phil Olbrechts | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 83 | 02/01/10 | 4:41 pm | Phil Olbrechts | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 84 | 02/01/10 | 4:53 pm | Dave Bricklin | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 85 | 02/01/10 | 4:55 pm | Phil Olbrechts | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 86 | 02/01/10 | 4:59 pm | Steve Pilcher | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 87 | 02/01/10 | 5:17 pm | Phil Olbrechts | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 88 | 02/02/10 | 8:03 pm | Melanie Gauthier | Pre-Hearing Order |
| 89 | 02/03/10 | 1:46 pm | Nancy Rogers | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 90 | 02/03/10 | 10:35 pm | Chris Clifford | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 91 | 02/04/10 | 12:21 pm | Judith Carrier | Adding Appellant e-mail address |
| 92 | 02/04/10 | 12:36 pm | Judith Carrier | Steve Sundqvist, Clifford Appeal |
| 93 | 02/10/10 | 5:11 pm | Jeff Taraday | Lawson Hills Notice of Appeal with exhibit, signed.pdf; The Villages Notice of Appeal with exhibit, signed.pdf |
| 94 | 2/11/10 | 3:30 am | Judith Carrier | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 95 | 02/11/10 | 10:32 am | Jeff Taraday | City of Maple Valley's Notice of Appeal |
| 96 | 02/11/10 | 11:56 am | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |
| 97 | 02/11/10 | 12:07 pm | Jeff Taraday | Maple Valley's Notice of Appeal - Black |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| | | | | Diamond |
| 98 | 02/11/10 | 12:18 pm | Phil Olbrechts | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 99 | 02/11/10 | 12:29 pm | Dave Bricklin | APPEAL OF THE VILLAGES AND LAWSON HILLS EISs |
| 100 | 02/11/10 | 1:34 pm | Kay Richards | Maple Valley's Notice of Appeal - Black Diamond |
| 101 | 02/11/10 | 1:56 pm | Nancy Rogers | Maple Valley's Notice of Appeal - Black Diamond |
| 102 | 02/11/10 | 2:14 pm | Dave Bricklin | Maple Valley's Notice of Appeal - Black Diamond |
| 103 | 02/11/10 | 2:42 pm | Jeff Taraday | Request for Clarification re Black Diamond's refusal to accept appeal fee |
| 104 | 02/11/10 | 3:29 pm | Nancy Rogers | Maple Valley's Notice of Appeal - Black Diamond - Applicant's Responses |
| 105 | 02/11/10 | 3:57 pm | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |
| 106 | 02/11/10 | 4:03 pm | Mike Kenyon | Maple Valley's Notice of Appeal - Black Diamond |
| 107 | 02/11/10 | 4:04 pm | Christy Todd | Maple Valley's Notice of Appeal - Black Diamond |
| 108 | 02/11/10 | 4:06 pm | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |
| 109 | 02/11/10 | 4:27 pm | Phil Olbrechts | Revised Prehearing Order |
| 110 | 02/11/10 | 4:29 pm | Phil Olbrechts | Revised Prehearing Order |
| 112 | 02/11/10 | 4:33 pm | Phil Olbrechts | Revised Prehearing Order |
| 113 | 02/11/10 | 4:34 pm | Christy Todd | Revised Prehearing Order |
| 114 | 02/11/10 | 4:39 pm | Mike Kenyon | FW: Maple Valley's Notice of Appeal - Black Diamond - City's Responses |
| 115 | 02/11/10 | 4:51 pm | Phil Olbrechts | Revised Prehearing Order |
| 116 | 02/11/10 | 4:59 pm | Kay Richards | Revised Prehearing Order |
| 117 | 02/11/10 | 5:00 pm | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |
| 118 | 02/11/10 | 5:07 pm | Kay Richards | Revised Prehearing Order |
| 119 | 02/12/10 | 1:06 pm | Dave Bricklin | Maple Valley's Notice of Appeal - Black Diamond |
| 120 | 02/12/10 | 1:45 pm | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |
| 121 | 02/12/10 | 2:51 pm | Mike Kenyon | Revised Prehearing Order |
| 122 | 02/12/10 | 2:51 pm | Phil Olbrechts | Revised Prehearing Order |
| 123 | 02/12/10 | 2:56 pm | Christy Todd | Maple Valley's Notice of Appeal - Black Diamond |
| 124 | 02/12/10 | 3:02 pm | Phil Olbrechts | Maple Valley's Notice of Appeal - Black Diamond |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| ---END OF FIRST REVISED EMAIL EXHIBIT LIST--- | | | | |
| 125 | 02/12/10 | 3:29 pm | Nancy Rogers | Revised Prehearing Order - Motions for Reconsideration |
| 126 | 02/13/10 | 6:16 pm | Melanie Gauthier | M. Gauthier Pre-Hearing Brief for Lawson Hills FEIS |
| 127 | 02/14/10 | 9:01 pm | Phil Olbrechts | M. Gauthier Pre-Hearing Brief for Lawson Hills FEIS |
| 128 | 02/16/10 | 7:54 am | Steve Pilcher | Gil Bortleson has a new email address |
| 129 | 02/16/10 | 11:35 am | Jeff Taraday | Maple Valley Response to Motion for Reconsideration |
| 130 | 02/16/10 | 11:36 am | Jeff Taraday | Maple Valley's Prehearing Brief, Witness List, and CV of Expert |
| 131 | 02/16/10 | 11:37 am | Jeff Taraday | Maple Valley's Pre-Hearing Motions |
| 132 | 02/16/10 | 11:45 am | Kay Richards | M. Gauthier Pre-Hearing Brief for Lawson Hills FEIS |
| 133 | 02/16/10 | 12:23 pm | Peggy Cahill | Black Diamond - Pre-Hearing Brief (Bricklin) |
| 134 | 02/16/10 | 3:25 pm | Margaret Starkey | The Villages & Lawson Hills - Black Diamond's Motion to Dismiss and Supporting Declaration (Kenyon) |
| 135 | 02/16/10 | 3:56 pm | Kay Richards | Gil Bortleson has a new email address |
| 136 | 02/16/10 | 4:31 pm | Jeff Taraday | Maple Valley's Notice of Appeal under BDMC 2.30.085 |
| 137 | 02/16/10 | 4:31 pm | Kristi Beckham | Applicant's Motions to Dismiss Appeal Issues for The Villages and Lawson Hills (Rogers) - Motions are attachments |
| 138 | 02/16/10 | 4:36 pm | Jeff Taraday | Maple Valley's Request for Formal Code Interpretation |
| 139 | 02/16/10 | 5:19 pm | Judith Carrier | BD Brief to Conclusion Additional Projects - Brief is attachment |
| 140 | 02/16/10 | 10:00 pm | Gil Bortleson | Pre-Hearing Brief - Bortleson - Brief is attachment |
| 141 | 02/16/10 | 10:22 pm | Chris Clifford | Clifford et al, Appeals 39 and 40 |
| 142 | 02/16/10 | no time/not an email | David Bricklin | Pre-Hearing Brief, Witness List, and Exhibit List of Appellants Wheeler, Proctor, May and Harp |
| 143 | 02/17/10 | 9:26 am | Kay Richards | Gil Bortleson has a new email address |
| 144 | 02/17/10 | 2:26 pm | Mike Kenyon | Maple Valley's Response to Motion for Reconsideration |
| 145 | 02/17/10 | 3:03 pm | Kathy Swoyer | Maple Valley's Response to Motion for Reconsideration |
| 146 | 02/17/10 | 7:36 pm | Judith Carrier | BD Brief to Conclusion Additional Projects |
| 147 | 02/18/10 | 2:45 pm | Margaret Starkey | Maple Valley's Notice of Appeal (letter) |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 148 | 02/18/10 | 2:48 pm | Margaret Starkey | Black Diamond - Request for Formal Code Interpretation (letter) |
| 149 | 02/18/10 | 2:50 pm | Ty Peterson | Black Diamond - Request for Formal Code Interpretation |
| 150 | 02/18/10 | 3:11 pm | Margaret Starkey | Black Diamond - Request for Formal Code Interpretation (ordinance) |
| 151 | 02/18/10 | 4:52 pm | Ty Peterson | Black Diamond - Request for Formal Code Interpretation |
| 152 | 02/19/10 | 12:32 am | Phil Olbrechts | Maple Valley Procedural Issues |
| 153 | 02/19/10 | 6:02 am | Dave Bricklin | Request for Pre-Hearing Conference and Suspension of Schedule |
| 154 | 02/19/10 | 8:18 am | Mike Kenyon | Black Diamond - Request for Formal Code Interpretation |
| 155 | 02/19/10 | 9:56 am | Phil Olbrechts | Request for Pre-Hearing Conference and Suspension of Schedule |
| 156 | 02/19/10 | 12:15 pm | Phil Olbrechts | Request for Pre-Hearing Conference and Suspension of Schedule |
| 157 | 02/19/10 | 12:42 pm | Mike Kenyon | Request for Pre-Hearing Conference and Suspension of Schedule |
| 158 | 02/19/10 | 1:02 pm | Dave Bricklin | Request for Pre-Hearing Conference and Suspension of Schedule |
| 159 | 02/19/10 | 1:16 pm | Nancy Rogers | Request for Pre-Hearing Conference and Suspension of Schedule |
| 160 | 02/19/10 | 2:10 pm | Phil Olbrechts | Request for Pre-Hearing Conference and Suspension of Schedule |
| 161 | 02/19/10 | 2:16 pm | Phil Olbrechts | Request for Pre-Hearing Conference and Suspension of Schedule with Revised Schedule |
| 162 | 02/19/10 | 3:58 pm | Dave Bricklin | Request for Pre-Hearing Conference and Suspension of Schedule |
| 163 | 02/19/10 | 4:05 pm | Dave Bricklin | Scheduling Request |
| 164 | 02/19/10 | 4:20 pm | Mike Kenyon | Request for Pre-Hearing Conference and Suspension of Schedule |
| 165 | 02/22/10 | 4:15 pm | Kay Richards | Second Revised PreHearing Order |
| 166 | 02/22/10 | 4:18 pm | Postmaster on behalf of Mike Kenyon | Second Revised Prehearing Order (Out of the Office) |
| 167 | 02/23/10 | 12:34 pm | Nancy Rogers | Second Revised Hearing Order |
| 168 | 02/23/10 | 2:24 pm | Steve Pilcher | MPD Staff Reports (attachments) |
| 169 | 02/23/10 | 10:19 pm | Melanie Gauthier | Request for Pre-Hearing Conference and Suspension of Schedule |
| 170 | 02/24/10 | 9:20 am | Kay Richards | 2-19-10 Revised Schedule attachment |
| 171 | 02/24/10 | 10.20 am | Dave Bricklin | Second Revised Prehearing Order |
| 172 | 02/24/10 | 10:55 am | Nancy Rogers | Second Revised Prehearing Order |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 173 | 02/24/10 | 11:04 am | Dave Bricklin | Second Revised Prehearing Order |
| 174 | 02/24/10 | 2:08 pm | Stacey Borland | Hearing Examiner Packet Exhibits |
| 175 | 02/24/10 | 2:23 pm | Steve Pilcher | MPD Staff Reports |
| 176 | 02/24/10 | 2:34 pm | Marsha St. Louis | City of Maple Valley Declaration of Service |
| 177 | 02/24/10 | 3:14 pm | Phil Olbrechts | Hearing Examiner Packet Exhibits |
| 178 | 02/24/10 | 5:09 pm | Cindy Wheeler | MPD Staff Reports |
| 179 | 02/25/10 | 7:53 am | Dave Bricklin | Request to Allow Jerry Lilly to Testify on Monday, March 8 |
| 180 | 02/25/10 | 10:22 am | Phil Olbrechts | Request to Allow Jerry Lilly to Testify on Monday, March 8 |
| 181 | 02/25/10 | 10:37 am | Phil Olbrechts | Subpoenas |
| 182 | 02/26/10 | 11:08 am | Dave Bricklin | Exhibits |
| 183 | 02/26/10 | 12:56 pm | Bob Sterbank | Exhibits |
| 184 | 02/26/10 | 1:31 pm | Judith Carrier | Second Revised Prehearing Order |
| 185 | 02/26/10 | 1:49 pm | Dave Bricklin | Exhibits, Continuance and Consolidation |
| 186 | 02/26/10 | 2:23 pm | Chris Clifford | Motion for Clarification |
| 187 | 02/26/10 | 2:41 pm | Dave Bricklin | Addendum re Consolidation Clarification |
| 188 | 02/26/10 | 3:27 pm | Bob Sterbank | Exhibits, Continuance and Clarification |
| 189 | 02/26/10 | 4:04 pm | Nancy Rogers | Exhibits, Continuance and Clarification |
| 190 | 02/26/10 | 4:13 pm | Dave Bricklin | Exhibits, Continuance and Clarification |
| 191 | 02/26/10 | 4:27 pm | Dave Bricklin | Ex Parte Motion for Issuance of Subpoenas (with attachment) |
| 192 | 02/26/10 | 8:13 pm | Melanie Gauthier | MPD Staff Reports |
| 193 | 02/27/10 | 12:05 pm | Melanie Gauthier | MPD Staff Reports |
| 194 | 02/28/10 | 4:02 pm | Phil Olbrechts | Exhibits, Continuance and Consolidation |
| 195 | 02/28/10 | 5:19 pm | Phil Olbrechts | Exhibits |
| 196 | 02/28/10 | 10:01 pm | Gil Bortleson | Site Inspection |
| 197 | 03/01/10 | 8:20 am | Dave Bricklin | Exhibits |
| 198 | 03/01/10 | 9:49 am | Dave Bricklin | Exhibits |
| 199 | 03/01/10 | 10:13 am | Phil Olbrechts | Exhibits |
| 200 | 03/01/10 | 10:39 am | Steve Pilcher | Exhibits |
| 201 | 03/01/10 | 1:06 pm | Bricklin & Newman, LLP (Anne Bricklin) | Response by Appellants William & Cindy Wheeler, et al. to City's & Applicant's Motion to Dismiss; Declaration of Service |
| 202 | 03/01/10 | 2:14 pm | Margaret Starkey | The Villages & Lawson Hills: Black Diamond's Response to Appeals; Witness and Exhibit List; Declaration of Mailing |
| 203 | 03/01/10 | 2:50 pm | Margaret Starkey | Attachments to City of Black Diamond's Witness & Exhibit List |
| 204 | 03/01/10 | 3:06 pm | Margaret Starkey | Declaration of Mailing for Black |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| | | | | Diamond's Witness & Exhibit List |
| 205 | 03/01/10 | 5:24 pm | Kristi Beckham | Lawson Hills - Applicant's Exhibit List and Applicant's Responsive Pre-Hearing Brief |
| 206 | 03/01/10 | 5:25 pm | Kristi Beckham | The Villages - Applicant's Exhibit List and Applicant's Witness List |
| 207 | 03/01/10 | 5:26 pm | Kristi Beckham | Lawson Hills - Applicant's Witness List and Response in Support of Motion to Dismiss |
| 208 | 03/01/10 | 5:28 pm | Kristi Beckham | The Villages - Response in Support of Motion to Dismiss |
| 209 | 03/01/10 | 5:57 pm | Nancy Rogers | The Villages - Applicant's Responsive Pre-Hearing Brief |
| 210 | 03/01/10 | 10:09 pm | Chris Clifford | Response to Motions to Dismiss, Motion in Limine, etc. (attachment) |
| 211 | 03/02/10 | 7:57 am | Steve Pilcher | Service Question |
| 212 | 03/02/10 | 2:56 pm | Jeff Taraday | Maple Valley Notice of Appeal Pursuant to BDMC 2.30.085 |
| 213 | 03/02/10 | 3:01 pm | Margaret Starkey | Maple Valley Notice of Appeal Pursuant to BDMC 2.30.085 |
| 214 | 03/03/10 | 4:13 pm | Kristi Beckham | Notice of Errata - Lawson Hills Prehearing Brief; Applicant's Reply on Motion to Dismiss Appeal Issues (Lawson Hills); Applicant's Reply on Motion to Dismiss Appeal Issues (The Villages) |
| 215 | 03/03/10 | 4:34 pm | Dave Bricklin | In re: Master Planned Development Applications for the Villages and Lawson Hills |
| 216 | 03/03/10 | 5:00 pm | Margaret Starkey | Black Diamond's Reply on Motion to Dismiss or, in the Alternative, Motion in Limine; Declaration of Mailing |
| 217 | 03/03/10 | 5:27 pm | Judith Carrier | Emailing Appeal Exhibits |
| 218 | 03/03/10 | 5:28 pm | Kristi Beckham (Nancy Rogers) | Exhibits for Villages and Lawson Hills - Part 1 of 6 |
| 219 | 03/03/10 | 5:29 pm | Kristi Beckham (Nancy Rogers) | Exhibits for Villages and Lawson Hills - Part 2 of 6 |
| 220 | 03/03/10 | 5:30 pm | Kristi Beckham (Nancy Rogers) | Exhibits for Villages and Lawson Hills - Part 4 of 6 |
| 221 | 03/03/10 | 5:52 pm | Kristi Beckham (Nancy Rogers) | Exhibits for Villages and Lawson Hills - Resending Email 3 - Pages 1-74 of TV Ex. 8 - LH Ex. 6. pdf |
| 222 | 03/03/10 | 5:59 pm | Kristi Beckham (Nancy Rogers) | Exhibits for Villages and Lawson Hills - Resending Email 6 of 6 - Pages 1-70 TV Ex 11 - LH Ex. 9.pdf |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 223 | 03/03/10 | 6:22 pm | Phil Olbrechts | Motions to Dismiss |
| 224 | 03/03/10 | 6:23 pm | Nancy Rogers | Re: Motions to Dismiss |
| 225 | 03/03/10 | 6:46 pm | Steve Pilcher | Re: Motions to Dismiss |
| 226 | 03/03/10 | 9:21 pm | Judith Carrier | Re: Emailing Appeal Exhibits |
| 227 | 03/04/10 | 8:59 am | Judith Carrier | Sending exhibits electronically |
| 229 | 03/04/10 | 9:21 am | Judith Carrier | Carrier Exhibits #1 |
| 230 | 03/04/10 | 9:21 am | Judith Carrier | Carrier Exhibits #2 |
| 231 | 03/04/10 | 9:55 am | Judith Carrier | Carrier Exhibits #3 |
| 232 | 03/04/10 | 10:28 am | Judith Carrier | Carrier Exhibits #4 |
| 233 | 03/04/10 | 10:40 am | Steve Pilcher | Wheeler Exhibits |
| 234 | 03/04/10 | 10:51 am | Steve Pilcher | 1996 BD Comp Plan EIS - Wheeler Exhibits |
| 235 | 03/04/10 | 10:53 am | Steve Pilcher | SEPA Addendum for 2009 Comp Plan Update - Wheeler Exhibit |
| 236 | 03/04/10 | 10:59 am | Dave Bricklin | Wheeler Exhibits |
| 237 | 03/04/10 | 11:02 am | Judith Carrier | Carrier Exhibits #5 |
| 238 | 03/04/10 | 11:29 am | Kay Richards | 1996 BD Comp Plan EIS - Problems Opening WORD documents |
| 239 | 03/04/10 | 11:31 am | Kristi Beckham (Nancy Rogers) | Email 1 of 6 - Problems Opening and Printing Documents |
| 240 | 03/04/10 | 11:34 am | Judith Carrier | Carrier Exhibits #6 |
| 241 | 03/04/10 | 11:34 am | Steve Pilcher | 1996 BD Comp Plan EIS - Problems with WORD documents |
| 242 | 03/04/10 | 12:06 pm | Judith Carrier | Carrier Exhibits #8 |
| 243 | 03/04/10 | 12:06 pm | Judith Carrier | Carrier Exhibits #7 |
| 244 | 03/04/10 | 12:27 pm | Dave Bricklin | Scheduling |
| 245 | 03/04/10 | 12:40 pm | Nancy Rogers | Scheduling |
| 246 | 03/04/10 | 12:48 pm | Steve Pilcher | Scheduling |
| 247 | 03/04/10 | 1:02 pm | Dave Bricklin | Scheduling |
| 248 | 03/04/10 | 1:03 pm | Judith Carrier | Carrier Exhibits #11 |
| 249 | 03/04/10 | 1:03 pm | Judith Carrier | Carrier Exhibits #10 |
| 250 | 03/04/10 | 1:03 pm | Judith Carrier | Carrier Exhibits #9 |
| 251 | 03/04/10 | 1:23 pm | Steve Pilcher | Wheeler Exhibits |
| 252 | 03/04/10 | 1:26 pm | Nancy Rogers | Scheduling |
| 253 | 03/04/10 | 2:09 pm | Bob Sterbank | Scheduling |
| 254 | 03/04/10 | 2:31 pm | Kristi Beckham (Nancy Rogers) | Resending of Exhibits LH Ex 15 and RV Ex 18 |
| 255 | 03/04/10 | 2:54 pm | Bob Sterbank | Maple Valley 2/16/10 Notice of Appeal |
| 256 | 03/04/10 | 3:26 pm | Stacey Borland (City) | City Exhibits for Lawson Hills (already have copies) |
| 257 | 03/04/10 | 3:30 pm | Stacey Borland (City) | City Exhibits for Lawson Hills 2 (already have copies) |
| 258 | 03/04/10 | 3:33 pm | Stacey Borland (City) | City Exhibits for Lawson Hills 3 (already have copies) |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 259 | 03/04/10 | 3:35 pm | Stacey Borland (City) | City Exhibits for Lawson Hills 4 (already have copies) |
| 260 | 03/04/10 | 3:36 pm | Stacey Borland (City) | City Exhibits for Lawson Hills 5 (already have copies) |
| 261 | 03/04/10 | 3:37 pm | Stacey Borland (City) | City Exhibits for Lawson Hills 6 (already have copies) |
| 262 | 03/04/10 | 3:41 pm | Stacey Borland (City) | City Exhibits for The Villages (already have copies) |
| 263 | 03/04/10 | 3:43 pm | Stacey Borland (City) | City Exhibits for The Villages 2 (already have copies) |
| 264 | 03/04/10 | 3:47 pm | Stacey Borland (City) | City Exhibits for The Villages 3 (already have copies) |
| 265 | 03/04/10 | 3:49 pm | Stacey Borland (City) | City Exhibits for The Villages 4 (already have copies) |
| 266 | 03/04/10 | 3:50 pm | Stacey Borland (City) | City Exhibits for The Villages 5 (already have copies) |
| 267 | 03/04/10 | 3:51 pm | Stacey Borland (City) | City Exhibits for The Villages 6 (already have copies) |
| 268 | 03/04/10 | 4:22 pm | Steve Pilcher | FW: Carrier Exhibits #3 (already have) |
| 269 | 03/04/10 | 4:23 pm | Steve Pilcher | FW: Carrier Exhibits #4 (already have) |
| 270 | 03/04/10 | 4:24 pm | Steve Pilcher | FW: Carrier Exhibits #4 (already have) |
| 271 | 03/04/10 | 4:25 pm | Steve Pilcher | FW: Carrier Exhibits #2 (already have) |
| 272 | 03/04/10 | 4:26 pm | Steve Pilcher | FW: Carrier Exhibits #2 (already have) |
| 273 | 03/04/10 | 4:26 pm | Steve Pilcher | FW: Carrier Exhibits #11 (already have) |
| 274 | 03/04/10 | 4:27 pm | Steve Pilcher | FW: Carrier Exhibits #11 (already have) |
| 275 | 03/04/10 | 4:27 pm | Steve Pilcher | FW: Carrier Exhibits #10 (already have) |
| 276 | 03/04/10 | 4:28 pm | Steve Pilcher | FW: Carrier Exhibits #6 (already have) |
| 277 | 03/04/10 | 4:28 pm | Steve Pilcher | FW: Carrier Exhibits #6 (already have) |
| 278 | 03/04/10 | 4:28 pm | Steve Pilcher | FW: Carrier Exhibits #3 (already have) |
| 279 | 03/04/10 | 4:29 pm | Steve Pilcher | FW: Carrier Exhibits #9 (already have) |
| 280 | 03/04/10 | 4:34 pm | Steve Pilcher | FW: Carrier Exhibits #9 (already have) |
| 281 | 03/04/10 | 4:41 pm | Steve Pilcher | FW: Carrier Exhibits #10 (already have) |
| 282 | 03/04/10 | 8:10 pm | Judith Carrier | Sending Exhibits Electronically (with Exhibit List Yellow as attachment) |
| 283 | 03/05/10 | 9:02 am | Dave Bricklin | Scheduling |
| 284 | 03/05/10 | 10:19 am | Steve Pilcher | Yarrowbay MPD (Comment) |
| 285 | 03/05/10 | 11:11 am | Steve Pilcher | Yarrow Bay Developments (Comment) |
| 286 | 03/05/10 | 11:35 am | Phil Olbrechts | Yarrowbay MPD |
| 287 | 03/05/10 | 11:46 am | Steve Pilcher | Joe May Appeal (with attachment) |
| 288 | 03/05/10 | 11:53 am | Phil Olbrechts | Scheduling |
| 289 | 03/05/10 | 12:01 pm | Dave Bricklin | Scheduling |
| 290 | 03/05/10 | 12:07 pm | Nancy Rogers | Scheduling |
| 291 | 03/05/10 | 12:16 pm | Bob Sterbank | Scheduling |
| 292 | 03/05/10 | 12:44 pm | Dave Bricklin | Scheduling |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 293 | 03/05/10 | 12:48 pm | Dave Bricklin | Scheduling |
| 294 | 03/05/10 | 12:57 pm | Mike Kenyon | Scheduling |
| 295 | 03/05/10 | 12:59 pm | Mike Kenyon | Scheduling |
| 296 | 03/05/10 | 1:17 pm | Phil Olbrechts | Scheduling |
| 297 | 03/05/10 | 1:41 pm | Nancy Rogers | Scheduling |
| 298 | 03/05/10 | 1:43 pm | Chris Clifford | Scheduling |
| 299 | 03/05/10 | 1:48 pm | Phil Olbrechts | Scheduling |
| 300 | 03/05/10 | 3:18 pm | Phil Olbrechts | Motions to Dismiss |
| 301 | 03/05/10 | 3:27 pm | Phil Olbrechts | Scheduling |
| 302 | 03/05/10 | 3:28 pm | Kay Richards | Order on Motions to Dismiss (PDF) |
| **---END OF SECOND REVISED EMAIL EXHIBIT LIST** | | | | |
| 303 | 03/05/10 | 4:22 pm | Steve Pilcher | Joe May Appeal |
| 304 | 03/05/10 | 4:44 pm | Dave Bricklin | Scheduling |
| 305 | 03/05/10 | 5:06 pm | Kay Richards | Second Revised Prehearing Exhibit List (PDF) |
| 306 | 03/05/10 | 5:25 pm | Phil Olbrechts | Joe May Appeal |
| 307 | 03/05/10 | 6:01 pm | Phil Olbrechts | Exhibit Management |
| 308 | 03/05/10 | 7:03 pm | Melanie Gauthier | Motions to Dismiss |
| 309 | 03/05/10 | 7:47 pm | Dave Bricklin | Subpoena |
| 310 | 03/05/10 | 8:31 pm | Steve Pilcher | Joe May Appeal |
| 311 | 03/08/10 | 9:00 am | Kay Richards | Standard of Proof on Motions to Dismiss (second copy of DOC) |
| 312 | 03/09/10 | 1:02 am | Bob Sterbank | Standing |
| 313 | 03/09/10 | 7:44 am | Chris Clifford | Standing |
| 314 | 03/09/10 | 9:21 am | Nancy Rogers | Standing |
| 315 | 03/09/10 | 10:41 am | Chris Clifford | Standing |
| 316 | 03/09/10 | 11:23 am | Phil Olbrechts | Standing |
| 317 | 03/09/10 | 11:33 am | Bob Sterbank | Standing |
| 318 | 03/09/10 | 12:24 pm | Chris Clifford | Standing |
| 319 | 03/10/10 | 7:46 am | Nancy Rogers | Witness Scheduling |
| 320 | 03/10/10 | 1:22 pm | Phil Olbrechts | Witness Scheduling |
| 321 | 03/12/10 | 6:12 pm | Phil Olbrechts | Hearing Schedule |
| 322 | 03/14/10 | 11:19 am | Lynne Christie | Black Diamond question |
| 323 | 03/14/10 | 8:31 pm | Phil Olbrechts | Black Diamond question |
| 324 | 03/14/10 | 8:37 pm | Phil Olbrechts | Black Diamond question |
| 325 | 03/14/10 | 9:21 pm | Postmaster at KenyonDisend | Proposed Scheduling (Out of Office) |
| 326 | 03/14/10 | 9:19 pm | Phil Olbrechts | Proposed Scheduling |
| 327 | 03/15/10 | 10:35 am | Mike Kenyon | Black Diamond question |
| 328 | 03/15/10 | 12:26 pm | Nancy Rogers | Proposed Scheduling |
| **---END OF THIRD REVISED EMAIL EXHIBIT LIST---** | | | | |
| 329 | 03/15/10 | 1:13 pm | Phil Olbrechts | Black Diamond MPD Hearing Exhibits |
| 330 | 03/15/10 | 4:09 pm | Phil Olbrechts | Proposed Scheduling |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 331 | 03/15/10 | 4:20 pm | Stacey Borland | Proposed Scheduling |
| 332 | 03/15/10 | 4:58 pm | Dave Bricklin | Proposed Scheduling |
| 333 | 03/15/10 | 5:04 pm | Dave Bricklin | Proposed Scheduling |
| 334 | 03/15/10 | 5:20 pm | Nancy Rogers | Proposed Scheduling |
| 335 | 03/15/10 | 6:50 pm | Phil Olbrechts | Proposed Scheduling |
| 336 | 03/15/10 | 6:54 pm | Dave Bricklin | Proposed Scheduling |
| 337 | 03/16/10 | 1:07 pm | Stacey Borland | Exhibits |
| 338 | 03/16/10 | 1:08 pm | Stacey Borland | Exhibits |
| 339 | 03/16/10 | 3:25 pm | Phil Olbrechts | Black Diamond MPD Hearing Exhibits |
| 340 | 03/18/10 | 8:55 pm | Phil Olbrechts | More Scheduling |
| 341 | 03/19/10 | 8:10 pm | Bob Sterbank | More Scheduling |
| 342 | 03/19/10 | 11:01 am | Christy Todd | More Scheduling |
| 343 | 03/19/10 | 1:05 pm | Christy Todd | More Scheduling |
| 344 | 03/19/10 | 3:23 pm | Stacey Borland | Additional MPD Exhibits |
| 345 | 03/19/10 | 3:25 pm | Stacey Borland | Additional Exhibit 2 |
| 346 | 03/19/10 | 4:19 pm | Bob Sterbank | More Scheduling |
| 347 | 03/19/10 | 5:03 pm | Dave Bricklin | MPD Rebuttal |
| **---END OF FOURTH REVISED EMAIL EXHIBIT LIST---** | | | | |
| 348 | 03/22/10 | 8:46 am | Nancy Rogers | MPD Rebuttal |
| 349 | 03/22/10 | 9:45 am | Phil Olbrechts | MPD Rebuttal |
| 350 | 03/22/10 | 9:52 am | Emily Terrell | MPD Rebuttal |
| 351 | 03/22/10 | 9:55 am | Emily Terrell | MPD Rebuttal |
| 352 | 03/22/10 | 10:17 am | Bob Sterbank | MPD Rebuttal |
| 353 | 03/22/10 | 10:35 am | Dave Bricklin | MPD Rebuttal |
| 354 | 03/22/10 | 10:41 am | Bob Sterbank | MPD Rebuttal |
| 355 | 03/22/10 | 10:46 am | Nancy Rogers | MPD Rebuttal |
| 356 | 03/22/10 | 10:53 am | Brenda Martinez | Black Diamond Exhibit List |
| 357 | 03/22/10 | 10:53 am | Marsha St. Louis | Black Diamond Exhibit List |
| 358 | 03/22/10 | 11:51 am | Dave Bricklin | MPD Rebuttal |
| 359 | 03/22/10 | 12:02 pm | Nancy Rogers | MPD Rebuttal |
| 360 | 03/22/10 | 12:05 pm | Phil Olbrechts | MPD Rebuttal |
| 361 | 03/22/10 | 12:15 pm | Dave Bricklin | MPD Rebuttal |
| 362 | 03/22/10 | 12:45 pm | Nancy Rogers | MPD Rebuttal |
| 363 | 03/22/10 | 12:59 pm | Bob Sterbank | MPD Rebuttal |
| 364 | 03/22/10 | 2:10 pm | Phil Olbrechts | MPD Rebuttal |
| 365 | 03/22/10 | 2:22 pm | Chris Clifford | MPD Comments |
| 366 | 03/22/10 | 2:24 pm | Brenda Martinez | MPD Comments |
| 367 | 03/22/10 | 2:42 pm | Brenda Martinez | Latest Exhibit List |
| 368 | 03/22/10 | 2:42 pm | Phil Olbrechts | Latest Exhibit List |
| 369 | 03/22/10 | 2:50 pm | Stacey Borland | Question about Exhibits |
| 370 | 03/22/10 | 3:13 pm | Dave Bricklin | Latest Exhibit List |
| 371 | 03/22/10 | 3:20 pm | Phil Olbrechts | Revised Scheduling |
| 372 | 03/22/10 | 4:02 pm | Stacey Borland | Sign in sheets for public comments |
| 373 | 03/22/10 | 4:22 pm | Phil Olbrechts | Hearing Exhibit List ("H" Documents) |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 374 | 03/22/10 | 8:50 pm | Dave Bricklin | MPD Comments |
| 375 | 03/22/10 | 11:22 pm | Dave Bricklin | LOS |
| 376 | 03/23/10 | 8:40 am | Judith Carrier | Hearing Exhibit List ("H" Documents) |
| 377 | 03/23/10 | 9:07 am | Phil Olbrechts | Email Comment |
| 378 | 03/23/10 | 9:28 am | Phil Olbrechts | Email Comment |
| 379 | 03/23/10 | 11:33 am | Stacey Borland | Latest Exhibit List |
| 380 | 03/23/10 | 2:17 pm | Phil Olbrechts | Hearing Exhibit List ("H" Documents) |
| 381 | 03/23/10 | 2:29 pm | Phil Olbrechts | Email Exhibit List |
| 382 | 03/23/10 | 2:48 pm | Stacey Borland | Email Exhibit List |
| 383 | 03/23/10 | 3:01 pm | Phil Olbrechts | Email Exhibit List |
| 384 | 03/23/10 | 3:07 pm | Stacey Borland | Email Exhibit List |
| 385 | 03/23/10 | 3:23 pm | Phil Olbrechts | Email Exhibit List |
| 386 | 03/23/10 | 4:21 pm | Bob Sterbank | LOS |
| 387 | 03/23/10 | 5:12 pm | Nancy Rogers | LOS |
| 388 | 03/23/10 | 6:14 pm | Dave Bricklin | LOS |
| 389 | 03/23/10 | 7:45 pm | Jason Paulsen | LOS |
| 390 | 03/24/10 | 9:54 am | Nancy Rogers | LOS |
| 391 | 03/24/1- | 12:17 pm | Bob Sterbank | LOS |
| 392 | 03/24/10 | 1:55 pm | Dave Bricklin | LOS |
| 393 | 03/24/10 | 2:36 pm | Emily Terrell | Question |
| 394 | 03/24/10 | 3:34 pm | Emily Terrell | Question |
| 395 | 03/24/10 | 4:06 pm | Phil Olbrechts | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 396 | 03/24/10 | 4:47 pm | Brenda Martinez | Updated Exhibit List |
| 397 | 03/24/10 | 5:08 pm | Dave Bricklin | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 398 | 03/24/10 | 5:15 pm | Phil Olbrechts | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 399 | 03/24/10 | 5:54 pm | Dave Bricklin | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 400 | 03/24/10 | 5:57 pm | Phil Olbrechts | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 401 | 03/24/10 | 5:59 pm | Dave Bricklin | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 402 | 03/25/10 | 8:06 am | Dave Bricklin | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 403 | 03/25/10 | 9:08 am | Dave Bricklin | Ruling on Applicant/City Objections to |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| | | | | Documents Submitted after Close of Record |
| 404 | 03/25/10 | 9:59 am | Phil Olbrechts | Index of H Documents |
| 405 | 03/25/10 | 10:22 am | Bob Sterbank | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 406 | 03/25/10 | 10:32 am | Nancy Rogers | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 407 | 03/25/10 | 11:18 am | Stacey Borland | Index of H Documents |
| 408 | 03/25/10 | 11:18 am | Stacey Borland | Email Exhibit List |
| 409 | 03/25/10 | 1:21 pm | Stacey Borland | Black Diamond Exhibit #10: Problem |
| 410 | 03/25/10 | 3:20 pm | Phil Olbrechts | Timeliness of Bricklin 3/22/10 email objection |
| 411 | 03/26/10 | 5:02 pm | Jeff Taraday | Missing Exhibit |
| 412 | 03/27/10 | 4:33 pm | Jeff Taraday | Missing Exhibit |
| 413 | 03/29/10 | 10:27 am | Phil Olbrechts | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 414 | 03/29/10 | 10:32 am | Nancy Rogers | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 415 | 03/29/10 | 11:07 am | Dave Bricklin | Ruling on Applicant/City Objections to Documents Submitted after Close of Record |
| 416 | 03/29/10 | 11:08 am | Jeff Taraday | Missing Exhibit |
| 417 | 03/29/10 | 11:13 am | Stacey Borland | MPD Hearing Exhibit List |
| 418 | 03/29/10 | 11:21 am | Phil Olbrechts | MPD Hearing Exhibit List |
| 419 | 03/29/10 | 1:01 pm | Jeff Taraday | Black Diamond Demand Model |
| 420 | 03/29/10 | 2:12 pm | Bob Sterbank | Black Diamond Demand Model |
| 421 | 03/29/10 | 3:28 pm | Jeff Taraday | Black Diamond Demand Model |
| 422 | 03/29/10 | 3:39 pm | Phil Olbrechts | Please communicate with me via this email address |
| 423 | 03/29/10 | 3:42 pm | Phil Olbrechts | Please communicate with me via this email address |
| 424 | 03/29/10 | 4:04 pm | Chris Clifford | Closing for Clifford et al |
| 425 | 03/29/10 | 4:18 pm | Peggy Cahill for David Bricklin | Post-Hearing Brief of SEPA Appellants, Declaration of Service |
| 426 | 03/29/10 | 4:19 pm | Bob Sterbank | Re: Black Diamond Demand Model |
| 427 | 03/29/10 | 4:23 pm | Cindy Proctor | Supplemental Post Hearing Brief Wheeler Proctor |
| 428 | 03/29/10 | 4:28 pm | William and Cindy Wheeler | Supplemental Post Hearing Brief Wheeler Proctor |
| 429 | 03/29/10 | 4:35 pm | Melanie | Post Hearing Brief of SEPA appellant M. |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| | | | Gauthier | Gauthier |
| 430 | 03/29/10 | 4:37 pm | Jeff Taraday | Re: Black Diamond demand model |
| 431 | 03/29/10 | 4:54 pm | Kristi Beckham for Nancy Rogers | Applicants' Closing Brief and Applicants' Rebuttal to Additional Public Testimony |
| 432 | 03/29/10 | 5:34 pm | Judith Carrier | Closing Brief Time Deadline |
| 433 | 03/29/10 | 6:13 pm | Bob Sterbank | MPD Applications for The Villages and Lawson Hills - City's Post-Hearing Brief |
| 434 | 03/29/10 | 6:50 pm | Chris Clifford | Motion to Strike City of Black Diamond's FEIS Closing - Untimely |
| 435 | 03/29/10 | 6:55 pm | Dave Bricklin | Out of Office |
| 436 | 03/29/10 | 6:56 pm | Phil Olbrechts | Briefing Deadlines |
| 437 | 03/29/10 | 7:00 pm | Bob Sterbank | Re: Motion to Strike City of Black Diamond's FEIS Closing - Untimely |
| 438 | 03/29/10 | 7:01 pm | Bob Sterbank | Re: Briefing Deadlines |
| 439 | 03/29/10 | 11:48 pm | Bob Sterbank | Black Diamond's MPD Rebuttal Comments; Felt-Hanson; King Co. CPP Excerpts |
| 440 | 03/29/10 | 11:50 pm | Judith Carrier | BD Closing Brief |
| 441 | 03/29/10 | 11:51 pm | Bob Sterbank | Black Diamond's MPD Rebuttal Comments |
| 442 | 03/30/10 | 9:05 am | Judith Carrier | BD Closing Brief |
| 443 | 03/31/10 | 2:11 pm | Dave Bricklin | Out of Office |
| 444 | 03/31/10 | 2:11 pm | Phil Olbrechts | Prehearing Exhibits |
| 445 | 03/31/10 | 3:36 pm | Stacey Borland | Re: Electronic Files - Staff Reports Attachments are staff reports for The Villages and Lawson Hills |
| 446 | 03/31/10 | 5:45 pm | Judith Carrier | Re: Prehearing Exhibits; attachment is BD Exhibit List Yellow.docx |
| 447 | 03/31/10 | 8:10 pm | Melanie Gauthier | Re: Prehearing Exhibits; attachment is Exhibits for FEIS hearing.doc |
| 448 | 04/01/10 | 9:24 am | Stacey Borland | Additional Exhibit |
| 449 | 04/01/10 | 10:52 am | Gil Bortleson | "Mr. Olbrechts" (?) report that prehearing exhibits were delivered to the City of Black Diamond |
| 450 | 04/01/10 | 1:21 pm | Jeff Taraday | Tomorrow's submission from Maple Valley |
| 451 | 04/01/10 | 2:03 pm | Nancy Rogers | Re: Prehearing Exhibits; attachments are Redlined Villages and Lawson Hills SEPA Appeal Exhibit Lists (2) |
| 452 | 04/01/10 | 2:05 pm | Nancy Rogers | Re: Prehearing Exhibits; attachment is The Villages Context Plan |
| 453 | 04/01/10 | 2:07 pm | Nancy Rogers | Re: Prehearing Exhibits; attachment is Lawson Hills Context Plan |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 454 | 04/01/10 | 2:34 pm | Phil Olbrechts | Re: Tomorrow's Submission from Maple Valley |
| 455 | 04/01/10 | 3:10 pm | Jeff Taraday | Re: Tomorrow's Submission from Maple Valley |
| 456 | 04/01/10 | 3:44 pm | Nancy Rogers | Re: Tomorrow's Submission from Maple Valley |
| 457 | 04/01/10 | 4:00 pm | Jeff Taraday | Re: Tomorrow's Submission from Maple Valley |
| 458 | 04/01/10 | 8:27 pm | Phil Olbrechts | Re: Tomorrow's Submission from Maple Valley |
| 459 | 04/02/10 | 9:15 am | Bob Sterbank | Re: Tomorrow's Submission from Maple Valley |
| 460 | 04/02/10 | 10:31 am | Cindy Proctor | Re: Prehearing Exhibits; attachment is Wheeler et al Exhibits List and Electronic Exhibits List |
| 461 | 04/02/10 | 11:17 am | Nancy Rogers | Re: Tomorrow's Submission from Maple Valley |
| 462 | 04/02/10 | 12:47 pm | Jeff Taraday | Exhibit G to Dr. Janarthanan's Third Declaration |
| 463 | 04/02/10 | 1:17 pm | Phil Olbrechts | Prehearing Exhibits |
| 464 | 04/02/10 | 2:52 pm | Jeff Taraday | Third Declaration of Natarajan Janarthanan, Exhibit Nos. B - F; attachments are Exh. B - Parametrix Trip Distribution Sheet for The Villages; Exh. C - Parametrix Trip Distribution sheet for Lawson Hills; Exh. D - PM Trip Distribution Map; Exh. E - Maple Valley 2025 Trip Distribution Map, Exh. F - Figure 11 from TTR |
| 465 | 04/02/10 | 9:09 pm | Jeff Taraday | Third Declaration of Natarajan Janarthanan and Exhibit A; attachments are Third Declaration and Exhibit a |
| 466 | 04/02/10 | 11:33 pm | Jeff Taraday | Maple Valley's Second Brief on MPD Compliance; attachment is MV's Second Brief on MPD Compliance PDF |
| **---END OF FIFTH REVISED EMAIL EXHIBIT LIST---** | | | | |
| 467 | 04/05/10 | 4:01 pm | Dave Bricklin | Re: Prehearing Exhibits; Wheeler et al Exhibits List as attachment |
| 468 | 04/09/10 | 1:20 pm | Phil Olbrechts | Exhibit Lists |
| 469 | 04/09/10 | 3:41 pm | Kay Richards | Re: Exhibit Lists; Attachments are Index of H Documents; Index of Prehearing Documents; MPD Hearing Exhibits; Email Exhibit List |
| 470 | 04/12/10 | 9:33 am | Phil Olbrechts | Exhibit Lists |
| 471 | 04/12/10 | 1:05 pm | Phil Olbrechts | Question on Gauthier Exhibits |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| 472 | 04/12/10 | 1:33 pm | Melanie Gauthier | Re: Question on Gauthier Exhibits |
| 473 | 04/12/10 | 4:10 pm | Kristi Beckham (Nancy Rogers) | In re MPD Applications for Villages/Lawson Hills; attachment is Applicants' 3rd Rebuttal Memo, 4-12-10 |
| 474 | 04/12/10 | 11:19 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; attachments are Perlic Exhibit Nos. 1a, 1b, 1c, 1d, 1e, 1f, and 1g as PDFs |
| 475 | 04/12/10 | 11:21 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; attachments are Perlic Exhibit Nos. 2a, 2b, 2c, 2d, 2e, 2f, and 2g as PDFs |
| 476 | 04/12/10 | 11:24 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; attachments are Perlic Exhibit Nos. B1, B2, C, D, E1 and E2 |
| 477 | 04/12/10 | 11:26 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; no attachments, left off in error |
| 478 | 04/12/10 | 11:40 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; attachments are Perlic Exhibit Nos. F1, F2, F3, F4, G, H, and I |
| 479 | 04/12/10 | 11:55 pm | Bob Sterbank | In re: MPD Apps of Villages/Lawson Hills; attachments are John Perlic Declaration in Support of City's MPD Rebuttal on Transportation Issues and City proposed additional clarifications to the revised MPD conditions |
| 480 | 04/13/10 | 12:02 am | Bob Sterbank (sent from home email address due to fear of nondelivery of earlier message | In re: MPD Apps of Villages/Lawson Hills; attachments are John Perlic Declaration in Support of City's MPD Rebuttal on Transportation Issues and City proposed additional clarifications to the revised MPD conditions |
| 481 | 04/13/10 | 12:13 am | Bob Sterbank (sent from home email address due to fear of nondelivery of earlier message | In re: MPD Apps of Villages/Lawson Hills; attachments are John Perlic Declaration in Support of City's MPD Rebuttal on Transportation Issues and City proposed additional clarifications to the revised MPD conditions |
| 482 | 04/13/10 | 8:43 am | Nancy Rogers | Re: In re: MPD Apps for Villages and Lawson Hills; "City's proposed clarifications are acceptable to Applicant" |
| 483 | 04/13/10 | 1:22 pm | Dave Bricklin | Re: In re: MPD Apps for Villages and Lawson Hills; Comments on Perlic's supplemental declaration |
| 484 | 04/13/10 | 2:06 pm | Bob Sterbank | Re: In re: MPD Apps for Villages and Lawson Hills; Comments on Bricklin's |

| No. | Date | Time | Sender | Subject |
|---|---|---|---|---|
| | | | | comments on Perlic's declaration |
| 485 | 04/13/10 | 2:09 pm | Phil Olbrechts | Re: In re MPD Apps for Villages and Lawson Hills; Ruling on SEPA decision |
| 486 | 04/13/10 | 5:02 pm | Nancy Rogers | Re: Another Question re the Exhibit Lists re: transcripts |
| 487 | 04/13/10 | 5:45 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills; Comments on Bricklin's comments on Perlic's declaration |
| 488 | 04/13/10 | 5:47 pm | Phil Olbrechts | Re: Another Question re the Exhibits Lists; Transcript emails to be removed |
| 489 | 04/13/10 | 8:07 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills re: deadlines for submission |
| 490 | 04/14/10 | 12:30 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills; Perlic Declaration in Support of MDP Traffic Rebuttal attachment |
| 491 | 04/14/10 | 12:32 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills; Attachments A - I to the Perlic Declaration |
| 492 | 04/14/10 | 12:36 pm | Phil Olbrechts | Re: In re MPD Apps for Villages and Lawson Hills |
| 493 | 04/14/10 | 12:43 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills |
| 494 | 04/14/10 | 8:19 pm | Dave Bricklin | Re: In re MPD Apps for Villages and Lawson Hills |
| 495 | 04/14/10 | 10:53 pm | Bob Sterbank | Re: In re MPD Apps for Villages and Lawson Hills |
| 496 | 04/15/10 | 11:59 pm | Phil Olbrechts | Re: In re MPD Apps for Villages and Lawson Hills; attachment is The Villages Hearing Examiner Decision |

# EXHIBIT A

## Attachment 2

BLACK DIAMOND MPD CLOSED RECORD HEARINGS
EXHIBIT LIST

**("C" Documents)**

Updated – July 19, 2010

| No. | Provided by | Description |
|---|---|---|
| C-1 | Cindy Proctor | 06/21/10 General Affidavit |
| C-2 | Cindy Proctor | 03/05/10 email from Leih Mulvihill to Cindy Proctor |
| C-3 | Nancy Rogers | Excerpts from Craig Goodwin's Blog |
| C-4 | Nancy Rogers | Excerpts of Craig Goodwin's Blog |
| C-5 | Robert Edelman | 06/22/10 Request for reconsideration regarding Council rules |
| C-6 | City of Black Diamond | Staff Comments and Recommendations concerning HE recommendations |
| C-7 | Councilmember Goodwin | 06/24/10 preliminary questions for YarrowBay |
| C-8 | Nancy Rogers | 06/22/10 Memorandum to Black Diamond City Council |
| C-9 | David Bricklin | 06/24/10 Letter to Mayor Rebecca Olness |
| C-10 | Mike Kenyon | 06/25/10 Email exchange from Peter Rimbos and Mike Kenyon |
| C-11 | Bob Sterbank | 6/28/10 Email exchange between Jason Paulsen and Bob Sterbank |
| C-12 | Judith Carrier | Copy of comments read into the record |
| C-13 | Lynne Christie | Written Statement |
| C-14 | Ron Taylor | Copy of comments read into the record |
| C-15 | Judy Taylor | Copy of comments read into the record |
| C-16 | Cindy Proctor | Copy of comments read into the record |
| C-17 | Robert Taeschner | Copy of comments read into the record |
| C-18 | Judith Carrier | Maps |
| C-19 | Vicki Harp | Email exchange between Vicki Harp and Mike Kenyon regarding clarification on ex parte communication with Councilmember Hanson |
| C-20 | Cindy Proctor | Melanie Gauthier written statement |
| C-21 | Gomer Evans | Written Statement |
| C-22 | Clarissa Metzler Cross | Copy of comments read into the record |
| C-23 | Mark and Harriet Dalos | Copy of comments read into the record |
| C-24 | Donna Gauthier | Copy of comments read into the record |
| C-25 | Cindy Wheeler | Copy of tree preservation code from City's website |
| C-26 | Robbin Taylor | Copy of comments read into the record, including referenced materials |
| C-27 | City of Auburn | Written Statement |

| | | |
|---|---|---|
| C-28 | Richard Ostrowski | Copy of comments read into the record |
| C-29 | Fred and Polly Rohrbach | Written Statement |
| C-30 | Janie Edelman | Copy of comments read into the record |
| C-31 | Robert Edelman | Written Statement |
| C-32 | Thomas Hanson | Written Statement |
| C-33 | Cindy Wheeler | Copy of comments read into the record |
| C-34 | Bruce Early | Written Statement |
| C-35 | Mike Irrgang | Copy of comments read into the record |
| C-36 | Erika Morgan | Copy of comments read into the record |
| C-37 | David Bricklin | Rural by Design figures 6-2, 6-3 |
| C-38 | Gretchen and Michael Buet | Written Statement |
| C-39 | Ulla Kemman | Copy of comments read into the record |
| C-40 | Robert Rothschilds | Copy of comments read into the record |
| C-41 | Vicki and William Harp | Copy of comments read into the record |
| C-42 | Steven Garvich | Copy of comments read into the record |
| C-43 | Lisa Garvich | Copy of comments read into the record |
| C-44 | Lisa and Steve Garvich | Letter to Black Diamond City Council |
| C-45 | Robert Rothschilds | Written Statement |
| C-46 | Jack Sperry | Copy of comments read into the record |
| C-47 | Jack Sperry | Written Statement |
| C-48 | David Bricklin | Written Statement |
| C-49 | Cindy Proctor | Letter to Black Diamond City Council |
| C-50 | Laure Iddings | Suggested Amendments |
| C-51 | G. C. Bortleson | Copy of comments read into the record |
| C-52 | G. C. Bortleson | Written Statement |
| C-53 | Joe May | Copy of comments read into the record |
| C-54 | Carol Lynn Harp | Copy of comments read into the record |
| C-55 | Peter Rimbos | Copy of comments read into the record |
| C-56 | Peter Rimbos | Written Statement |
| C-57 | City of Maple Valley | Proposed Order on Remand |
| C-58 | City of Maple Valley | Maple Valley Brief |
| C-59 | City of Maple Valley | Map – Exhibit No. 15 (Exhibit 7) |
| C-60 | City of Maple Valley | Map – Exhibit No. 211 (Exhibit D) |
| C-61 | City of Maple Valley | Map - Exhibit No. 211 (Exhibit E) |
| C-62 | City of Maple Valley | Map – Exhibit No. 211 (Exhibit F) |

| | | |
|---|---|---|
| C-63 | City of Maple Valley | Map - Exhibit No 15 (Exhibit 2) |
| C-64 | City of Maple Valley | Map – Exhibit No. 15 ( Exhibit 3) |
| C-65 | City of Maple Valley | Map – Exhibit No. 15 (Exhibit 4) |
| C-66 | Laure Iddings | Copy of comments read into the record |
| C-67 | Judith Carrier | Written Statement |
| C-68 | Sally Neary – Sierra Club | Copy of comments read into the record |
| C-69 | Steve Hiester – GMVUAC | Copy of comments read into the record |
| C-70 | Rick Bradbury | Copy of comments read into the record |
| C-71 | Dennis Boxx | Written Statement |
| C-72 | Bill Wheeler | Copy of comments read into the record |
| C-73 | Kristin Bryant | Copy of comments read into the record |
| C-74 | Julie Earley | Copy of comments read into the record |
| C-75 | Bonnie Scott | Copy of comments read into the record |
| C-76 | Monica Stewart | Copy of comments read into the record |
| C-77 | City of Black Diamond | Staff Closing Statement |
| C-78 | Nancy Rogers | Applicant Closing Statement |
| C-79 | Mike Kenyon | Objections to Extra-Record Evidence |
| C-80 | Bob Edelman | Objections to evidence outside of the MPD records |
| C-81 | Jeff Taraday | Objections to new evidence submitted during hearing |
| C-82 | Nancy Rogers | Extra Record Objections |

# EXHIBIT B

## CONCLUSIONS OF LAW

1. Authority of City Council. BDMC 18.98.060(A)(6) provides that the City Council shall, following receipt of the hearing examiner's recommendation, schedule a time for consideration of the MPD, and that the council may (a) accept the examiner's recommendation; (b) remand the MPD application to the examiner with direction to open the hearing and provide supplementary findings and conclusions on specific issues; or (c) modify the examiner's recommendation. If modifying the examiner's recommendation, the council shall enter its own modified findings and conclusions as needed. The Conclusions of Law set forth below, and the Findings of Fact adopted in Exhibit A above upon which these Conclusions of Law are based, are within the City Council's authority provided in BDMC 18.98.060(A)(6)(c).

2. Conclusions as Findings of Fact. Any Conclusions of Law adopted herein that are findings of fact shall be deemed as such. Any Findings of Fact adopted in Exhibit A above that are conclusions of law are hereby adopted as if set forth herein in full.

3. Review Criteria. BDMC 18.98.060(A)(6) and18.98.080 require the City Council to base its decision the MPD on the approval criteria set forth in BDMC 18.98.080. However, BDMC 18.98.080(A)(1) also requires compliance with all applicable regulations, and BDMC 18.98.080(A)(10) requires compliance with the purposes outlined in BDMC 18.98.010(B) through (M) as well as the public benefit objectives contained in BDMC 18.98.020. Consequently, these Conclusions of Law address compliance with all the provisions of Chapter 18.98 BDMC, as well as some provisions of the International Fire Code (IFC) required to be addressed at this stage of review. Applicable criteria are quoted in bold italics with corresponding Conclusions of Law assessing compliance.

4. **BDMC 18.98.010(A):** ***Establish a public review process for MPD applications.***

This purpose is met. The MPDs have been the subject of multiple environmental appeals, over one hundred hours of open and closed record hearings, and hundreds of written comments. Members of the public were given ten minutes each to testify before the Hearing Examiner, and parties of record who so testified or submitted written comments were also provided ten minutes each to present argument to the City Council during its closed record hearing. Although some parties of record nevertheless asserted that there was not enough time for them to review or comment upon the MPD applications, the public was provided ample opportunity to comment on the MPDs. The public review process utilized for the Villages MPD applications complied with the purpose of BDMC 18.98.010(A).

5. **BDMC 18.98.010(B):** ***Establish a comprehensive review process for development projects occurring on parcels or combined parcels greater than eighty acres in size.***

As detailed in Finding of Fact No. 2, the Villages MPD project comprises 1,196 acres. It is therefore subject to the MPD review process as per BDMC 18.98.010(B). The North Property (aka Parcel B), although approximately 80 acres in size (and thus potentially eligible to be an MPD unto itself), is considered part of the overall Villages MPD, and was therefore also subjected to the MDP review process in accordance with BDMC 18.98.010(B). Pursuant to Section 18.98.030(C), an MPD commercial area may be geographically separate from the MPD's residential component.

6. **BDMC 18.98.010(C):** ***Preserve passive open space and wildlife corridors in a coordinated manner while also preserving usable open space lands for the enjoyment of the city's residents.***

As detailed in Finding of Fact No. 2, the Land Use Plan map (Figure 3-1, dated July 8, 2010), and page 3-21 of the MPD application, the project proposes to preserve significant amounts of open space. They include a mix of passive and usable areas comprised of sensitive areas such as wetlands and their associated buffers, trails, parks, and utilities such as stormwater ponds. Figure 3-1 (July 8, 2010) of the MPD application shows a majority of the areas dedicated to open space as a coordinated network. As detailed in Finding of Fact No. 12.B, the wildlife corridors are more than double the width recommended by King County's wildlife network biologist. The vast majority of open space will be maintained as sensitive areas (primarily wetlands and streams) and their required buffers. Therefore, these open space, trails, parks, wetlands, buffers and wildlife corridors comply with BDMC 18.98.010(C)'s purpose of preserving open space, wildlife corridors and open space lands.

7. **BDMC 18.98.010(D):** ***Allow alternative, innovative forms of development and encourage imaginative site and building design and development layout with the intent of retaining significant features of the natural environment;***

Chapter 3 of the MPD application requests residential and commercial development standards that allow for great flexibility in building design and development layout. In terms of residential development, this includes a variety of housing types at varying densities; alley-loaded lots; clustered residential centered on common greens; and live/work units. The applicant has agreed to a condition requiring detached single-family dwelling units to be "alley loaded," which is not a typical suburban development pattern.

In addition, live/work units are described on page 3-35 of the application materials, and their potential location is now depicted on the Land Use Plan map contained in the Land Use Plan Map in Figure 3-1 (July 8, 2010). Although when researching other large master planned communities in the Puget Sound (such as Issaquah Highlands), staff

found the viability of live/work units to be limited, the location indicated in the Land Use Plan map is in the center of the Villages proposed development area where live/work units are most likely to be viable.

With the unavoidable exception of several road crossings, avoidance of sensitive areas was a factor in the overall layout of this project. The land use plan/constraints map overlay (Ex. CBD-2-11) shows the relationship between sensitive areas and proposed development parcels. The Villages MPD application materials indicate that the proposed Community Connector road and multiple parks are designed to enhance views of Mt. Rainier.

As proposed in the Villages MPD application, the innovative design purpose of BDMC 18.98.010(D) is met. The City Council expects to establish some of the street design features in the Development Agreement and other infrastructure design flexibility through the design deviation process already established within the Black Diamond Engineering Design and Construction Standards.

8. **BDMC 18.98.010(E):** ***Allow flexibility in development standards and permitted use.;***

A. Chapter 3 of the MPD application proposes residential and commercial development standards and uses that allow for flexibility in building design and development layout. The commercial component of the MPD would be located on the North Property (Parcel B) and in the northern portion of the Main Property. The eastern portion of Parcel B is proposed as a high density residential use. The remaining residential, schools, and parks components would occur on the Main Property. In some cases, these proposed densities differ from those available under other zoning designations in the remainder of the City, and would therefore be unique to these MPD properties. As such, the development of the MPD will utilize flexibility in development standards and permitted uses, and therefore satisfies the purpose outlined in BDMC 18.98.010(E), as explained in more detail below.

B. The project proposes three residential categories, MPD-L (1-8 du/ac), MPD-M (7-12 du/ac) and MPD-H (13-30 du/ac). (The minimum 1 unit per acre density proposed is not consistent with the BDUGAA, past pre-annexation agreements, or the City's Comprehensive Plan. A minimum density of 4 du/ac for residential properties is therefore a condition of approval.) Chapter 3 of the application requests the MPD "Master Developer" have the ability to propose to change the category of individual residential development parcels as shown on the Figure 3-1 Land Use Plan. The proposal includes the ability to adjust up or down one residential land use category through an administrative review process (this would not apply to the 18-30 du/acre category). The adjustment of land use categories would not allow an increase in the overall unit cap of 4,800. The areas proposed for the highest residential densities (18-30 du/ac) have been depicted on the land use plan.

C. The City Council concludes that if the applicant requests to change the residential category of a development parcel internal to the project, then an administrative process would be appropriate. However, a change in a residential category that abuts the perimeter of the MPD requires a public hearing process as a Major Amendment to the MPD. Additionally, the Development Agreement should also establish a limitation to allow such reclassification of development parcels no more frequently than once per calendar year (consistent with the allowance for Comprehensive Plan amendments).

D. While the applicant has proposed a wide variety of project-specific development standards, not all should be granted. Some of these areas are identified and discussed under the "Functionally Equivalent Standards" portion of these Conclusions. Specifically, decision on a number of the land use development standards (table of allowed uses, setbacks, etc.) should be addressed in the Development Agreement. This will provide the opportunity for further discussions with the applicant. There are several areas in which less stringent standards than required elsewhere in the city are being sought, some of which are requested in the functionally equivalent standards mentioned above. Until the applicant provides greater certainty and clarity to the actual development proposed for the site, these requests are not justifiable even with the flexibility called for by BDMC 18.98.010(E). The amount of flexibility being requested in the proposed project at this time - while the overall plan is highly conceptual - does not result in a compelling reason to allow these different standards. There are numerous concerns, including uses proposed to be permitted in open space areas; a minimum 18' front yard setback to residential garages (20' required by MPD Design Guidelines and in standard zones); inadequate parking lot landscaping, resulting in less required landscaping than the city's nonresidential zones; excessive allowance for compact parking stalls (65% vs. 25% elsewhere in the city); and insufficient required parking for commercial/retail uses (a particular concern when Parcel B's location means it will be heavily oriented to automobile trips).

E. The City Council recognizes the advantages of flexibility and provides a mechanism for exploring alternatives to the City's water, sewer, and storm water comprehensive plan concepts. Staff, the applicant, the hearing examiner and the Council can resolve the large, overarching design issues and establish some of the proposed functionally equivalent construction standards as part of the Development Agreement. In addition to the flexibility of establishing functionally equivalent standards as part of the Development Agreement, the Engineering Design and Construction Standards contain an administrative deviation process (section 1.3 of the standards) that does not require a showing of hardship. Any proposed deviation from standards must show comparable or superior design and quality; address safety and operations; cannot adversely affect maintenance and operation costs; will not adversely affect aesthetic appearance; and will not affect future development or redevelopment. Most of the requested functionally equivalent standards for streets and utilities can be addressed in the Development Agreement and through the Engineering Design & Construction Standards' administrative deviation process.

9. **BDMC 18.98.010(F):** ***Identify significant environmental impacts, and ensure appropriate mitigation;***

The MPDs have been subject to extensive and intensive environmental review. The FEIS is supported by hundreds of pages of environmental analysis. The bulk of the hearings on the MPDs was comprised of the testimony of numerous experts addressing the appeals of the FEIS. Through this process several areas of improvement were identified, resulting in Hearing Examiner recommendations for and Applicant offers of extensive additional mitigation, including additional future impact analysis and mitigation. That mitigation, and the requirements for additional future analysis, are incorporated into the conditions of MPD approval in Exhibit C below. New conditions addressing traffic and noise in particular, will help ensure that all significant environmental impacts are appropriately mitigated. *See* Finding of Fact No. 5.E. For the reasons detailed in the Findings of Fact, the City Council concludes that the requirement of BDMC 18.98.010(F) has been met.

10. **BDMC 18.98.010(G):** ***Provide greater certainty about the character and timing of residential and commercial development and population growth within the city.***

A. As detailed in the Findings of Fact, the project proposes a maximum of 4,800 units and 775,000 square feet of office and commercial uses to be built out in three phases over a period of approximately 15 years. (It should be noted that the application includes several uses which are typically considered to be industrial uses under the definition of "office"). Chapter 9 of the MPD application indicates the phasing of development, with the initial development focus south of Auburn-Black Diamond Road, followed later by development on the north side and the commercial area of the proposed Lawson Hills MPD (North Triangle). Development would progress outward from these areas, with the southeastern portion of The Villages site being the last area likely to be developed.

B. Chapter 3 of the MPD application contains design concepts that illustrate the proposed character of development. Ch. 3 also describes a variety of housing types anticipated to be built and proposes development standards that would apply exclusively within the MPD. Although the level of detail of the MPD does not include typical subdivision or project layouts, per Conclusion No. 8 above and related conditions of approval in Exhibit C below, the Development Agreement will specify details of what product type will be built where and when, and the additional development standards and design guidelines to which the development will be subject. These design guidelines must comply with the Master Planned Development Framework Design Standards and Guidelines adopted in June 2009. In addition, the conditions of approval shall also establish a target unit split (percentages of single family and multifamily) and commercial use split (commercial, office and industrial) be incorporated into the Development Agreement. And, all commercial/office uses (other than home occupations) shall only occur on lands so designated.

Therefore, subject to the conditions of approval in Exhibit C below, the purpose set forth in BDMC 18.98.010(G) is met.

11. **BDMC 18.98.010(H):** ***Provide environmentally sustainable development.***

A. Low Impact Development. The MPD application discusses implementation of low impact development (LID) techniques, water conservation, clustering development and preserving open space. Because of the suitability of soils on the Main Property (as described in Ch. 4 of the FEIS), LID should have excellent potential. As a condition of approval, mechanisms shall be identified to integrate LID into the overall design of the MPD.

B. Compliance with Environmental Ordinances. The MPD will comply with codes aimed at environmental protection, including but not limited to the Sensitive Areas Ordinance, and will also provide mitigation measures derived from the FEIS designed to prevent the project from having an adverse impact on the environment.

C. Vehicle Trip Reduction. The project includes a number of design features (trails and bike lanes, inclusion of schools within walkable distances to residential areas) that will facilitate non-motorized travel within the Main Property. It is possible that some vehicle trips would be reduced especially given the proximity of commercial uses to the residential component of Parcel B and the Main Property's Town Center.

D. Villages MPD Provides Environmentally Sustainable Development. In light of the conclusions in 11.A – C above, and subject to the conditions of approval in Exhibit C below, the Villages MPD complies with BDMC 1898.010(H)'s purpose of providing environmentally sustainable development.

12. **BDMC 18.98.010(I):** ***Provide needed services and facilities in an orderly, fiscally responsible manner.***

This purpose is met. The MPD application, along with conditions of approval, will ensure that needed services and facilities are provided in an orderly, fiscally responsible manner. Chapters 4-8 of the MPD application discuss transportation, parks, stormwater, sewer, and water facilities; Ch. 9 discusses the project phasing plan and the timing of these improvements. Ch. 9 of the MPD application also discusses several cost recovery mechanisms related to construction of facilities improvements, including local improvement districts, latecomer agreements and other financing mechanisms such as community facility districts. In addition, a proactive transportation monitoring plan, with a list of projects and trigger mechanisms acceptable to the City, is required by Conditions 20 and 25 in Exhibit C below, with the monitoring plan to be further detailed as part of the Development Agreement. Condition 25, in particular, requires traffic mitigation measures to be installed so as to maintain the City's adopted level of service, rather than subsequent to a decline in level of service. And, Condition No. 17 requires periodic

review of traffic impacts, and identification and construction of additional mitigation if the mitigation identified in Conditions 15 and 16 is insufficient to mitigate identified traffic impacts from the Villages MPD. In light of the phased construction of regional public infrastructure projects, the monitoring plan, and periodic review and analysis of traffic impacts and mitigation, to be further specified in the Development Agreement, the Villages MPD will provide services and facilities in an orderly fiscally responsible manner.

13. **BDMC 18.98.010(J):** ***Promote economic development and job creation in the city.***

The Villages MPD also satisfies the purpose of promoting economic development and job creation in the City, as called for by BDMC 18.98.010(J). As shown on the Land Use Map in Figure 3-1 (July 8, 2010), and as detailed in Finding of Fact No. 2, the MPD project has designated 67 acres for a maximum of 775,000 square feet of commercial/office/industrial use. Chapter 3 of the MPD application describes these in more detail; among other things, it describes office uses as a broad category including such things as general office, business support services, light manufacturing, wholesaling and mini-storage. While the ultimate mix of uses will remain unknown until full build out, the amount of land provided in the MPD for retail and office uses meets the purpose of promoting economic development and job creation.

14. **BDMC 18.98.010(K):** ***Create vibrant mixed-use neighborhoods, with a balance of housing, employment, civic and recreational opportunities;***

A. The purpose set out in BDMC 18.98.010(K) is also satisfied. As detailed in Finding of Fact No. 2 and as shown on the Land Use Plan map in Figure 3-1 (July 8, 2010) and described in the MPD application, the Villages MPD includes a mixed-use town center, a variety of housing types and densities, areas for schools and other civic uses, and recreational opportunities in the form of a variety of parks and trails. Chapter 3 of the MPD application describes a variety of housing types including detached single family, duplex, triplex, quadplexes, townhouses, cottages, and stacked flats. With the exception of stacked flats, which are described as a possible housing type within the high-density category, all other types could be built within areas designated for either low or medium density residential uses.

B. The application includes schematic drawings of potential housing types and lot configurations (see Chapter 3). However, the distribution of these various modes of development is not defined; therefore, a condition is included in Exhibit C to require the development agreement to set targets for specified housing types for each phase of development.

C. Because the potential earning potential yielded by jobs that may be created in the MPD project area is unknown, if a significant number of jobs is in the retail and service sector, housing affordability may become a significant issue. Therefore, a condition of approval is included in Exhibit C below to require the project to include a mix of housing

types that contribute to the affordable housing goals of the City, and to require that the Development Agreement provide for a phase-by-phase analysis of affordable housing citywide to ensure that housing is being provided at affordable prices.

15. **BDMC 18.98.010(L):** ***Promote and achieve the city's vision of incorporating and/or adapting the planning and design principles regarding mix of uses, compact form, coordinated open space, opportunities for casual socializing, accessible civic spaces, and sense of community; as well as such additional design principles as may be appropriate for a particular MPD, all as identified in the book Rural By Design by Randall Arendt and in the City's design standards;***

This purpose is also met by the Villages MPD. As detailed in Finding No. 2, the Land Use Plan map and the MPD application, the Villages MPD application proposes a mix of residential and commercial type uses, with development located in compact clusters separated by sensitive areas and open space. Parks and schools are proposed to be located on site with a road and trail network to link the residential portions of the project. These will provide opportunities for interaction, socializing and a sense of community. Stands of trees and natural areas are proposed along the main spine road through the project. These natural areas and extensive open space will help preserve rural character.

**16. BDMC 18.98.010(M):** ***Implement the city's vision statement, comprehensive plan, and other applicable goals, policies and objectives set forth in the municipal code.***

In June 2009, the City adopted an updated comprehensive plan, zoning code, design guidelines and engineering design and construction standards. The Comprehensive Plan includes the city's vision statement on page 1-2, which envisions "development [that] maintains a healthy balance of moderate growth and economic viability," residential development with "a mix of types, sizes and densities, clustered to preserve a maximum of open space and to access a system of connecting trails/bikeways." The proposed project is generally consistent with the vision statement and the City's development regulations and policies. Further, Page 5-13 of the Comprehensive Plan (Land Use element) discuss the MPD Overlay plan designation. The Villages MPD is also consistent with that section of the Comprehensive Plan.

These Conclusions of Law address below the MPD proposal's consistency with other provisions of the Black Diamond Municipal Code.

17. **BDMC 18.98.020:** ***Specific objective of the MPD permit process and standards is to provide public benefits not typically available through conventional development. These public benefits shall include but are not limited to:***

***A. Preservation and enhancement of the physical characteristics (topography, drainage, vegetation, environmentally sensitive areas, etc.) of the site;***

A. This objective is satisfied. The Villages MPD provides a greater preservation and enhancement of the physical characteristics (topography, drainage, vegetation,

environmentally sensitive areas, etc.) of the site than would typically be available through conventional development. This includes:

i. The MPD preserves 29 more acres of open space and sensitive areas than would conventional development, according to Exhibit 1-3 of the FEIS;

ii. Because the property is being developed via an MPD, roads, utilities and public facilities will be constructed in a coordinated fashion, minimizing disturbance of sensitive areas; with the unavoidable exception of several road crossings, avoidance of sensitive areas was a factor in the overall layout of this project, as shown in the land use plan/constraints map overlay (Exhibit 11). Under conventional development roads and utilities would be constructed incrementally, as Exhibit 1-3 of the FEIS acknowledges, which could result in additional incursions into sensitive areas as permitted by the City's development regulations for road and other public utility construction (BDMC Section 19.10.080(E)(1));

iii. Because the property is being developed in a coordinated fashion, drainage can be coordinated to maximize infiltration where soils permit, as well as utilization of a large drainage area to maximize sediment and phosphorus removal, in manner that would exceed that available under conventional development; and

iv. Other than where stormwater ponds, utilities and future active park and trail sites may be proposed, open space areas are to remain untouched.

B. Chapter 1 of the MPD application discusses clearing and grading for the project. It is estimated that approximately 4,753,000 cubic yards of cut and 1,685,000 cubic yards of fill would be required for the Main Property. Fill is proposed to come from material excavated on site. For Parcel B the estimate is 81,000 cubic yards of cut and 81,000 cubic yards of fill would be necessary (i.e., the site would be "balanced"). The City Council recognizes that in order for urban development to occur, some natural undulations and occasional sharp pitches in the natural grade will need to be graded for street and urban living compatibility, and that initial site grading will provide better, more consistent utility depths and minimize retaining walls and steps to homes and other buildings. The extent of removal and export (approximately 3,000,000 million cubic yards of soil) proposed for the Main Property would be inconsistent with the objective in BDMC 18.98.020.A, however. Therefore, a condition is included in Exhibit C below to require that, prior to the approval of the first implementing plat or site development permit within a phase, the applicant must submit an overall grading plan that will balance the cut or fill so that the amount of cut or fill does not exceed the other by more than 20%. This will insure that unnecessary mining of material will not occur and that reuse of existing materials will be maximized. Further, a condition is also included in Exhibit C below requiring the Villages MPD to comply with the Framework Design Standards and Guidelines, which require at 3.A.6 that grading be phased to maintain surface disturbance and maintain significant natural contours.

**18. BDMC 18.98.020(B): *Protection of surface and groundwater quality both on-site and downstream, through the use of innovative, low-impact and regional stormwater management technologies;***

A. This objective is satisfied. The development standards adopted by the City, combined with the conditions contained in Exhibit C below, will protect both surface and groundwater quality on-site and downstream, through the use of innovative, low-impact and regional stormwater management technologies.

B. The City's adopted standards utilize regional stormwater management technologies. BDMC Ch. 14.04.020 adopts the 2005 Ecology Stormwater Management Manual for Western Washington (SWMMWW), which is consistent with the requirements of the NPDES Phase II Municipal Stormwater Permit for Western Washington. The provisions of BDMC Ch. 14.04 will apply to all development permits until such time as the City may be required by the terms of the NDPES Permit to amend the provisions of the adopted SWMMWW. In addition, the Villages MPD application proposes a project-wide approach to stormwater management (rather than an individual development parcel approach), which also meets the intent of regional stormwater management.

C. As indicated in Chapter 6 of the MPD application, the stormwater management plan includes incorporation of low impact development (LID) techniques. Given the soils on the Main Property as described in Ch. 4 of the FEIS, LID should have excellent potential. Further, Exhibit C contains a condition of approval requiring identification of mechanisms to integrate LID into the overall design of the MPD for the benefit of surface water resources. This meets the intention of the objective's provision for low-impact stormwater management technologies.

D. Exhibit C contains other conditions requiring the Development Agreement to incorporate additional innovative techniques, as follows:

i. In the event that new phosphorus treatment technology is discovered and is either certified by the State Department of Ecology as authorized for use in meeting requirements of the SMMWW, or is in use such that it is considered by the stormwater engineering community as constituting part of the set of measures described as "All known available, and reasonable methods of prevention, control, and treatment" ("AKART") as defined in WAC 173-201A-020, then the Applicant shall incorporate that new phosphorus treatment technology in all new ponds and facilities applied for as part of an implementing project, such as a preliminary plat, even if the Applicant's ponds and facilities would otherwise be vested to a lower standard.

ii. Prior to approval of the Development Agreement, the Applicant shall identify to the City the estimated maximum annual volume of total phosphorus (Tp) that will be discharged in runoff from the MPD site and that will comply with the TMDL established by the State Department of Ecology for Lake Sawyer. If monitoring

conducted pursuant to the phosphorus monitoring plan proposed by the Applicant in Ex. NR-TV-7 and integrated into the Development Agreement pursuant to Condition No. 78 above indicates that the MPD site is discharging more than the identified annual maximum volume of Tp, the Master Developer shall modify existing practices or facilities, modify the design any proposed new stormwater treatment facilities, and/or implement a project within the Lake Sawyer basin that collectively provide an offsetting reduction in Tp so as to bring the discharge below the annual maximum identified pursuant to this Condition.

iii. The Development Agreement shall require a proactive, responsive temporary erosion and sediment control plan to prevent erosion and sediment transport and protect receiving waters during the construction phase.

iv. The Development Agreement shall ensure that the storm water system does not burden the city with excessive maintenance costs, while assisting the City with maintenance of landscape features in storm water facilities.

v. The Development Agreement shall require a tabular list of stormwater monitoring requirements. The list should include the term of the monitoring, the allowable deviation from design objectives or standards, and the action items necessary as a result of excess deviations. Particular attention should be paid to phosphorous levels in Lake Sawyer.

vi. If roof runoff will be discharged directly to wetlands or streams for recharge and base-flow purposes, include restrictions on roof types (no galvanized, no copper) and roof treatments (no chemical moss killers, etc) to ensure that stormwater discharge is suitable for direct entry into wetlands and streams without treatment. These restrictions should be enforced during permitting and also during the life of the project by the Homeowners Association (HOA). The applicant should develop public education materials that will be readily available to all homeowners and implement a process that can be enforced by the HOA.

vii. The stormwater plan shall include the ability to adaptively manage detention and discharge rates and redirect stormwater overflows when environmental advantages become apparent. This condition recognizes the fact that shifts in the discharge points of storm water may be appropriate and benefit wetlands, lake, streams or groundwater environments.

viii. The Applicant shall be required to obtain all necessary permits from King County for construction, including any necessary approval or agreement providing the City ability to perform maintenance of the large regional storm pond proposed to the west of the project. The Applicant shall submit engineering plans to the City for approval, which shall not be unreasonably withheld or delayed, prior to submitting such plans to the County. This condition is required in recognition of the fact that although the property to the west of the MPD property is the best location for the regional stormwater infiltration pond because it presents an environmental advantage

(the ability to consolidate the infiltration of the excess runoff to a deep aquifer in one location at the most efficient collection location), this site is not within the City's jurisdiction and approval from King County is required for both pond construction and future City maintenance.

19. **BDMC 18.98.020(C):** ***Conservation of water and other resources through innovative approaches to resource and energy management including measures such as wastewater reuse.***

This objective is satisfied. Chapter 8 of the MPD application describes the proposed water system for the MPD, including details of the required water conservation plan. Additional conservation measures may be required in the Development Agreement as staff and the applicant develop a specific design.

20. **BDMC 18.98.020(D):** ***Preservation and enhancement of open space and views of Mt. Rainier.***

A. This objective is satisfied. Chapter 3 of the MPD application contains details regarding open space. Pursuant to BDMC Sections 18.98.120(G), 18.98.140(F) and (G), an MPD shall provide the amount of open space required in any prior agreements, or the applicant may elect to provide 50% of the project area as open space. As detailed in Finding of Fact 18.B, there are two prior agreements, the Black Diamond Urban Growth Area Agreement ("BDUGAA") and the Black Diamond Area Open Space Agreement ("BDAOSPA"), and those agreements have been complied with. Those agreements resulted in the preservation of nearly 1,670 acres of open space and, as recited in those agreements, conveyance and/or preservation of the specific acreages set forth in the agreements resulted from a required ratio of 4 acres of open space for every one acre of land allowed for urban development. Finding of Fact No. 18.B; BDUGAA (Staff Report, Ex. 7) at 5, para. 3.5. The objective in BDMC 18.98.020(D) is therefore satisfied.

B. Even if BDMC Sections 18.98.120.G, 18.98.140.F and .G were construed as applying the prior agreements only to the specific portions of the MPD addressed by those agreements, and that a 50% open space requirement applies to the remainder of the MPD, the objective in BDMC 18.98.020(D) is nevertheless satisfied. The portions of the MPD subject to the prior agreements provided 145 acres of open space as an offset for the West (63.3 ac) and South Annexation (81.7 ac) areas. Under such an interpretation, the portions of the MPD not subject to prior agreements are required to provide 50% of the land area as open space (336.4 acres) in order to have varied lot dimensions, cluster housing and pursue additional density (see 18.98.140.G). Thus, the overall amount of open space required to be provided within the MPD is 481.4 acres (145 + 336.4 = 481.4). The Figure 3-1 Land Use plan shows that 505 acres of open space, parks and trails, wetlands and buffers are proposed, while page 1-4 states that a minimum of 481.4 ac will be provided. Therefore, even under an interpretation that applies the "prior agreement" standard to only part of the MPD, and the 50% open space standard to the remainder of the MPD, the Villages MPD complies with the open space requirements of the Black Diamond Municipal Code. This also satisfies the objective in BDMC 18.98.020(D).

C. The MPD application materials indicate that the Community Connector Road and multiple parks are designed to enhance views of Mt. Rainier. There are very limited opportunities for views of Mt. Rainier on The Villages main property. The school site in parcel F may have some views of Mt. Rainier if the areas to the south are cleared. There appears to be reasonable opportunities for views from Parcel B that will be further enhanced if the nearby tailing piles are removed in the future. A condition of approval in Exhibit C will encourage that these view opportunities be explored and incorporated into the planning process.

D. Some parties of record argued that the Applicant was "double dipping," because some of the areas included in the open space totals itemized in Finding of Fact 18.B are also regulated under the City's Sensitive Areas Ordinance. Such a result was expressly contemplated by, and complies with, the BDUGAA and the Black Diamond Municipal Code. Section 7.5 of the BDUGAA expressly provides that open space within the West and South Annexation Areas "can only be used for the purposes included in KCC 26.04.020.L, such as preservation of wetlands and other critical areas, buffers, recreational areas and natural areas or as an urban separator and/or urban/rural buffer." BDMC Section 18.98.140(A) expressly defines open space as "wildlife habitat, areas, perimeter buffers, environmentally sensitive areas and their buffers, an trail corridors." It may also include "those portions of school sites devoted to outdoor recreation, and stormwater detention/retention ponds that have been developed as a public amenity and incorporated into a public park system."

21. **BDMC 18.98.020(E):** ***Provision of employment uses to help meet the city's economic development objectives.***

The objective is satisfied. BDMC 18.98.020(E) does not require (nor could it) that the MPD meet all of the City's economic development objectives. Instead, it requires only that the MPD "help meet" them. Consequently, any significant contribution to available employment would satisfy this requirement. As detailed in Finding of Fact No. 2, the project has designated 67 acres for a maximum of 775,000 square feet of retail/commercial/office/industrial use. Chapter 3 of the MPD application describes these in more detail. The amount of jobs and tax revenues to be generated by this area will be dependent upon the mix of development that occurs, but there is no question that the project will add to the employment base of the City.

22. **BDMC 18.98.020(F):** ***Improvement of the city's fiscal performance;***

A. The objective is satisfied. The fiscal impacts of the project are addressed in detail in Finding of Fact No. 11. As noted in that Finding, a condition will be imposed in Exhibit C below, utilizing a combination of the conditions proposed by the Applicant and City staff, respectively, requiring repeated reassessment of fiscal impacts and requiring the Applicant to cover any shortfalls. This will ensure that the objective in BDMC 18.98.020(F) is satisfied.

B. Page 12-15 of the MPD application notes that "the city will commission new rate studies to accurately adjust revenue collection for the Special Funds such that all Special Fund expenditures will be fully funded to match the appropriate standards identified in the updated comprehensive plan." While possibly true for the water, sewer and stormwater utilities, street operation and maintenance is currently inadequately funded by the City's share of the gas tax, with the street maintenance function competing for general fund dollars for the balance of funding. Also, the Applicant is proposing the use of higher risk pervious asphalt in some cases and higher landscape intensive improvements (such as rain gardens). In order to balance the impact of the added street maintenance and the proposed street standards with higher maintenance costs, a condition of approval is included in Exhibit C below requiring that all cul-de-sacs and auto courts serving 20 units or less and all alleys be private and maintained by the Master Developer or future Homeowners Association(s).

23. **BDMC 18.98.020(G):** ***Timely provision of all necessary facilities, infrastructure and public services, equal to or exceeding the more stringent of either existing or adopted levels of service, as the MPD develops; and***

A. This objective, which requires provision of facilities, infrastructure and public services in accordance with the more stringent of the existing levels of service within the City of Black Diamond or Black Diamond's adopted levels of service, is satisfied. Chapters 4 and 6 through 9 of the application contain conceptual utility plans and a phasing plan which describes street and utility improvements. These plans assure that infrastructure will be in place at the time and to the extent needed. Details on the proposed timing of improvements are on page 9-3, as well as included in conditions of approval in Exhibit C below, especially for transportation improvements. Page 9-10 indicates the proposed "trigger" for park improvements. Further, the proposed phasing plan of supporting regional infrastructure projects, along with various conditions contained in Exhibit C below and a satisfactory implementing Development Agreement, will provide for the required facilities and infrastructure in time to meet adopted levels of service applicable in other jurisdictions.

B. Further, the conditions of approval in Exhibit C require preparation of a revised transportation demand model, and use of that model at specified points in the future to periodically review traffic impacts of the MPDs as they develop and identify additional mitigation as necessary to meet levels of service for successive phases of development. Mitigation may exceed that identified in the FEIS if necessary to meet level of service standards, so long as the adverse impacts are identified in the relevant environmental document (here, the FEIS), and the mitigation is consistent with an environmental policy adopted by the governmental body and referenced in its decision. WAC 197-11-660(1)(a) and (b); *see also Quality Rock Products, Inc. v. Thurston County*, 139 Wn. App. 125, 140-141 (Div. II 2007). Here, requiring such additional mitigation is consistent with the City's policy set out in BDMC 18.98.020(G), which is adopted by reference as a SEPA policy in BDMC 19.04.240(B)(3). Under these conditions, the first periodic review will be conducted at the point where building permits have been issued

for 850 homes for the Villages and Lawson Hills together; subsequent periodic review will occur at such future points specified by the City Council.

As discussed in Finding of Fact 5(L), the future periodic reviews utilizing a revised transportation demand model are warranted, because of the length of the project build out, and because the existing models are not optimally suited to predict future traffic impacts 15 or more years into the future, particularly given the scale of the two MPD projects and the models' underlying assumptions. Future periodic reviews will involve re-validation of the transportation demand model by checking the traffic analysis against actual MPD traffic growth.

24. **BDMC 18.98.020(H):** ***Development of a coordinated system of pedestrian oriented facilities including, but not limited to, trails and bike paths that provide accessibility throughout the MPD and provide opportunity for connectivity with the city as a whole.***

The objective is satisfied. Chapter 5 of the MPD application contains provisions for a trail network which would connect areas of the MPD and provide points at which future extensions to the rest of the City could be made by others or the City through public projects.

25. **BDMC 18.98.050(A):** ***MPD Permit Required. An approved MPD permit and Development Agreement shall be required for every MPD.***

This objective is satisfied. These Conclusions of Law are part of an ordinance granting MPD permit approval. The conditions of approval included in Exhibit C require a Development Agreement, consistent with BDMC 18.98.050(A).

26. **BDMC 18.98.050(C):** ***Implementing Development Applications. An MPD permit must be approved, and a development agreement as authorized by RCW 36.70B completed, signed and recorded, before the city will grant approval to an application for any implementing approval...***

This objective is satisfied, for the reasons explained in Conclusion No. 25 above. The recommended conditions of approval require execution of a development agreement before approval of any implementing land use or development permits.

27. **BDMC 18.98.080(A):** ***An MPD permit shall not be approved unless it is found to meet the intent of the following criteria or that appropriate conditions are imposed so that the objectives of the criteria are met:***

***1. The project complies with all applicable adopted policies, standards and regulations. In the event of a conflict between the policies, standards or regulations, the most stringent shall apply unless modifications are authorized in this chapter and all requirements of section 18.98.130 have been met. In the case of a conflict between a specific standard set forth in this chapter and other adopted policies, standards or***

***regulations, then the specific requirement of this chapter shall be deemed the most stringent.***

The criterion is met. As discussed at length below, Comprehensive Plan policies are met. Further, specific MPD regulations and design requirements are also met, as explained and addressed throughout these Conclusions of Law and in the conditions in Exhibit C below.

A. Compliance with Comprehensive Plan policies.

i. The most controversial polices at issue concern those pertaining to preservation of small town character. Many parties of interest argued that the Comprehensive Plan policies require preservation of "rural" character. This is incorrect, and would be inconsistent with the Growth Management Act, the City's Comprehensive Plan, and implementing development regulations in any event. As the Hearing Examiner's Recommendation explained, when it comes to density, "the die has already been cast on this issue." The Growth Management Act, Chapter 36.70A RCW, requires cities to encourage urban densities in order to promote efficient use of infrastructure and contain urban sprawl. *See* RCW 36.70A.110, 36.70A.020. Under the GMA, cities are not permitted to adopt Comprehensive Plan policies requiring certain areas to remain "rural." *See, e.g.*, Final Decision and Order in *Robison v. Bainbridge Island*, CPSGMHB No. 94-3-0025, at 22-23. In *Robison*, the Board determined that the City of Bainbridge Island's "Overriding Policy No. 1," which called for the City to "preserve the rural character of the Island" violated RCW 36.70A.020(1) and (2), and remanded the policy to the City for revision (the City excised the word "rural"). As the Board explained, "Compact urban development is not "rural" land use. . . . [B]ecause Bainbridge Island has chosen to be a city, it must remain cognizant of its duty under the Act to plan for compact urban development within its boundaries as it grows."

ii. The City Council has implemented the GMA's mandate to provide for urban densities, by adopting Comprehensive Plan provisions concerning a "Master Planned Development (MPD) Overlay (pages 5-13 - 5-14) that state that MPD "densities are intended to be urban in nature (minimum of 4 dwelling units per gross acre) and will be established as part of the MPD approval process." (Emphasis added). The Plan acknowledges that all cities (including Black Diamond) are to be included within the Urban Growth Area, which is to include "areas and densities sufficient to accommodate urban growth expected to occur in the City in the next 20 years." Comp Plan at 1-6. As such, the Plan proposed a "village" environment, residential and economic development (including job opportunities for local residents and a long-term tax base for the City) . . . ." Comp Plan at 1-8. The Plan also uses innovative techniques such as density bonuses and MPDs (*Id.* at 1-8 – 1-9) to accommodate a 2025 population of nearly 17,000 people in "compact" (i.e., dense) urban development that preserves 35-40% of the City as open space. *Id.* at 1-10. "Much of this growth will occur as a result of Master Planned Developments in areas annexed to the City in 2005 . . . ." Comp Plan at 3-1.

iii. In light of the above, the Legislature and the Black Diamond City Council have adopted legislation that authorizes projects the size and density of the Villages MPD if specified criteria are met, and due to those legislative actions, the City Council is not in a position to deny the MPD applications because their densities might be construed as damaging "rural character." The impacts created by those densities, however, may be (and are) addressed through application of the MPD criteria and conditions of approval imposed pursuant to them.

iv. The City's Comprehensive Plan policies do not require preservation of "rural" character, even if such an approach was authorized under the GMA. Instead, the Comprehensive Plan instead refers to protection of "small town" character – and this is to be accomplished by principles that include compact development. *See, e.g.*, Comp Plan at 5-10 (continue compact form); at 5-4 – 5-5 (existing residential areas are developed at density of 4 and 6 dwelling units per acre); at 5-7 – 5-11 (addressing seven principles to preserve "small town character"); at 5-10 (discussing compact development, along with ways to connect "large-scale development" to older sections of town). On page 5-10, the Comprehensive Plan indicates that it calls for the use of "techniques that continue the character of compact form," while design guidelines will help the new, compact development feel like a rural community. This does not mean that the Plan is calling for protection of "rural character" by limiting density. It is only areas designated "Limited" Residential, *i.e.*, areas subject to significant environmental constraints and open space protection" that are to "reflect the informal rural development typical of many portions of the City." Comp Plan at 5-50. And, while the Comprehensive Plan and BDMC 18.98.010(L) do reference the book "Rural by Design," they do so only with respect to the extent that the book identifies ways by which the City can achieve its goal that an MPD "incorporate and/or adapt the planning and design principles regarding mix of uses, compact form, coordinated open space, opportunities for casual socializing, accessible civic spaces, and sense of community." The listed planning and design principles are not "rural"; if anything, the reference to "compact form" is a reference to urban rather than rural development.

v. Exhibit 161, prepared by Dave Bricklin, does not require a conclusion to the contrary. Exhibit 161 identifies several comprehensive plan policies that require protection and/or consistency of "community character," "existing character of the historic villages," "natural setting," "rural community," "traditional village community," "small town character," and "existing historical development." *See* Black Diamond Comprehensive Plan, pp. 2-5, 4-1, 5-7, 5-8, 5-33, 5-38, 5-49, 5-50, 7-49. Another policy provides that design guidelines are required to provide methods and examples of how to achieve design continuity and to reinforce the identity of the City as a rural community. *Id.* at 5-10. All of the policies referenced above reflect a strong preference to retain small town character. None require rural densities or suggest that they supersede the more specific comprehensive plan policies and state mandates requiring urban densities within the City. The MPD regulatory framework must and can be applied in a manner that harmonizes the requirement for urban densities with the objective of maintaining small town character. The MPD regulations provide the specific examples of how this is to be accomplished, including but not limited to reference in BDMC 18.98.010(L) to the book

"Rural by Design" and its synthesis of the urban density/small town character concepts. The City Council must apply these specific standards, and may not impose conditions upon the MPDs on some vague "feeling" that they are necessary to protect small town or rural character, because such terms are highly subjective and difficult to assess. *See, Anderson v. Issaquah*, 70 Wn. App. 64 (1993) (a statute violates due process if its terms are so vague that persons of common intelligence must necessarily guess at its meaning and differ as to its application).

B. Compliance With King County Growth Allocations.

Some parties of record argued that the City has improperly planned for more growth in the MPDs than allocated to the City by King County GMA growth allocations. Cities, however, are not bound by County-adopted growth targets unless specifically required by county-wide planning policies. *See West Seattle Defense Fund v. City of Seattle*, CPSGMHB 94-3-0016, Final Decision and Order (4/4/95), p. 55. It is also worthy of note that even if the GMA growth targets were designed to limit growth in Black Diamond, it is too late to raise that issue now. The same reasoning applies to the applicability of any other county-wide planning policies. Black Diamond's comprehensive plan and development regulations allow master plan developments with the densities and population proposed in the Lawson Hills and Villages MPDs. If King County or any other party had wanted to challenge those regulations and policies as inconsistent with growth targets, that should have been done via an appeal to the Growth Management Hearings Board within sixty days of adoption of the comprehensive plan and development regulations that required the densities proposed for the MPDs[1]. RCW 36.70A.290(2); *Wenatchee Sportsmen Ass'n v. Chelan County,* 153 Wn. App. 394 (2009).

C. Compliance with MPD Framework Design Standards and Guidelines, Section G.

Some parties of record sought more protection than the five-foot perimeter setbacks that would generally be provided under the City's development regulations. The Framework Design Standards and Guidelines, however, require compatibility with adjoining densities. Through these guidelines, the Villages MPD will be conditioned to provide for 50 foot buffers along the most sensitive project interfaces on the northern part of the main property, where some of the highest densities are proposed. The guidelines require a minimum 25-foot buffer for multi-family and non-residential land uses, and perimeter lots for single-family development may be no less than 75% the size of the abutting residential zone or 7200 square feet, whichever is less. These standards help assure compatibility along perimeter areas.

---

[1] Some of the Villages and Lawson Hills property are zoned R4, R6, MDR8 and community commercial, and these designations are being amended by the Ordinance approving the MPDs. However, the R4 – MDR8 designation already allows 4 to 8 dwelling units per acre, respectively, and community commercial densities are only limited by floor/area ratios, height, parking and other site requirements. Consequently, all approved zoning already allows the population proposed in the MPD applications.

D. Comprehensive Plan Police T-1. The only comprehensive plan policy found by staff to raise some compliance issues is Comprehensive Plan Policy T-1, which calls for connections to surrounding neighborhoods with roads and trails. The City's Engineering Design and Construction Standards section 3.2.02 D sets a limit of no more than 300 homes on a single point of access before a second connection must be constructed. Based on the comprehensive plan and design standards, the Main Property south of the Auburn Black Diamond Road will be required to connect all the way through to SR 169, regardless if the final phases are ever completed. There are several locations along the main spine road through the project where a parallel road will not be possible. Additionally, the FEIS modeled the traffic distribution with the spine road connection to SR 169. Therefore, a condition of approval is included in Exhibit C below to require:

- No more than 150 residential units shall be permitted with a single point of access. Three hundred units may be allowed on an interim basis, provided that a location for a secondary point of access is identified.

- The Development Agreement shall define a development parcel(s) beyond which no further development will be allowed without complete construction of the South Connector.

28. **BDMC 18.98.080(A)(2): *Significant adverse environmental impacts are appropriately mitigated.***

A. For the reasons explained in Findings of Fact in Exhibit A above, and in subsections B-I in this Conclusion below, the criterion in BDMC 18.98.080(A)(2) is satisfied by imposition of the FEIS mitigation measures, in addition to the other mitigation identified in the Findings of Fact in Exhibit A above. The Applicant's argument that environmental mitigation is limited to that identified in the FEIS is incorrect. A local jurisdiction's exercise of substantive SEPA authority allows the imposition of environmental mitigation beyond that identified in a threshold environmental determination, if relevant to permitting criteria and otherwise consistent with legal requirements. WAC 197-11-660(1)(a) and (b); *Quality Products, Inc. v. Thurston County*, 139 Wn. App. 125 (2007). Even with the issuance of an EIS, an applicant must still comply with all MPD permit criteria, and the review standard for an FEIS is significantly different than that under MPD permit review. As noted in the FEIS decisions, the Examiner must give substantial weight to the determination of the SEPA responsible official in assessing the adequacy of an EIS. By contrast, the factual findings made by the City Council in finding compliance with MPD criteria must be supported by substantial evidence. *See* RCW 36.70C.130(c). All FEIS mitigation and modifications thereto incorporated into the conditions of this MPD approval should be considered as imposed pursuant to the City's substantive SEPA authority under RCW 43.21C.060 and WAC 197-11-660, as well as pursuant to the MPD criterion in BDMC 18.98.080(A)(2) governing this Conclusion of Law.

B. As discussed in the Findings of Fact, including but not limited to Findings 5, 7, 9, and 10, there are some environmental impacts for which reasonable mitigation was

adequately identified under the rule of reason standard applicable to a challenge to an FEIS, but where additional or more comprehensive mitigation was nevertheless warranted. For the reasons discussed in the applicable Findings of Fact, there is substantial evidence to justify such additional mitigation, including but not limited to additional, periodic traffic analysis based on a revised transportation demand model, additional study of noise impacts and mitigation related thereto, and further study, monitoring, and mitigation for protection of Lake Sawyer water quality.

C. Geologically hazardous areas shall be designated as open space, with roads and utilities routed to avoid such areas. Where avoidance is impossible, the applicant should utilize the process in BDMC 19.10 (supplied with adequate information as defined in code) and the Engineering Design and Construction Standards to build roads and utilities through these areas.

D. A condition shall be included in Exhibit C below requiring that all houses that are sold in classified or declassified coal mine hazard areas be accompanied by a liability release from the homeowner to the City. The release must recognize that the City is not liable for actual or perceived damage or impact from the coal mine hazard area. The release form shall be developed and included in the Development Agreement. This Conclusion addresses environmental impacts from classified or declassified coal mine hazard areas by providing notice to potential homeowners of the hazards and creating a market disincentive for construction in such mine hazard areas.

E. The MPD application states that the 2005 Ecology manual is "expected to be adopted." The City adopted this in June 2009 and it will be applicable to this project until such time as the city may be required to adopt an updated stormwater manual by state mandate as a requirement of the City's Phase II Municipal Stormwater General Permit.

F. The proposal meets city standards and with the additional goals and conditions will provide several enhancements:

- Regional infiltration pond will provide a central low maintenance facility that could also provide multipurpose recreational opportunities.

- Regional infiltration pond will provide opportunities for storm water reuse that could further conserve potable water.

- Low impact development proposal with HOA maintenance will provide distributed infiltration that will be closer to natural stormwater flow regimes.

F. Construction must be authorized by an NPDES permit for stormwater treatment and discharge issued by the Department of Ecology. Although permit conditions imposed by NPDES permits are not administered by the City, a condition is included in Exhibit C below reserving to the City the right to enforce the conditions of NPDES

permit(s) applicable to the Villages MPD project. Since the city has a high interest in protecting receiving waters under the city storm water permit, the condition also requires the Applicant to fund necessary costs for training related to inspection services.

G. The MPD application's suggestion (at page 6-5) that the City lacks approval authority for water quality treatment options, and that all options allowed under the 2005 Manual are allowed "without preference," is rejected. Because the City is the approving authority and will ultimately own and be responsible for most of the proposed storm water facilities, the City retains the authority to reject higher maintenance cost facilities when lower maintenance cost options may be available.

H. Given that there are water quality and balance challenges that are addressed in the storm water management concept, and that storm water management is not an exact science, shifts in the distribution of storm water may be appropriate and benefit wetlands, lake, streams or groundwater environments. The MPD approval will therefore include a condition in Exhibit C requiring that the Development Agreement include language to allow for adaptive management of the distribution of stormwater when justified by technical analysis and risk assessment, as long as the impacts to on-site and off-site environment are maintained or enhanced.

I. Per BDMC 18.98.195, stormwater ponds, water quality treatment facilities, and other components of the stormwater treatment and conveyance system governed by the City's stormwater regulations shall vest phase by phase, to the extent authorized by the NPDES Phase II Stormwater Permit for Western Washington and state law.

29. **BDMC 18.98.080(A)(3):** ***The proposed project will have no adverse financial impact upon the city at each phase of development, as well as at full build-out. The fiscal analysis shall also include the operation and maintenance costs to the city for operating, maintaining and replacing public facilities required to be constructed as a condition of MPD approval or any implementing approvals related thereto. This shall include conditioning any approval so that the fiscal analysis is updated to show continued compliance with this criteria, in accordance with the following schedule: [Remainder not listed here; refer to BDMC for complete code text.]***

The criterion is satisfied as discussed in Finding of Fact 11 and as conditioned in Exhibit C below.

30. **BDMC 18.98.080(A)(4):** ***A phasing plan and timeline for the construction of improvements and the setting aside of open space so that:***

> ***a. Prior to or concurrent with final plat approval or the occupancy of any residential or commercial structure, whichever occurs first, the improvements have been constructed and accepted and the lands dedicated that are necessary to have concurrency at full build-out of that project for all utilities, parks, trails, recreational amenities, open space, stormwater and transportation improvements to***

***serve the** project, **and to provide for connectivity of the roads, trails and other open space systems to other adjacent developed projects within the MPD and MPD boundaries; provided that, the city may allow the posting of financial surety for all required improvements except roads and utility improvements if determined to not be in conflict with the public interest; and***

***b. At full build-out of the MPD, all required improvements and open space dedications have been completed, and adequate assurances have been provided for the maintenance of the same. The phasing plan shall assure that the required MPD objectives for employment, fiscal impacts, and connectivity of streets, trails, and open space corridors are met in each phase, even if the construction of improvements in subsequent phases is necessary to do so.***

A. As modified with the conditions identified below and included in Exhibit C, the criterion is satisfied. In addition, see Conclusion of Law 23 above.

B. Chapters 4-9 of the MPD application discuss transportation, parks, stormwater, sewer, water and the project phasing plan. Chapter 9 of the MPD application contains the phasing plan, which also projects which parcels will be developed and associated unit counts. Parks are to be built by phase also. The above provisions (4.a and 4.b) shall also be addressed in the Development Agreement.

C. Chapter 9 of the MPD application states that "[t]he facilities that serve the MPDs as well as development in areas outside of the MPD project boundaries will be a shared responsibility between the City and Master Developer, with the Master Developer contributing a proportionate share." While other benefiting parties may make use of roads and other infrastructure, it is unrealistic for the Applicant to expect full cost recovery for every implementing project. The City cannot guarantee cost recovery from benefiting non-contributing properties or cost recovery from the City. Absent these developments, there would not be a need to construct some of the improvements identified in the MPD Application. Many new vehicle trips coming from outside the City may make use of roads and intersection improvements funded by the developer, but the City has no ability to collect from the growth in background traffic. Cost recovery for the Applicant can occur where the benefiting parcels can be clearly defined, the benefiting parties are subject to the City's regulatory authority, and the other parties' pro rata share is significant. The identification of specific projects to be constructed by the Applicant, the projects to be constructed by the City, the projects for which credits or cost recovery may be available, shall be included in the Development Agreement, pursuant to a Condition No. 10, Exhibit C below

D. On page 9-3 of the MPD application, the Applicant proposes that final design must be approved and constructed, bonded or financially guaranteed prior to occupancy of any structure relying on the facility. This would be inconsistent with the surety requirement established in the City's Engineering Design and Construction Standards adopted pursuant to BDMC Section 15.08.010. To address this, a condition of approval is included in Exhibit C requiring that, before the first implementing project of any one

phase is approved, a more detailed implementation schedule of the regional infrastructure projects supporting that phase shall be submitted for approval. The timing of the projects should be tied to the number of residential units and/or square feet of commercial projects.

E. The timing of the design and alignment of the Pipeline Road will need to be determined as part of the Development Agreement, as parties other than the Applicant must be involved and the roadway alignment will need to be resolved so that water and sewer alignments to The Villages will not be delayed by preliminary road design issues.

F. With respect to traffic impact mitigation, Page 9-3 of the MPD application proposes to monitor traffic and then implement mitigation projects six months after a loss of level of service is identified. This request is denied; instead, mitigation projects should be in place prior to LOS failure. A condition of approval (No. 25) is included in Exhibit C requiring the Applicant to analyze the traffic impact of a pending phase of development before the start of that phase to determine when a street or intersection is likely to drop below the adopted level of service. Transportation mitigation projects should then be implemented to prevent LOS failure. Traffic mitigation projects may change or additional projects be added to address the traffic issues as they actually develop.

G. As discussed in Finding of Fact No. 18.C above, the phasing plan for the parks is not consistent with the criterion above, and a condition is included in Exhibit C to require compliance. As further discussed in Finding of Fact No. 18.D, off-site trail construction necessary to achieve connectivity will be required prior to occupancy and final plat and site plan approval to the extent allowed by law.

31. **BDMC 18.98.080(A)(5):** ***The project, at all phases and at build out, will not result in the lowering of established staffing levels of service including those related to public safety.***

As conditioned, the project meets the criterion above. The 2009 Comprehensive Plan contains levels of service related to police and fire and emergency medical services. The fiscal analysis indicates that staffing levels should generally be allowed to increase in accordance with population growth. Currently, this area of the city has a minimal level of fire and EMS protection. A condition of approval (No. 100) has been added to Exhibit C to require that the Development Agreement include specific provisions for mitigating fire service impacts to ensure protection concurrent with project build out. The conditions of approval regarding fiscal impacts also include a condition (No. 156) that requires that the fiscal analysis ensure that revenues from the project are sufficient to pay the project's pro rata share to maintain staffing levels of service.

32. **BDMC 18.98.080(A)(6):** ***Throughout the project, a mix of housing types is provided that contributes to the affordable housing goals of the City.***

A. As conditioned in Exhibit C below, this criterion is satisfied. Chapter 3 of the MPD application describes a variety of housing types including detached single family,

duplex, triplex, quadplexes, townhouses, cottages, and stacked flats. The Fiscal Analysis (Chapter 12) makes some assumptions regarding housing costs for various potential housing types. However, there is nothing in the remainder of the application to indicate whether all these housing types will be built. A condition is included in Exhibit C requiring that the Development Agreement include targets for various types of housing for each phase of development, as well as a unit split (percentages of single family and multifamily) and commercial use split (commercial, office and industrial).

B. As previously noted, the commercial component of the project will most likely include retail, office and personal service uses. The MPD should provide housing opportunities for individuals anticipated to work at those jobs; this may require a greater mix of multifamily housing and/or the construction of housing types that can meet the affordability goals of the Comprehensive Plan. The staff report proposed a condition that requires the Applicant to meet housing targets for purchasers at specified income levels. The Applicant subsequently indicated its agreement to a modified condition that provides more generalized goals for providing affordable housing. This modification complies with BDMB 18.98.050.A.6 and the law governing the extent to which a development applicant may be compelled to address affordable housing goals. That condition is included in Exhibit C as Condition No. 138.

33. **BDMC 18.98.080(A)(7):** ***If the MPD proposal includes properties that are subject to the Black Diamond Urban Growth Area Agreement (December 1996), the proposal shall be consistent with the terms and conditions therein.***

A. For the reasons detailed in Finding of Fact 18.B, this criterion is satisfied. The Villages MPD includes properties that are subject Black Diamond Urban Growth Area Agreement (BDUGAA) (Exhibit 7): two portions of the Main property (portions of West Annexation area) and the southeastern portion of the Main Property (South Annexation area). The BDUGAA requires that 63.3 acres of open space be provided within the West Annexation Area, which is located in the Villages Main property. BDUGAA, Ex. 7, at 8, Section 5.2(c)(1). The BDUGAA also requires that 81.7 acres of open space be provided within the South Annexation Area. *Id.* at 9, Section 4 (c)(1). As detailed in Finding of Fact No. 18.B, the BDUGAA also requires conveyance or protection and/or conservation of open space properties in unincorporated King County, and in other locations with the City of Black Diamond, and such properties have been conveyed or protected / conserved as provided by the BDUGAA and the BDAOSPA.

B. The BDUGAA also requires that for the West and South Annexation areas a minimum average density of 4 dwelling units/acre be achieved with a base density of 2 du/ac with the remainder achieved through transfer of development rights (TDR). As detailed in Finding of Fact No. 4, the proposal complies with this requirement. As a recommended condition of approval and for the Villages MPD to be consistent with this agreement, the entire "Pipeline Road" link will need to be constructed.

34. **BDMC 18.98.080(A)(8):** ***If the MPD proposal includes properties that were annexed into the city by Ordinances 515 and 517, then the proposal must be consistent with the terms and conditions therein.***

The criterion is satisfied. The MPD proposal includes properties annexed into the City by Ordinance 515 (Exhibit CBD-2-12) and appears to be consistent with the terms and conditions therein.

35. **BDMC 18.98.080(A)(9):** ***The orientation of public building sites and parks preserves and enhances, where possible taking into consideration environmental concerns, views of Mt. Rainier and other views identified in the comprehensive plan. Major roads shall be designed to take advantage of the bearing lines for those views.***

The criterion is satisfied. The application materials indicate that the Community Connector Road and multiple parks are designed to enhance views of Mt. Rainier. There are very limited opportunities for views of Mt. Rainier on The Villages main property. The school site in parcel F may have some views of Mt. Rainier if the areas to the south are cleared. There appears to be reasonable opportunities for views from Parcel B that will be further enhanced if the nearby tailing piles are removed in the future. Staff recommends that these view opportunities be explored and incorporated into the planning process. Exhibit C below includes a condition of approval to implement this recommendation.

36. **BDMC 18.98.080(A)(10):** ***The proposed MPD meets or exceeds all of the public benefit objectives of 18.98.020 and the MPD purposes of 18.98.010, B through M.***

As detailed in the MPD staff report and the analysis above for Sections 18.98.010 and 18.98.020, as conditioned the proposed MPD satisfies these provisions.

37. **BDMC 18.98.080(A)(11):** ***If the MPD project is adjacent to property already developed, or being developed as an MPD, or adjacent to property which is within an MPD zone, then the project is designed so that there is connectivity of trails, open spaces and transportation corridors, the design of streetscape and public open space amenities are compatible and the project will result in the functional and visual appearance of one integrated project with the adjacent properties subject to an MPD permit or, if not yet permitted, within an MPD zone.***

A. The criterion is satisfied. The North Property (Parcel B) and Main Property are not adjacent to property already developed as an MPD. The North Property is adjacent to property zoned MPD. The property to which the Villages Parcel B is adjacent is located to the north of Parcel B, is zoned MPD and is known as the "North Triangle" portion of the proposed Lawson Hills MPD. A soft surface trail connection between Parcel B and the Lawson Hills North Triangle is shown in Chapter 5 of the Villages and Lawson Hills MPD applications. Chapter 4 of the MPD applications shows the North Connector which will connect Parcel B and the North Triangle with SR 169. The proposed street standards

for the two MPD applications are identical, ensuring consistency between the two projects.

B. The Main Property is also adjacent to property zoned MPD. One hundred sixty (160) acres of property adjacent to the Main Property are located between the Villages' proposed Community Connector road and the western City of Black Diamond city limits. Both hard and soft surface potential trail connections between The Villages and these 160 acres are shown in Chapter 5 of the Villages MPD application. Chapter 4 of the MPD application shows three potential future road connections between The Villages and these 160 acres. Any future development will be reviewed against the regulations in effect at that time regarding connectivity of trails, open spaces and transportation corridors, and the compatibility of streetscape design and public open space amenities.

38. **BDMC 18.98.050(A)(12):** ***As part of the phasing plan, show open space acreages that, upon build out, protect and conserve the open spaces necessary for the MPD as a whole. Subsequent implementing approvals shall be reviewed against this phasing plan to determine its consistency with open space requirements.***

A. The criterion is satisfied as conditioned. The Land Use Plan map, Figure 3-1 (July 8, 2010) shows the areas intended as open space. Chapter 5 of the Villages MPD Application also contains a figure on open space typologies at the MPD project scale. Specific development parcel open space consistency shall be verified at the permitting stage.

B. As previously discussed in Conclusion of Law No. 20, even if the Black Diamond Municipal Code is construed as requiring portions of the MPD project area not specifically addressed in the BDUGAA or other prior agreements to provide 50% of their area as open space, the Villages MPD complies with the criterion above. While the phasing of open space is not included within the MPD Application, conditions have been included in Exhibit C below (Nos. 152 – 155) to require that phasing of open space (which includes parks and is identified within the MPD application) be defined and articulated for timing of final designation within the Development Agreement once acreages have been finalized.

39. **BDMC 18.98.080(A)(13):** ***Lot dimensional and building standards shall be consistent with the MPD Design Guidelines.***

The criterion is satisfied as conditioned. Analysis of consistency with the Master Planned Development Framework Design Standards and Guidelines is discussed in a later section of these Conclusions. A recommended condition of approval is to require that this provision be enforced.

40. **BDMC 18.98.080(A)(14):** ***School sites shall be identified so that all school sites meet the walkable school standard set for in the comprehensive plan. The number and sizes of sites shall be designed to accommodate the total number of children that will reside in the MPD through full build-out, using school sizes based upon the applicable***

***school district's standard. The requirements of this provision may be met by a separate agreement entered into between the applicant, the city and the applicable school district, which shall be incorporated into the MPD permit and development agreement by reference.***

A. Determining compliance with this criterion requires identification of the walkable school standard. This is not straightforward. There is no specific "walkable" standard expressed in the 2009 Black Diamond Comprehensive Plan, or the Enumclaw School District Capital Facilities Plan (2009-2014). However, pages 1-10 of the Comprehensive Plan provide as follows:

> The creation of a pedestrian friendly environment is central to the success of the City's plan, and will be implemented by the plan's concept of the "ten-minute walk" The goal is for 80% of City residents have no more than a 0.50-mile walk from a cluster of commercial services, employment, or access to transit.

The half-mile distance is consistent with the maximum distance one would expect a child to walk to school, as well as with the proximity needed in order for schools to provide for joint recreational use as encouraged by Comprehensive Plan Objective CF-14, under School Objectives and Policies, which encourages the use of joint-use agreements for school recreation facilities.

B. Figure 3-1, Land Use Plan, shows four proposed school sites on development parcels V21 (10 ac), V50 (10 ac), V57 (8.4 ac) and V58 (4.1 ac). Alternatively, as shown in Table 3.4 of the application, the applicant is requesting that any development parcel may be used for an institutional use (which could include a school site). Figure 3-2, School Proximity Exhibit, shows that the areas of the project intended for residential use, with the exception of the proposed residential on Parcel B, are within 0.5-1.0 mile of the proposed school site. To ensure compliance with BDMC 18.98.080(A)(14)'s requirement for compliance with the walkability standard, a condition (No. 98) has been included in Exhibit C below to require that, where reasonable and practicable, all schools shall also be located within a half-mile walk of residential areas.

C. To address the Villages MPD's compliance with the remainder of BDMC 18.98.080(A)(14)'s requirements, the Applicant and Enumclaw School District staff have been negotiating a draft school mitigation agreement (Ex. MPD 194 and Ex. 6) to address the district's needs for public schools to serve both the Villages and Lawson Hills MPD. Conditions have been included in Exhibit C require that the Development Agreement include requirements for the Applicant's payment of school impact fees or its proportionate share of school mitigation, based upon the number of school sites and acreage requirements set forth in Exhibit 6.

41. **BDMC 18.98.080(B):** ***So long as to do so would not jeopardize the public health, safety, or welfare, the city may, as a condition of MPD permit approval, allow the applicant to voluntarily contribute money to the city in order to advance projects to meet the city's adopted concurrency or level of service standards, or to mitigate any identified adverse fiscal impact upon the city that is caused by the proposal.***

The criterion above is not mandatory. As discussed in Finding of Fact No. 5(F) the Applicant has agreed to cover any short-falls in fiscal impacts attributable to its development. Beyond this the record does not identify any need at this time to advance funds.

42. **BDMC 18.98.090:** ***MPD permit - Development Agreement. The MPD conditions of approval shall be incorporated into a Development Agreement as authorized by RCW 36.70B.170. This agreement shall be binding on all MPD property owners and their successors, and shall require that they develop the subject property only in accordance with the terms of the MPD approval. This agreement shall be signed by the mayor and all property owners and lien holders within the MPD boundaries, and recorded, before the city may approve any subsequent implementing permits or approvals.***

The MPD conditions of approval will be incorporated into a Development Agreement as required by this criterion.

43. **BDMC 18.98.110(A):** ***Design Standards. The MPD master plan and each subsequent implementing permit or approval request, including all proposed building permits, shall be consistent with the MPD design standards that are in effect at the time each application is determined to be complete.***

Analysis of the MPD master plan consistency with the Master Planned Development Framework Design Standards and Guidelines is discussed in these Conclusions of Law below. Any subsequent implementing permit or approval will be subject to the MPD design standards.

44. **BDMC 18.98.110(B)(1):** ***MPD Permit. The hearing examiner shall evaluate the overall MPD master plan for compliance with the MPD design standards, as part of the examiner's recommendation to the city council on the overall MPD permit.***

Analysis of the MPD master plan consistency with Master Planned Development Framework Design Standards and Guidelines is discussed below.

45. **BDMC 18.98.120(A):** ***MPDs shall include a mix of residential and nonresidential use. Residential uses shall include a variety of housing types and densities.***

The criterion is satisfied. As previously discussed, the MPD proposes residential and commercial uses and the residential uses are proposed at a variety of densities. Conditions of MPD approval in Exhibit C below also require the Development Agreement to provide specific targets for housing types.

46. **BDMC 18.98.120(B):** ***The MPD shall include those uses shown or referenced for the applicable parcels or areas in the comprehensive plan, and may also provide neighborhood commercial uses, as defined in the comprehensive plan, sized and located to primarily serve the residential portion of the MPD.***

The criterion is satisfied. The Comprehensive Plan designation for the North Property is Mixed Use with Master Planned Development Overlay and the Main Property has areas of Low Density Residential and Mixed Use with Master Planned Development Overlay. According to the Comprehensive Plan, "an MPD may include residential and commercial uses clustered around private and community open space, supported by adequate services and facilities." The Mixed Use designation identifies a preferable location for mixed use development within an MPD, in specific areas where the anticipated larger commercial component can also serve the broader community. The potential for mixed uses is permissive, as opposed to being a requirement of development. The Main Property has areas designated for Mixed Use and Low Density Residential uses according to the Comprehensive Plan. The MPD application also includes several parcels designated for high density residential uses in accordance with Section 18.98.120(F). Table 3.4 in the application materials lists neighborhood commercial as a permitted use in low-, medium- and high-density residential areas; however, it is not known if this will actually occur, as the application makes no other mention of it.

47. **BDMC 18.98.120(C):** ***The MPD shall, within the MPD boundary, or elsewhere within the city, provide for sufficient properly zoned lands, and include sufficient incentives to encourage development as permit conditions, so that the employment targets set forth in the comprehensive plan for the number of proposed residential units within the MPD, will, with reasonable certainty, be met before full build-out of the residential portion of the MPD.***

A. The criterion requires the MPD to provide within the MPD boundary or elsewhere within the City (1) sufficient properly zoned lands; and (2) sufficient incentives as permit conditions to encourage development; (3) so that that the employment targets set forth in the comprehensive plan for the number of residential units within the MPD will with reasonable certainty be met. This criterion requires that the "employment targets set forth in the comprehensive plan" be applied to the MPD as well as "elsewhere within the city." As explained below, because there are properly zoned lands for employment development within the MPD and within the City as a whole sufficient to permit the comprehensive plan's employment targets to be met, this criterion is satisfied.

B. As detailed in Finding of Fact No. 22, the Comprehensive Plan includes the City's updated projection for 2,677 new jobs by the year 2025. Table 3-9 characterizes this as 0.5 jobs per household by the year 2025. This is roughly consistent with the Comprehensive Plan's "Employment Targets" shown on Table 5-3, for a year 2025 jobs target of 2,952 jobs (2,525 new jobs) which, when divided by the household target of 6,302 households, is jobs per household ratio of 0.468.

C. As detailed in Finding of Fact No. 22, the Comprehensive Plan also states that "the City's employment target is to provide one job per household within the City by the year 2025, which would translate to a jobs target of 6,534 jobs. However, employment projections used in this update are more conservative in order to recognize that the City's population will need to grow first so that it provides a larger market base that can attract and support a larger market base . . . ." Comprehensive Plan at 3-11 – 3-12.

D. Given the Comprehensive Plan's acknowledgement that more conservative targets are being utilized to recognize that population growth must precede employment growth, and in light of the "Employment Targets" specified in Table 5-3 and on page 3-12, the jobs per household target specified by the Comprehensive Plan is 0.5 jobs per household. Applying this standard to the Villages MPD, the MPD should include sufficient zoned land either within the MPD boundary or the City as a whole, to provide approximately 2,400 jobs (4,800 X 0.5 = 2,400).

E. The Appendix J Fiscal Analysis of the FEIS contains an analysis of the amount of retail/office square footage to be developed within the Villages MPD, which is projected to generate 1,365 employees. Finding of Fact No. 22.E. As detailed in Finding No. 22.D, the City has sufficient zoned lands within it to generate "5,761 total jobs or 5,334 new jobs (from 2000)." Comprehensive Plan at 5-31.

F. The conditions of MPD approval set forth in Exhibit C below also contain a number of incentives for development of the retail/commercial/light industrial lands within the Villages MPD. These include a requirement for designation of a light industrial area, a requirement that the Development Agreement specify a Floor Area Ratio ("FAR") standard for the retail/commercial/light industrial development, a limitation that no more than two floors of residential development be constructed on top of any retail or commercial development, and a granting of the request for reduced parking standards within the Mixed Use Town Center area. Exhibit C, Conditions 140, 145-148.

G. Because the Villages MPD is projected to generate 1,365 jobs within the Villages MPD boundary, because the City has sufficient zoned land within the City as a whole for 5,761 jobs, and because the conditions of approval contain incentives for development of the retail/commercial/light industrial areas, the criterion in BDMC 18.98.120(C) is met.

F. To the extent that a reviewing court may construe the City's Comprehensive Plan employment targets or BDMC 18.98.120(C) otherwise, the Hearing Examiner's observations should also be noted:

> [R]equiring a developer to be responsible for job creation is of dubious validity, both because there is no clear nexus between job creation and mitigation of development impacts and also because placing this type of burden on a developer can be construed as unreasonable.

Hearing Examiner Villages MPD Recommendation at 164, Conclusion 41.

48. **BDMC 18.98.120(E):** ***Property that is subject to a pre-annexation agreement, Development Agreement or annexation ordinance conditions relating to residential density will have as its base density the minimum density designated in such agreement or ordinance. All other property will have as its base density the minimum density designated in the comprehensive plan.***

A. The criterion is satisfied. Two portions of the Main property (portions of West Annexation area) and the southeastern portion of the Main Property (South Annexation area) are subject to a pre-annexation agreement, the Black Diamond Urban Growth Area Agreement (BDUGAA) (Ex. CBD-2-7). The BDUGAA requires that for the West and South Annexation areas a minimum average density of 4 dwelling units/acre be achieved with a base density of 2 du/ac with the remainder achieved through transfer of development rights (TDR). As stated in Finding of Fact No. 4, the Villages MPD proposes an average density of 4.01 units per gross acre (4,800 units/1,196 acres = 4.0133). This complies with the BDUGAA's requirements.

B. The portion of the Villages Main Property not subject to the BDUGAA has a Comprehensive Plan Master Plan Development overlay. The MPD Overlay requires a minimum of 4 dwelling units per gross acre. Comprehensive Plan at 5-13. The portion of the Villages Main property not subject to the BDUGAA also has an underlying Comprehensive Plan designation of Low Density Residential, which has a base density of 4-6 dwelling units du/gross ac. The northwest corner of the Main Property has an underlying Comprehensive Plan designation of Mixed Use which does not propose a base density.

C. As noted above, as stated in Finding of Fact No. 4 the Villages MPD proposes an average density of 4.01 units per gross acre (4,800 units/1,196 acres = 4.0133). This complies with the minimum densities set forth for these properties in the Comprehensive Plan. The minimum 1 unit per acre density allowance described in the Villages MPD application (page 3-19, Table 3.2) is not consistent with the BDUGAA or the City's Comprehensive Plan. Therefore, a condition of approval is included in Exhibit C below requiring a minimum density of 4 du/ac.

**49. BDMC 18.98.120(F):** ***The council may authorize a residential density of up to 12 dwelling units per acre so long as all of the other criteria of this chapter are met, the applicant has elected to meet the open space requirements of section 18.98.140(G), or otherwise is providing the open space required by section 18.98.140(F), and the additional density is acquired by participation in the TDR program. In any development area within an MPD, for which the applicant has elected to meet the open space requirements of Section 18.98.140(G) or is otherwise meeting the open space requirement of [Section] 18.98.140(F), an effective density of development up to a maximum of eighteen dwelling units per gross acre may be approved, so long as the total project cap density is not exceeded and the development, as situated and designed, is consistent with the provisions of [Sections] 18.98.010 and 18.98.020. A MPD may include multi-family housing at up to thirty dwelling units per gross acre, subject to the following:***

A. This provision establishes an overall density of 12 du/ac for the entire proposal, and does not set a maximum cap for specific parcels within the project boundaries. The areas proposed for medium density residential range from 7-12 du/ac and high density 13-30 du/ac (with certain areas dedicated to 18-30 units in accordance with the additional criteria below). As discussed above, the MPD meets the requirements of both BDMC 18.98.140(F) and 18.98.140(G) even assuming that 18.98.140(G) applies independently to those portions of the MPD that are not covered by a prior agreement. As detailed under the analysis above for Sections 18.98.010 and 18.98.020, as conditioned the proposed MPD satisfies these provisions

**BDMC 18.98.120(F)(1):** ***Areas proposed for development at more than 18 dwelling units per gross acre shall be identified on the MPD plan; and***

B. Figure 3-1 Land Use Plan in the MPD application shows eight areas (development parcels V3, V4, V5, V6, V10, V13, V14 and V17) totaling approximately 35 acres intended for high-density residential over 18 du/ac.

**BDMC 18.98.120(F)(2):** ***Identified sites shall be located within ¼ mile of shopping/commercial services or transit routes; and***

C. The eight parcels would be located adjacent to proposed shopping/commercial services, and therefore comply with the requirement that they be located within ¼ mile of shopping/commercial services or transit routes.

**BDMC 18.98.120(F)(3):** ***The maximum building height shall not exceed 45 feet; and***

D. Table 3.8 Residential Development Standards in the MPD application shows 45 feet as a maximum height for high-density residential development. Therefore, this criterion is met.

**BDMC 18.98.120(F)(4):** ***Design guidelines controlling architecture and site planning for projects exceeding 18 dwelling units per gross acre shall be included in the required Development Agreement for the MPD; and***

E. Appendix E of the application contains the high-density residential (18-30 du/ac) supplemental design standards and guidelines. Staff is recommending these guidelines become part of the Development Agreement. Analysis of the MPD master plan consistency with the Master Planned Development Framework Design Standards and Guidelines is discussed in a later section of this report.

**BDMC 18.98.120(F)(5):** ***Residential uses located above ground floor commercial/office uses in mixed use areas within a MPD are not subject to a maximum density, but area subject to the maximum building height, bulk/massing, and parking standards as defined in the design guidelines approved for the MPD. No more than two floors of residential uses above the ground floor shall be allowed.***

F. Mixed use as described above is proposed in the application on parcels V11 and V12. A recommended condition stipulates that no more than two floors of residential uses above ground floor commercial/office uses shall be allowed.

50. **BDMC 18.98.120(G):** ***Unless the proposed MPD applicant has elected to meet the open space requirements of section 18.98.140(G), or is otherwise meeting the open space requirements of section 18.98.140(F), the following conditions will apply, cannot be varied in a Development Agreement, and shall preempt any other provision of the code that allows for a different standard:***
***1-3 [Not listed here; refer to BDMC for complete code text.]***

As set forth in Finding of Fact No. 18.B, the open space requirements of section 18.98.140(F) are met, because the Villages MPD "contain[s] the amount of open space required by any prior agreement," namely, the BDUGAA and the BDAOSPA. Further, even if Section 18.98.140(G) is construed as applying independently to those portions of the Villages MPD that were not included within the BGUGAA, the provisions of BDMC 18.98.140(G) are met. Therefore, the prohibitions in BDMC 18.98.120(G)(1)-(3) do not apply to this project.

51. **BDMC 18.98.130:** ***MPD standards - Development standards.***

> ***A. Where a specific standard or requirement is specified in this chapter, then that standard or requirement shall apply. Where there is no specific standard or requirement and there is an applicable standard in another adopted city code, policy or regulation, then the MPD permit and related Development Agreement may allow development standards different from set forth in other chapters of the Black Diamond Municipal Code, if the proposed alternative standard:***

***1. Is needed in order to provide flexibility to achieve a public benefit; and***

***2. Furthers the purposes of this chapter and achieves the public benefits set forth in Section 18.98.010; and***

***3. Provides the functional equivalent and adequately achieves the purpose of the development standard for which it is intended to deviate.***

***B. Any approved development standards that differ from those in the otherwise applicable code shall not require any further zoning reclassification, variances, or other city approvals apart from the MPD permit approval.***

A. Chapter 13 of the MPD application lists the Applicant's requests for "functionally equivalent standards." There are 19 separate requests that seek to deviate from adopted city codes and standards. In its closing statement to the City Council, however, the Applicant withdrew its request for deviation from the Tree Preservation Ordinance (BDMC 19.30), and its requests for deviation from required front yard setback fro garages, alternate parking lot landscaping, allowance for additional compact parking stalls, and insufficient parking outside of the Town Center area. Applicant's Closing Statement in Response to Council Questions and Parties of Record Statements at Section IX, pp. 1-2. One request, for reduced parking standards in the Town Center, is justified, because it is common to have flexible parking standards within mixed use and "downtown" areas. Therefore, this request will be granted in part in the conditions of approval set forth in Exhibit C below.

B. The City Council recognizes the advantages of flexibility and provides a mechanism for exploring alternatives to the City's water, sewer, and stormwater comprehensive plan concepts. Staff and the applicant can resolve the large, overarching design issues and work to establish functionally equivalent construction standards as part of the Development Agreement. The Engineering Design and Construction Standards contain an administrative deviation process (section 1.3) that does not require a showing of hardship. Any proposed deviation from standards must show comparable or superior design and quality; address safety and operations; cannot adversely affect maintenance and operation costs; will not adversely affect aesthetic appearance; and will not affect future development or redevelopment. Most of the requested functionally equivalent standards for streets and utilities can be addressed in the Development Agreement and through the Engineering, Design and Construction Standards' administrative deviation process.

C. The following requests do not need to be considered as "functionally equivalent standards" and can therefore be addressed through the Development Agreement process:

18.100 Definitions—generally, this is not an area where "functional equivalency" is applicable. While adding words that are not already defined in City code may make some sense, in City code, there is no advantage to treating proposed alternative definitions as "functionally equivalent" standards.

18.76 Gateway Overlay District—grading, removal of invasive species, and installation of infrastructure within the public right of way are not subject to the Gateway District overlay (per Section 18.76.020.B). Therefore, the Applicant's request is unnecessary.

18.38—Community Commercial (CC) Zone Standards and Allowed Uses; Parcel B is being rezoned to MPD as part of this MPD approval.

18.30—R4 Zone Standards—None of the property associated with The Villages is currently zoned R4, nor will be zoned R4.

52. **BDMC 18.98.140(A)*: Open space is defined as wildlife habitat areas, perimeter buffers, environmentally sensitive areas and their buffers, and trail corridors. It may also include developed recreational areas, such as golf courses, trail corridors, playfields, parks of on-quarter acre or more in size, pocket parks that contain an active use element, those portions of school sites devoted to outdoor recreation, and stormwater detention/retention ponds that have been developed as a public amenity and incorporated into the public park system. An MPD application may propose other areas to be considered as open space, subject to approval. It shall not include such space as vegetative strips in medians, isolated lands that are not integrated into a public trail or park system, landscape areas required by the landscape code, and any areas not open to the public, unless included within a sensitive area tract as required by Chapter 19.10.***

The project proposes to preserve amounts of open space as detailed on page 3-10 of the MPD application. They include a mix of passive and active areas comprised of sensitive areas such as wetlands, associated buffers, trails, parks, forested areas and utilities such as stormwater ponds. The Land Use Plan map, Figure 3-1 (July 8, 2010) depicts a majority of the open space areas as a coordinated network. The vast majority of open space will be maintained as sensitive areas and their buffers. The uses proposed for the open space areas shown on Figure 3-1 comply with the requirement of BDMC 18.98.140(A). Further, use of sensitive areas and their associated buffers for development including trails, stormwater management, etc. is regulated by the City's sensitive areas ordinance, BDMC Chapter 19.10. Appropriate mitigation for impacts, if required, as well as other required measures would apply and will be evaluated on a case-by-case basis at the time of implementing project application. Chapter 5 of the MPD application (p. 5-5) also contains a figure on open space typologies at the MPD project scale. Specific development parcel open space consistency would need to be verified at the permitting stage. Storm ponds should only be considered as open space if they are developed as an amenity and incorporated into the public park system. A condition of approval is included in Exhibit C below identifying specific criteria to be applied to determine whether a particular storm pond has been developed as an "amenity."

53. **BDMC 18.98.140(B):** ***Natural open space shall be located and designed to form a coordinated open space network resulting in continuous greenbelt areas and buffers to minimize the visual impacts of development within the MPD, and provide connections to existing or planned open space networks, wildlife corridors, and trail corridors on adjacent properties and throughout the MPD.***

A. Figure 3-1 of the application shows that the dedicated open space areas serve as a coordinated network. In order to enhance this coordination for natural areas, a recommended condition of approval is to require that areas shown as natural open space/areas in the figure on page 5-7 of the application to remain natural, with the possibility for vegetation enhancement. No other land clearing shall be permitted other than trails and storm ponds. As previously noted, the figure on page 5-5 depicts some areas as "natural open space" that are also proposed to include stormwater facilities. As noted above, stormwater facilities may be considered as open space only if designed as an amenity. Other than trails and stormwater facilities designed as amenities, the natural areas in the figure on page 5-7 of the Villages MPD application shall be required to remain natural with the possibility for vegetation enhancement. Retention in the natural state is necessary in order to maintain continuous greenbelt areas as required in the criterion above.

B. In order to retain currently forested open space areas in their natural condition, the Development Agreement should also include text that defines when and under what conditions a parcel may be logged for timber revenue, how that parcel must be secured to minimize the impacts on the community and how long the parcel may remain un-worked before it must be reforested. And, the Development Agreement should include a narrative of the process and basis for removing selective hazard trees at the project perimeter. The intent of this section will be to leave the majority of the perimeter as designated passive open space, and to have it appear and function as native forest.

54. **BDMC 18.98.140(C):** ***The open space shall be located and designed to minimize the adverse impacts on wildlife resources and achieve a high degree of compatibility with wildlife habitat areas where identified.***

This criterion is met. The Villages MPD is designed so that open space outlines the sensitive areas and their relevant buffers, so as to minimize impacts on wildlife resources. As noted in Finding of Fact No. 12.B, the wildlife corridors proposed as part of the Villages MPD are adequate because they provide at least double the minimum width recommended by King County's network biologist, and provide sufficient space for wildlife to travel around spots where natural barriers such as flooded wetlands are present. And, while some development impacts to wildlife are unavoidable, the large amount of open space provided by the Villages MPD proposal provides appropriate mitigation for any significant, adverse impacts to wildlife. Finding of Fact 12.C. And, mitigation measures related to fish and wildlife are included in Exhibit C as conditions of approval.

55. **BDMC 18.98.140(D):** ***The approved MPD permit and Development Agreement shall establish specific uses for open space within the approved MPD.***

Chapters 3 and 5 of the MPD application, including tables 3.4 and page 5-6, describe proposed open space uses. For those portions of the open space that are sensitive areas or associated buffers, minimal flexibility exists as it relates to uses within these areas. All activities shall be conducted in accordance with BDMC Chapter 19.10. The Development Agreement shall include a tabular list of the types of activities and the characteristics of passive open space and active open space so that future land applications can accurately track the type and character of open space that is provided. A condition of approval is included in Exhibit C requiring the Development Agreement to include language that specifically defines when the various components of permitting and construction must be approved, completed or terminated (e.g., when must open space be dedicated, plats recorded, and utility improvements be accepted by the City).

56. **BDMC 18.98.140(E):** ***The approved MPD permit and Development Agreement shall establish which open spaces shall be dedicated to the city, which shall be protected by conservation easements, and which shall be protected and maintained by other mechanisms.***

Page 5-2 of the MPD application generally describes proposed ownership, but as to sensitive areas only identifies various options rather than any specific type of ownership mechanism. A condition of approval is included in Exhibit C below requiring that specific details on which open space is to be dedicated to the city, protected by conservation easements or protected and maintained by other mechanisms be established as part of the Development Agreement. An additional condition of approval will also require language in the Development Agreement that will allow for public access to parks and trails facilities.

57. **BDMC 18.98.140(F):** ***An approved MPD shall contain the amount of open space required by any prior agreement.***

As discussed in Findings of Fact No. 18B and Conclusions of Law Nos. 6, 20, 33, and 49 above, the MPD application contains the amount of open space required by the BDUGAA and the BDAOSPA.

58. **BDMC 18.98.140(F):** ***If an applicant elects to provide fifty percent (50%) open space, then the applicant may be allowed to vary lot dimensions as authorized elsewhere in this chapter, cluster housing, and seek additional density as authorized in Section 18.98.120(F).***

The application is seeking to vary lot dimensions, cluster housing and include high-density residential housing. As discussed above, this is permitted pursuant to Section 18.98.120.F, because the Applicant has complied with BDMC 18.98.140(F). Therefore, compliance with BDMC 18.98.140(G) is not required. As discussed above, even if BDMC 18.98.140(G) is construed as applying independently to those portions of the

MPD site not included in the BDUGAA, those portions of the Villages MPD proposal not included within the BDUGAA provide 50% of open space (336.4 ac total). The MPD proposal satisfies this requirement, to the extent that it applies.

59. **BDMC 18.98.150(A):** ***An MPD shall provide on-site recreation areas and facilities sufficient to meet the needs of MPD residents, exceeding or at a minimum consistent with levels of service adopted by the city where applicable. This shall include providing for a coordinated system of trails and pedestrian linkages both within, and connecting to existing or planned regional or local trail systems outside of the MPD.***

**(B).** ***The MPD permit and Development Agreement shall establish the sizes, locations, and types of recreation facilities and trails to be built and also shall establish methods of ownership and maintenance.***

A. Chapter 5 of the MPD application contains information regarding proposed recreation areas and facilities. The proposal meets the adopted levels of service with regard to on-site parks and recreation areas and facilities. In addition, as discussed in Conclusions 15 and 24 above, the MPD includes a coordinated system of trails and pedestrian linkages, both within and connecting to existing or planned trail systems outside of the MPD. Therefore, the criteria in BDMC 18.98.150(A) and (B) are satisfied.

B. Based on maps included with the application, it appears that a significant amount of trail systems will be located within the buffer areas and potentially within sensitive areas themselves. The use of sensitive areas and their associated buffers for development including trails and stormwater management requires appropriate mitigation and other requirements in accordance with BDMC Section 19.10. Conditions of approval in Exhibit C below will require that the Development Agreement include a unit trigger for when trails need to be constructed, and establish the sizes, locations and types of recreation facilities and trails to be built, along with methods of ownership and maintenance. Further, the City, and not the Applicant, must retain discretion concerning when and if a lump sum payment by the Applicant can be accepted in lieu of constructing off-site recreational facilities.

60. **BDMC 18.98.155(A):** ***The requirements of the Sensitive Areas Ordinance (BDMC 19.10) shall be the minimum standards imposed for all sensitive areas.***

The Applicant has requested a deviation from Sensitive Area Ordinance standards. This is denied. The general authority under MPD code provisions in BDMC Ch. 18.98 to vary development standards is superseded by the more specific requirement in BDMC 18.98.155(A). The Villages MPD must at minimum comply with the Sensitive Areas Ordinance. A condition of approval shall be included requiring that the Development Agreement include language providing that areas subject to the Sensitive Areas Ordinance are fixed at the time the mapped boundaries of sensitive areas have been delineated and approved by City staff. If during construction it is discovered that the actual boundary is smaller or larger than what was mapped, the mapped boundary should

prevail. The applicant should neither benefit nor be penalized by errors or changes in the sensitive area boundaries as the projects are developed.

61. **BDMC 18.98.155(B):** ***All development, including road layout and construction, shall be designed, located and constructed to minimize impact of wildlife habitat and migration corridors. This shall include minimizing use of culverts in preference to open span crossings.***

With respect to the proposed "Community Connector at Sensitive Areas" (Figure 4-4 in the MPD application), impacts to sensitive areas and buffers should be mitigated, if necessary, in accordance with BDMC 19.10 at the time of actual development. The Villages MPD project overall, including road locations, has been designed to minimize impacts to wildlife and migration corridors as set forth above and in the Finding of Fact No. 12.

**62. BDMC 18.98.160(A):** ***All proposed transfers of development rights shall be consistent with the TDR program (Chapter 19.24). An MPD permit and Development Agreement shall establish the TDR requirements for a specific MPD. Maximum allowable MPD residential densities can only be achieved through participation in the city's TDR program as a receiving site.***

The MPD application is consistent with the City's transfer of development rights program. Specifics as they pertain to development right use and timing shall be included within the Development Agreement.

63. **BDMC 18.98.160(A):** ***Property that is subject to a pre-annexation agreement, Development Agreement or annexation ordinance conditions relating to residential density will have as its base density the density designated in such agreement or ordinance. All other property will have as its base density the minimum density designated in the comprehensive plan.***

This criterion is met. *See* Conclusion of Law No. 48 above.

64. **BDMC 18.98.170(A):** ***Street standards shall be consistent with the MPD design guidelines, which may deviate from city-wide street standards in order to incorporate "low impact development" concepts such as narrower pavement cross-sections, enhanced pedestrian features, low impact stormwater facilities, and increased connectivity or streets and trails. Any increased operation and maintenance costs to the city associated therewith shall be incorporated into the fiscal analysis.***

Functionally equivalent standards are expected be approved on a general level in the Development Agreement and specific deviations can be dealt with at the site development and design phase using the existing administrative deviation process under the City's Engineering Design and Construction Standards.

65. **BDMC 18.98.170(B):** ***The street layout shall be designed to preserve and enhance views of Mt. Rainier or other views identified in the city's comprehensive plan to the extent possible without adversely impacting sensitive areas and their buffers.***

The criterion is satisfied. The application materials indicate that the Community Connector Road and multiple parks are designed to enhance views of Mt. Rainier. There are very limited opportunities for views of Mt. Rainier on The Villages main property. The school site in parcel F may have some views of Mt. Rainier if the areas to the south are cleared. There appears to be reasonable opportunities for views from Parcel B that will be further enhanced if the nearby tailing piles on property not owned by the Applicant are removed in the future. A condition is included in Exhibit C below encouraging the Applicant to explore opportunities for view enhancement and incorporate them into the planning process.

66. **BDMC 18.98.170(C):** ***The approved street standards shall become part of the MPD permit approval, and shall apply to public and private streets in all subsequent implementing projects except when new or different standards are specifically determined by the city council to be necessary for public safety.***

Implementing projects shall be designed to foster the development of a street grid system. Functionally equivalent standards are expected be approved on a general level in the Development Agreement and specific deviations will be addressed at the site development and design phase using the existing administrative deviation process under the City's Engineering Design and Construction Standards.

67. **BDMC 18.98.180(A):** ***The stormwater management system shall enhance the adopted standards that apply generally within the city, in order to implement the concepts in sections 18.98.010(C), (H), and (L), 18.98.020(B) and (C), and 18.98.180(C). The stormwater detention system shall be publicly owned. Provided, in non-residential areas, the use of private vaults and filters may be authorized where: 1) the transmission of the stormwater by gravity flow to a regional system is not possible and 2) there is imposed a maintenance/replacement condition that requires vault filters to be regularly inspected and maintained by the property owner.***

A. The criterion is met. The AESI reports in Appendix D to the TV FEIS show conclusively that the stormwater system has been designed to locate infiltration ponds in areas that will recharge aquifers as required by BDMC 18.98.180(C). Planning on such a large scale has enabled the applicant to use its land efficiently for stormwater purposes, such as creation of a regional infiltration pond that would otherwise be segmented in several areas and thereby increase the need to encroach and segment natural open space and wildlife corridors. In this respect the regional nature of the facilities furthers the purposes of BMDC 18.98.010(C). The Applicant proposes a list of low impact development techniques, maximizing the use of permeable soils, thereby promoting environmentally sustainable development as contemplated in BDMC 18.98.010(H). The efficiencies of using a regional stormwater system also promote compact development as contemplated in BDMC 18.98.010(L). As further required by the criterion above, the

Applicant proposes public ownership of the facility as identified in page 6-4 of the Villages MPD application.

B. Conditions of approval require use of the most recent DOE stormwater manual (the 2005 SWMMWW). They also require that in the event that new phosphorus treatment technology is discovered and is either certified by DOE as authorized for use in meeting requirements of the SMMWW or is in use such that it is considered by the stormwater engineering community as constituting part of AKART, then the Applicant shall incorporate that new phosphorus treatment technology in all new ponds and facilities. These conditions provide additional compliance with the criterion above, by ensuring that the most up to date standards and technologies are employed to maximize the effectiveness and efficiency of the stormwater system.

68. **BDMC 18.98.180(B):** ***The stormwater management system shall apply to public and private stormwater management systems in all subsequent implementing projects within the MPD, except when new or different standards are specifically determined by the city council to be necessary for public health or safety, or as modified as authorized in section 18.98.195(B).***

The City's storm water codes apply to both public and private improvements.

69. **BDMC 18.98.180(C):** ***Opportunities to infiltrate stormwater to the benefit of the aquifer, including opportunities for reuse, shall be implemented as part of the stormwater management plan for the MPD.***

The criterion is satisfied. The stormwater management plan proposed as part of The Villages takes advantage of the soil conditions in and around the project for infiltration. The stormwater management plan will incorporate distributed infiltration through Low Impact Development and a regional infiltration pond for the excess volume from the developed site. Opportunities for water reuse are preserved with the central collection of stormwater.

70. **BDMC 18.98.180(D):** ***The use of small detention/retention ponds shall be discouraged in favor of the maximum use of regional ponds within the MPD, recognizing basin constraints. Ponds shall be designed with shallow slopes with native shrub and tree landscaping and integrated into the trail system or open space corridors whenever possible. Small ponds shall not be allowed unless designed as a public amenity and it is demonstrated that transmitting the stormwater to a regional pond within the MPD is not technically feasible.***

The criterion is satisfied. A regional storm water system is proposed with sensitivity to existing wetlands and water balance within the basins. A condition of approval requires that stormwater ponds proposed to be included as "open space," and must be developed as a public amenity (i.e., safe, accessible, and aesthetically pleasing). A condition of approval is included in Exhibit C below to require that mechanisms be identified to integrate LID into the overall design of the stormwater system for the benefit of surface

and groundwater resources, provided that future Homeowners' Associations bear the increased cost of landscape maintenance that may be required as a result of use of LID.

71. **BDMC 18.98.190(A):** ***An MPD shall be served with public water and sanitary sewer systems that:***

> ***1. Employ innovative water conservation measures including metering technologies, irrigation technologies, landscaping and soil amendment technologies, and reuse technologies to reduce and/or discourage the reliance upon potable water for nonpotable uses including outdoor watering.***

This criterion is satisfied. See Conclusion of Law No. 72 below.

> ***2: Are designed in such a way as to eliminate or at a minimum reduce to the greatest degree possible the reliance upon pumps, lift stations, and other mechanical devices and their associated costs to provide service to the MPD.***

A. This criterion is met subject to conditions. First, the Council recognizes that it may be impractical in the early stages of this project to construct the regional sewer pump station within the area identified within the application as the western expansion parcel. Therefore, the Council concludes that an interim sewer pump station will comply with the above criterion, provided that:

i. Routing of the gravity sewer mains is consistent with the City's ultimate plan for routing sewage; and

ii. No capital facility charge credit will be considered for interim improvements.

B. In addition, for the Northern Parcel, the Villages MPD application states there will be a point of connection in SR 169. Although that connection point will function, abandonment of the Diamond Glen sewer pump station and connection of the new sewer force main to the existing Diamond Glen sewer force main will be required. Continued installations of redundant interim sewer pump stations would be inconsistent with the criterion above, and will not be permitted. A pump station may be necessary to serve the easternmost portion of Parcel F. Alternatively, if the property to the north has developed or easements are obtained, the eastern area of Parcel F can be served by gravity to the existing King County Jones Lake sewer pump station.

C. King County is in the pre-design phase of an equalization sewer storage project to reduce the peak flow from the Black Diamond sewer service area. Currently, the City and King County have different proposals as to where such a storage facility should be located. When the final location is determined, the Applicant may need to shift its sewer infrastructure to deliver sewage from The Villages to a location upstream of the existing King County pump station G located just southwest of existing downtown Black Diamond. A condition of a approval is added to Exhibit C to so require.

D. The Applicant shall pay the Capital Facilities Charge in accordance with BDMC 13.04.020 and 13.04.295, as they exist or are subsequently amended. Page 8-1 of the Villages MPD application states, "Since water use can vary significantly...projected water use per ERU will be determined at the preliminary plat, binding site plan or site plan approval stage and confirmed prior to Occupancy." This statement implies that the developer can establish their own capital facility charge rate based on projected water use within The Villages. While the Applicant may anticipate that households within the Villages will use less water than other single- or multi-family households, the amount of water used by an "equivalent residential unit" is set by the City's water comprehensive plan. BDCM 13.04.020. Until such time as either the City's code or the water comprehensive plan is amended, the Applicant must pay a CFC in accordance with the same rules that apply to other development.

E. The planned projects for water service to The Villages are consistent with the City's Water Comprehensive Plan. If the City and developer identify new alternatives to distribute water to The Villages that will meet fire flow requirements, maintain redundant looping of the water system and/or reduce the needed facilities without compromising the level of service, the applicant shall pay the cost of a water comprehensive plan update if one is needed to accommodate such alternatives prior to the next scheduled water comprehensive plan update.

72. **BDMC 18.98.190(B):** ***Each MPD shall develop and implement a water conservation plan to be approved as part of the Development Agreement that sets forth strategies for achieving water conservation at all phases of development and at full build out, that results in water usage that is at least ten percent less the average water usage in the city for residential purposes at the time the MPD application is submitted. For example, if the average water usage is 200 gallons per equivalent residential unit per day, then the MPD shall implement a water conservation strategy that will result in water use that is 180 gallons per day or less per equivalent residential unit.***

This criterion is satisfied. The water conservation plan identified on page 8 of the MPD applications meets the requirements of BDMC 18.98.190(B) above. A condition of approval (No. 54) will be included in Exhibit C requiring that the water conservation plan be evaluated for its effectiveness in light of the City's available water resources after 500 dwelling units have been constructed. At that time, additional measures may be imposed.

73. **Master Planned Development Framework Design Standards and Guidelines (MPDFSG) (A)(Environmentally Sustainable)(p. 3):** ***To provide resource-efficient site design which includes consideration for saving trees, constructing on-site stormwater retention/infiltration features, and building orientation to maximize passive solar heating and cooling.***

This criterion is satisfied. The Villages MPD application indicates that Low Impact Development techniques will be used for treating and disposing of stormwater. This shall be required as a condition of approval, wherever practical and feasible. Because no specific lot layouts are included in the MPD application, compliance or noncompliance

with solar orientation cannot be determined at this time. The City's Tree Preservation Ordinance will assure a significant retention and/or replacement of trees.

74. **MPDFSG (A)(1):** ***Implement a construction waste management plan to reduce construction waste. Consider life-cycle environmental impacts of building materials.***

This criterion is satisfied, with the condition that the Applicant shall submit a construction waste management plan as part of the Development Agreement.

75. **MPDFSG (A)(2):** ***Incorporate energy-saving techniques into all aspects of building's design and operation.***

This criterion shall be evaluated at the time of individual building permit applications.

76. **MPDFSG (A)(3):** ***Maximize water conservation by maintaining or restoring pre-development hydrology with regard to temperature, rate, volume and duration of flow; use native species in landscaping; recycle water for on-site irrigation use.***

This criterion will be satisfied, subject to a condition requiring use of native vegetation in street landscaping and in parks. The Development Agreement will be required to include a water conservation plan with performance measurements; a general landscape plan; and a stormwater management plan.

77. **MPDFSG (A)(4):** ***Use measures that can mitigate the effects of potential indoor air quality contaminants through controlling the source, diluting the source, and capturing the source through filtration.***

This will be addressed at the time of future building permit applications.

78. **MPDFSG (A)(5):** ***Reduce overall community impacts by providing connectivity from the project to the community; by incorporating best management practices for stormwater management; by creating useable public spaces such as plazas and parks; and by protecting important community-identified viewsheds and scenic areas.***

This criterion is satisfied. In addition, high pedestrian use is expected to develop east-west along Auburn Black Diamond Road/Roberts Drive to and from The Villages and existing neighborhoods to the east. The existing Roberts Drive bridge over Rock Creek is currently unsafe for pedestrians. A condition of approval will be included requiring that a connecting sidewalk and safe pedestrian connection to the programmed sidewalk in the Morganville area be constructed, provided that a design study confirms that the improvement is feasible from an engineering standpoint and that construction costs will be reasonable. Construction timing should be specified in the Development Agreement.

79. **MPDFSG (A)(6):** ***Grading plans shall incorporate best management practices with phased grading to minimize surface disturbance and to maintain significant natural contours.***

This criterion is satisfied, subject to a condition that will be included as a condition of approval in Exhibit C below, requiring compliance with the Framework Standards and Guidelines. Further, a condition of approval will be included requiring that, prior to the approval of the first implementing plat or site development permit within a phase, the Applicant shall submit an overall grading plan that will balance the cut or fill so that the amount of cut or fill does not exceed the other by more than 20%. This will insure that unnecessary mining of material will not occur and reuse of existing materials will be maximized.

80. **MPDFSG (B)(p. 4)**: ***Black Diamond has a specific history and setting that involves varied topography, an agricultural past, forested areas, mining, and a small town scale. Care should be taken to reflect these patterns in master planned developments. In addition, the MPD chapter of Black Diamond's Municipal Code requires that fifty percent (50%) of the total land area of an MPD be maintained as open space. Proper design and integration of this open space into a development is very important.***

***Guidelines***

***1. All master planned developments shall include a wide range of open spaces, including the following:***

***a. Sensitive environmental features and their buffers***
***b. Greenbelts***
***c. Village greens***
***d. Parks and school playgrounds***
***e. Public squares***
***f. Multi-purpose trails***

***These features should be deliberately planned to organize the pattern of development and serve as centerpieces to development cluster, not merely as "leftover" spaces.***

***2. Open spaces shall be linked into an overall non-motorized network through sidewalks, trails and parkways.***

***The overall network shall be delineated at initial MPD approval and implanted through subsequent plats and permit approvals.***

For reasons previously discussed, this criterion is satisfied, because the Villages MPD proposal meets the intent of these guidelines.

81. **MPDFSG (B)(3)**: ***Stands of trees as an element of open space. Due to the propensity of severe wind events in the Black Diamond area, an MPD should incorporate the preservation of larger rather than smaller stands of native trees.***

This criterion is satisfied. There are forested areas proposed for retention as open space (Compare Figure 10-1 with Land Use Plan (Figure 3-1)). In addition, a condition of approval is included that requires a tree inventory prior to the development of implementing projects so that other opportunities to preserve trees may be realized. The City's Tree Preservation Ordinance will also result in significant large tree retention.

82. **MPDFSG (C)(p. 5)**: ***To allow for an efficient use of land, lower the cost of infrastructure and construction, protect environmentally sensitive areas, and maintain a small town "village" character within an MPD. Development is to be integrated with networks of preserved natural features and developed open space for both passive and active recreational uses.***

***Guidelines***

***1. Use of conventional, suburban-style subdivision design that provides little common open space shall be avoided.***
***2. Groupings of primarily residential development of approximately 400-600 units should be contained generally within a quarter mile radius to support walking, bicycling and future transit service. Development clusters shall be surrounded by a network of open space with a variety of recreational uses (including trails) to provide connections between clusters.***
***3. Methodology for Planning Development in clusters.***
***a. environmentally sensitive areas to be protected (including streams, wetlands, steep slopes, wildlife corridors, and their buffers) shall be identified, mapped and used as an organizing element for design;***
***b. areas for development of housing and commercial development shall be indicated;***
***c. streets and public spaces (as well as sites for public facilities such as schools, fire stations and other civic structures) shall be identified;***
***d. lots and groups of lots with various ownerships (i.e. fee simple by occupant, condominium, single ownership apartments, etc) shall be integrated with one another throughout all phases of a project;***
***e. views of Mt Rainier and other desirable territorial views shall be identified and integrated into site planning to maximize viewing from public spaces (streets, trails, parks, plazas, etc.).***

For reasons previously discussed and as demonstrated in the layout proposed in the MPD applications, the Villages MPD meets the intent of these guidelines; therefore, these guidelines are satisfied.

83. ***MPDFSG (D)(Ensuring Connectivity)(p. 6)****: To promote ease of mobility and access within all portions of the development.*

***1. Pedestrian Connectivity***

***a. Similar to a traditional small town, services and common spaces shall be easily accessible to residents on foot. Off-street pedestrian trails are to be provided as a network throughout the development. Pedestrian connections shall be provided where cul-de-sacs or other dead-end streets are used.***

As conditioned, the criterion is satisfied. The MPDs propose an integrated trail network that connects all portions of the development, including up to the commercial portions of the projects. In addition, high pedestrian use is expected to develop east-west along Auburn Black Diamond Road/Roberts Drive to and from The Villages and existing neighborhoods to the east. The existing Roberts Drive bridge over Rock Creek is currently unsafe for pedestrians. A condition of approval will be included requiring that a connecting sidewalk and safe pedestrian connection to the programmed sidewalk in the Morganville area be constructed, provided that a design study confirms that the improvement is feasible from an engineering standpoint and that construction costs will be reasonable. Construction timing should be specified in the Development Agreement.

84. **MPDFSG (D)(2)(a): *The system of streets shall demonstrate a high degree of both vehicular and pedestrian connectivity, allowing residents and visitors multiple choices of movement. Isolated and dead-end pockets of development are not desired.***

As depicted in Figure 4-1 of the MPD applications, the proposals depict only an "approximate" and basic "skeleton" of a future street system and descriptions of street types including cul-de-sacs. The trail networks depicted in Chapter 5 of the applications provide more detail. The vehicular and pedestrian circulation plans proposed by the Applicant exhibit several connection points to adjoining properties, thus demonstrating a high degree of connectivity as required by the criterion above. Therefore, this criterion is satisfied. For clarification, page 4-26 of the MPD application refers to a connection point to Green Valley Road. This is construed as in error, because the connection is not depicted in the Land Use Plan and the FEIS assesses a direct connection to SR 169.

85. **MPDFSG (D)(2)(b):. *Cul-de-sacs shall be avoided unless there are no other alternatives.***

No cul-de-sacs are proposed at this MPD level of design. Regulations and conditions of approval require consistency with the MPDFSG at all stages of development; therefore, this criterion is satisfied.

86. **MPDFSG(E)(Mixing of Housing)(p. 7):** ***To encourage a diversity of population and households within Black Diamond through a range of choices in housing types and price.***

> ***Guidelines***
> ***1. MPD's shall include various types of housing, such as:***
> ***a.-e. [Not listed here; refer to Design Guidelines for complete text.]***
> ***2. Each cluster of development shall include a variety of unit types and densities.***

As noted previously, it is not clear what the exact housing mix in the MPD project will be. As previously noted, a condition of approval is included requiring compliance with this guideline. In addition, a condition of approval is also included requiring that the Development Agreement contain specific targets for various types of housing for each phase of development so that this requirement does not become perpetually deferred from one phase to the next. So conditioned, this criterion is satisfied.

87. **MPDFSG(E)(3):** ***For Single Family developments, alley access to garages is desired. Direct driveway access to streets should only occur if there are no other alternatives.***

Page 3-30 of the MPD application materials indicates that front loaded single-family homes will, "form the majority of the residential typology" within The Villages MPD. To assure this, a condition of approval is included requiring that detached single family dwelling units shall be alley loaded, except where site conditions prevent alley loading or cause alleys to be impractical as determined by the City, in its reasonable discretion. However, while alleys provide convenience and a clean streetscape, the City may not be able to cover the additional cost of policing the alleys and maintaining double public street frontage. Therefore, for alleys or auto courts serving less than 20 lots, the alleys and auto courts be privately owned and maintained.

88. **MPDFSG(E)(4):** ***Large apartment complexes and other repetitive housing types are discouraged. Apartments should replicate features found in Single Family Residential areas (i.e., garages associated with individual units, individual outdoor entries, internal driveway systems that resemble standard streets, etc.).***

This level of detail is more appropriate at the Development Agreement and implementing permit issuance. Compliance with this guideline is required as a condition of the Development Agreement. As so conditioned, this criterion is satisfied.

89. **MPDFSG(F)(*Creating Neighborhood Civic/Commercial Centers*)(p. 8):** ***To conveniently concentrate services and activities to serve multiple residential clusters.***

> ***Guidelines***
> ***1. Civic/Commercial Centers shall be located to serve groupings of clusters as well as pass-by traffic in order to support an array of shops and services.***
> ***2. Such centers shall be anchored by a public green space and, ideally, a public building such as a school or meeting hall.***

The proposed Town Center and uses on Parcel B satisfy this provision. Although the proposed allowed uses in the various land use categories indicate the potential for small scale (neighborhood) commercial development occurring in the residential classifications, actual locations are not defined at this time. Commercial areas should be identified on the Land Use Plan through a future amendment to the MPD. Proposed parks are located in areas which comply with this guideline.

91. **MPDFSG(F)(3):** ***Upper story housing above retail or commercial space is strongly encouraged within Civic/Commercial Centers.***

Development parcels V11 and V12, with approximately 160 dwelling units, are proposed as a mixed use component of the Town Center.

92. **MPDFSG(F)(*Interface with Adjoining Development*)(p. 9):** ***To ensure a transition in development intensity at the perimeter of MPD projects.***
***Guidelines.***

> ***1. Where individual lot residential development is located along the boundary of an MPD, lot sizes shall be no less than 75% the size of the abutting residential zone or 7200 sq. ft., whatever is less.***
> ***2. Multi-family and non-residential land uses should include a minimum 25 ft. wide dense vegetative buffer when located along the boundary of an MPD.***
> ***3. When there is no intervening development proposed, a minimum 25 ft. wide dense vegetative buffer should be provided between main entrance or access routes into an MPD and any adjoining residential development.***

Compliance with these standards will be required at the time of implementing projects. As so conditioned, this criterion is satisfied. In addition, the minimum buffer along the eastern border of development parcel V13 should be 50 feet. Existing vegetation should be retained and augmented with native plantings. The minimum buffer along the western border of development parcels V1, V2, V10, V15 and V20 should be 50 feet. These parcels comprise the northern part of the main property and Figure 3-1 already depicts these areas as open space tracts. Existing vegetation should be retained and augmented,

except for construction of the planned regional trail with native plantings. The Applicant does propose trails for the 50 foot western border buffer. *See* MPD application, p. 5-27.

93. **MPDFSG(A)( *Streets*)(p. 10):** ***To establish a safe, efficient and attractive street network that supports multiple choices of circulation, including walking, biking, transit and motor vehicles.***

***1. Connectivity***

***a. The street layout shall create a network that promotes convenient and efficient traffic circulation and is well connected to other existing City streets.***

A. The criterion is satisfied. The new Pipeline Road, the South (Community) Connector and the North Connector through parcel B will provide new efficient transportation links that will avoid having to increase existing roads to 4 or 5 lanes. The network of trails and bike lanes will provide alternate means for local travel. The connection points to surrounding urban zoned properties will provide for future connectivity. Also see previous discussion regarding the extension of the Community Connector to SR 169.

***2. Design***

***a. The layout of streets should relate to a community-wide focal point.***

B. This criterion is satisfied. The street design does provide for a neighborhood focal point at the elongated roundabout near The Villages center.

***b. A consistent overall landscape theme should be utilized, with variations provided to indicate passage through areas of different use, densities, topography, etc.***

C. The MPD application includes a variety of street sections, which can be unified through a landscape theme that emphasizes the use of native plant species.

***c. Limit the use of backyard fences or solid walls along arterial streets.***

D. Compliance with this standard will be required at the time of implementing projects.

***3. Reduced Pavement Widths***

***a. Pavement widths should be minimized to slow vehicular speeds and maintain an area friendly to pedestrians and non-motorized users.***

E. The City street standards were adopted in June of 2009, with reduced widths to address this goal. The Villages proposed streets are very similar to the City's standard streets, but in some cases are wider. The design standards will be established through the Development Agreement and the administrative deviation process provided for in the Engineering Design and Construction Standards.

***4. Low-Impact Design***

***a. Stormwater runoff should be reduced through "natural" techniques: flush curbs, bio-filtration swales, use of drought-tolerant vegetation within medians and planting strips, etc.***

F. This criterion is satisfied as discussed above.

***5. Traffic calming methods should include:***

- ***Roundabouts***
- ***Traffic Circles***
- ***Chicanes***
- ***Corner bulbs***

G. Two roundabouts are proposed along the Community Connector. Staff recommends that traffic calming measures be explored with each implementing development action, at the discretion of the Public Works Director.

***6. Lanes and Alleys***

***a. Access to rear residential garages and commercial loading and service areas shall be available through lanes and alleys.***

H. As noted, the application materials indicate that the majority of homes will be "front loaded lots," which is inconsistent with this guideline. The recommended conditions of approval require that homes have alley access except where site conditions prevent alley loading or cause alleys to be impractical as determined by the City, in its reasonable discretion. Further, as noted above, in order to balance the impact of the added street maintenance and the proposed street standards with higher maintenance costs, all alleys and auto courts serving 20 units or less shall be maintained by the Master Developer or future Homeowners Association(s).

***7. Non-motorized Circulation***

***a. All streets shall include either sidewalks or trails on at least one side of the street. Design streets to be "bicycle" friendly.***

***8. Street Landscaping***

***a. All streets shall include native and/or drought-tolerant vegetation (trees, shrubs and groundcover) planted within a strip abutting the curb or edge of pavement. Native and/or drought-tolerant vegetation shall also be used within all medians.***

I. Compliance with these standards will be required at the time of implementing projects. The details of these design features will be resolved through the Development Agreement and the design deviation process. The City does not have adequate funds to manage street landscaping; a condition of approval included in Exhibit C requires that future Homeowners' Association(s) be required to maintain the street-side landscaping.

***9. On-Street Parking***

***a. Curbside parallel parking shall be included along residential streets. Parallel or angle parking should be included within non-residential areas.***

J. The proposed street standards indicate that parallel parking will be available along residential streets. Compliance with these standards will also be required at the time of implementing projects.

94. **MPDFSG(B)( *Sidewalks*)(p. 11):**

***B. Sidewalks***

***Intent***

***Guidelines***

***1. Width***

***a. The minimum clear pathway shall generally be between 5 ft and 8 ft, depending upon adjacent land uses and anticipated activity levels.***

***2. Lighting***

***a. All lighting shall be shielded from the sky and surrounding development and shall be of a consistent design throughout various clusters of the development.***

***3. Furnishings***

***a. Street furnishings including seating, bike racks, and waste receptacles shall be located along main streets in Civic/Commercial areas.***

***b. Furnishings serving specific businesses (outdoor seating) will require a building setback and shall maintain a minimum passable width of the sidewalk.***

***c. Mailbox stations shall be designed to be architecturally compatible with the development in which they are located***

The Villages proposal provides a good network of trails, sidewalks and bike lanes within the project itself. A safe sidewalk link is needed and will be required from The Villages to Morganville (current west Black Diamond) along the Auburn Black Diamond Road/Roberts Drive. The area of greatest concern is the narrow bridge over Rock Creek. Compliance with these standards will be required at the time of implementing projects.

95. **MPDFSG(C)( *Walkways and Trails*)(p. 12):**

***Intent***

***To provide safe, continuous pedestrian linkages throughout and sensitive to the project site, open to both the public and project residents.***

A. The Villages proposal provides internal safe continuous pedestrian linkages with sidewalks and trails. With the one additional off-site sidewalk pedestrian link along Auburn Black Diamond Road/Roberts Drive, this guideline will be met.

***Guidelines***

***1. Location***

***a. Walkways and trails shall be integrated with the overall open space network as well as provide access from individual properties. Trail routes shall lead to major community activity centers such as schools, parks and shopping areas.***

B. Staff finds that the proposal meets the intent of this guideline.

***2. Width***

***a. Not less than 8 feet wide to allow for multiple modes of use.***

C. Both 8-foot-wide hard and a 6-foot-wide soft surface trail types are proposed within the project (see page 5-29 of the application). A 5-foot-wide boardwalk trail section is also proposed for limited use. The MPD proposal meets the intent of this guideline, with the exception of the soft-surface trail which is proposed to be 6 feet in width.

***3. Materials***

***a. Walkways connecting buildings and hardscaped common spaces shall have a paved surface.***

***b. Trails throughout the development and connecting to larger landscaped common spaces shall be of at least a semi-permeable material.***

D. The MPD proposal meets the intent of this guideline as proposed and the requirement will be enforced for implementing projects.

96. **MPDFSG(pp. 13-18):**

***Text not included.***

The remaining design guidelines in the MPDFSG concern design requirements for site plan and building permit level development that are not addressed at this stage of development review. While the staff report references some specific design standards proposed by the Applicant, these do not warrant analysis at this stage of review because the conditions of approval below exclude those proposals from the scope of the MPD approval. As to land use, the conditions of MPD approval limit the proposal to the land use plan map (Figure 3-1 in the MPD applications), description of categories (beginning on page 3-18), and target densities. BDMC 18.98.110 and the conditions of approval both require application of the MPDFSG for implementation projects. Deferral of the site plan and building level of MPDFSG review for implementing permits will not compromise the ability to comply with those standards.

97. ***International Fire Code, 2006 Edition***

BDMC 18.98.080(A)(1) requires the MPD to comply with all adopted regulations, which includes the International Fire Code. The requirements below are necessary at this stage of project review to assure compliance with the Fire Code.

**Access:** All Fire Department access roads should be required to meet the International Fire Code, specifically Section 503 (Fire Department Access Roads) and Appendix D (Fire Department Access Roads). Generally this requires that all roads be at least 20 feet in unobstructed width with 13 feet 6 inches of unobstructed vertical clearance across the entire road surface. If fire hydrants are located on the Fire Department access road, then the roads must be at least 26 feet in width. The proposed street designs include some elements (e.g., "auto courts") that do not comply with this standard. Per the Fire Code, road grades should not exceed 10 percent. All portions of the first floor exterior walls of structures should be within 150 feet of approved fire apparatus access roads (especially with high density housing, multi-family and commercial occupancies).

More than one means of access and egress is required per the International Fire Code 2006 ed. Appendix D Section D107. Specifically D107.1 states: "Developments of one or two family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads and shall meet the requirements of Section D104.3...."

**Parks and Open Spaces:** Separation of combustible structures and vegetation must be provided to prevent potential wildland fires from the east and south from spreading to structures. This separation will vary with types of structures and the natural vegetation and will be evaluated at the time of implementing project approval.

**Access to Park/Open Space Trails:** To allow for Fire Department access to medical emergencies and small fires involving natural vegetation within the open space and park trails, these trails to be wide enough to allow for passage of the Fire Department off-road "Gator" and wheeled stretchers.

**EXHIBIT C**

**CONDITIONS OF APPROVAL**

**The Villages MPD**

## GENERAL

1. Approval of the MPD is limited to the terms and conditions set forth in the City Council's written decision, and does not include approval of any other portion of the MPD set forth in the application.

2. After approval by the City Council at an open public meeting and after a public hearing as required by law, a Development Agreement shall be signed by the Mayor and all property owners and lien holders within the MPD boundaries, and recorded, before the City shall approve any subsequent implementing permits or approvals. Any requirements deferred to the Development Agreement in this decision shall be integrated into the Agreement prior to any approval of subsequent implementing permits or approvals.

3. The Phasing Plan of Chapter 9 of the MPD application is approved, with the exception of the bonding proposal at p. 9-3 and the proposal for off-site trails at p. 9-2 (to the extent not already considered a regional facility) and parks at p. 9-10, and except as otherwise noted in these conditions of approval.

4. The Development Agreement shall specify which infrastructure projects the applicant will build; which projects the City will build; and for which projects the applicant will be eligible for either credits or cost recovery and by what mechanisms this shall occur.

5. The Development Agreement shall specifically describe when the various components of permitting and construction must be approved, completed or terminated (e.g., when must open space be dedicated, plats recorded, and utility improvements be accepted by the City).

6. The Development Agreement shall include language that defines and identifies a "Master Developer." A single Master Developer shall be maintained through the life of the Development Agreement. The duties of the Master Developer shall include at least the following: a) function as a single point of contact for City billing purposes; b) function as a single authority for Development Agreement revisions and modifications; c) provide proof of approval of all permit applications (except building permits) by other parties prior to their submittal to the City; and d) assume responsibility for distributing Development Agreement entitlements and obligations and administering such.

7. The City shall have the ability but not the obligation to administratively approve off-site projects that would otherwise be compromised if they cannot be completed prior to approval and execution of the Development Agreement. In these instances, the applicant shall acknowledge in

writing that the approval of any such applicable projects does not in any way obligate the City to incur obligations other than those specifically identified in the approved permits for the applicable project.

8. The applicant shall submit a construction waste management plan for inclusion in the Development Agreement.

9. Homeowners Association(s) conditions, covenants and restrictions (CCRs) and/or the proposed Architectural Review Committee shall be required to allow the use of green technologies (such as solar panels) in all buildings. In addition, the CCRs shall include provisions, to be enforced by the HOA, prohibiting washing of cars in driveways or other paved surfaces, except for commercial car washes, and limiting the use of phosphorous fertilizers in common areas, so as to limit phosphorous loading in stormwater.

**TRANSPORTATION**

10. Over the course of project build out, construct any new roadway alignment or intersection improvement that is: (a) depicted in the 2025 Transportation Element of the adopted 2009 City Comprehensive Plan and in the City's reasonable discretion is (i) necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service deficiency as determined by the City's adopted level of service standard, or (ii) to provide access to or circulation within the project; (b) functionally equivalent to any said alignment or improvement; or (c) otherwise necessary to maintain the City's then-applicable, adopted levels of service to the extent that project traffic would cause or contribute to any level of service failure as determined by the City's adopted level of service standard, or to provide access to or circulation within the project, as determined by the City in its reasonable discretion based on the monitoring and modeling provided for in Conditions 25 and 20 below. The Development Agreement shall specify for which projects the applicant will be eligible for either credits or cost recovery and by what mechanisms this shall occur. Any "functionally equivalent" realignment that results in a connection of MPD roads to Green Valley Road shall be processed as a major amendment to the MPD.

11. The City shall create, at the expense of the Applicant, a new transportation demand model for this project for use in validating the distribution of project traffic at the intervals specified in Condition No. 17. The new model shall incorporate, at an appropriately fine level of detail, and at a minimum, the transportation network from the northern boundary of the City of Enumclaw on SR 169 through the City of Maple Valley to the northern limits of that city. The new model shall include the intersections studied in the FEIS, together with the following additions: all existing principal and minor arterials in Black Diamond, Covington and Maple Valley and the unincorporated areas between these cities and specifically including the Kent-Black Diamond Road; additional study intersections at SE 231$^{st}$ Street/SR 18 westbound ramps, SR 169/SE 271st Street and SR 169/SE 280th Street in Maple Valley. External trips may be captured by any valid methodology including overlaying the new model onto the existing Puget Sound Regional Council transportation model. The new model must be validated for existing traffic, based on actual traffic counts collected no more than two years prior to model creation. Key to the success of the new model is a well-coordinated effort and cooperation among the

cities of Black Diamond, Maple Valley and Covington, the Applicant, King County and the Washington State Department of Transportation. Although the specific assumptions ultimately made in the model may be the subject of differences in professional judgment, the City Council's goal is that, notwithstanding these differences in judgment, the model will be comprehensive and therefore acceptable to all parties. The City Council therefore directs staff in preparing the model to work within the spirit of openness and cooperation with these other agencies and the Applicant, and similarly requests that other agencies and the Applicant join with the City of Black Diamond staff in working together in the same spirit for the common good.

12. The new demand model must take into account recent traffic counts, current and proposed land uses as defined in the applicable Comprehensive Plans areas covered in the study area, and existing speed limits on all roadway links included in the model's roadway network. The model must be run with currently funded transportation projects for each affected jurisdiction as shown in the applicable 6-year Transportation Improvement Plans and with transportation projects shown in the applicable 20-year Transportation Improvement Plans which projects are not funded but are determined to have a reasonable likelihood of obtaining funding based on consultation with each jurisdiction.

13. The new model must contain a mode split analysis that reflects the transit service plans of Sound Transit, King County Metro and any other transit provider likely to provide service in the study area. This mode split analysis should include an estimate of the number of project residents likely to use the Sounder and to which stations these trips might be attributed. This analysis must be presented to the City, the applicable transit agencies, and the jurisdictions in which trips are likely to use park and ride, Sound Transit parking garages or other facilities.

14. The new model must include a reasonable internal trip capture rate assumption. The assumed internal trip capture rate must be based upon and justified by an analysis of the internal trip capture rates suggested by the currently applicable ITE publication as well as information concerning actual internal trip capture rates in other master planned developments with similar land use mixes in Western Washington. Any subsequent revisions to the model should include the realized trip capture rates for the project, if available.

15. Intersection improvements outside the City limits may be mitigated through measures set forth in an agreement between the developer and the applicable agency. Where agreement is possible, the developer shall enter into traffic mitigation agreements with impacted agencies outside the city that have projects under their jurisdiction in the list below, and the agreement shall be incorporated as part of the Development Agreement, or as an addendum to an adopted Development Agreement. Any agreement so incorporated supersedes all other conditions and processes that may set mitigation measures and that are contained in the MPD Conditions or Development Agreement. If an agreement is not reached, the projects identified below shall be added to the regional project list and included as part of the Development Agreement, and the developer and the City shall agree on reasonable time frames for construction (for projects located within the City of Black Diamond and subject to Condition No. 10), or Applicant payment of its proportional costs toward construction of projects located outside of the City of Black Diamond.

**Exhibit 6-1**
**Intersection Improvements**

| Study Intersection | Jurisdiction | Mitigation |
|---|---|---|
| SE 288th Street/216th Avenue SE | Black Diamond | Signalize. Add NBR turn pocket. |
| SE 288th Street/232nd Avenue SE | Black Diamond | Add NBR turn pocket and provide a refuge for NBL turning vehicles on EB approach. |
| SR 169/SE 288th Street | WSDOT | Signalize. Add NBL turn pocket. Add second SBT lane (SBTR). |
| SE Covington Sawyer Road/ 216th Avenue SE | Black Diamond | Add EBL, NBL and SBR turn pockets. |
| SE Auburn Black Diamond Road/ 218th Avenue SE | King County | Provide a refuge for NBL turning vehicles on EB approach. |
| SE Auburn Black Diamond Road/ Lake Sawyer Road SE | Black Diamond | Signalize. Add WBL turn pocket. |
| SE Auburn Black Diamond Road/ Morgan Street | Black Diamond | Roundabout. |
| SR 169/Roberts Drive | Black Diamond/WSDOT | Add second SBT and NBT lanes. Add SBL and NBL turn pockets. |
| SR 169/SE Black Diamond Ravensdale Road (Pipeline Road) | Black Diamond/WSDOT | Add second SBT and NBT lanes. Add SBL turn pocket. |
| SR 169/Baker Street | Black Diamond/WSDOT | Signalize. |
| SR 169/Lawson Road | Black Diamond/WSDOT | Signalize. Add SBL turn pocket. |
| SR 169/Jones Lake Road (SE Loop Connector) | Black Diamond/WSDOT | Signalize. Add WBL, NBL, and SBL turn pockets. |
| SR 169/SR 516 | Maple Valley/WSDOT | Add second NBL turn pocket. |
| SR 169/SE 240th Street | Maple Valley/WSDOT | Add additional SBT lane on SR 169 from north of 231st Street to Witte Road. Add second NBT lane at SR |
| SR 169/Witte Road | Maple Valley/WSDOT | |

| | | |
|---|---|---|
| SR 169/SE Wax Road | Maple Valley/WSDOT | 169/240th Street. |
| SR 169/SE 231st Street | Maple Valley/WSDOT | |
| SR 169/SR 18 EB Ramps | Maple Valley/WSDOT | |
| SR 516/SE Wax Road | Covington/WSDOT | Add second SBL, WBR, and NBL turn pockets. |
| SR 516/168th Pl SE | Covington/WSDOT | Add NBL and EBR turn pockets. |
| SR 516/Covington Way SE | Covington/WSDOT | Optimize signal timings. |
| SE 272nd Street/160th Avenue SE | Covington/WSDOT | Signalize. |
| SE Kent Kangley Road/ Landsburg Road SE | Maple Valley/King County | Add SBL turn pocket and provide a refuge on WB approach for SBL turning vehicles. |
| SR 169/SE Green Valley Road | WSDOT | Signalize. |
| SE Auburn-Black Diamond Road/ SE Green Valley Road | King County | Provide a refuge on EB approach for NBL turning vehicles. |
| SR 169/North Connector | Black Diamond/WSDOT | Signalize. Add second SBT and NBT lane. Add EBL, EBR, SBR, and NBL turn pockets. End additional NBT lane 1,000 feet north of intersection. |
| Lake Sawyer Road/Pipeline Road | Black Diamond | Signalize. Add EBL, WBL, NBL, and SBR turn pockets. |
| SE Auburn Black Road/Annexation Road | Black Diamond | Signalize. Add EBL, EBR, WBL, NBL, and SBR turn pockets. |
| SR 169/South Connector | Black Diamond/WSDOT | Signalize. Add SBR and NBL turn pockets. |

16. If (a) the City of Maple Valley does not appeal or challenge the MPD Approval for the Villages MPD, (b) the City of Maple Valley does not appeal or challenge the MPD Approval for the Lawson Hills MPD, (c) the City of Maple Valley does not appeal or challenge the Development Agreement for the Villages MPD, (d) the City of Maple Valley does not appeal or challenge the Development Agreement for the Lawson Hills MPD, the Applicant shall provide the following mitigation for the City of Maple Valley, which as to the identified mitigation supercedes the mitigation projects listed for the City of Maple Valley in Condition 15 above.

For purposes of this condition, the percentage of the mitigation project to be contributed by the Applicant to the City of Maple Valley is shown for each project. All references to percentages constitute the combined contribution share of the Villages and Lawson Hills projects.

Project A: Contribute 25.3 percent toward one additional southbound through lane on SR 169 from SE 231st Street to Witte Road. Add a second eastbound to southbound right-turn lane on SE Wax Road (double right turn lanes). Upgrade signal equipment to be able to run the eastbound right turn phase with northbound protected left turn phase at the same time.

Project B: Contribute 26.1 percent toward one additional southbound through lane on SR 169 from SE Wax Road through the intersection at SR 169/Witte Road SE. The curb lane will become a right turn lane. The southbound approach to this intersection will be one right turn lane and two through lanes.

Project C: Contribute 66.6 percent toward a second northbound to westbound left-turn lane (300 ft) on SR 169 and a second westbound to southbound left-turn lane (400 ft) on SE 240th Street. Widen SE 240th Street west of SR 169 to add a second westbound lane (500 ft).

Project E: Contribute 37.2 percent toward a second southbound lane on SR 169 from Witte Road SE to SE 244th Street and a second northbound lane on SR 169 from 1,000 feet south of SE 240th Street to Witte Road SE.

Project F: Contribute 63.2 percent toward installation of a traffic signal at the intersection of SR 169/SE 244th Street.

Project G: Contribute 50.8 percent toward a second southbound lane on SR 169 from SE 244th Street to SE 264th Street. Construct a second northbound lane on SR 169 from SE 264th Street to 1,000 feet north of SE 264th Street.

Project H: Contribute 59 percent toward a second southbound lane on SR 169 from south of SR 516 to SE 271st Street.

Project I: Contribute 54.6 percent toward a signal equipment upgrade at the intersections of SR 169/SE 264th Street, SR 169/SR516, and SR 169/SE 271st Street to be able to coordinate these three signals, and set the signal cycle length at 140 seconds.

Project J: Contribute 61.25 percent toward a second southbound lane on SR 169 from SE 271st Street to SE 280th Street and a second northbound lane on SR 169 from 1,000 feet south of SE 271st Street to SE 271st Street.

Project K: Contribute 58.4 percent toward a second southbound lane on SR 169 from SE 280th Street to Maple Valley's south City limit.

Project L: Contribute 6.8 percent toward a new three-lane road (one eastbound and two westbound lanes) on the SE 271st Street alignment between SR 169 and SR 516. Add a

second northbound to westbound left turn lane (200 ft) on SR 169 and a signal at SR 516/SE 271st intersection.

Project W: Contribute 29.9 percent toward widening SR 516 to 4/5 lanes from 216th Ave SE to the west City limits of Maple Valley. Add a second westbound lane on SR 516 to 1,000 feet east of 216th Ave SE.

Project X: Contribution 29.9 percent toward reconfiguration of the northbound approach to SR 516/216th Ave SE to include one left-turn lane and one left and right-turn share lane. Increase the left turn pocket length to 270 feet. Modify signal to accommodate eastbound right-turn phase overlapping with northbound phase.

Project Y: Contribute 13.5 percent toward a second westbound lane on SE 240th from 500 feet west of SR 169 (see Project C) to Witte Road if and when the City of Maple Valley obtains all the remaining funding necessary for completion of Project Y (except for the contribution of the Applicant).

Project Z: Contribute 13.5 percent toward a 2-to-3 lane extension of SE 240th Street between Wax Road and Witte Road if and when the City of Maple Valley obtains all the remaining funding necessary for completion of Project Z (except for the contribution of the Applicant).

17. a. At the point where building permits have been issued for 850 dwelling units at the Villages and Lawson Hills together, and again at such phase or interval determined by the City Council following completion of the review called for by this condition, the City shall validate and calibrate the new transportation demand model created pursuant to Condition 11 above for the then-existing traffic from the Villages and Lawson Hills together. The calibration may include an assumption for internal trip capture rates as set forth in Condition 14 above, rather than actual internal trip capture rates, if an insufficient amount of commercial development has been constructed at the time of the validation/calibration required herein. The City shall then run the model to estimate the trip distribution percentages that will result from the next upcoming phase or interval of MPD development, and to assign the estimated trips from that phase or interval to the intersections identified in Condition 11 above.

b. Using the trip distribution and trip assignment yielded by the transportation demand model validation and calibration required in subsection (a) above, the City shall conduct an intersection operations analysis of the transportation levels of service (LOS) for the intersections identified in Condition 11 above, and shall issue findings, conclusions and a recommendation as provided below. The intersection operations analysis shall determine whether then-existing, adopted PM peak hour intersection levels of service are met, and whether the then-existing, adopted PM peak hour intersection levels of service are projected to be met by the time of the next validation/calibration/operations analysis identified by the City Council pursuant to subsection (a) above. The intersection operations analysis for existing conditions must take into account the then-existing peak hour factor; the analysis for the next identified phase or interval of development must be based on a reasonable assumption (justified by reasonable traffic engineering practice) as to the future peak hour

factor, and contain a sensitivity analysis to identify the effect of such peak hour factor assumption. If the findings and conclusions determine that the then-existing, adopted PM peak hour LOS will not be met, they shall also determine whether the projects set forth in Conditions 15 and 16 above adequately mitigate the impacts resulting from the failure to meet the adopted LOS. If the findings and conclusions determine that failure to meet adopted transportation LOS will not be adequately mitigated, they shall also recommend such additional measures necessary to adequately mitigate the impacts reasonably attributable to the MPD projects' failure to meet the adopted LOS.

c. The review identified in subsections (a) and (b) above, may be performed concurrent with a preliminary plat application held on either the Villages or Lawson Hills implementing plat, and the City review may incorporate relevant portions of any SEPA documents prepared for the implementing plat which analyze cumulative MPD impacts.

d. When the review thresholds identified in subparagraph a above have been reached, the City shall issue written notice to the Master Developer(s) to each submit within 90 days review documentation summarizing their respective project impacts and compliance with mitigations and conditions to date, as well as any additional information the City deems necessary to perform the transportation demand model validation/calibration and/or intersection operations analysis. In addition, the Master Developer(s) shall each pay a proportionate share of the validation/calibration/operations analysis costs incurred by the City. If a Master Developer fails to submit satisfactory periodic review documentation regarding its project within the 90-day period after notice has been issued as required herein, further permits shall not be approved for that MPD until the required documentation has been submitted.

e. Not later than 90 days following the City's completion of the validation/calibration/operations analysis, the City Director of Community Development shall consult with other affected jurisdictions as to the review analysis results, obtain any input such jurisdictions wish to provide, issue the City's proposed findings, conclusions and recommendation, and at the close of the 90-day period, the City shall meet with the Master Developer(s) to review the proposed findings, conclusions and recommendation and identify what improvements the Master Developer(s) plans to construct. Within 14 days of the City meeting with the Master Developer(s), the City shall finalize its findings, conclusions and recommendation and shall provide mailed notice to all Parties of Record on the Villages MPD and/or the Lawson Hills MPD that the review has been issued.

f. The City's demand model validation and calibration called for by subsection (a) above, and the intersection operations analysis called for by subsection (b) above, (the "periodic review analysis") shall result in written findings and conclusions plus a recommendation for new future permit conditions and mitigations for the Villages and/or Lawson Hills, as required. Proposed conditions and mitigations applicable to future permits and associated mitigation within either or both projects shall be revised if the City finds that the conditions or mitigation measures imposed pursuant to the City's standards in effect at the time of MPD approval have resulted in an unsatisfactory level of mitigation, either because the degree of mitigation is

inadequate or the quantity of impact demonstrated to be attributable to MPD development exceeds levels predicted. New permit conditions and mitigations imposed for cumulative impacts through the periodic review process shall comply with the following standards and limitations:

i. No new standards or requirements shall be imposed upon property in any plat recorded within 60 months of MPD approval to the extent that such standards or requirements would affect infrastructure serving said property also constructed within the 60-month timeframe.

ii. Performance standards more stringent than those contained in the original MPD permit shall not be imposed.

iii. No retrofitting or major modification shall be required for facilities properly installed in accordance with MPD permits unless such is determined necessary to avoid a threat to public health or safety or a new significant adverse environmental impact, and such impact or threat cannot be mitigated by requirements imposed upon or downsizing of MPD development yet to be constructed.

iv. New conditions and mitigations shall be limited to those shown to be necessary as a direct result of the MPD development, and such mitigation must be reasonable and achievable without compromising other MPD permit requirements.

v. Conditions and mitigations applicable to a MPD shall be modified only to the extent that cumulative impacts are demonstrated to be the result of development of such project. If cumulative impacts have been demonstrated to exist but cannot be attributed solely to the MPDs, or allocated between the two MPDs, responsibility for mitigation shall be apportioned equitably in a proportionate or pro-rata share. For purposes of this condition, "proportionate share" shall mean the ratio of the combined Villages and Lawson Hills MPD project PM peak hour trips projected to use the intersection compared to the total number of PM peak hour trips expected to use the intersection. Any mitigations or conditions imposed shall specify clearly which project and which portion thereof to which they apply.

g. The Villages Master Developer, the Lawson Hills Master Developer, or any other party of record may appeal the periodic review analysis within 21 days of the date of its issuance by filing an appeal statement with the Community Development Director, plus a fee in the amount then applicable to an administrative appeal of a SEPA threshold determination. The appeal statement shall specify in detail the errors alleged to exist in the periodic review analysis and any appeal proceedings shall be limited to analysis of such allegations.

h. If one or more timely appeals are filed of the City's periodic review analysis, they shall be heard and decided by the Hearing Examiner within 90 days of the date the appeal is filed. The hearing shall be limited to the issues included within the written appeal statement. Participation in the appeal shall be strictly limited to the City, the Applicant and parties who timely filed complete written appeal statements and paid the appeal fee. The

appellant shall bear the burden of proof in the appeal. The periodic review analysis shall be upheld on appeal unless found to be clearly erroneous based on the record as a whole.

i. The Hearing Examiner's decision on the periodic review analysis shall be a final decision appealable under the Land Use Petition Act, Chapter 36.70C RCW.

j. If no timely appeal of the periodic review analysis is received, its findings, conclusions, and recommendation shall become final and non-appealable 21 days after issuance. If an appeal is filed, the time required for determination of such appeal shall be excluded from the approval period for any MPD permit and preliminary plat in effect on the date of issuance of the periodic review analysis.

18. The responsibilities and pro-rata shares of the cumulative transportation mitigation projects shall be established in the two Development Agreements, which must cover the complete mitigation list and be consistent with one another. (Traffic impacts were studied based on the cumulative impacts of The Villages and the Lawson Hills MPDs. These various projects have a mutual benefit and need crossing over between them.)

19. For each potential signal, first consider and present a conceptual design for a roundabout as the City's preferred method of intersection control. [FEIS Mitigation Measure]

20. A transportation monitoring plan shall be established as part of the Development Agreement using the projects identified in the list included in Condition 15 (and as that list is modified as a result of the periodic review process), and including trigger mechanisms acceptable to the City. The monitoring plan shall ensure that construction of improvements commences before the impacted street or intersection falls below the applicable level of service, provided that for projects within the State right-of-way, the monitoring plan shall establish timing for commencement of only engineering and design of improvement and shall not including deadlines for commencement of construction.

21. Implementing projects shall be designed to foster the development of a street grid system throughout the project.

22. In order to balance the impact of the added street maintenance and the proposed street standards with higher maintenance costs, all auto courts serving 20 units or less, and all alleys shall be private and maintained by the Applicant or future Homeowners' Association(s). The Development Agreement shall provide that, in the event that the Applicant or future Homeowners' Association(s) fails to maintain such auto courts and/or alleys, the City may enter onto the property, repair or maintain the alleys or autocourts as the City determines in its reasonable discretion is necessary, and collect the costs of such repair or maintenance from the Applicant or Homeowners' Association(s), as applicable. The Development Agreement shall also provide that, to secure repayment, the City may lien the individual lots within the subdivision in which the alley or autocourt is located.

23. The applicant or future Homeowners' Association(s) shall be required to maintain all street side landscaping, unless otherwise agreed upon by the City, and the Applicant or future Homeowners' Association(s). The Development Agreement shall provide that, in the event that

the Applicant or future Homeowners' Association(s) fails to maintain such street-side landscaping, the City may enter onto the property, repair or maintain the landscaping as the City determines in its reasonable discretion is necessary, and collect the costs of such maintenance from the Applicant or Homeowners' Association(s), as applicable. The Development Agreement shall also provide that, to secure repayment, the City may lien the individual lots within the subdivision in which the street-side landscaping is located.

24. Traffic calming measures shall be explored with each implementing development action and implemented at the discretion of the Public Works Director.

25. The monitoring plan required by these conditions shall require the applicant to model the traffic impacts of a development phase before submitting land use applications for that phase, in order to determine at what point a street or intersection is likely to drop below the City's adopted level of service. The monitoring plan shall provide for the timing of commencement of construction of projects identified in Condition 15, as well as the amendments to the scope of said projects and/or additions to Condition 15's project list as determined by the City in its reasonable discretion as necessary to maintain the City's adopted levels of service in effect at the time of the modeling, to the extent that project traffic would cause or contribute to any level of service failure as determined by the City's adopted level of service standard. In the event of a disagreement between the applicant and the City about the timing of construction of a transportation project under the monitoring plan, and if the monitoring plan does not already include period modeling, the applicant shall also monitor traffic levels midway through each phase to determine if the traffic generation, trip distribution and assignment patterns are developing as expected.

26. Reserve a site within the commercial area on either the north or south side of Auburn-Black Diamond Road for a future park and ride lot. [FEIS Mitigation Measure] The site shall be of sufficient size to accommodate parking for the number of vehicles identified in the mode-split analysis in the new transportation demand model as set forth in Condition No. 14 above.

27. No more than 150 residential units shall be permitted with a single point of access. 300 units may be allowed on an interim basis, provided that a secondary point of access is provided.

28. The Development Agreement shall define a development parcel(s) beyond which no further development will be allowed without complete construction of the South Connector.

29. Prior to the first implementing project of any one phase being approved, a more detailed implementation schedule of the regional infrastructure projects supporting that phase shall be submitted for approval. The timing of the projects should be tied to the number of residential units and/or square feet of commercial projects.

30. The applicant shall apply road design speed control and traffic calming measures so that inappropriate speeds are avoided on neighborhood streets.

31. The timing of the design and alignment of the Pipeline Road shall be included as part of the Development Agreement.

32. Provided a study confirms engineering feasibility and reasonable and customary construction costs, a connecting sidewalk and safe pedestrian connection to the programmed sidewalk in the Morganville area shall be required along Roberts Drive. Construction timing should be specified in the Development Agreement. The City and applicant shall work in good faith to seek grants and other funding mechanisms to construct the improvement. The applicant shall otherwise be responsible for construction costs to the extent authorized by law.

33. a. The City shall commission a study, at the Applicant's expense, on how to limit MPD traffic from using Green Valley Road, and which shall include an assessment of traffic calming devices within the existing improved right-of-way. The study shall also include an analysis and recommended mitigation ensuring safety and compatibility of the various uses of the road. All reasonable measures identified in the study shall be incorporated into the Development Agreement together with a description of the process and timing required for the Applicant to seek permits from King County should King County allow installation of the improvements, and with a proviso that none of the measures need to be implemented if not agreed to by the Green Valley Road Review committee.

b. A Green Valley Road Review Committee shall be formed. The committee shall consist of two representatives of the Applicant, one representative of the City, and two representatives of the community. If additional community members or representatives of King County desire to participate, they may do so, but only two community members shall have a vote on the committee regarding any matter. The Committee shall meet as needed, and specifically shall meet to review the study required by Condition 33(a) and attempt to reach agreement on whether any suggested traffic calming devices should be provided. If the community members of the Green Valley Road Review Committee decide against the traffic calming measures, then the Applicant need not construct them. The Committee shall also meet to review the plan to prohibit or discourage the use of Plass Road. The Applicant shall be responsible, at its expense, for drafting a report to the City Council regarding the Committee's findings on the traffic calming devices and on Plass Road.

34. a. The Development Agreement shall address which traffic projects will be built by the developer, which projects will be built by the City and what projects will qualify for cost recovery.

b. The Applicant agrees to work in good faith with the City, King County and residents on Plass Road to develop a plan to prohibit or discourage the use of Plass Road as a connection to Green Valley Road. The Applicant will agree to vacate a portion of Plass Road through the Villages property to assure no connectivity to the South Connector roadway towards Green Valley Road, provided the City, King County and Plass Road residents support the road vacation.

**NOISE**

35. Each implementing development shall include a plan for reducing short term construction noise by employing the best management practices such as minimizing construction noise with properly sized and maintained mufflers, engine intake silencers, engine enclosures, and turning off equipment when not in use. [FEIS Mitigation Measure]

36. Stationary construction equipment shall be located distant from sensitive receiving properties whenever possible. Where this is infeasible, or where noise impacts would still be likely to occur, portable noise barriers shall be placed around the equipment (pumps, compressors, welding machines, etc.) with the opening directed away from the sensitive receiving property. [FEIS Mitigation Measure]

37. Ensure that all equipment required to use backup alarms utilizes ambient-sensing alarms that broadcast a warning sound loud enough to be heard over background noise, but without having to use a preset, maximum volume. Alternatively, use broadband backup alarms instead of typical pure tone alarms. [FEIS Mitigation Measure]

38. Require operators to lift, rather than drag materials wherever feasible. [FEIS Mitigation Measure]

39. Substitute hydraulic or electric models for impact tools such as jackhammers, rock drills and pavement breakers, wherever feasible. [FEIS Mitigation Measure]

40. Electric pumps shall be specified whenever pumps are required. [FEIS Mitigation Measure]

41. The developer shall establish a noise control "hotline" to allow neighbors affected by noise to contact the City and the construction contractor to ask questions or to complain about violations of the noise reduction program. The noise reduction program is established by conditions 35 through 40 and 42-43. Whether the noise reduction program has been violated shall be determined by the City in its reasonable discretion. Failure to comply with the noise reduction program shall result first in a warning and one or more continuing failures may result in cessation of construction activities until the developer provides an acceptable solution to the City that will reasonably achieve the intent of the noise reduction program and allow construction to continue. Nothing in this condition shall be construed as limiting or altering the City's authority to enforce its noise regulations.

42. If pile driving becomes necessary, impact pile-driving shall be minimized in favor of less noisy pile installation methods. If impact pile driving is required, the potential for noise impacts shall be minimized by strict adherence to daytime only. [FEIS Mitigation Measure]

43. Work hours of operation shall be established and made part of the Development Agreement

44. To provide construction noise attenuation for existing residents adjoining the Villages development, the following condition shall apply to Villages development parcels V1, V2, V10, V13, V15, V20, V49, V57, V60, and V71. For each of the designated parcels, the Applicant shall:

a. offer to meet with the affected existing resident(s) to seek a mutual agreement about mitigation to be provided, or if mutual agreement cannot be reached, then,

b. the Applicant shall have the choice to provide either:

i. mitigation consisting of a buffer, trail easement or other separator between the edge of the development parcel and the property boundary that is 100-feet wide, provided that trails, recreational facilities, stormwater facilities and similar uses otherwise permitted for the MPD are allowed inside the 100-foot area, or

ii. mitigation consisting of all of the following:

(A) a construction noise attenuation barrier (i.e., a berm, wall, or combination of the two) on the development parcel, provided that if a buffer or trail easement less than 100-feet wide adjoins the development parcel, the barrier may be placed within that area;

(B) design, sizing and placement of the noise attenuation barrier in a manner intended to reduce noise from long-term construction activities (i.e., activities lasting 6 months or longer, such as construction hauling and including the loading/unloading of dump trucks);

(C) payment to the City for its costs in commissioning a study to evaluate the noise barrier design and placement shall be prepared by the Applicant, at its expense, and submitted for review and approval by the City;

(D) the noise study shall evaluate whether noise from long-term construction activities will comply with the environmental noise limits in WAC 173-060-040, and if the noise study concludes that an on-site noise barrier cannot effectively control long-term construction noise to the degree that it complies with the WAC noise limits outside the adjoining existing homes, additional mitigation measures intended to reduce interior sound levels will be evaluated,

(E) any additional noise mitigation measures determined to be effective at reducing interior sound levels (i.e., providing a reduction of exterior-to-interior noise transmission at least 7 dBA more than provided by the existing building envelope) shall be implemented so long as the adjoining owner provides permission if the mitigation requires work on their property, and

(F) at the Applicant's discretion, the noise barrier may be temporary (i.e., removed after construction on one of the designated parcels is complete) or permanent.

Mitigation under section (b)(ii) shall be installed before construction activities begin on the designated development parcel. In the event that lands adjacent to any of the

designated development parcels are acquired by the developer of the MPD, this condition shall not apply as to the acquired lands.

45. A Noise Review committee shall be formed. The committee shall consist of two representatives of the Applicant, one representative of the City, and two representatives of the community. If additional community members desire to participate, they may do so, but only two members shall have a vote on the committee regarding the annual report. The Committee shall meet at least once a year, and no more than six times per year. The Noise Review committee shall review and evaluate compliance with the noise conditions imposed upon the Villages MPD. The Committee shall endeavor to reach mutual agreement (i.e., a 5-0 vote) on the contents of an annual report to be filed with the City Council. The Applicant shall be responsible, at its expense, for drafting the annual report. The annual report will summarize the Committee's findings regarding compliance, and shall include recommendations, if any, for improved performance. If the Committee is unable to reach mutual agreement, then the Applicant shall prepare the annual report summarizing the matters for which agreement is reached, as well as the matters still under debate, and shall allow the other members of the community to provide comments on the report prior to submittal to the City Council. The City Council shall review the report and respond as appropriate under applicable City Codes, or the provisions of the Development Agreement.

**PUBLIC UTILITIES – WATER**

46. Comply with the terms of the Water Services Future Funding Agreement (WSFFA).

47. Utilize the Tacoma Intertie, in addition to the Spring Supply per the WSFFA. [FEIS Mitigation Measure]

48. Construct an appropriately sized reservoir in 850 Zone or construct an 850 Zone loop back to the existing system in the vicinity of Railroad Avenue. [FEIS Mitigation Measure]

49. Construct a 750 Zone loop back to the existing system, or propose a functionally equivalent alternative as allowed in the MPD code. [FEIS Mitigation Measure]

50. Complete the 850 loop in the North Property and the 850 loop in Pipeline Road with a pressure reducing station to the 750 Zone water main within the North Property. [FEIS Mitigation Measure]

51. Construct needed water supply and storage improvements in accordance with the City's Comprehensive Plan and necessary to serve the proposed development. Alternatively, a functionally equivalent improvement to the facilities above may be approved by City staff within the MPD. [FEIS Mitigation Measure]

52. Should new water distribution alternatives be desired by the applicant that are not consistent with the recently adopted Water Comprehensive Plan, the applicant shall be responsible for the cost of updating the Plan if needed.

53. The Water Conservation Plan included in the Chapter 8 of the MPD Application is approved. The Development Agreement shall include details about the responsibility for water conservation, the basis and methods for measuring conservation savings, and the impacts if the required savings targets of 10% less than the average water use in the City by residential uses at the time the MPD was submitted are not achieved.

54. The proposed water conservation plan shall be evaluated for its effectiveness in light of the City's available water resources after the first 500 units have been constructed. At that time, additional measures may be required if goals are not being achieved.

**PUBLIC UTILITIES – SEWER**

55. King County will be constructing a sewer flow equalization storage reservoir in a location to serve the needs of the City. [FEIS Mitigation Measure]

56. Construct trunk lines Nos. 1 and 4. [FEIS Mitigation Measure]

57. Construct pump station 1 and force main 1 to equalization tank. [FEIS Mitigation Measure]

58. Collection of sewage shall occur as presented in City's Comprehensive Plan, consistent with King County sewage storage site selection, and as necessary to serve the proposed development. Alternatively, a functionally equivalent improvement to the facilities above may be approved in the future if determined appropriate by City staff and consistent with King County's sewage storage site selection process. [FEIS Mitigation Measure]

59. An interim sewer pump station is accepted, provided that:

a. Routing of the gravity sewer mains is consistent with the City's ultimate plan for routing sewage.

b. No capital facility charge credit will be considered for interim improvements.

**PUBLIC UTILITIES – STORMWATER AND WATER QUALITY**

60. Stormwater runoff that is collected from impervious surfaces shall be mitigated in accordance with the *2005 Stormwater Management Manual for Western Washington*, and stormwater designs shall include low impact development techniques wherever practical and feasible. [FEIS Mitigation Measure]. Homeowner associations should bear the cost of landscape maintenance associated with the low impact development techniques.

61. Preserve the volume of stormwater for the groundwater area tributary to Black Diamond Lake and associated wetlands. [FEIS Mitigation Measure]

62. Implement the stormwater program described in Appendix D to The Villages FEIS in order to match total runoff volume discharges via surface and subsurface conveyance routes to Horseshoe Lake. [FEIS Mitigation Measure]

63. Provide mitigation facilities within the project limits, expansion parcels or provide an agreement with King County for long term City ownership and/or maintenance of off-site facilities not within City limits. [FEIS Mitigation Measure]

64. Native plants shall be primarily used as part of the planting palette within the MPD. Lawn planting shall be reduced wherever practical. [FEIS Mitigation Measure]

65. Where point discharges to streams must occur, design the outfall to minimize impacts to the stream channel and avoid areas of significant vegetation. [FEIS Mitigation Measure]

66. Construct stormwater treatment and storage improvements as presented in City's Comprehensive Plan and as necessary to serve the proposed development. Alternatively, a functionally equivalent improvement to the facilities above may be approved with the MPD. [FEIS Mitigation Measure]

67. Mechanisms shall be identified to integrate Low Impact Development technologies into the overall design of the MPD and incorporated into the Development Agreement. Future Homeowners' Associations shall bear any increased cost of landscape maintenance.

68. The Development Agreement shall include restrictions on roof types (no galvanized, copper, etc.) and roof treatments (no chemical moss killers, etc) to ensure that stormwater discharged from roof downspouts is suitable for direct entry into wetlands and streams without treatment. This condition does not constitute approval for direct discharge of roof drainage into wetlands, streams or their buffers; any such direct discharge is authorized only if approved by the Public Works Director as in compliance with Black Diamond Municipal Code Ch. 14.04 and the standards adopted therein. The applicant shall develop related public education materials that will be readily available to all homeowners and implement a process that can be enforced by future homeowners associations.

69. Stormwater facilities to be considered as part of required open space shall be designed as an amenity per the Public Works and Natural Resources Directors. Factors to be considered by the Directors in determining whether the facilities are designed as an amenity include, but shall not be limited to, whether the facilities are safe for general public access (*i.e.*, do not have steeply sloped banks requiring fencing), are suitable for active recreational use during at least 3 months per year, are suitable for passive recreational use such as walking, hiking, or bird or other wildlife viewing, and/or provide wildlife habitat. If approved, future Homeowners Association(s) shall be required to provide landscape maintenance of these facilities, unless otherwise agreed upon by the City, and the Applicant or future Homeowners' Association(s).

70. The Development Agreement shall include language that binds future developers and contractors to a requirement to comply with any NPDES permits issued by the Washington State Department of Ecology and acknowledge that although permit conditions imposed by NPDES

permits are not administered by the City, staff reserves the right to enforce the conditions of the NPDES permit. Since the city has a high interest in protecting receiving waters under the city storm water permit, the developer shall fund necessary costs for training related to inspection services.

71. Develop a proactive temporary erosion and sediment control plan to prevent erosion and sediment transport and provide a response plan to protect receiving waters during the construction phase.

72. Construct a storm water system that does not burden the city with excessive maintenance costs; assist the city with maintenance of landscape features in storm water facilities. The City shall have the right to reject higher cost of maintenance facilities when lower cost options may be available.

73. Include a tabular list of stormwater monitoring requirements. The list should include the term of the monitoring, the allowable deviation from design objectives or standards, and the action items necessary as a result of excess deviations.

74. The stormwater plan shall include the ability to adaptively manage detention and discharge rates and redirect stormwater overflows when environmental advantages become apparent.

75. The size of storm ponds for hydraulic purposes shall vest on a phase by phase basis to the extent allowed by the City's DOE discharge permit and state law.

76. In the event that new phosphorus treatment technology is discovered and is either certified by the State Department of Ecology as authorized for use in meeting requirements of the Stormwater Management Manual for Western Washington, or is in use such that it is considered by the stormwater engineering community as constituting part of the set of measures described as "All known available, and reasonable methods of prevention, control, and treatment" ("AKART") as defined in WAC 173-201A-020, then the Applicant shall incorporate that new phosphorus treatment technology in all new ponds and facilities applied for as part of an implementing project, such as a preliminary plat, even if the Applicant's ponds and facilities would otherwise be vested to a lower standard.

77. The Development Agreement shall include language to allow deviations from the stormwater facilities listed in the FEIS when justified by a technical analysis and risk assessment.

78. The applicant shall obtain all necessary permits from King County for both construction, including any necessary approval or agreement providing the City ability to perform maintenance of the large regional storm pond proposed to the west of the project. The Applicant shall submit engineering plans to the City for approval, which shall not be unreasonably withheld or delayed, prior to submitting such plans to the County.

79. The City shall determine whether the Applicant's reasonable proportionate share participation in any watershed-wide implementation measures identified in Exhibit H-9 would be of significant benefit in protecting Lake Sawyer water quality. If so, those measures shall be incorporated into the Development Agreement. The Development Agreement shall also integrate the phosphorous monitoring plan proposed by the Applicant in Ex. NR-TV-7 as well as a temperature monitoring plan identical to the plan proposed for the Lawson Hills project in Exhibit NR-LH-5.

80. Runoff from basins tributary to Lake Sawyer shall provide water quality treatment in accordance with the phosphorous control menu in the 2005 Stormwater Management Manual for Western Washington. [FEIS Mitigation Measure]

81. Prior to approval of the Development Agreement, the Applicant shall identify to the City the estimated maximum annual volume of total phosphorus (Tp) that will be discharged in runoff from the MPD site and that will comply with the TMDL established by the State Department of Ecology for Lake Sawyer. If monitoring conducted pursuant to the phosphorus monitoring plan proposed by the Applicant in Ex. NR-TV-7 and integrated into the Development Agreement pursuant to Condition No. 78 above indicates that the MPD site is discharging more than the identified annual maximum volume of Tp, the Master Developer shall modify existing practices or facilities, modify the design any proposed new stormwater treatment facilities, and/or implement a project within the Lake Sawyer basin that collectively provide an offsetting reduction in Tp so as to bring the discharge below the annual maximum identified pursuant to this Condition.

82. Enhanced water quality treatment shall be provided as required by the 2005 Stormwater Management Manual for Western Washington. [FEIS Mitigation Measure]

83. When the Applicant builds improvements to existing public road right-of-way inside the City of Black Diamond and which road right-of-way drains to Lake Sawyer, the Applicant is required to treat the stormwater from those improvements to the then current and applicable phosphorus treatment standard, and the Applicant shall also treat the existing stormwater that runs off the existing right-of-way in the immediate vicinity of the improvement.

84. The Applicant agrees to work cooperatively with the City to identify opportunities where the City can reduce phosphorus sources or improve phosphorus treatment on existing City lands and for existing City owned or maintained stormwater facilities.

85. A Water Quality Review committee shall be formed. The committee shall consist of two representatives of the Applicant, one representative of the City, and two representatives of the community. If additional community members desire to participate, they may do so, but only two members shall have a vote on the committee regarding the annual report. The Committee shall meet at least once a year, and no more than six times per year. The Water Quality Review committee shall review and evaluate compliance with the stormwater conditions imposed upon the Villages MPD. The Committee shall endeavor to reach mutual agreement (i.e., a 5-0 vote) on the contents of an annual report to be filed with the City Council. The Applicant shall be responsible, at its expense, for drafting the annual report. The annual report will summarize the

Committee's findings regarding compliance, and shall include recommendations, if any, for improved performance. If the Committee is unable to reach mutual agreement, then the Applicant shall prepare the annual report summarizing the matters for which agreement is reached, as well as the matters still under debate, and shall allow the other members of the community to provide comments on the report prior to submittal to the City Council. The City Council shall review the report and respond as appropriate under applicable City Codes, or the provisions of the Development Agreement.

## VISUAL AND AESTHETICS

86. The Development Agreement shall include a narrative of the process and basis for selectively removing hazard trees within sensitive areas. The intent of this section will be to leave the majority of the sensitive areas as designated passive open space but to have it appear and function as native forest.

87. The Development Agreement shall define when and under what conditions a development parcel may be logged for timber revenue, how that parcel must be secured to minimize the impacts on the community and how long the parcel may remain undeveloped before it must be reforested.

## PUBLIC SERVICES – PARKS AND RECREATION

88. If a school site is developed and the proponent proposes to build a joint-use facility, the proponent shall provide one or more youth/adult baseball/softball fields, soccer fields, tennis courts, or basketball courts in conjunction with the school site(s) or at an alternative location. [FEIS Mitigation Measure]

89. The details of the park and recreation facilities to serve the new demand from the MPD shall be set in the required Development Agreement, including whether such facilities may be constructed on- or off-site. [FEIS Mitigation Measure]

90. The cost of such facilities, including a proportionate share of facilities not fully warranted by the MPD build out, could be provided by payment of fees. [FEIS Mitigation Measure]

91. As part of the Development Agreement, the fee-in-lieu values for park facilities shall be re-evaluated to ensure appropriate levels of funding and to include a mechanism to account for inflationary rises in construction costs and potentially, the costs of maintaining these types of facilities in the future. The City shall maintain discretion concerning when and if a lump sum payment will be accepted in lieu of constructing off-site recreational facilities

92. The details regarding the timing of construction and optional off-site construction or payment of fee in lieu of construction included in Table 5.2 of the MPD application (Recreation Facilities) shall be specified in the Development Agreement.

93. Dependant on the availability of land, the adequacy of funds to construct City-approved recreational facilities and an ability to maintain these facilities, the City shall retain the sole discretion to determine when and if the applicant will be allowed to provide a lump sum payment in lieu of constructing off-site recreational facilities. This condition may be further defined within the Development Agreement.

94. The Development Agreement shall include language authorizing public access to parks and trails facilities.

95. As proposed in the Master Plan Application, on-site trails (i.e. on the site of the implementing project) shall be constructed or bonded prior to occupancy, final site plan or final plat approval, whichever occurs first. Off-site trail connections shall meet the same standard to the extent authorized by law.

96. Parks within each phase of development shall be constructed or bonded prior to occupancy, final site plan or final plat approval of any portion of the phase, whichever occurs first, to the extent necessary to meet park level of service standards for the implementing project.

97. The Development Agreement shall include a tabular list of the characteristics of passive open space and active open space and permitted activities thereon so that future land use applications can accurately track the type and character of open space that is provided.

**PUBLIC SERVICES – SCHOOLS**

98. The Applicant shall enter into a separate school mitigation agreement, with substantially the same key terms as the agreement in the record as Exhibit 6, so long as such agreement is approved by the City and the Enumclaw School District which approval provides adequate mitigation of impacts to school facilities. If approved, such agreement shall be incorporated into the Development Agreement by reference. Alternatively, school mitigation may be addressed in the Development Agreement, using terms similar to those contained in Exhibit 6, or through a combination of (1) school impact fees under a City-wide school impact fee program for new development or a voluntary mitigation fees agreement and (2) the dedication of land for school facilities (subject to credit under State impact fee laws). The agreed number of school sites and associated minimum acreage, both as set forth in Exhibit 6, shall be used to guide any school mitigation alternative. To the extent reasonable and practical, elementary schools shall be located within a half-mile walk of residential areas. All school sites shall be located either within the MPDs or within one mile of the MPDs.

99. An updated fiscal analysis shall be required for any proposal to locate a high school within any lands designated on Figure 3-1 (Land Use Plan) for commercial/office/retail use.

**PUBLIC SERVICES – PUBLIC SAFETY**

100. The Development Agreement shall include specific provisions for providing fire mitigation to ensure protection concurrent with project build out. Fire mitigation may include

fire impact fees under a City-wide fire impact fee program for new development, a voluntary fire mitigation agreement, and/or the dedication of land for fire facilities (subject to credit under State impact fee laws).

101. All Fire Department access roads must meet International Fire Code, specifically Section 503 Fire Department Access Roads and Appendix D Fire Department Access Roads, except to the extent modifications or exceptions are approved by the designated official as authorized by applicable regulations

102. Auto courts shall meet the requirements of the International Fire Code 2006 ed. Per IFC Section 503, specifically 503.2.1, except to the extent modifications or exceptions are approved by the designated official as authorized by applicable regulations.

103. Separation of combustible structures and vegetation shall be provided to prevent wildland fires from the east and south from spreading to buildings. This shall be determined at the time of implementing projects.

**EROSION HAZARDS**

104. Major earth moving and grading may be limited to the "dry season," between April and September, to avoid water quality impacts from erosion due to wet soils. Construction during the "wet season" may occur as allowed by the Engineering Design and Construction Standards Section 2.2.05. [FEIS Mitigation Measure]

105. In cases where vegetation is an effective means of stabilizing stream banks, stream banks shall be protected from disturbance to reduce the adverse impacts to stream erosion. [FEIS Mitigation Measure]

106. Bridges or appropriately sized box culverts shall be used for roadway crossings of streams to allow peak flow high-water events to pass unimpeded and to preserve some normal stream processes. [FEIS Mitigation Measure]

107. Design stormwater facilities to avoid discharging concentrated stormwater flows on moderate and steep slopes in order to avoid severe land erosion. [FEIS Mitigation Measure]

108. Utilize stormwater detention facilities that avoid increases in peak stream flows. [FEIS Mitigation Measure]

109. The Applicant shall submit a Temporary Erosion and Sedimentation Control (TESC) plan meeting City standards that will mitigate the potential for construction run-off from the site prior to grading or land clearing activities. The best management practices in the TESC plan shall include standby storage of emergency erosion and sediment control materials; a limit to the amount of property that may be disturbed in the winter months; and guaranteed time frames for the establishment of wet weather erosion and site protection measures.

110. Prior to approval of the first implementing plat or site development permit within a phase, the applicant shall submit an overall grading plan that will balance the cut or fill so that the amount of cut or fill does not exceed the other by more than 20%.

**LANDSLIDE HAZARDS**

111. Development of landslide hazard areas shall be avoided. Sufficient setbacks shall be required to assure or increase the safety of nearby uses, or where feasible grade out the landslide hazard area to eliminate the hazard in compliance with the city's Sensitive Areas Ordinance BDMC 19.10. [FEIS Mitigation Measure]

112. Stormwater and groundwater shall be managed to avoid increases in overland flow or infiltration in areas of potential slope failure to avoid water-induced landslides. [FEIS Mitigation Measure]

113. Geologically hazardous areas shall be designated as open space and roads and utilities routed to avoid such areas. Where avoidance is impossible, utilize the process in the Sensitive Areas Ordinance (supplied with adequate information as defined in code) and Engineering Design and Construction Standards (ED&CS) to build roads and utilities through these areas.

**MINE HAZARDS**

114. Development within the moderate mine hazard area may require additional mitigation measures, which shall be evaluated with future implementing development proposals.

115. All proposed development within mine hazard areas shall occur in conformance with BDMC 19.10.

116. All houses that are sold in classified or declassified coal mine hazard areas shall require a liability release from the homeowner to the City. The release must recognize that the City is not liable for actual or perceived damage or impact from the coal mine hazard area. The release form shall be developed and included in the Development Agreement.

**VEGETATION AND WETLANDS**

117. Structural measures such as silt fences and temporary sediment ponds shall be used to avoid discharging sediment into wetlands and other critical areas. [FEIS Mitigation Measure]

118. Implementing projects shall provide "on the ground" protection measures such as wetland buffers or root protection zones for significant trees. [FEIS Mitigation Measure]

119. New stormwater outfalls shall be located to avoid impacts to any stream and adjacent wetlands, riparian buffers, unstable slopes, significant trees, and instream habitat. Where all

practical and feasible avoidance measures have been employed, provide mitigation in the form of outfall energy dissipaters and/or vegetation restoration and slope stabilization as necessary. [FEIS Mitigation Measure]

120. A tree inventory shall be required prior to the development of implementing projects so that other opportunities to preserve trees may be realized.

121. The Development Agreement shall include text that defines when and under what conditions a parcel may be logged for timber revenue, how that parcel must be secured to minimize the impacts on the community and how long the parcel may remain un-worked before it must be reforested.

122. The use of native vegetation in street landscaping and in parks shall be required.

**FISH AND WILDLIFE**

123. Wildlife forage preferences shall be of primary consideration in plant species selection for enhancement areas. [FEIS Mitigation Measure]

124. Mast-producing species (such as hazelnut) and such other native, preferred vegetation as may be specified by the Development Agreement shall be used to mitigate for reduced food sources resulting from habitat reductions when designing landscape plans for development parcels adjoining wetland buffers, or for wetland buffer enhancement plantings. [FEIS Mitigation Measure] The Development Agreement shall specify a process by which such landscape plans are to be reviewed and approved by the Director of Natural Resources and Parks for compliance with the mitigation requirement herein.

125. Provide a 300-foot-wide wildlife corridor from the western edge of the Core Complex to the City's western boundary. The corridor should be located within areas of contiguous open space that form a network. [FEIS Mitigation Measure]

**CLIMATE CHANGE**

126. Building design guidelines shall allow the use of solar, wind, and other renewable sources. [FEIS Mitigation Measure]

127. Should a large employer (100+ employees) or a group of similar employers locate in the commercial areas of the MPD, a Transportation Management Association shall be implemented to reduce vehicle trips. [FEIS Mitigation Measure]

**LAND USE**

128. Approval of the design concept and land use plan (Chapter 3) shall be limited to the Land Use plan map (Figure 3-1, as updated July 8, 2010); description of categories (beginning

on page 3-18); a maximum of 4,800 total residential units and 775,000 square feet of commercial space; and target densities (Table 3.2), except as modified herein. Corner store-style neighborhood commercial uses within residential land use categories shall be defined in the Development Agreement and shall only be allowed through minor amendment of the MPD. All other specifics shall be resolved through the Development Agreement process.

129. The project shall provide a mix of housing types in conformance with the MPD Design Guidelines. The Development agreement shall set targets for various types of housing for each phase of development.

130. Identification of specific areas where live/work units can be permitted shall be done as part of the Development Agreement or through an MPD minor amendment.

131. A minimum density of 4 du/per net acre for residential development shall be required for implementing projects, and shall be calculated for each development parcel using the boundaries of that parcel (or the portion thereof to be developed) as shown on the Land Use plan map (Figure 3-1, as updated July 8, 2010).

132. If the applicant requests to increase a residential category that abuts the perimeter of the MPD, it shall be processed as a Major Amendment to the MPD. Residential land use categories can otherwise be adjusted one category up or down through an administrative approval process provided they also otherwise meet the requirements for minor amendments outlined in BDMC 18.98.100.

133. The Development Agreement shall limit the frequency of proposed reclassification of development parcels to no more frequently than once per calendar year.

134. The Expansion Area process shall be clarified in the Development Agreement.

135. Project specific design standards shall be incorporated into the Development Agreement. These design guidelines must comply with the Master Planned Development Framework Design Standards and Guidelines. All MPD construction shall comply with the Master Planned Development Framework Design Standards and Guidelines, whether or not required by the Development Agreement.

136. A unit split (percentages of single family and multifamily) and commercial use split (commercial, office and industrial) shall be incorporated into the Development Agreement.

137. All commercial/office uses (other than home occupations and identified live/work areas) shall only occur on lands so designated. Additional commercial areas shall be identified on the Land Use Plan through future amendment to the MPD.

138. The project shall include a mix of housing types that contribute to the affordable housing goals of the City. The Development Agreement shall provide for a phase-by-phase analysis of affordable housing Citywide to ensure that housing is being provided at affordable

prices. Specifications for affordable housing needs within the project shall be determined as a result of the phase-by-phase analysis.

139. Exact specifications for the housing described in paragraph 122 shall be included within the Development Agreement.

140. A distinct land use category shall be created to recognize potential light industrial uses or the "office" category shall be renamed to properly indicate the range of potential uses. Areas intended to have light industrial type uses shall be identified on the Land Use Map that is made part of the Development Agreement.

141. The high density residential (18-30 du/ac) supplemental design standards and guidelines (MPD application Appendix E) shall become part of the Development Agreement.

142. Detached single family dwelling units shall be alley loaded, except where site conditions prevent alley loading or cause alleys to be impractical as determined by the City, in its reasonable discretion.

143. Homeowners Association conditions, covenants and restrictions (CCRs) or the Architectural Review Committee shall review, but shall not preclude, the use of green technologies such as solar panels.

144. Front yard setbacks and other specific lot standards shall be determined as part of the Development Agreement.

145. A FAR standard shall be established through the Development Agreement process.

146. No more than two floors of residential uses above ground floor commercial/office uses shall be allowed.

147. The orientation of public building sites and parks shall preserve and enhance views of Mt. Rainier and other views identified in the comprehensive plan. There are tailing piles located on property near Parcel B. The Applicant is not responsible for removal of those tailing piles, but future site and building design for Parcel B should consider the nature of the views to Mt. Rainier that may be possible if those piles are later removed.

148. The Applicant's requests for reduced parking standards in the Mixed Use Town Center as identified at p. 13-4 of the MPD application is granted. All other requests for deviation in the Chapter 13 of the MPD application are denied except for those deviations, mostly utility and street standards, that are identified in the recommendation as amenable to further review in the development agreement process. Any MPD deviations to the Sensitive Areas Ordinance are denied, because BDMC 18.98.155(A) provides that the Sensitive Areas Ordinance shall be the minimum standards for protection of sensitive areas within MPDs.

## SENSITIVE AREAS/OPEN SPACE

149. The use of sensitive areas including but not limited to wetlands, landslide and mine hazard areas and their associated buffers for development including trails, stormwater management, etc. shall be regulated by BDMC Chapter 19.10. Appropriate mitigation, if required, for impacts as well as other required measures shall be evaluated on a case-by-case basis at the time of implementing project application.

150. Areas shown as natural open space in the figure on Page 5-7 of the application are required to remain natural with the possibility for vegetation enhancement. Modifications to these areas may be approved by the City in its reasonable discretion, on a case-by-case basis, only if necessary for construction of required infrastructure such as roads, trails or stormwater facilities. Any areas disturbed pursuant to such approval shall be replanted with native plants. Nothing in this condition shall allow grading or modifications in the sensitive areas and buffers, except as provided in the Sensitive Areas Ordinance.

151. The Development Agreement shall include a tabular list of the types of activities and the characteristics of passive open space and active open space so that future land applications can accurately track the type and character of open space that is provided.

152. The Development Agreement shall include language that specifically defines when the various components of permitting and construction must be approved, completed or terminated. For example; when must open space be dedicated, plats recorded, and utility improvements be accepted by the City.

153. Specific details on which open space shall be dedicated to the city, protected by conservation easements or protected and maintained by other mechanisms shall be established as part of the Development Agreement.

154. Once acreages have been finalized, phasing of open space (which includes parks and is identified within the MPD application) shall be defined and articulated for timing of final designation within the Development Agreement.

155. Once the mapped boundaries of sensitive areas have been agreed to, the Development Agreement shall include text that identifies that these areas are fixed. If during construction it is discovered that the actual boundary is smaller or larger than what was mapped, the mapped boundary shall prevail. The applicant shall neither benefit nor be penalized by errors or changes in the sensitive area boundaries as the projects are developed.

## ADMINISTRATION

156. The proposed project shall have no adverse financial impact upon the city, as determined after each phase of development and at full build-out. The required fiscal analysis shall include the costs to the city for operating, maintaining and replacing public facilities required to be constructed as a condition of MPD approval or any implementing approvals related thereto. The fiscal analysis shall ensure that revenues from the project are sufficient to

maintain the project's proportionate share of adopted City staffing levels of service. The fiscal analysis shall be updated to show continued compliance with this criterion, in accordance with the following schedule:

a. Within five years, a new fiscal analysis shall be completed to determine the long-term fiscal impact to the City. If necessary, additional project conditions may be required.

b. Prior to commencing a new phase, including the first phase of construction.

The exact terms and process for performing the fiscal analysis and evaluating fiscal impacts shall be outlined in the Development Agreement, and shall include a specific "MPD Funding Agreement," which shall replace the existing City of Black Diamond Staff and Facilities Funding Agreement. The applicant shall be responsible for addressing any projected city fiscal shortfall that is identified in the fiscal projections required by this condition. This shall include provisions for interim funding of necessary service and maintenance costs (staff and equipment) between the time of individual project entitlements and off-setting tax revenues; provided, however, that in the event that the fiscal projection prepared prior to the commencement of Phase III indicates a likelihood of significant ongoing deficits in the city's general fund associated with operations or maintenance for properties within the MPD, the applicant must address the projected shortfalls by means other than interim funding..

157. The Applicant and other property owners may petition for the formation of a Community Facilities District to provide a mechanism for funding the costs of "facilities" as defined in Section 501 of SSB 6241. The City Council will review the petition as provided in SSB 6241 and, as set forth in Section 205, determine in its sole discretion whether the petitioners will benefit from the proposed district and whether the formation of a district will be in the best interest of the City and comply with the requirements of the Growth Management Act, Ch. 36.70A RCW.

The Development Agreement shall include language that specifically defines when the various components of permitting and construction must be approved, completed or terminated. For example: when must open space be dedicated, plats recorded, and utility improvements be accepted by the City.

158. The Development Agreement shall document a collaborative design/review/permitting process that allows City staff to participate in the conceptual stage of project planning in order to provide input on designs and choices that benefit the City as well as the applicant.

159. The Development Agreement shall specifically identify which rights and entitlements are vested with each level of permitting, including but not limited to the MPD Application approval, the Development Agreement approval, and Utility Permit approvals.

160. Reclassification of development parcels shall occur no more frequently than once per calendar year.

161. Proposed reclassification of development parcels located at the project perimeter to a higher density shall only occur through a Major Amendment to the MPD.

162. A process for including lands identified as "Expansion Areas" in the application shall be defined in the Development Agreement.

163. The Development Agreement shall define the proposed phasing plan for the various matters (utility and street infrastructure, parks, transferred development rights, etc.) subject to phasing standards.

164. Prior to the approval of the first implementing project of a defined phase, a detailed implementation schedule of the regional projects supporting that phase shall be submitted to the City for approval. The timing of the projects shall be tied to the number of residential units and/or square feet of commercial projects.

161. Proposed reclassification of development parcels located at the project perimeter to a higher density shall only occur through a Major Amendment to the MPD.

162. A process for including lands identified as "Expansion Areas" in the application shall be defined in the Development Agreement.

163. The Development Agreement shall define the proposed phasing plan for the various matters (utility and street infrastructure, parks, transferred development rights, etc.) subject to phasing standards.

164. Prior to the approval of the first implementing project of a defined phase, a detailed implementation schedule of the regional projects supporting that phase shall be submitted to the City for approval. The timing of the projects shall be tied to the number of residential units and/or square feet of commercial projects.

# Exhibit D

## Villages MPD
## Legal Description of Parcels Rezoned to MPD

1. Villages Parcel H (Guidetti) (Parcel #1521069088), legally described as follows:

That portion of the Easterly 660 feet of the West half of the Northeast quarter of Section 15, Township 21 North, Range 6 East W.M., in King County Washington, lying Southerly of Auburn-Black Diamond Highway;

Except the East 381.24 feet of the Northwest quarter of the Northeast quarter of Section 15, Township 21 North, Range 6 East, W.M. lying Southerly of Auburn-Black Diamond Highway and the East 90 feet of the North 165.70 feet of the Southwest quarter of the Northeast quarter of Section 15, Township 21 North, Range 6 East W.M., in King County Washington;

(Also known as Parcel 1 under survey recorded under recording number 20030917900009); and

2. Parcel B (Parcel #1121069006 and portion of parcel #1121069109), legally described as follows:

The West half of the Northwest Quarter of Section 11, Township 21 North, Range 6 East, W.M., in King County, Washington.

# Exhibit D

## Summary of Prior Agreements

# EXHIBIT "D": SUMMARY OF PRIOR AGREEMENTS

The following is a summary of the prior agreements and pre-conditions required under these agreements:

## 1.1 Black Diamond Urban Growth Area Agreement (BDUGAA) (Dec. 1996)

### A. Purpose

The Black Diamond Urban Growth area agreement is a multi-party agreement between the City of Black Diamond, King County, Palmer Coking Coal Company, and Plum Creek Timber. As a result of property acquisitions, the Master Developer has assumed responsibility for BDUGAA requirements related to the West, South, and East Annexation areas. The agreement was negotiated in order to allow for the expansion of the County's Urban Growth Area, and ultimately the City's municipal boundary as contemplated under the Growth Management Act and as identified in the agencies' respective comprehensive plans. Countywide Planning Policies and King County Ordinance 12065 specified that up to 915 acres were to be designated for future urban development and the remaining acreage was to be designated for Open Space or Natural Resource Use. The BDUGAA addressed two specific elements that needed to be carried out in order to implement Ordinance 12065 and the Countywide Planning Policies: the identification of open space to be preserved, and the ultimate land use and development within the areas identified as future development area.

### B. Intent

The City's intent is to allow for the annexation of and ultimately the orderly and responsible development in the new Urban Growth Areas. As a result of the annexations, open space is conserved within the new Urban Development Areas, within significant areas identified in the City, and in identified areas in the County adjacent to the City. Land uses and minimum densities are identified both in the pre-annexation development agreements, and within this development agreement as a part of the Master Planned Development application. Finally, the method of development, including development standards and provision of public utilities (water, sewer, storm, roads, etc.), was contemplated within the BDUGAA.

### 1.2 Black Diamond Area Open Space Protection Agreement

**A. Purpose**

The Black Diamond Open Space Agreement was entered into June of 2005 to provide for the orderly conveyance of numerous acres of open space, as well as memorializing future open space designations and preserving those areas with temporary conservation easements. The primary objective of the Black Diamond Area Open Space Protection Agreement (Open Space Agreement) was to prepare the open space conveyance for the first annexation under the BDUGAA, the West Annexation, and to preliminarily identify In City land for the South Annexation. Finalized in December 2005, the West Annexation area was brought into the City of Black Diamond, and 398 acres were permanently, or in some cases temporarily, conserved in the City and the County.

**B. Intent**

As a result of the Open Space Agreement, over 2,500 acres of open space was permanently conserved within Black Diamond and King County. The method for which open space gets conveyed was established within that agreement. Portions of the identified open space have already been conveyed in their entirety, while other portions have only had temporary conservation easements put in place. These temporary conservation easements are intended to protect the land from further development until a proposal is made to protect the open space necessary and develop the rest, in accordance with the Open Space Agreement, and the BUDGAA, as identified.

### 1.3 Annexation Ordinance No. 515

**A. Purpose**

In December of 1994, the City annexed 623 acres in Sections 15 and 22. Those parcels are identified specifically as Parcel E and Parcel BDA in this Agreement. The annexation identified the zoning, as well as indebtedness and taxation responsibility of the property.

**B. Intent**

The ordinance brought the land within the City's municipal boundaries, upon which it controls the zoning and development standards employed upon the property, in addition to other certain municipal responsibilities. Immediately upon annexation, the City adopted a moratorium on the annexed land in order to afford time to apply the appropriate zoning and land use classifications.

**C. Status**

Land use designations and zoning was applied to the land in the City's 1996 Comprehensive Plan. The land use designation and zoning was subsequently updated in the City's Comprehensive Plan and Zoning Code, adopted June 18th, 2009. Following the adoption of the 2009 Comprehensive Plan and Zoning Code, the moratorium on the land expired.

### 1.4 Annexation Ordinance No. 517

**A. Purpose**

In December of 1994, the City annexed approximately 160 acres in Section 22. That parcel is currently identified as a potential expansion parcel in this Agreement. The annexation identified the zoning, as well as indebtedness and taxation responsibility of the property.

**B. Intent**

The ordinance brought the land within the City's municipal boundaries, upon which it controls the zoning and development standards employed upon the property, in addition to other certain municipal responsibilities. Immediately upon annexation, the City adopted a moratorium on the annexed land in order to afford time to apply the appropriate zoning and land use classifications.

**C. Status**

Land use designations and zoning was applied to the land in the City's 1996 Comprehensive Plan. The land use designation and zoning was subsequently updated in the City's Comprehensive Plan and Zoning Code, adopted June 18th, 2009. Following the adoption of the 2009 Comprehensive Plan and Zoning Code, the moratorium on the land expired.

### 1.5 Pre-Annexation Development Agreement for the West Annexation Area

**A. Purpose**

Plum Creek petitioned the City to annex the West Annexation Area. Due to Boundary Review Board (BRB) requirements, the annexations were submitted as three separate annexations, and thus three separation Pre-Annexation and Development Agreements (PADAs). The PADAs pertain to zoning and other development requirements pertinent to the potential development of the annexed lands. All three of the PADAs are summarized within this section.

**B. Intent**

In order to allow for the annexation of the properties as proposed by Plum Creek, the proposal had to be consistent with the BDUGAA which outlined specific requirements. In addition, state law requires that as part of the annexation process, zoning and other land use matters pertinent to the property are defined.

**C. Status**

Upon execution of the three PADAs, the land was annexed into the City, and zoning was applied. All other remaining requirements from the PADAs are integrated into this Agreement.

### 1.6 Pre-Annexation Development Agreement for the South Annexation area

**A. Purpose**

BD Village Partners, LP, petitioned the City to annex the South Annexation area, which occurred December 17, 2009 via Ordinance no. 09-932, effective December 27, 2009.

**B. Intent**

As required by state law, the annexation specified that the zoning for the South Annexation area would be R-4 and MPD and also that the area would be assessed and taxed to pay for its proportion of the City's existing indebtedness.

**C. Status**

Upon execution of the PADA, the land was annexed into the City, and zoning was applied. All other remaining requirements from the PADA are integrated into this Agreement.

## Exhibit E

## City of Black Diamond Municipal Code

Hard copy on file with the City Clerk. Exhibit "E" includes:

- Black Diamond Municipal Code, through September 20, 2010
- City of Black Diamond Zoning Map, June 2009
- City of Black Diamond Comprehensive Plan, 2009
- City of Black Diamond Parks, Recreation and Open Space Plan, December 18, 2008
- Storm and Surface Water Plan, December 2009
- City of Black Diamond Water System Comprehensive Plan, December 2009
- City of Black Diamond Engineering Design and Construction Standards, June 2009
- Black Diamond Design Guidelines for Master Planned Development Framework Design Standards and Guidelines, June 2009
- Black Diamond Design Guidelines for Business Park/Industrial Areas, June 2009
- Black Diamond Design Guidelines for Commercial Zones, June 2009
- Black Diamond Design Guidelines for The Historic Town Center, June 2009
- Black Diamond Design Guidelines for Multi-family Development, June 2009
- Black Diamond Design Guidelines for Residential Uses in the Historic Village Core, June 2009

# Exhibit F

## Traffic Monitoring Plan

## TRAFFIC MONITORING PLAN

The transportation mitigation measures imposed on The Villages MPD include projects that address the potential full transportation impacts of complete build-out of The Villages MPD together with build-out of the Lawson Hills MPD. The build-out of both MPDs will occur over a period of years and, therefore, the transportation mitigation also should be implemented over a period of years. To assure that the mitigation keeps pace with MPD Development and appropriate improvements are constructed at the appropriate time, the following monitoring and trigger protocol is established.

### A. Required Timing for Modeling and Monitoring

Before submitting Implementing Project applications for each Phase of the combined MPDs, and in the middle of each Phase, the Master Developer shall model and monitor traffic to identify the expected traffic impacts of that Phase and to determine what improvements or strategies, if any, will be necessary to comply with the City's transportation concurrency requirements as defined in the City of Black Diamond's Comprehensive Plan (2009). The middle of a Phase is defined as the point at which occupancy has been granted for the mid-point ERUs[1] for the MPDs. The modeling shall take into account the number of new homes and commercial buildings that are actually occupied and generating traffic. In the event that one MPD is not proceeding, the modeling and monitoring need only be conducted for the active MPD. In the event that there are separately controlled Master Developers for each MPD, and both are proceeding, the Master Developers shall be required to coordinate to model and monitor traffic and submit a joint report. In the event that a subsequent Phase is submitted prior to full build-out of an existing Phase, the subsequent Phase shall establish as its baseline what is constructed and occupied as of the date of submittal of the report. The subsequent Phase shall also assume buildout of the remainder of the existing Phase as part of the modeling in addition to what is being submitted in the Implementing Project application.

When the City has completed its regional transportation model, all subsequent modeling and monitoring shall be done with that regional model.

[1] ERU means an Equivalent Residential Unit, which is intended to equate all land uses to equivalent single-family dwelling units in terms of trips generated. The ITE trip generation rates designate that a single-family dwelling unit generates one trip during the PM peak hour. Therefore, if, for example, the ITE trip generation rates applied to a commercial office building result in 60 PM peak hour trips, that building would be deemed to generate 60 ERUs.

## B. Report Requirements

The results of the traffic modeling and monitoring shall be presented to the City in a written report. The traffic monitoring report shall be prepared by a registered professional engineer chosen by the Master Developer and licensed to practice in the State of Washington with experience in traffic engineering and transportation planning. The written report shall document the findings including an evaluation of the existing conditions (including traffic counts), a forecast of future traffic volumes based on the next Phase's (or the remaining portion of the Phase's) projected level of development, and identification of expected Implementing Projects' impacts. The report shall also evaluate the phase using the City's transportation concurrency requirements (as defined in the City of Black Diamond's Comprehensive Plan (2009)) so as to identify any improvements or strategies necessary to maintain the City's then-applicable, adopted level of service (LOS) standard on transportation facilities within the City of Black Diamond.

The existing conditions section of each traffic monitoring report shall include a summary of updated peak hour turning movement counts for intersections or two-direction roadway counts for roadway segments for all of the transportation mitigation projects included in the traffic monitoring plan (refer to Section C below). Existing level of service shall also be calculated for each transportation mitigation project included in the traffic monitoring plan. Traffic counts shall be conducted on representative weekdays (Tuesday, Wednesday, or Thursday during weeks not affected by holidays, bad weather such as snow, or other days with unusually high or low traffic volumes) and when school is in session. To enable comparisons back to prior monitoring reports, traffic counts shall be conducted during the same month to the extent feasible—alternatively, seasonal adjustment factors shall be applied to counts conducted during different months.

Evaluation of potential future traffic volumes from other Black Diamond development shall not be required because the City will independently require other projects to evaluate and mitigate their own impacts. However, infill traffic growth (exempt from SEPA) and background traffic growth from outside of Black Diamond (also exempt from SEPA) shall be included in modeling.

For intersection improvements, the report shall compare the results with the LOS threshold for each existing facility to determine whether and at what time any improvement to an existing facility is required.

The report shall also evaluate the extent to which MPD traffic would cause or contribute to any level of service failure on an existing facility in Black Diamond or need for access to or circulation within the MPD. The City, in its reasonable discretion, may use the report to determine whether to request that the Master Developer modify its proposed timing for construction of any new roadway alignments or intersection improvements described in MPD Condition of Approval No. 10 of the MPD Permit Approval.

As described in Development Agreement Section 11.4.A, all documents that result from the Traffic Monitoring Plan, including traffic monitoring reports, are required to be "submitted to the Designated Official for approval." The Designated Official, with assistance from such professional transportation engineering consultants selected by the Designated Official in his/her reasonable discretion as provided in Exhibit "N", shall be responsible for reviewing and approving each traffic monitoring report submitted by the Master Developer pursuant to the requirements of this Traffic Monitoring Plan. Moreover, the City shall not approve an Implementing Project unless the most recent traffic monitoring report prepared by the Master Developer per this Exhibit—and approved by the City—demonstrates compliance with the City's transportation concurrency requirements (as defined in the City of Black Diamond's Comprehensive Plan (2009)).

## C. Transportation Projects to be Monitored and Modeled

The following projects shall be monitored and/or included in the model of the Phase's future traffic impacts: all projects listed in Table 11-5-1 of the Development Agreement, (and any modifications to that list following the periodic review process of Condition of Approval No. 17 of the MPD Permit Approval), together with existing facilities in the City of Black Diamond where the level of service impacts of the MPD may be addressed by construction of a new roadway alignment or intersection improvements inside Black Diamond as described in Condition of Approval No. 10 of the MPD Permit Approval. However, if the Master Developer has entered into a mitigation agreement with an outside jurisdiction that either sets the timing for payment towards or construction of the mitigation projects, or exempts that jurisdiction's projects from later monitoring, modeling or other review, that mitigation agreement is deemed to satisfy all mitigation and no further monitoring or modeling of facilities within that jurisdiction are required. In addition, any projects listed on Table 11-5-1 of the Development

Agreement that are outside the City of Black Diamond are not subject to the transportation concurrency testing.

The monitoring plan and model need not analyze a specific improvement after that improvement has been constructed.

**D. Triggers and Timing for Construction of Transportation Projects**

For intersection improvements, the threshold trigger is when the intersection LOS (as defined in the Highway Capacity Manual, TRB, 2000) for the entire PM peak hour would (1) no longer meet the City's then-applicable, adopted LOS standard or other jurisdiction's standard applicable to the MPD Permit Approval or (2) in the event that the LOS is already below the applicable threshold, the trigger shall be when traffic volumes from the new MPD Phase begin to increase delay at the intersection causing an additional impact .

For new roadway improvements inside Black Diamond, the MPD Phasing Plan anticipates that the transportation mitigation projects will be constructed to service the new MPD development of each Phase, including for access to and circulation within the MPD. For purposes of the modeling and monitoring plan, the threshold trigger to construct the improvement is when MPD traffic would increase delay or impact LOS at any intersection on existing roadways to a point at which the new roadway would be warranted. This trigger does not supersede other City standard requirements such as providing two points of access or the obligations for constructing the Pipeline Road.

The Master Developer shall only be required to perform an improvement if the applicable threshold is triggered.

The specific construction timing shall be set in each report, based on the results of the required monitoring and modeling. For City of Black Diamond projects, by execution of the Development Agreement, the City commits to prompt permit review, such that the Master Developer's prompt construction of transportation improvements shall commence before the impacted street or intersection falls below the applicable level of service. For projects within Black Diamond that are also within the State right-of-way, the report shall set a deadline for commencement of only engineering and design of the improvement but not a deadline for commencement of construction. For projects outside the City of Black Diamond where

additional permitting from another jurisdiction is required, the report shall set the time at which the Master Developer must commence the permitting and/or engineering and design process, but shall not set a deadline for commencement of construction. Within the City of Black Diamond, if additional public right-of-way should be needed for the design of a particular improvement, the Master Developer shall first demonstrate a good faith effort to acquire the right-of-way needed. If, after making an offer equal to the fair market value, the Master Developer is unable to purchase the needed right of way, the City shall be responsible for acquiring the needed right-of-way.

# Exhibit G

## Constraint Maps

PORTION OF SECTIONS 2, 3 AND 11, TOWNSHIP 21 N, RANGE 6 E., W.M.

SCALE: 1" = 400'

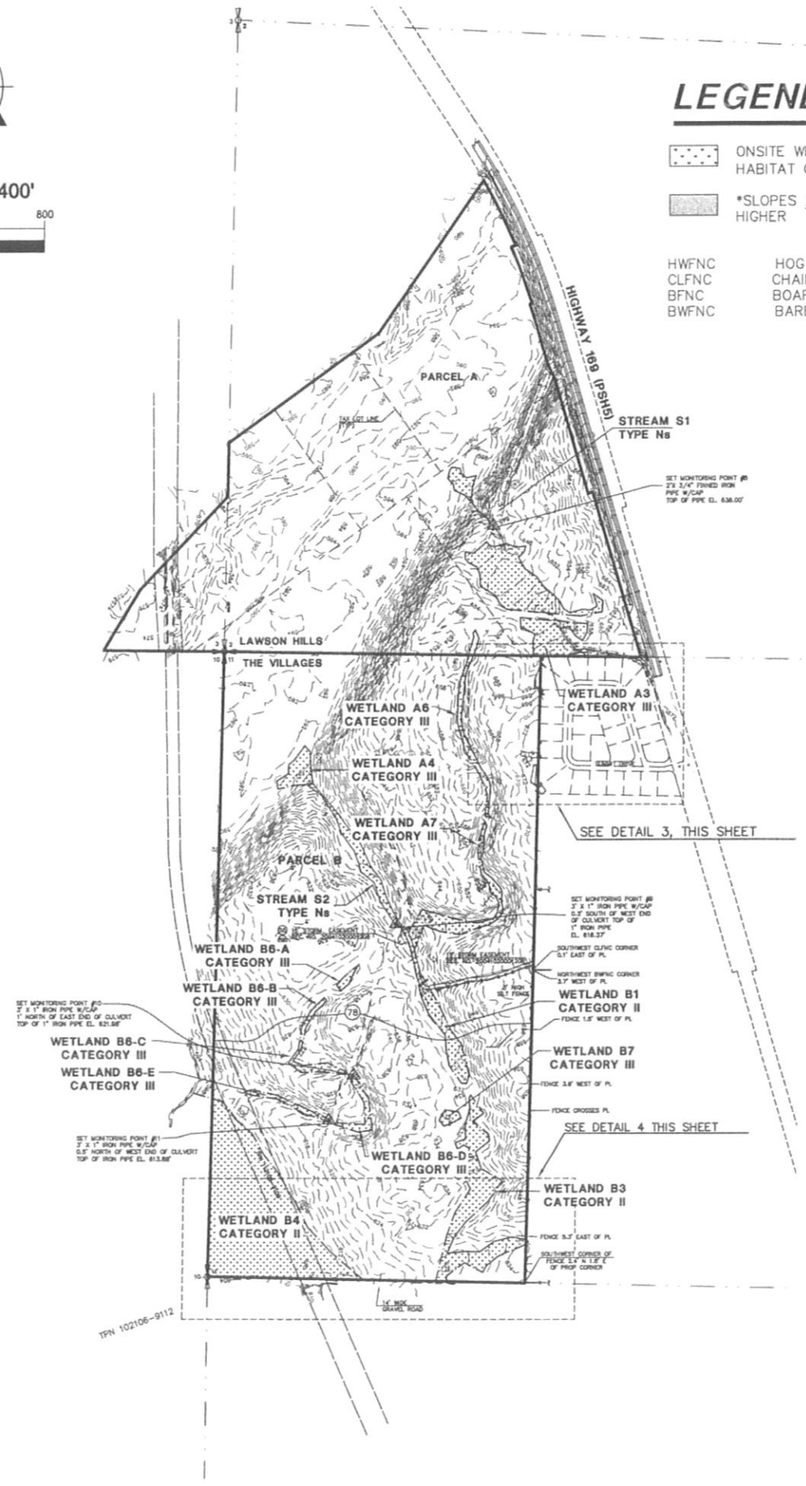
0 200 400 800

## LEGEND

ONSITE WETLAND AREA (INCLUDES FISH AND HABITAT CONSERVATION AREAS)

*SLOPES ≥ 40% AND 10 FEET HIGH OR HIGHER

| | |
|---|---|
| HWFNC | HOG WIRE FENCE |
| CLFNC | CHAIN LINK FENCE |
| BFNC | BOARD FENCE |
| BWFNC | BARB WIRE FENCE |




## CONSTRAINT MAP ASSUMPTIONS

STREAMS, WETLANDS, AND STEEP SLOPES

1. THE WETLANDS AND STREAMS ARE BASED ON THE CITY'S SENSITIVE AREAS ORDINANCE DATED FEBRUARY 2009.

2. THE LOCATIONS OF OFF-SITE STREAMS AND WATER BODIES HAVE NOT BEEN SURVEYED. THEY ARE LOCATED BASED ON WASHINGTON DEPARTMENT OF NATURAL RESOURCES WATER AND STREAM TYPE MAPS, LIDAR TOPOGRAPHY, AND LIMITED FIELD RECONNAISSANCE IN SOME INSTANCES.

3. THE WETLAND FLAGS IN THE BDA PARCEL WERE ESTABLISHED BY OTHERS AND SURVEYED BY ESM. SUBSEQUENT REVISIONS TO THE WETLAND BOUNDARIES WERE PROVIDED BY WETLAND RESOURCES AND SURVEYED BY TRIAD.

4. THE CHANNEL (S3) RUNNING DOWN A ROAD BED IN THE SOUTHEAST CORNER OF PARCEL D SHOULD BE TYPED AS AN UNREGULATED DITCH. THE CITY OF BLACK DIAMOND, WDFW AND THE USACE WOULD MAKE THE FINAL DETERMINATION ON THE STATUS OF THE DITCH.

TOPOGRAPHY

TRIAD SURVEYED GROUND TOPOGRAPHY IS SHOWN FOR PARCELS A, B, C, D, E, AND THAT PORTION OF PARCEL F NORTH LYING SOUTHERLY OF BLACK DIAMOND LAKE AND STREAM S5 AND WETLAND S1/S2. GROUND TOPO FOR THE BDA PARCEL WAS PROVIDED BY ESM. LIDAR TOPOGRAPHY IS SHOWN ON THE REMAINDER OF PARCEL F, PARCEL G AND OFFSITE.

EASEMENTS

1. SOME EASEMENTS ON THE BDA PROPERTY MAY HAVE BEEN EXTINGUISHED UPON PURCHASE OF THE PROPERTY BY YARROW BAY COMMUNITIES.

2. ACCESS AND UTILITY EASEMENT REC. NO. 8712140407
ALT. D–UNSPECIFIED 60' MINIMUM EASEMENT FROM NW 1/4 THROUGH S. 1/2 SEC. TO SE 352ND STREET A.K.A. SE GREN VALLEY ROAD

NOTES CORRESPONDING TO PARAGRAPH NUMBERS FROM SCHEDULE B–SECTION 2, SPECIAL EXCEPTIONS OF THE TITLE REPORT

49. PARCEL G IS SUBJECT TO RESERVATIONS FOR MINERALS, OIL AND GAS PER RECORDING NUMBERS 8907070390, 8907070391, 8907070392, 9112301747, 9206230401, AND 9301152402.

55. REC. NO. 1629726 UNDEFINED PACIFIC TELEPHONE AND TELEGRAPH CO. RELOCATABLE LICENSE FOR 86 POLES, ETC. AND EQUIPMENT IN SECTION 11 AND 12; NO POLES FOUND.

56. REC. NO. 1726827–UNDEFINED PACIFIC TELEPHONE AND TELEGRAPH RELOCATABLE LICENSE FOR 65 POLES ETC. IN SECTION 11, 14, 23, AND 26. NO POLES FOUND.

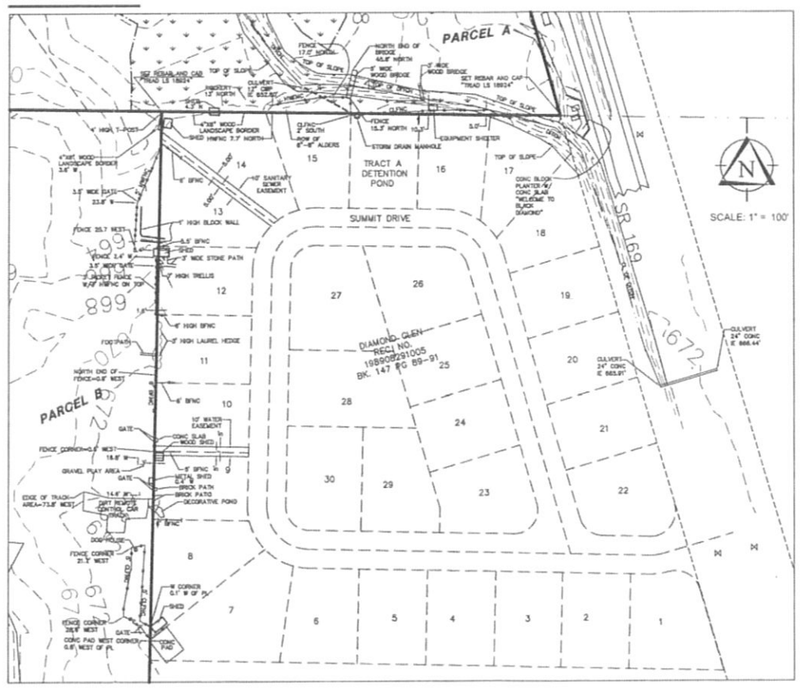
57. RECORDING NUMBER 20041020001208 STORM DRAINAGE DITCH EASEMENT (RELOCATABLE) BENEFITING BLACK DIAMOND DEVELOPMENT COMPANY, LLC FOR THE PURPOSE OF WATER OVERFLOW FROM RETENTION POND TO THE EAST.

62. GENERAL EXCEPTION TO THE RIGHTS OF THE PUBLIC TO THAT PORTION OF THE PROPERTY, IF ANY, LYING WITHIN MAPLE VALLEY–BLACK DIAMOND ROAD.

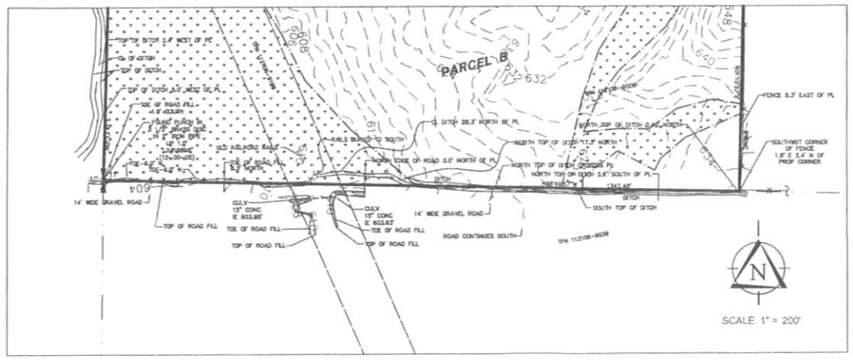
77. WEST HALF OF SECTION 15 IS SUBJECT TO UNDEFINED 63.3 ACRE CONSERVATION EASEMENT PER REC. NO. 20060323001818 (TRAIL CORRIDOR CREDITED AS PART OF THE 63.3 ACRES)

78. CONSERVATION EASEMENT REC. NO. 20060323001819 ESTABLISHES AN UNDEFINED 91 ACRE CONSERVATION EASEMENT. PARCELS B, E, AND F ARE BURDENED BY THE EASEMENT. THE EASEMENT DOES NOT APPORTION THE 91 ACRES TO EACH OF THESE PARCELS.

## DETAIL 3




## DETAIL 4




© 2011 TRIAD ASSOCIATES

TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-6929
425.821.8448
425.821.3461 fax
800.488.0756 toll free
www.triadassoc.com
WASHINGTON

THE VILLAGES - PARCEL B
CONSTRAINT MAP - LAND USE WORKSHEET
YARROW BAY COMMUNITIES
CITY OF BLACK DIAMOND

| NO. | DATE | REVISION | BY | CK |
|---|---|---|---|---|
| 1 | 1/25/08 | ADDED STEEP SLOPES | AU | BW |
| 2 | 5/5/08 | ADDED WETLANDS A7 AND A8 | AU | BW |
| 3 | 5/15/08 | ADDED WETLAND BUFFERS AND AREAS | AU | BW |
| 4 | 6/27/08 | REVISED WETLAND BUFFERS AND AREAS | AU | BW |
| 5 | 11/21/08 | REVISED WETLANDS AND AREAS | AU | BW |

AL FLANE
PROJECT MANAGER
MARK S. HARRISON, PLS
PROJECT SURVEYOR
PROJECT ENGINEER
PROJECT LANDSCAPE ARCHITECT
FIRST SUBMITTAL DATE: 11/06/07
SCALE: MODEL:1"= 400' PAPER:

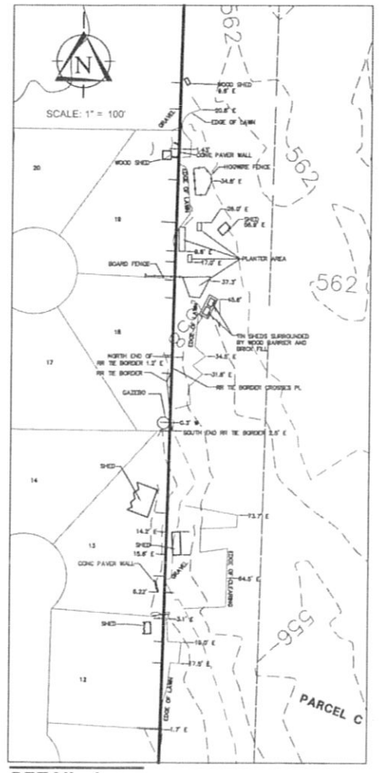
STATE OF WASHINGTON MARK S. HARRISON 21467 REGISTERED PROFESSIONAL LAND SURVEYOR

STAMP NOT VALID UNLESS SIGNED AND DATED

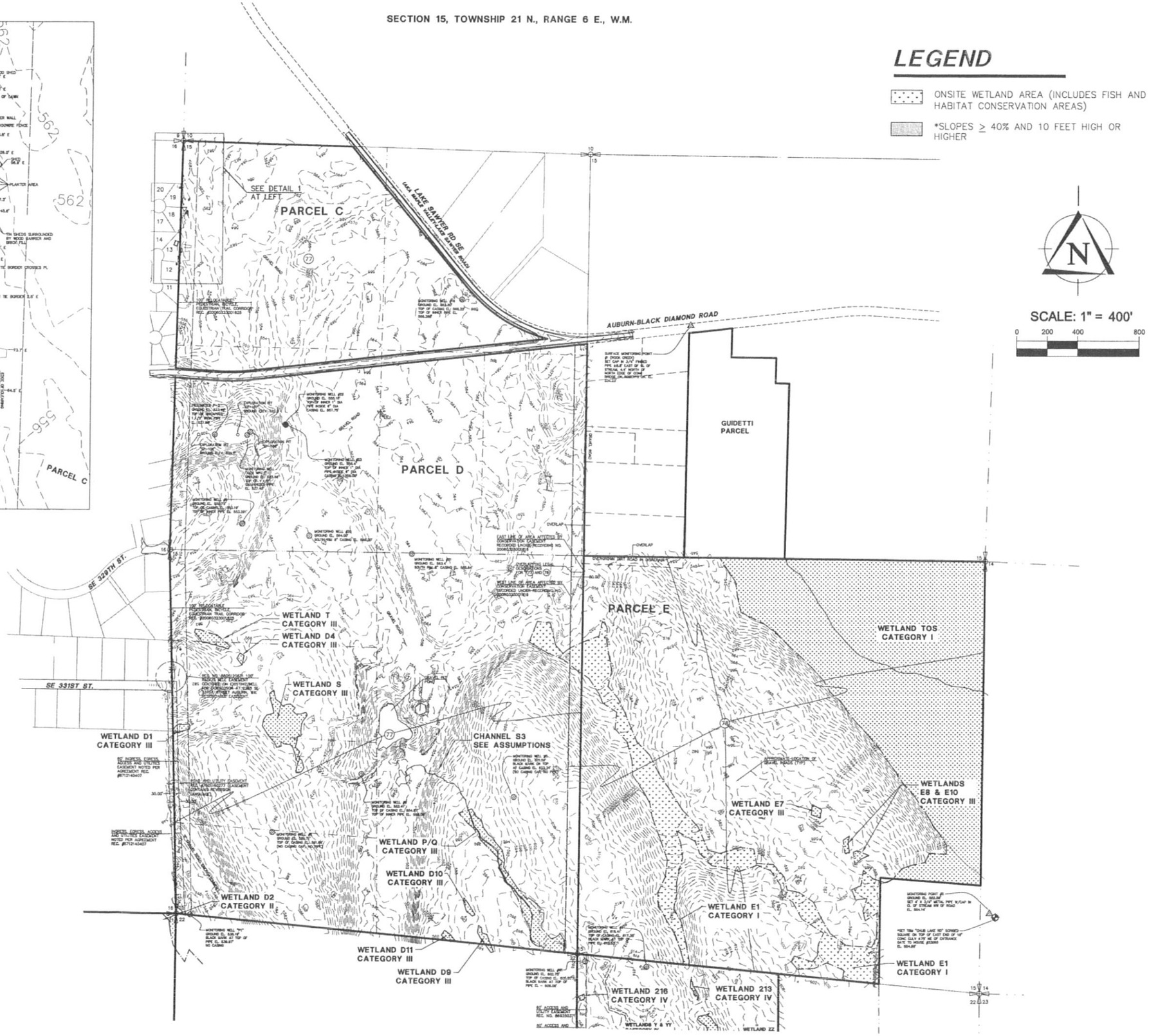
JOB NO. 05-336

SHEET NO. 1 of 4

SECTION 15, TOWNSHIP 21 N., RANGE 6 E., W.M.




DETAIL 1




## LEGEND

- ONSITE WETLAND AREA (INCLUDES FISH AND HABITAT CONSERVATION AREAS)
- *SLOPES ≥ 40% AND 10 FEET HIGH OR HIGHER

SCALE: 1" = 400'

0 200 400 800


TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-6929
425.821.8448
425.821.3481 fax
800.488.0756 toll free
www.triadassoc.com


WASHINGTON

# THE VILLAGES - PARCELS C, D & E AND THE GUIDETTI PARCEL

CONSTRAINT MAP - LAND USE WORKSHEET

YARROW BAY COMMUNITIES

CITY OF BLACK DIAMOND

REVISED BY:

| NO. | DATE | REVISION | BY | CK |
|---|---|---|---|---|
| 1 | 04-07-08 | ADDED COMMUNITY OVERLAP AND CONSTRUCTION EASEMENTS, REVISE WETLANDS | JMJ | DHS |
| 2 | 05-20-08 | ADDED TAX #'S TO PARCELS, REVISED WETLAND BUFFER FOR WETLAND 'P' | JMJ | DHS |
| 3 | 06-19-08 | ADDED WETLAND BUFFERS AND ROAD | JMJ | DHS |
| 4 | 07-21-08 | REVISED WETLAND BUFFERS | JMJ | DHS |

AL FURE
PROJECT MANAGER
MARK S. HARRISON, PLS
PROJECT SURVEYOR
PROJECT ENGINEER
PROJECT LANDSCAPE ARCHITECT
FIRST SUBMITTAL DATE: 11/06/07
SCALE: BASE: 1"= 400' VERT:

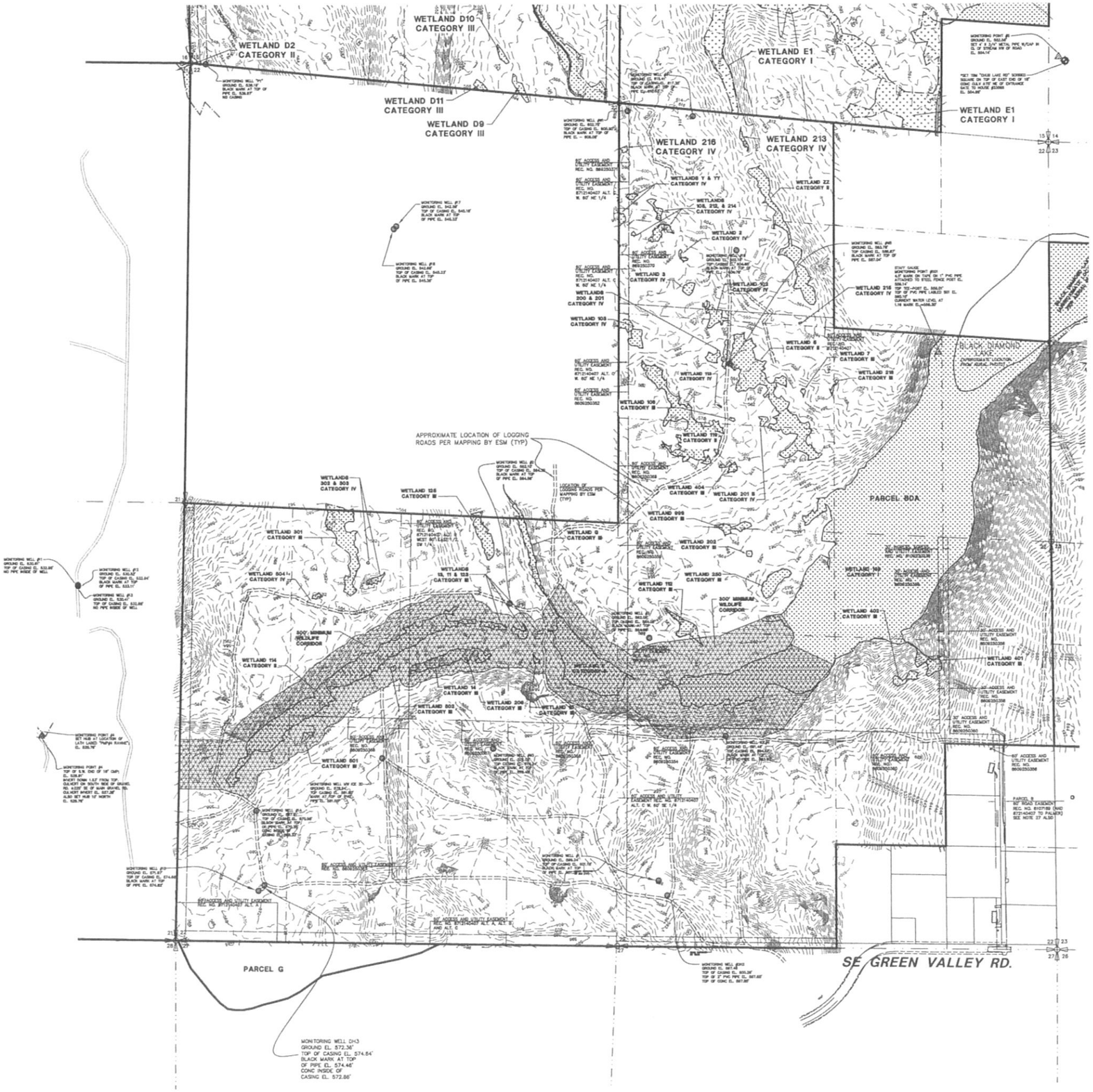
REGISTERED PROFESSIONAL LAND SURVEYOR
MARK S. HARRISON
21467
STATE OF WASHINGTON

STAMP NOT VALID UNLESS SIGNED AND DATED

JOB NO. 05-336

SHEET NO. 2 of 4

SECTION 22, TOWNSHIP 21 N., RANGE 6 E., W.M.



SCALE: 1" = 400

0 200 400 800

## LEGEND

- ONSITE WETLAND AREA (INCLUDES FISH AND HABITAT CONSERVATION AREAS)
- *SLOPES > 40% AND 10 FEET HIGH OR HIGHER
- 300' MINIMUM FISH AND WILDLIFE CORRIDOR


TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-6929
425.821.8448
425.821.3481 fax
800.488.0756 toll free
www.triadassoc.com


# THE VILLAGES - BDA PARCEL AND PARCEL G

## CONSTRAINT MAP - LAND USE WORKSHEET

YARROW BAY COMMUNITIES

CITY OF BLACK DIAMOND

WASHINGTON

| NO. | DATE | REVISION | BY | CK |
|---|---|---|---|---|
| 1 | 5/5/08 | ADD STEEP SLOPES & VARIETY WETLANDS | AMJ | DHS |
| 2 | 5/12/08 | COLOR REVISED WETLAND | AMJ | DHS |
| 3 | 5/19/08 | REVISED WETLAND BUFFERS | AMJ | DHS |
| 4 | 6/16/08 | REVISED BUFFER | AMJ | DHS |
| 5 | 6/23/08 | REVISED BUFFER PER CITY/DEPT | AMJ | DHS |
| 6 | 7/1/08 | ADDED SLOPE OVER 40% | AMJ | MJH |
| 7 | 8/21/08 | REVISED SLOPE OVER 40% | AMJ | DHS |

REVISED BY:
DATE:

AL FURE
PROJECT MANAGER

MARK S. HARRISON, PLS
PROJECT SURVEYOR

PROJECT ENGINEER

PROJECT LANDSCAPE ARCHITECT

FIRST SUBMITTAL DATE: 11/06/07

SCALE: HORIZ.: 1"= 400' VERT.:

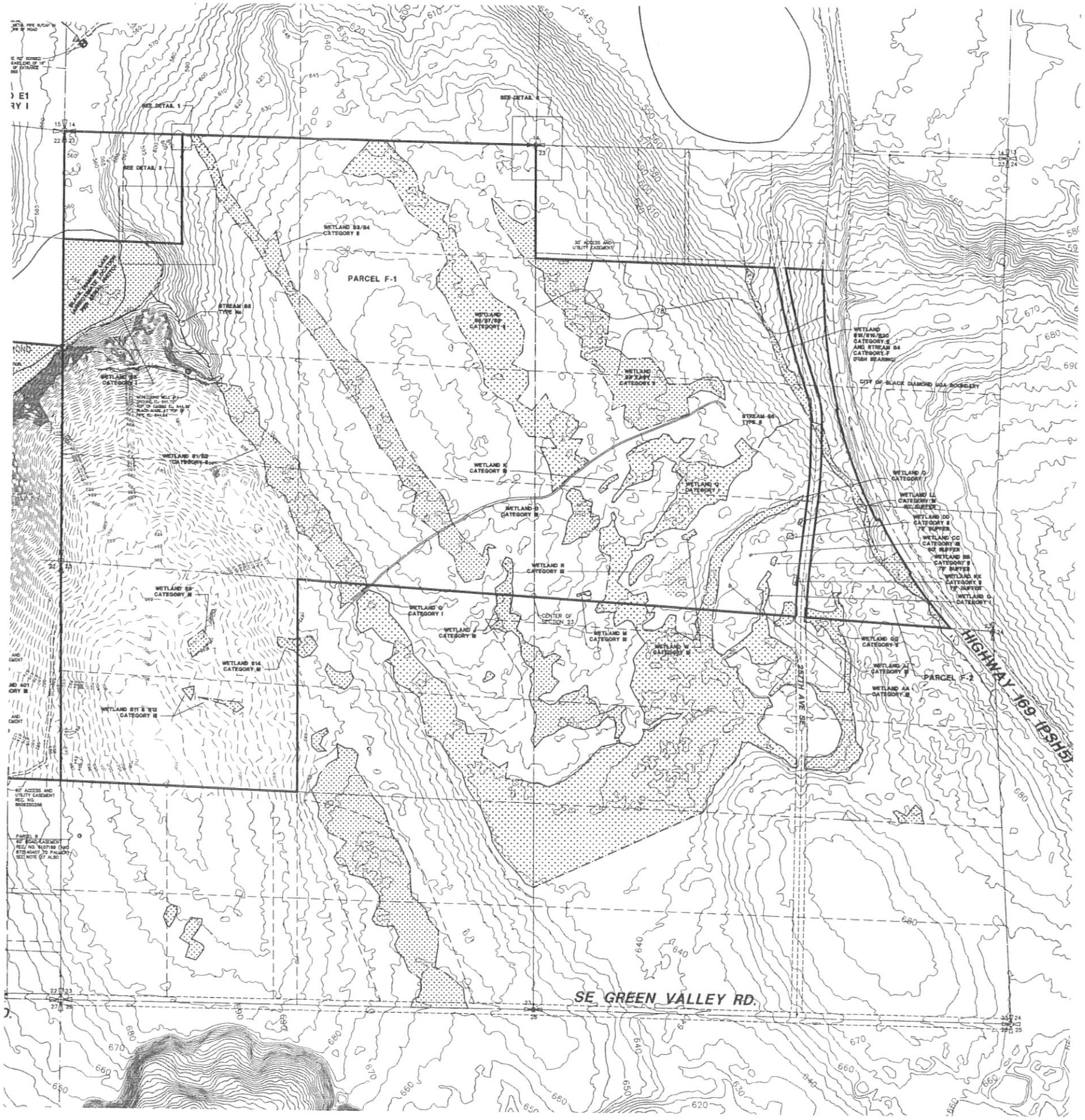
STAMP NOT VALID
UNLESS SIGNED AND DATED

JOB NO. 05-336

SHEET NO. 3 OF 4

© 2011 TRIAD ASSOCIATES

SECTION 23, TOWNSHIP 21 N., RANGE 6 E., W.M.




SCALE: 1" = 400'

0 200 400 800

## LEGEND

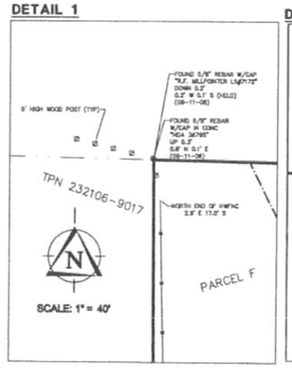
ONSITE WETLAND AREA (INCLUDES FISH AND HABITAT CONSERVATION AREAS)

*SLOPES ≥ 40% AND 10 FEET HIGH OR HIGHER

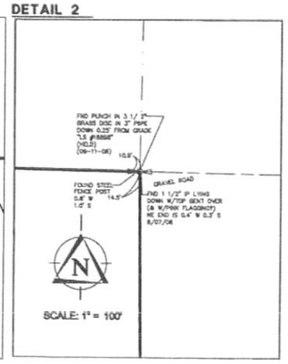
## NOTES

1.) CONTOURS EAST OF THE WEST EDGE OF WETLAND S1/S2 AND STREAM S5 ARE BASED ON LIDAR TOPOGRAPHY.

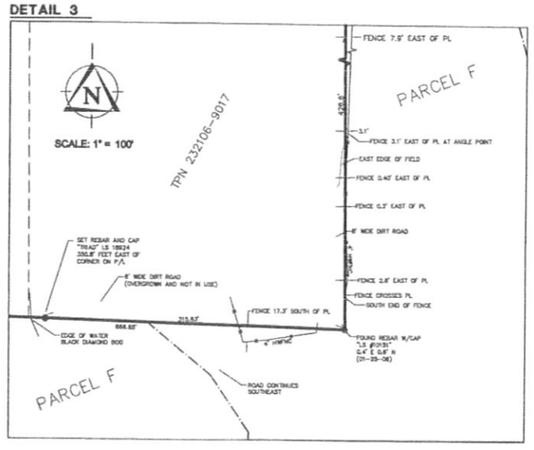
**DETAIL 1**




**DETAIL 2**




**DETAIL 3**




© 2011 TRIAD ASSOCIATES

TRIAD ASSOCIATES
12112 115th Ave. NE
Kirkland, WA 98034-6929
425.821.8448
425.821.3461 fax
800.488.8756 toll free
www.triadassoc.com

WASHINGTON

# THE VILLAGES - PARCEL F NORTH

## CONSTRAINT MAP - LAND USE WORKSHEET

YARROW BAY COMMUNITIES

CITY OF BLACK DIAMOND

| REVISED BY: | DATE | REVISION | BY | CK |
|---|---|---|---|---|
| AS | 11/06/07 | ADDED SEPTIC AND REVISED WETLANDS | AM | DMS |
| | 12/07/07 | REVISED WETLANDS | AM | DMS |
| | 01-25-08 | ADDED STREAM S4 AND SF | AM | DMS |
| | 02-01-08 | REVISED WETLANDS | AM | DMS |
| | 03-03-08 | REVISED EASTERLY BUFFER | AM | DMS |
| | 03-06-08 | REVISED WETLANDS | AM | DMS |
| | 03-20-08 | REVISED BUFFER | AM | DMS |
| | 04-21-08 | REVISED WETLANDS AND BUFFER | AM | DMS |

AL FURE
PROJECT MANAGER
MARK S. HARRISON, PLS
PROJECT SURVEYOR
PROJECT ENGINEER
PROJECT LANDSCAPE ARCHITECT
FIRST SUBMITTAL DATE: 11/06/07
SCALE: HORIZ.:1"= 400' VERT.:

STAMP NOT VALID UNLESS SIGNED AND DATED

JOB NO. 05-336

SHEET NO. 4 of 4

# Exhibit H

## MPD PROJECT SPECIFIC DESIGN STANDARDS AND GUIDELINES

# The Villages and Lawson Hills

BLACK DIAMOND, WASHINGTON

## Design Standards & Guidelines

May 24, 2011

# TABLE OF CONTENTS


1. Introduction ..... 1

2. Neighborhood Overviews ..... 4

3. Non-Residential Design Standards and Guidelines ..... 10
   - Architectural Design Standards ..... 11
   - Architectural Design Guidelines ..... 13

4. Residential Design Standards and Guidelines ..... 17
   - Architectural Design Standards ..... 18
   - Architectural Design Guidelines ..... 21

5. Parks and Open Space ..... 24

6. Signage and Wayfinding ..... 30
   - Signage Standards ..... 31
   - Signage Guidelines ..... 32

# Chapter One:
## Introduction

# Introduction

The Villages and Lawson Hills are designed to reinforce the small-town character and recreation-oriented lifestyle of Black Diamond, yet bring a fresh, vibrant architecture and energy to the community.

They are both comprised of multiple neighborhoods woven into the landscape. The architecture within each of the neighborhoods will evoke an identifiably distinct character which is influenced by regional style, contemporary interpretations, and traditional housing types, planning patterns, topography, as well as the unique parks around which each neighborhood is located.

To ensure that the architecture within The Villages and Lawson Hills contributes to the individual identity of each neighborhood, as well as high quality development for the whole community, this document provides Design Standards and Guidelines.

These Design Standards complement and expand upon the standards in the Development Agreements for The Villages and Lawson Hills which govern many of the aspects of design and site planning. This document intends to supplement the Development Agreement and comply with the City's MPD Framework Design Standards and Guidelines. Design Standards are specific requirements and are expressed as such.

Design Guidelines are statements that describe the desired visual character of the neighborhood or structure and address issues that are primarily aesthetic in nature. While they are expressed as "encouraged" or "discouraged" they are important in the overall success of the community. These guidelines are not intended to be utilized simply as a checklist. They are intended to encourage creativity and a level of quality within the desired community character.

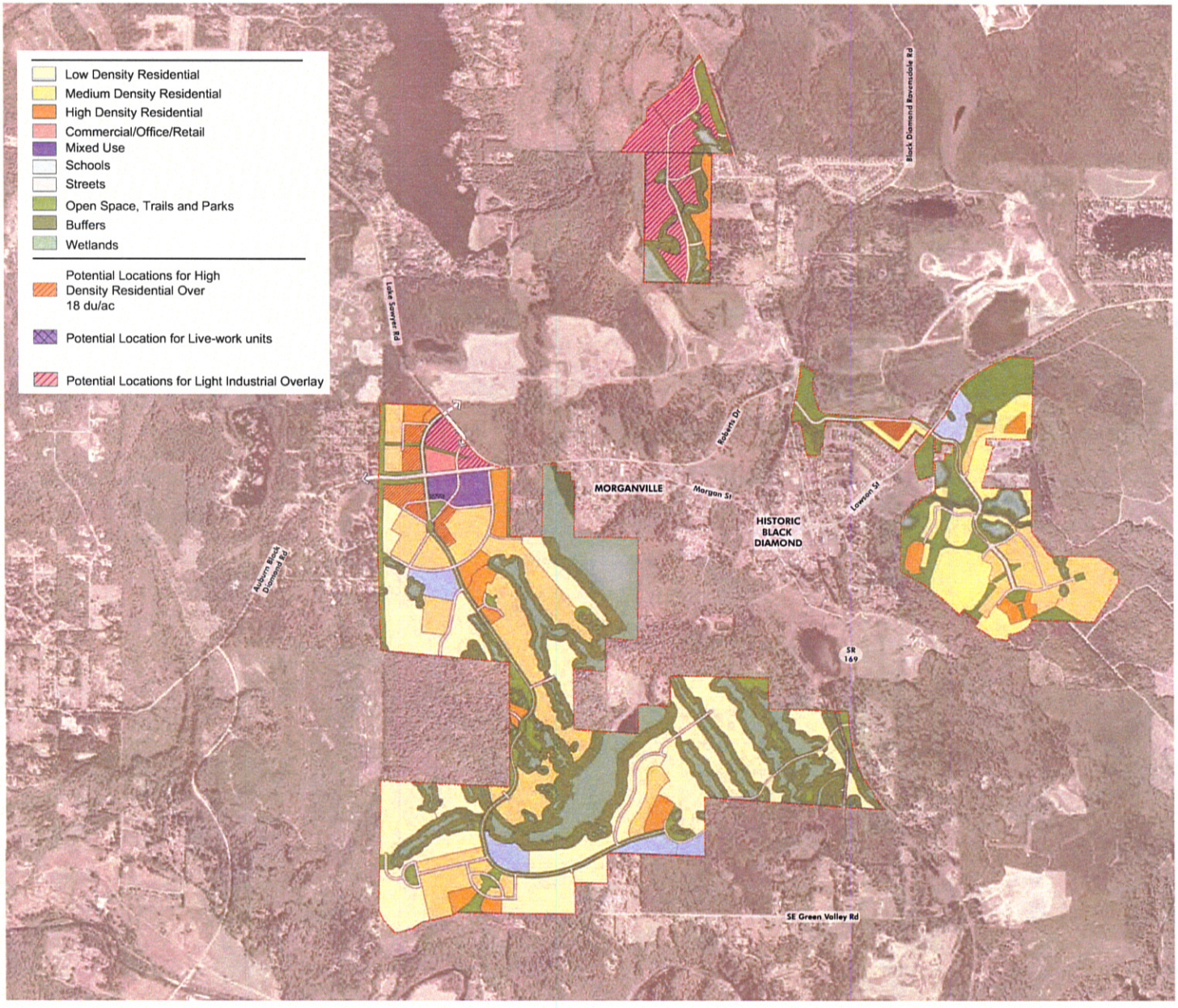



*Exhibit A:*
*MPD Site Plans*
*Black Diamond, WA*

# Chapter Two:
## Neighborhood Overviews

# Neighborhood Overviews

*Communities built around outdoor experiences.*

*A modern interpretation of historic mining forms is appropriate for the Village Center.*

These neighborhood overviews for The Villages and Lawson Hills MPD's describe separate features in each MPD's main property and the commercial area on Parcels A and B.

## THE VILLAGES

The Villages neighborhood is intended to reinforce the small-town character and outdoor enthusiast lifestyle available in Black Diamond. The plan, as well as the architecture, supports and encourages interaction with the outdoors. Development areas are woven into the site between areas of open space, and utilize existing topography, sensitive areas, and their buffers, to a design advantage to create distinct districts.

The architecture of The Villages draws from historic rural and mining town images. These references draw from simple form-based architecture with minimal added detail. A modern interpretation of this historic vocabulary, along with inclusion of a number of appropriate Northwest architectural styles, create a strong character rooted in history, yet adding a contemporary twist. The strength of influence of these styles will vary from district to district.

Utilizing this concept, each of these districts is envisioned to have its own unique character; design elements are provided both in plan and architecture to create a strong, individual sense of place without being heavily themed.

The districts, shown on page 8, are as follows:

Village Center
Diamond Park
The Woodlands
Forest Green
Diamond Lake
The Narrows

These districts loosely correspond to potential phasing of the community and allow the community character to change and evolve over time within the guidance and design direction provided in this document.

*Village Center homes should combine simple forms with bold colors*

*Modern detailing using industrial materials is encouraged in the Village Center.*

*Homes in Diamond Park include a twist on the old farm house.*

## Village Center

The goal of the Village Center District is to capture the spirit of historic Black Diamond in a vibrant, mixed-use environment. The spaces between buildings become as important as the buildings themselves. More than any other district, the architecture of the Village Center District draws from the simple forms of historic mining towns of the western United States, with sophisticated and modern detailing and materials.

Diversity of forms and materials will add to the richness of the experience. While there will be a consistent level of quality and some signature detailing, it is important that the buildings do not become themed or stylized. There must be some variety in the design in order to achieve the vision of a Village Center built over time. Groupings of square and rectilinear forms with flat or gable roofs should be the predominant building blocks. The Main Street within the Village Center will blend these forms with classic main street design. Housing should draw from the simple form-based historic mining architecture and lean towards a modern expression of detailing and use of glass, without a lot of extra ornamentation.

## Diamond Park

This district derives its name from the public park at the southeastern tip of its area and is woven into the natural topography and sensitive areas of the site; both elements that begin to establish its unique character. It includes an extensive trail system connecting parks and district, as well as a site identified for an elementary school.

The Community Connector road passes briefly through the district offering only a glimpse into the residential areas, enhancing its hidden, enchanted nature. Each home should have an individual and unique feeling to it, and utilize forms and materials to enhance the whimsical, curious character of the neighborhood.

## The Woodlands

The physical layout of the Woodlands is heavily influenced by its site context. The development pattern is broken up into many sub-districts tucked between open spaces and fills the space between differing open space environments, while creating a character of its own.

The Woodlands district creates edges along sensitive areas and a regional wildlife corridor, enhancing its importance and purpose within the community. Therefore, the architecture should have a strong sense of presence while being sensitive to its context by creating the edge between the tame and the wild.

The distinct character of mountain architecture is appropriate in this district: pitched roofs that reflect the forms of the nearby mountains, timber framing and wood detailing that utilize historic building practices, and rusticated stone to create

*The Woodlands district encourages architecture that has its forms and materials drawn from mountain architecture.*

*Character of the Forest Green district is reminiscent of early America; homes are more square shouldered.*

*The Diamond Lake neighborhood steps with the hillsides.*

a strong foundation can all be used to capture this character. Architectural connection details can be used to symbolize the nature of this neighborhood as a connecting point between places. Simple forms and creative detailing are encouraged to capture this character.

A strong connection to the outdoors is vitally important in this neighborhood. Front porches and outdoor rooms and the use of textures and materials are encouraged to enhance the transition from indoors to outdoors and back.

### Forest Green

The goal of the Forest Green district is to capture the character of a country village. As a counterpoint to the Woodlands, this neighborhood has a more formal character in both the site planning and architecture. Located in a relatively flat area, the site is more open and lends itself to a gridded street pattern, formal spacing of trees, more manicured landscape elements of the development, symmetry in plan, and an urban influence on the architecture, landscape, and parks.

The boulevard leading into the heart of this district will have expanded parkways, detached sidewalks, and will create a strong sense of entry into this district as it focuses on the neighborhood park and an elementary school site.

The architecture within Forest Green should compliment the country village character by allowing more square-shouldered homes, uniform setbacks, and forms and materials found in a more urban environment. Traditional architecture, such as that which can be found in small western towns across the United States, but with an East Coast influence, is appropriate for this district. Materials should be of a slightly more refined nature: horizontal and vertical siding with cut stone and brick accents.

### Diamond Lake

The goal of the Diamond Lake district is to compliment the hillside landscape of this area with a neighborhood that blends with its natural environment. The hillside nature of this site influences street and lot layouts. A focal point park at the top of the hill becomes the organizing element of the district as home sites wrap around the contours of the site.

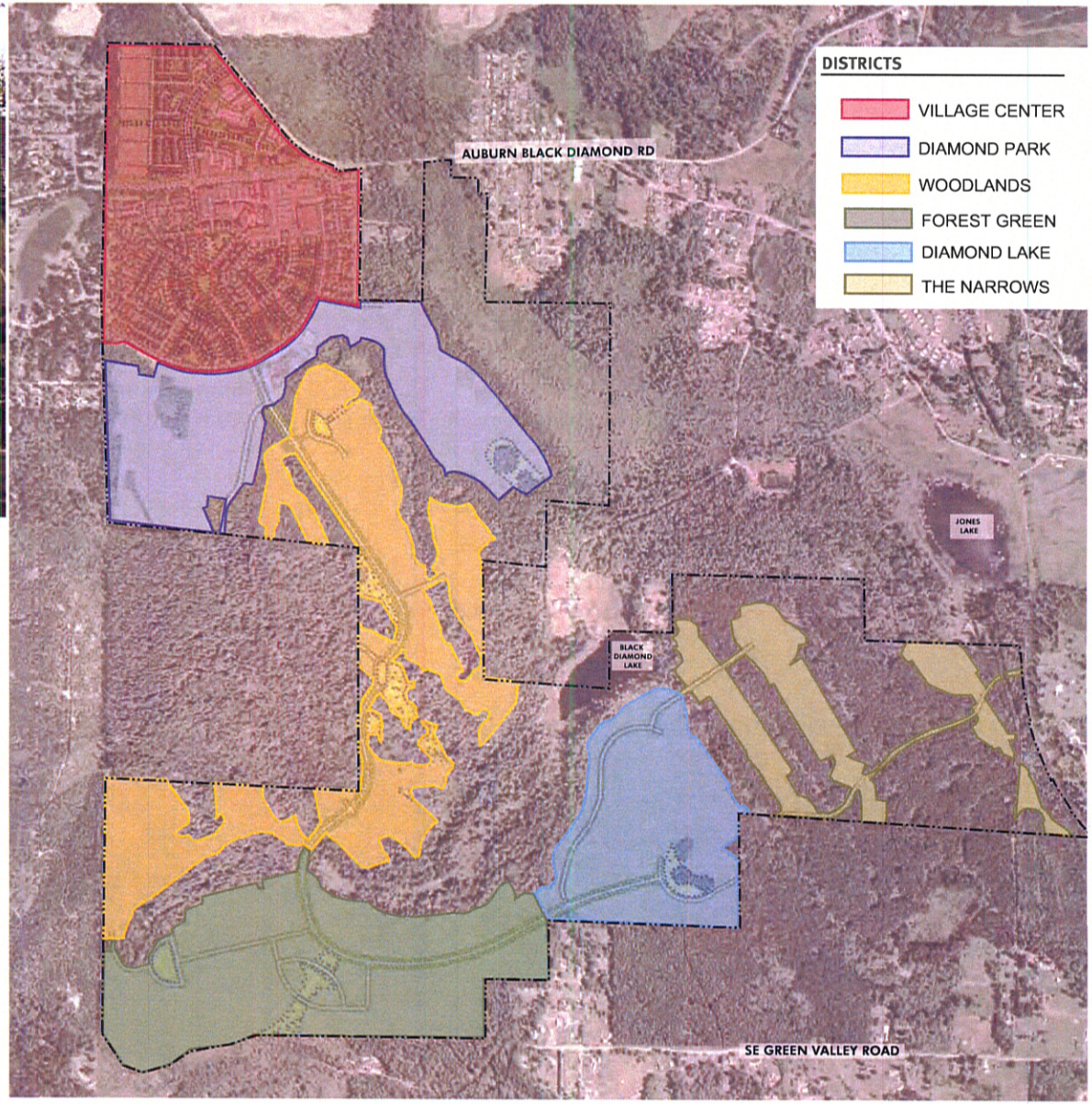
Architecture should compliment and blend with natural forms and colors within the site. The horizontal and foundational nature of the earth should provide inspiration for each home site. Naturally occurring materials within the earth should be utilized near the ground plane to integrate the building with the site. Colors should follow patterns found in nature: darker earth toned colors at the base, lighter and fading as the house rises out of the earth, dashed with bold, complimentary accents.

*In The Narrows, homes are worked into clusters of trees.*

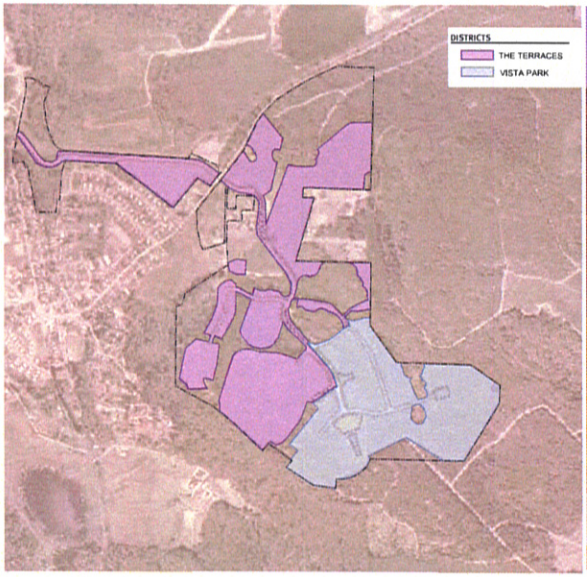
## The Narrows

The goal of The Narrows is to compliment the nature of the land plan as it weaves through the landscape, carefully following the natural watersheds of the site. The experience of The Narrows should resemble that of a rural county road. The architecture should rise delicately from the forest floor. Buildings should be slender and finely detailed. Large horizontal forms and roofs should be replaced with vertical elements that grow out of the forest like trees reaching to the sky above.

Where larger lots that will have larger homes occur, they should have a more organic floor plan where their mass is broken down into "wings" and has the appearance of working in and around clusters of trees.




*The Villages Neighborhood Plan*
*Black Diamond, WA*




*Lawson Hills Neighborhood Plan*
*Black Diamond, WA*

*Cottages in the Vista Park neighborhood face onto common green.*

*Parcels A and B - The North Gateway*
*Black Diamond, WA*

## LAWSON HILLS

Lawson Hills, as the name implies, is generally made up of hillside neighborhoods. Many homes will have striking views, even to downtown Seattle. As a hillside community, four-sided architecture will be critical as many rear elevations will be visible from below. There are two neighborhood areas within Lawson Hills:

### The Terraces

The Terraces district encompasses both larger lots and attached housing opportunities. The common thread is sloping lots and orientation towards views. Decks become an important feature for these homes and their integration into the architecture will be a major form determinant.

### Vista Park

The Vista Park District is a medium and high-density neighborhood located at the top of the hill, at the terminus of the garden parkway. This influences the lotting pattern and architectural character. Homes will generally be smaller in square footage and lend themselves to various styles of cottage and bungalow architecture. Usable porches and simple yet appropriate level of detailing will play an important role here.

## PARCELS A AND B - THE NORTH GATEWAY

This area forms a retail gateway into Black Diamond. Its land uses include Commercial/Office/Retail and High Density Residential categories along with the possibility for some light industrial. The intention of this district is to provide larger scale retail and business park uses along with high density housing.

While this area is the most appropriate area for locating large, national chain retailers, their "standard" or "franchise" architecture will be required to reflect the character of this community by meeting the design standards and guidelines for their land use and district.

*Franchise, larger-scaled, or auto oriented structures in Parcel A/B, the North Gateway, still reflect the unique community character.*

# Chapter Three:
## Non-Residential Design Standards and Guidelines

# Architectural Design Standards

The Design Standards shall apply to all buildings within the Mixed-Use areas of The Villages, and the non-residential areas of The Villages and Lawson Hills. All non-residential buildings shall also be subject to other applicable City design guidelines and standards.

*Seating areas activate the streetscape.*

*Awnings provide shelter and articulation to storefronts.*

## SITE DESIGN

### Street Level Interest

In order to support successful businesses within commercial buildings, animation and diversity of retail and commercial options are important at the street level to make them attractive as a destination for shoppers and visitors. In order to facilitate a vibrant, pedestrian oriented streetscape, the following treatments shall be applied:

- Buildings with street frontage shall provide street level pedestrian oriented uses on all street-facing frontages. Those at street corners should have display windows and the same level of design, detail, and transparency for both frontages to maintain continuity and pedestrian interest.
- Uses that cannot include pedestrian oriented uses adjacent to the street or buildings that do not use regular commercial glazing patterns at the street level shall not occupy street frontage.
- Centers shall be anchored by green spaces or public buildings.

### Drive-Through access in the Mixed-Use Areas:

- Drive-through access windows are prohibited along the Main Street.
- Drive-through stacking space shall not interrupt or impede traffic flow on streets or in parking lots where the aisle connects to a street.
- Stacking space shall not block pedestrian ways.
- Drive-through access lanes, menu boards, and windows shall not be visible from the plaza or Main Street.
- Drive-through access lanes shall be accessed through parking areas behind the Main Street buildings and not connect directly to streets.
- Drive through access windows shall be integrated architecturally into the building design.
- Stacking lane shall be screened with appropriate landscaping.
- Dedicated staking space shall not exceed six car lengths.

## ARCHITECTURE

### Four-Sided Design

- All building façades visible from streets shall display a similar level of quality of materials and workmanship, detail, and architectural interest as the front elevation.
- Buildings with façades that face public spaces other than streets such as mid-block courts between buildings, parking areas, and public plazas shall use the same materials and incorporate the same level of detail and articulation as the street-facing façades.

### Building Materials

- Color and material changes shall occur at inside corners.
- Mirror and reflective glass is prohibited.
- Vinyl and aluminum siding is prohibited.

### Massing and Form

- Roofs shall match the building in terms of style, detailing, and materials and should contribute expressive and interesting forms that add to the overall character of its environment.
- Any mechanical penthouses and stair towers shall appear as integrated building forms and shall be structures that complement the design of the

*Front elevation materials wrap onto side elevations.*

*Trellises and planters define seating areas.*

*Roof form contributes to the overall building design.*

building through the use of similar materials, colors, finishes, and architectural details.

- Rooftop equipment shall be located away from the street edge and/or screened so that it is not visible from streets or other public spaces.

### Ground Level Service Facilities

- Trash storage, loading, and truck parking shall be located to minimize visibility from streets, pedestrian ways, and building entrances and minimize interference with commercial or retail activities. Service and loading areas shall not be located along important pedestrian or view corridors.
- Service entrances shall not face primary or secondary retail and commercial streets. All service entrances and associated loading docks and storage areas shall be located to the side or rear of the building.
- Loading docks and truck parking shall be screened from public view using building mass, freestanding walls, and/or landscaping and shall be integral with the building architecture.
- All exterior trash receptacles shall be screened from public view on three sides and on the fourth shall be screened by a gate that also obscures views. The enclosure shall be made of materials and colors compatible with that of the principal structure(s).

## SITE LIGHTING

The goal for the site lighting design is to provide a comfortable level of illumination that meets the community's needs for orientation and safety in a way that compliments the aesthetic qualities of the architecture and surrounding environment.

To preserve the quality of a dark sky at night, high intensity light fixtures shall include a shielded light source that reduces the view to the light source, and directs light away from areas such as wetlands and their associated buffers.

*Ground level services are screened from view.*

# Architectural Design Guidelines

This section of the Design Guidelines addresses aesthetic issues associated with site and architectural design that will occur in both the mixed-use and commercial areas of the community.

## SITE DESIGN

### Development Density

Mixed-use areas are envisioned to have the character and pedestrian focus of a small town downtown, and as such, require a concentration and variety of uses that will make these areas thriving pedestrian environments.

Commercial only areas are envisioned to provide for larger scale retail and business park uses, with greater detail to architecture and site planning that focuses on small town character.

### Street Level Interest

In order to facilitate a vibrant, pedestrian oriented streetscape, the following treatments should be applied:

- Provide for a mix of sizes of businesses.
- Create strong pedestrian links to other land uses.
- The site design and building placement should create an environment where people are comfortable walking and spending time.
- Pedestrian scaled lighting that is shielded from the sky should be provided.
- Significant intersections and pedestrian routes should be highlighted with bollards, special paving, accent trees, landscape, or community art.
- Plazas and other outdoor seating areas should be provided and incorporate both sunny and sheltered areas.
- Direct entries from sidewalks to individual businesses should be provided as frequently as possible.
- Shops and cafés are encouraged to provide dining areas and small merchandise displays that spill out onto walkways and plazas, but maintain a minimum clear pathway between 5-8 feet wide.
- The design of mixed-use buildings should anticipate ground floor restaurant requirements.
- To the extent feasible, ground floor corners should be designed for retail or café uses. Second floor building entries and vertical circulation elements – i.e. stairs and elevators – should not be located in a prominent corner.
- Encourage housing to be located above ground floor retail or commercial uses.

*Places for merchandise display, banners, and unique signage contribute to street level interest.*

*Lighting standards should allow for seasonal flower baskets and banners.*

### Drive-Through access in the Commercial/ Office/Retail Areas:

- Drive-through service windows and the necessary stacking lanes should be located at the rear or side of buildings provided they do not substantially disrupt access to parking stalls, pedestrian activities, or surrounding uses.
- No additional curb-cuts should be provided for drive-through service windows.
- Drive-through lanes, windows, menu boards, and stacking lanes should be as far from street frontage as is feasible, have a clearly indicated travel path, be screened from public view, and the view of adjacent parking areas and properties.
- Where possible, the structure being served by the drive-through service window should be sited to maximize the distance for vehicle queuing while screening the drive-through operations from streets or public rights-of-way.

*Ground floor corners used for gathering places.*

*Simple massing with appropriate roof form.*

*Corners are accented by interesting building forms.*

- Drive-through windows and lanes should incorporate an architectural covering that is consistent with the style and character of the building.
- Drive-through lanes should not exit directly to the site's main entrance/exit.
- Stacking lanes should be screened with appropriate landscaping.

## ARCHITECTURE

### Massing and Form

- Buildings should be simple in form and massing with a primary building mass accentuated by important features.
- While adjacent buildings should relate in similarity of scale, height, and configuration, variation is encouraged.
- Vertical volumes and changes in height are encouraged to break up long façades.
- Corner buildings can enhance the quality of the pedestrian and visual experience and should be given special architectural and massing treatments that are oriented towards and emphasize their corner positions.
- Standard franchise building designs, prototypes, or design features associated with a single retailer that would deter subsequent use by other retailers should be avoided.

### Building Façade Design and Articulation

In general, overall composition of façades should incorporate the following treatments:

- Façades should incorporate a regular and frequent pattern of architectural variety through the use of such features as modulation of the wall plane, detailing, color, texture, and materials.
- Large unarticulated walls should be avoided.
- Incorporation of art and ornament is encouraged.
- Ground floor façades should be designed to give individual identity and unique character to each retail establishment.
- Trellis', permanent awnings, wide overhangs, deep reveals, and other weather protection elements are encouraged.

### Rooftops

Visible rooftops should be interesting and elegant in form and be compatible with the building's design.

- Roofs should match the building in terms of style, detailing, and materials and should contribute expressive and interesting forms that add to the overall character of its environment.
- "Commercial mansard" roofs where faux wraparound mansard panels are applied to a parapet and do not enclose a habitable floor area should not be used.

*Awnings sufficiently sized to provide shelter are encouraged.*

*High quality materials with appropriate detailing is encouraged.*

*Materials should be appropriate for the architectural style.*

- Steeply sloping roof forms and curved roofs should be limited to prominent or special buildings.

### Building Materials

Exterior materials should be of high quality and add to each building's character through creative use and in order to give a perception of permanence. Materials should be appropriate to the building's style and suited to commercial construction.

- Predominant building or cladding materials should be of a high quality, be durable, retain their appearance over time, and be economical to maintain.
- The form, scale, detail, texture, and quality of any material used in close proximity to the pedestrian environment should be considered in relation to human interaction.
- Reused or recycled materials are encouraged to add character to the building and reduce the need for virgin materials.
- Accent materials are encouraged to add interest and variety at a more intimate scale at individual storefronts, along architectural elements such as cornices, or on other portions of buildings or walls.
- Standing-seam or corrugated metal roofing is encouraged. Bright color such as blue, green, or red on standing seam roofs is discouraged.

*Building lighting is important for pedestrian ambiance and safety.*

# Landscape Objectives and Design Intent

## GENERAL PLANTING STANDARDS

- Approved plants include native and ornamental plant material.
- Prohibited plants represent species with characteristics that are potentially destructive to the native landscape, have weed-like tendencies, or are in direct conflict with these guidelines.
- Areas that have been previously landscaped shall be protected and/or replaced should damage occur during construction.
- All plant material shall meet the requirements of the "American Standards to Nursery Stock-ANSI 260.1."
- All planting beds shall be top-dressed with a specified mulch or other approved groundcover.
- Minimum street tree size shall be 2" caliper.
- Minimum deciduous and conifer parking lot tree size shall be 2" caliper and 8' height respectively.
- Accent trees in all other areas to be a minimum 1.5" caliper.
- All tree planting shall be organized so that they respect the following conditions:
  - Setback at intersections per traffic engineer
  - Appropriate setbacks from site infrastructure such as streetlights, wayfinding, and traffic control signage, water, gas, and other utilities above and below ground per traffic engineer.
- Turf or lawn should not be the predominant landscape material, unless the area is intended for active use.
- Planting adjacent to rights-of-way should incorporate vertical elements, except where on-street parking is provided.

*Boulder feature in garden setting.*

*Stacked stone retaining wall with landscape.*

- Rocks, pebbles, sand, and similar non-living materials shall not be used as groundcover substitutes, but may be used as accent features provided such features do not exceed a maximum of 5% of the total landscape area.
- A minimum 25' wide dense vegetative buffer should be provided where there is no intervening development between non-residential development and the MPD boundary.

## WALLS, FENCES, AND GATES OBJECTIVES AND DESIGN INTENT

- To construct walls, fences, and gates that borrow from the architectural styles designated for the community by District. (pages 8-11)
- To design walls, fences, and gates that are related and are natural extensions of the surrounding buildings.
- To enclose services areas and infrastructure related facilities from public view.

## HARDSCAPE OBJECTIVES AND DESIGN INTENT

- To encourage the use of materials that compliment the architectural style of the buildings and blend with adjacent paving.
- To create a continuity of materials and methods of construction from public spaces to private spaces.
- To reinforce the overall community image through the use of quality materials.
- To ensure and demarcate connection between buildings, plazas, and other outdoor spaces.

# Chapter Four:
## Residential Design Standards and Guidelines

# Architectural Design Standards

*Homes front onto common greens.*

*Front elevation materials wrap sides.*

These Design Standards shall apply to all residential buildings within The Villages and Lawson Hills.

## SITE DESIGN

### General

- Maintain general circulation pattern concepts, both street and pedestrian, as shown on Figure 6-3 of the Development Agreement.
- Establish circulation patterns that allow residents to easily walk or bike through a neighborhood and provide links to recreational amenities such as parks and trails.
- Dead-end streets and alleys should be oriented to take advantage of views into open space.
- To maintain a small town character, use open space to organize clusters of development.
- To provide a range of housing options, each neighborhood shall provide a mix of housing sizes and types.
- Where individual lot residential development is located along the boundary of an MPD, lot sizes shall be no less than 75% the size of the abutting residential zone or 7,200 sq. feet, whichever is less.
- Multi-family land uses should include a minimum 25 foot wide dense vegetative buffer when located along the boundary of an MPD.

### Lot Sizes and Front Yard Setbacks (Single Family Detached)

In order to avoid the monotony of streets lined with single family detached homes of similar width, height and setback, the following criteria shall be applied. However, on a limited basis, specific locations within neighborhoods may vary from this requirement.

- Corner lots side yard setback on the street side shall be at least 5 feet wider than interior lots.
- Excluding oversized corner lots within a block, any row of lots over 400 feet long shall have at least one lot of different width per every six houses. The differing lot may be wider or narrower, but shall vary in width by at least 5 feet.
- Varied front yard setbacks shall be applied to 20% of homes on each side of the street on each block. Offsets shall be an increase of no less than 33% of the standard front yard setback.

### Adjacency of Same Plans or Elevations with Similar Attributes

The same combination of elevation style and floor plan for dwelling units or buildings shall not be placed beside each other. Dwelling units or buildings that make use of the same floor plan and are sited directly across the street from one another shall incorporate a different elevation whenever possible and shall use a different exterior color/material palette. On a limited basis, specific locations within neighborhoods may vary from this requirement.

## ARCHITECTURE

### Four-Sided Design

- All building facades visible from streets, parks or other public areas shall display a similar level of quality of materials and workmanship, detail

*Material and color changes occur at inside corners.*

*Outdoor rooms are encouraged.*

*Porches and architecture wrap corners with the same level of detail as the front elevation.*

and architectural interest as the front elevation.

- Color and material changes shall occur at inside corners or at a trim element that is appropriate to the elevation design, and not at outside corners.
- Unarticulated roof forms shall not be set on a constant wall plate height.
- Aluminum, vinyl, and T-111 siding are not permitted.
- Structures shall include features to break up the mass, with elements such as distinctive roof forms, changes in colors and materials, porches, and offsets.

### Features Allowed in Setbacks

The following criteria shall also be observed:

- Encroachments shall not exceed thirty percent (30%) of the length of a side yard elevation, excluding eaves.
- Upper story living area over front loaded garages may encroach into the driveway length. The bottom of the overhang must be no lower than 8 feet above finished floor of garage.
- Upper levels or portions of upper levels over a garage may encroach into rear yard setbacks a maximum of 2 feet when the garage faces an alley. The bottom of the overhang must be no lower than 8 feet above finished floor of garage at the door.
- Balconies that protrude into the sideyard setback are prohibited on minimum depth interior side yards.

### Porches and Outdoor Rooms

Porches and outdoor rooms are an important feature for certain architectural styles that adds character to a streetscape while also creating an extension of the living space into the public space. In general, these requirements shall apply to all housing types where these spaces are appropriate.

- Porches, stairs, and decks shall be designed to reflect the appropriate scale and detail for the architectural style.
- Porches shall be sized to be furnishable as appropriate to the architectural style.

### Alley-Loaded and Side-Street Loaded Garages

- Alley loaded garages may accommodate three cars side-by-side, but doors on such garages shall accommodate a maximum of two cars – i.e. such garages shall not have a single 3-car garage door.
- Driveways for two-car alley-loaded garages may not exceed 18 feet in width.
- Driveways for one-car alley loaded garages may not exceed 12 feet in width.
- Driveways for three-car alley loaded garages must be separated by at least a 2 feet wide landscaped area.
- Side street loaded garages may be used on corner lots if the garage is located in the rear half of the lot.
- Side street loaded garages shall accommodate a maximum of two cars side-by-side.

*Living area and porches forward of garage softens streetscape.*

*Varied garage massing along an alley is encouraged.*

*Accessory structures shall compliment the architecture of the main structure.*

### Street-Loaded Garages (Single Family Detached)

In order to avoid the repetitious presence of garage and driveway dominated streetscapes, the following criteria shall be applied:

- The face of garage must be set back a minimum of 6 feet from the face of living area or porch elevation (at columns) and at least 20' from street.
- Where lots are less than 70' wide, for street facing garages, the maximum garage door width shall be that which accommodates two conventional cars. A third enclosed space may be included as a tandem space appended to the same garage (3-car garages oriented 90° to the street and the third door as a turn-in in combination with a 2-car street facing garage are also acceptable solutions.)
- Garage doors may not occupy 60% or more of a lot's maximum allowable building frontage - i.e. the lot width minus minimum side-yard setbacks.
- Driveways for garages in the front half of a lot shall not exceed the width of the garage door by more than 12 inches on each side or exceed 18 feet in width at the curb.
- Driveways for one-car garages or street-loaded rear yard garages shall not exceed 12 feet in width at the curb.

### Exterior Building Lighting

Accent lighting may be used to highlight architectural features and enhance security. Low-intensity indirect light sources shall be used in order to minimize light pollution and maximize dark sky.

### Accessory Structures

Single family detached – Accessory and garden structures, such as a gazebo, may be located in any portion of a required rear yard if permitted by the City's building code and setback requirements. If visible from any street, park or other greenway, it shall exhibit the same quality of architectural detail as the home or building it serves.

Larger accessory structures, such as a detached studio or shop, shall be consistent in design, quality, and level of architectural detail as the house that it serves.

### Hillside Lots

Development on hillsides present site planning and design challenges that are not typical of flatter areas.

- On down slope lots, enclosed crawl spaces shall not exceed 9 feet in height without some architectural treatment to distinguish their appearance. All crawl spaces shall be enclosed.
- Decks shall be integrated into the house and should not appear as an attachment or add-on to the primary building mass. Massive decks that stand out in the hillside are prohibited. Tall piers and skirting are prohibited.

# Architectural Design Guidelines

*Simple massing with exposed structural detailing is encouraged.*

*Front porches break up elevation mass and provide outdoor rooms.*

This section of the Design Guidelines addresses aesthetic issues associated with residential developments. Successful execution of these guidelines will ensure quality planning and design that will incorporate outward, street-facing orientations and greater variety and creativity in the development of building types and sizes.

## SITE DESIGN

Appropriate building siting can reduce perceived density, maximize open space areas, provide "eyes on the street" surveillance, and enhance neighborliness and a sense of community by providing attractive and desirable spaces where people may gather and interact.

- Buildings should be sited in response to, and to take advantage of, opportunities presented by natural or created topographic landforms.
- Site planning should provide clear pedestrian connections to the parks and trail system.
- When possible, non-street facing multi-unit buildings should be organized around a common open space such as a linear park or green court or courtyard, or community amenities such as swimming pools or other recreational facilities.
- Development should be clustered and defined by open space and contain homes of varying sizes, styles, and form.

## ARCHITECTURE

### Massing and Articulation

The collective streetscape is important, as it effectively becomes a shared amenity for all residents and visitors. To avoid bland homogenous neighborhoods and to ensure that the streetscape maintains a level of interest and variety, the following guidelines shall be applied:

- Incorporate a variety of compatible architectural styles within a neighborhood while avoiding overly themed of stylized statements.
- Unvarying repetitive façades that present a monolithic development should be avoided.
- Building forms should be appropriate to their style.
- Articulate the building massing appropriately to minimize boxiness of elevations facing streets, parks, or other greenways.
- Provide a variety of both single and multi-story elements within multi-story home designs.
- Porches, entries, balconies, or outdoor rooms are encouraged to be primary elements for homes that face public streets.
- Massing should be varied by articulation of elements such as bays, dormers, etc.
- Provide additional articulation and variety to elements by changing materials, details, and/or color.
- To meet the Design Standard for four-sided architecture (front, sides, and rear) where they are visible from the street or public and/or private open space, consider utilizing elements such as changes in building massing, roofline variation, and window treatments.

*Expression of individual units within row town homes is encouraged.*

*Variety in windows can provide interest.*

*Color is an important design element.*

- Multi-unit buildings should incorporate smaller-scale architectural forms that are associated with its architectural style to visually reduce the height and scale of the building and emphasize the definition of individual units.

### Detailing, Materials and Colors

A complimentary variety of materials used on façades from home to home and within a single home creates a more diverse and interesting neighborhood. Creative and thoughtful use of color can be a very simple yet effective tool for creating visual diversity. Together, variety in color and materials can have a significant and positive impact on the overall appearance of a neighborhood.

- Signature or custom detailing should reinforce and support the neighborhood character.
- Details and materials should be appropriate to the style the building is expressing. "Appliqué" of details or materials on inappropriate building forms should be avoided (i.e. English half-timbering on a ranch style home with a 4:12 roof pitch).
- Natural and natural appearing materials should be used as details to complement the selected architectural style such as wood, stone, brick, iron, and copper.
- When not used uniformly about a house, accent materials such as brick and stone used on street facing elevations should be returned to a logical point of termination such as an inside corner, on the adjacent side elevation.
- Color should be used as an important design element in a building's appearance.
- On an individual building, color variety should relate to changes of building forms and materials, such as body, accent, and trim.

### Roofs

A variety of roof plans and pitches is desired, as roof forms and their materials have a significant impact on the impression of variety within a neighborhood.

- Roofing materials should be appropriate to their related style and pitch.
- Roofs over one-story elements, such as those over porches or bays, provide additional articulation of the massing of larger two-story residences and are strongly encouraged.
- Variation in ridgeline heights and alignments should be incorporated in order to create visual interest.
- Roof pitch may range from 4:12 to 12:12

## HILLSIDE LOTS

Development on hillsides present site planning and design challenges that are not typical of flatter areas and are therefore subject to these additional guidelines.

- A vertical offset or split-level street along a hillside slope is desirable if it minimizes grading, preserves an important site feature, or enhances the hillside setting.
- Grading should blend with adjacent natural terrain so that over time the visibility of the grading is diminished.
- Daylight and walk-out basements are encouraged.

*Massing of single family attached units emphasizes identity of individual units.*

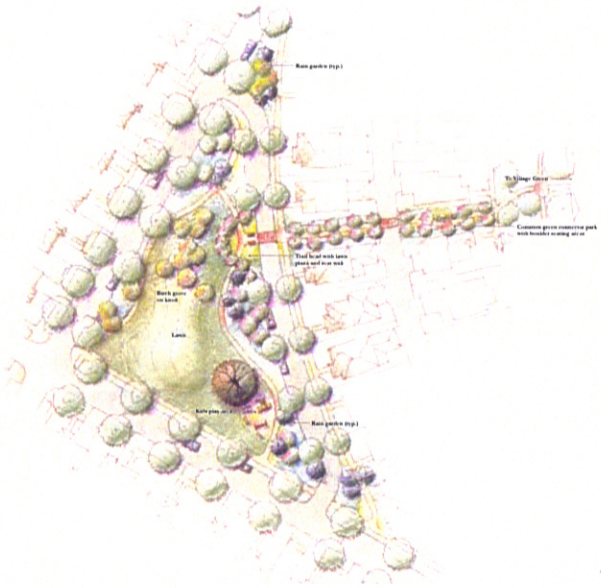
## SINGLE FAMILY ATTACHED

Single family attached homes provide a higher density option within single family detached neighborhoods, while maintaining a sense of individuality for each unit. They include 4 units or less in each building.

- Single Family Attached homes should be planned in a row town home configuration.
- Massing should create a sense of individual unit through changes in front elevation roof forms such as gables, hips, and other elements such as bays.
- Vertical elements on the front elevation should be emphasized.
- Each home should have an individual front entry and stoop or porch.
- Where located on side-sloping sites, buildings should step between units to emphasis individual homes.
- Garages will be provided for each unit.

# Chapter Five:
# Parks, Open Space and Trails

# Parks and Open Space



*Lawn bowling, horseshoes, and other structured play elements.*

*Neighborhood parks can accommodate small neighborhood events such as block parties or ice cream socials.*

## GENERAL STANDARDS

- Parks shall be integrated into the neighborhoods they serve and be linked via a network of walks and trails.
- Commercial areas shall include gathering spaces such as plazas or seating areas.
- Parks shall include a mix of features such as hardscape, seating gardens, play areas, community art or water features, and pedestrian scaled lighting.
- Low impact development features such as rain gardens shall be used wherever practical, and integrated into the community as amenities.
- Neighborhoods shall be organized by or focus on and include a range of open space such as greenbelts, green courts, and parks, linked together by a network of walks and trails.

## NEIGHBORHOOD PARK INTENT

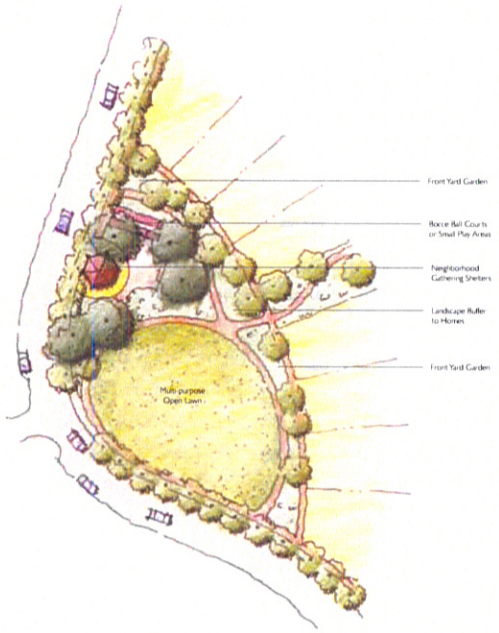
*Neighborhood Parks serve a smaller geographical area and are the recreational and social focus of each neighborhood. They should be developed for both active and passive recreation activities geared specifically for those living within its service area. The parks should accommodate a wide variety of ages and user groups and facilitate building relationships. From playgrounds to barbecues, residents and guests of the community can gather and enjoy their neighborhood. Creating a sense of place by bringing together the unique character of the site with that of the neighborhood is vital to a successfully designed neighborhood park.*

### Design Standards

- The area requirements for Neighborhood Parks are typically between 1 and 5 acres.
- Design the roads adjacent to parks for slower speeds allowing people to cross safely.
- Provide various types of seating.
- Provide a variety of active and passive spaces for various age groups.
- Provide on-street parking in close proximity to the park.

### Design Guidelines

- Park design should compliment the aesthetics of the neighborhood as defined in the Neighborhood Overview as well as accommodating the community needs in play areas.
- Link the park to community-wide trails for pedestrian and cyclist connectivity.
- Trellises, solid-roofed pavilions, or other shade structures may be located in the park to provide sun and rain protection.
- Unique structures and elements for children's play and discovery are encouraged. Off-the shelf manufactured play structures are discouraged.



*Intimate seating areas incorporated into the park.*

*Small park gathering structures.*

## POCKET PARK

### Intent

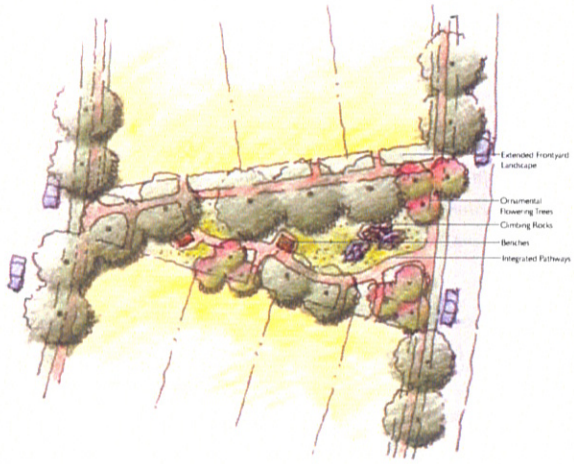
*Pocket Parks serve the smallest geographical community area and the informal needs of the adjacent neighborhood residents and provide interest and gathering places that can be accessed within a quarter-mile walk from one's home. They can include tot-lots, seating areas, or simply a small gathering place for children to play. Pocket parks are to be located and sized to fit the unique characteristics of the neighborhood design. Creative play elements or the placement of unique art elements are strongly encouraged.*

### Design Standards

- Provide site amenities such as seating and play areas.
- Provide the greatest possible accessibility to pedestrians.
- Integrate the park into the design of street and residential lot patterns.
- Provide on-street parking in close proximity.

### Design Guidelines

- The theme and program list of the pocket park for each location should be a site-specific design that responds to the needs of each neighborhood.
- Unique structures and elements for children's play and discovery are encouraged. Off-the-shelf manufactured play structures are discouraged.



*Excellent visibility provided into common greens from neighborhood drives.*

*Pedestrian neighborhood trail network throughout common green.*

## COMMON GREEN

### Intent

*Common Greens serve as semi-public spaces for the homes that face onto them and provide pedestrian corridors through neighborhoods. They are intended to act as front lawns for the small lot homes that surround them. They can vary in size and geometry but are generally dedicated to walking and outdoor living*

### Design Standards

- Common greens shall be minimally programmed with passive uses such as sitting areas, gardens, and small lawns.
- Common greens shall open onto neighborhood streets. Areas of the green should be visible from the street to ensure safety.

### Design Guidelines

- Common greens may incorporate perennial gardens, community vegetable gardens, or flower cutting gardens.
- Informal play areas for children should be located in common greens. These play areas should not incorporate commercial play structures, but rather use landscape materials such as sand, boulders, or timbers to encourage play and discovery.
- Public sidewalks should connect from street to street through each common green.
- Common greens may be utilized for rain gardens and infiltration.
- Ornamental flowering trees are encouraged in common greens.

*Small neighborhood community gardens as active open space.*

*Raised planters for ease of gardening.*

## COMMUNITY GARDENS

### Intent

*Community Gardens are important elements in the development of social networks and interaction. They provide healthy environments, fresh food, and recreation. They help maintain unity and productiveness in the community. Residents can maintain these spaces as areas of beautification. Community gardens are best suited for larger park spaces, but can be accommodated in smaller open spaces with appropriate physical access, solar access, and dimensions.*

*Community gardens provide valuable opportunities to create an educational experience about food production and gardening amongst the residents in the community and increase awareness of the health and societal benefits of local food production.*

### Design Standards

- Community gardens shall be physically and visually accessible from the surrounding community.
- Provide benches adequately for social function and rest.
- Provide trash recycling and yard waste receptacles.
- Provide fencing to help protect the garden from vandalism at night.
- Fencing materials shall include wood and steel.
- Provide hand watering as the minimum irrigation requirement for the community gardens.

*Hard-surface trails for multi-purpose use.*

*Soft-surface trails through open spaces.*

*Boardwalks used for access in and around sensitive areas.*

## COMMUNITY TRAILS

### Intent

*The trails network at Black Diamond is designed to connect major destinations within the community and to link to the regional trail network outside of Black Diamond providing access to significant regional destinations such as Lake Sawyer, the Green River, and the potential off-site King County regional equestrian facility. The trails network provides safe and convenient access to parks, natural open spaces, adjoining neighborhoods, schools, the Village Center, and other regional destinations. The trails network is comprised of a series of loops that provide differing surfaces and accommodate differing modes of transportation.*

### Loops

Creating multiple looping routes within the community is an important objective of the trails network. Loops provide route choices to destinations, offer differing experiences along their alignments and allow users to fit a route to the time they have available and their recreational needs. They can choose short loops if time is a premium or they can choose longer routes to extend exercise or exploration. Each loop offers an experience different from other locations in the community. Users can customize their experiences to their desires by choosing specific loops.

### Typologies

Trail users have differing needs depending on their skill levels, their purposes for using the trail system, and their mode of travel. To accommodate a full range of trail users, the trails network combines on-road and off-road trails and provides a variety of paved and unpaved surfaces. The trail network includes sidewalks in most street rights-of-way, on-street bike lanes/routes, off-road multi-use trails (paved or unpaved), and equestrian and hiking trails that link to regional destinations. Access to sensitive wetland buffer areas are controlled and protected with appropriate trail alignments and surface materials. If permitted, boardwalks and soft-surface trails could be used in these locations and can support wildlife observation and outdoor educational opportunities.

Each trail typology has an associated set of trail standards for widths, surfaces, and other design requirements. Paved multi-use trails shall be a minimum 8' wide and shall be constructed of asphalt. Equestrian trails shall be a minimum 2' wide when adjacent to multi-use trails and a minimum of 5' wide elsewhere. Equestrian trails shall be native soil or crushed stone material. Soft surface trails shall be a 4'-6' wide and shall be hog fuel, decomposed granite, or other natural materials. Boardwalks shall be 4'-6' wide and the walking surface shall consist of wood or a 100% recycled material such as Trex. Other details can be found in the Development Agreement.

# Chapter Six:
## Signage and Wayfinding

# Signage Standards

*Note: The photos shown here are not intended to be direct or literal examples appropriate for The Villages or Lawson Hills.*

*Example of a Major Tenant Building Identification Sign*

*Example of a Tenant Storefront Identification Sign*

These standards are intended to result in functional, attractive signage incorporating a high level of design, graphics and materials throughout both The Villages and Lawson Hills. All signage shall also conform to the specific requirements of the City of Black Diamond code provisions regulating signage.

The following sign types are prohibited by these Design Standards in all areas of The Villages and Lawson Hills but may be approved by the DRC on a limited basis:

- Internally-illuminated awnings.
- Plastic-faced box or cabinet signs.
- Formed plastic or injection molded plastic signs.
- Luminous vacuum-formed plastic or acrylic letters and/or signs.
- Paper, plaster, cardboard, or foam signs or decals.
- Blinking, flashing, animated, or moving signs.
- Signs with exposed fasteners unless they are architecturally integral to the building character and signage design.
- Signs with exposed conduit, tubing, raceways, conductors, transformers, or related equipment.
- Noise-emitting signs or those with speakers mounted on the face of the building.
- Advertising displayed on vehicles or trailers to attract attention to a specific business location or sale.
- Fabricator's stickers shall not be visible to the public.

## GENERAL STANDARDS

- Signs shall be constructed of high quality, durable materials.
- All bolts, fasteners, and clips shall consist of materials appropriate for the design of the sign and not appear as afterthoughts in the overall look of the sign.
- Separate all ferrous and non-ferrous materials with non-conductive gaskets to prevent electrolysis.

### Commercial/Office/Retail

Standard franchise signage is allowed if it does not consist of one of the prohibited sign types.

### Live/Work Town Homes

The live/work town homes create a unique environment where small shops, office space, or studios form a transition between retail and restaurant areas, and residential neighborhoods. This requires the additional signage restrictions listed below:

- No standard franchise signage is allowed.
- Signage shall be unique, original, and executed with a high degree of craftsmanship.
- Signage shall not occur at the upper levels of the live/work townhome structure.

*Example of a Building Address.*

*Example of a Tenant Speciality Banner.*

*Example of a Projecting Blade Sign (with sculptural icon)*

### Home Occupations

In keeping with smart growth and sustainability principles, home occupations are encouraged. Where these occur, the home occupation shall not disrupt the neighborhood character, but is allowed to have a small sign displayed on the residence near the entry door or in a window.

- No standard franchise signage is allowed.
- Signage shall be unique, original, and executed with a high degree of craftsmanship.
- Signage shall not be "propped up" inside a window.
- Signage shall not exceed two (2) square feet in size.

## SIGNAGE GUIDELINES

### GENERAL GUIDELINES

The building architecture should be designed to accommodate signage and other graphics as an integral part of the building design.

- Metal signs may be made of aluminum, brass, bronze, copper, stainless or welded steel.
- Logos or trademark displays may be used on signs.
- Individual raised letters on the building face, pedestrian oriented blade signs, sculptured cantilever signs, and non-internally lit signs with lighting from a secondary source are encouraged.
- Building addresses may be integrated as part of the architectural design or signage package for the building.
- Signage may be integrated with awnings and canopies.

### Mixed-Use

In keeping with the vibrant character desired in a mixed-use area, the following additional guidelines apply in the Mixed-Use areas:

- Signs are encouraged to be unique, sculptural, one-of-a-kind accents to the building architecture.
- Sculptural elements, banners, or painted murals without text may be included as part of a business identity.
- Artistic use of neon in surface mounted, blade, or hanging and window signs is permitted.
- Franchise signage is strongly encouraged to be incorporated into a more unique design execution than an "off the shelf" standard sign.
- The signage program for a tenant may include banners mounted on the upper levels of the building.

*Example of artistically executed neon.*

### Commercial/Office/Retail

Free-standing monument signs are allowed as identification for a building or complex of buildings.

- Color, materials, and fonts should be integrated with the design character of the architecture, walls (if present,) and landscaping.
- Sources of ground lighting should be screened from view and should not direct light upwards.
- Monument signs for individual tenants within a building are discouraged.

# Exhibit I

## High Density Residential Supplemental Design Standards and Guidelines

# HIGH DENSITY RESIDENTIAL (18-30 DU/AC) SUPPLEMENTAL DESIGN STANDARDS AND GUIDELINES

DECEMBER 31, 2009

*Well articulated buildings.*

*Roof line broken with bays.*

# ARCHITECTURAL DESIGN STANDARDS

This section of the Supplemental Design Guidelines addresses aesthetic issues associated with high density multi-family residential developments between 18-30 du/ac. The Supplemental High Density multi-family residential Design Standards are in addition to the overall Design Standards that are covered in the overall Design Guidelines document. Successful execution of these standards will ensure quality planning and design that will incorporate outward, street-facing orientations and greater variety and creativity in the development of building types and sizes.

## ARCHITECTURE

### Four-Sided Design

- All building facades visible from streets, parks or other greenways shall display a similar level of quality of materials and workmanship, detail and architectural interest as the front elevation.
- Color and material changes shall occur at inside corners or at a trim element that is appropriate to the elevation design, and not at outside corners.
- Unarticulated roof forms shall not be set on a constant wall plate height.
- Aluminum, vinyl and T-111 siding are not permitted.

### Encroachments

In addition to the encroachments allowed in the MPD document, the following criteria shall also be observed:

- Encroachments shall not exceed thirty percent (30%) of the length of a side yard elevation, excluding eaves.
- Upper story living area over front loaded garages may encroach up to 2 feet into the driveway length. The bottom of the overhang must be no lower than 8 feet above finished floor of garage.
- Upper levels or portions of upper levels over an attached garage may encroach into rear yard setbacks a maximum of 2 feet when the garage faces an alley. The bottom of the overhang must be no lower than 8 feet above finished floor of garage at the door.
- Balconies that protrude into the sideyard setback are prohibited on minimum depth interior side yards.

### Mechanical Equipment and Vents

On-site mechanical equipment visible from buildings or a public street, park or greenway shall be screened in accordance with the following requirements:

- The screening standards of this section shall apply to all of the following:
  - Electrical and gas-powered mechanical equipment and meters.
  - Duct work and major plumbing lines used to heat, cool or ventilate.
  - Power systems for the building or site upon which the equipment is located.

*Material changes at inside corners.*

*Well articulated side elevations.*

*Lighting that is decorative and provides cut-offs to maximize the dark sky.*

- Roof and/or wall-mounted satellite antennas shall not be considered mechanical equipment for purposes of these mechanical equipment screening standards. In addition, the standards in this section are not intended to impede systems which use solar or wind energy to reduce the costs of energy, if such systems are otherwise in compliance with applicable building codes and zoning ordinances.
- Roof-mounted mechanical equipment shall be screened from view by a parapet wall or similar structural feature that is an integral part of the building's architectural design. The parapet wall or similar structure feature shall be of a height equal to or greater than the height of the mechanical equipment being screened.
- For multi-unit buildings, ground-mounted mechanical equipment shall be screened from view by a decorative architectural structure or landscape screening that is compatible with the architecture and landscaping of the development site. Such screening devices shall be of a height equal to or greater than the height of the mechanical equipment being screened.
- Mechanical equipment that is not screened in full compliance with these screening standards shall be reviewed by the DRC, which may approve alternatives to if it determines that any adverse visual impacts associated with the mechanical equipment have been mitigated to the maximum practical extent. Alternate screening methods may include but shall not be limited to: increased setbacks, increased landscaping, grouping the equipment on specific portions of a site, and painting or otherwise camouflaging the equipment.
- Roof flashing and vents exposed to public view shall be painted or otherwise given a finish to match adjacent surfaces or concealed in a manner consistent with the building's appearance.

### Exterior Building Lighting

Accent lighting may be used to highlight architectural features and enhance security. Low-intensity indirect light sources shall be used in order to minimize light pollution and maximize dark sky.

All exterior lighting fixtures attached to the structures shall be consistent with the architectural style of the building that it serves. Manufacturer's specifications and/or cut sheets for all proposed exterior light fixtures shall be provided.

Each residence and/or building shall incorporate the following minimum exterior lighting requirements:

- Provide a porch light at each ground level exterior door.
- Each unit with an alley loaded garage shall be provided with at least one light on the elevation facing the alley or side street that serves the garage. Such lights shall be controlled independently by photo sensors.

*Balconies may overhang driveway.*

*Enclosures shall screen trash from view.*

*Cantilever type car port.*

### Accessory Structure

Multi-Unit – Community accessory structures associated with multi-unit developments shall integrate into the overall site and building design in order to be compatible with the primary buildings they serve.

- Community accessory structures include detached garages, carports, and other accessory buildings, including but not limited to storage and maintenance facilities, recreational facilities, picnic shelters, and outdoor shade/shelter structures. Such accessory structures, except for mailboxes, are subject to the same setback requirements as the building(s) that they serve.
- Community accessory structures shall incorporate compatible and comparable materials, scale, colors and architectural details as the primary building or buildings they serve. Such structures are subject to DRC review and approval and the removal of non-conforming structures is subject to DRC enforcement.
- Rear or end walls of detached garages and carports that face a perimeter street shall be screened with landscaping and articulated through the use of one or more of the following elements:
  - Windows
  - Trellises or attached arbors
  - A variety of roof planes
- Free-standing metal carports shall be cantilever type and roof must be wrapped on all sides by a fascia of a minimum of 6 inches in height.
- Trash enclosure and recycling storage areas shall be located in convenient but not prominent areas, such as inside parking courts, or at the end of parking bays.
- Trash enclosures and recycling storage areas shall be screened form public view on three sides by a solid wall at least 6 feet in height and a gate. The wall and gate shall be architecturally compatible with other buildings and structures on the site.
- Three sides of a trash enclosure and/or recycling storage area shall be screened from view by tall landscaping for a depth of 3 feet as measured from face of wall. The fourth (access) side shall include durable opaque metal gates of compatible design with latches and bolts.
- Each trash enclosure shall incorporate a lighted access that meets applicable accessibility standards.
- Trash enclosures shall be subject to the same setback requirements as the building(s) they serve.

## PARKING

### Multi-Unit Residential

Multi-unit residential parking standards are intended to reduce the prevalence and visibility of curb cuts, driveways,

*Individual garage doors break up facade.*

*Provide landscaping between driveways and accent paving to entries.*

*Recess garage doors where possible.*

garages, parking lots and covered parking from both local residential and perimeter streets; improve the appearance of parking lots and minimize their dominance of the site; and ensure that dwelling units have convenient access to adequate parking.

- Where practical, garage entries, carports and parking areas shall be internalized in building groupings or oriented away from street frontage.
- Parking areas and freestanding parking structures (detached garages or carports) shall not dominate any frontage along a primary street.
- Where practical, freestanding parking structures (detached garages or carports) visible form perimeter public streets shall be sited perpendicular to the perimeter streets in order to reduce visual impacts on the streetscape.
- Parking provided in surface parking lots shall be broken up into smaller blocks of parking with no more than 10 continuous perpendicular parking spaces, and these parking "blocks' shall be separated from each other by a landscaped area of no less than 10 feet in width.
- Carports shall accommodate not more than 10 continuous parking spaces.
- No more than 4 detached two doors or eight single garage doors shall be located adjacent to each other in a structure
- The minimum separation between adjacent parking structures (detached garages or carports) shall be 10 feet, and such separation areas shall be landscaped according to the guidelines in this document. A pedestrian access way may be included within the separation area.
- Setbacks for carports and detached garages shall meet all appropriate setback requirements.

### Front Loaded Townhouses Greater than 18 du/ac or other "Tuck-Under" Type Garages

Residential parking for front loaded Townhomes greater than 18 du/ac and other "tuck-under" enclosed street-facing garages shall meet the following requirements:

- Any unit less than 18 feet wide shall have only one single car garage door.
- For single car or tandem garages, driveway width shall be no more than 12 feet at the curb.
- For two car side-by-side garages, driveway width shall be no more than 18 feet at the curb.
- Driveway widths shall be no wider than the width of the garage door plus 1' on both sides for both single and double doors.
- Tandem garages are acceptable.

*Include children's play areas.*

*High density homes clustered around common space.*

# ARCHITECTURAL DESIGN GUIDELINES

This section of the Supplemental Design Guidelines addresses aesthetic issues associated with high density multi-family residential developments between 18-30 du/ac. The Supplemental High Density multi-family residential design guidelines are in addition to the overall Design Guidelines that are covered in the overall Design Guidelines. Successful execution of these guidelines will ensure quality planning and design that will incorporate outward, street-facing orientations and greater variety and creativity in the development of building types and sizes.

## SITE DESIGN

Appropriate building siting can reduce perceived density, maximize open space areas and enhance neighborliness and a sense of community by providing attractive and desirable spaces where people may gather and interact.

- Buildings should be sited in response to and to take advantage of opportunities presented by natural or created topographic landforms.
- Site planning should provide clear pedestrian connections to the parks and trail system.
- When possible, non-street facing multi-unit buildings should be organized around a common open space, public open space – e.g. a linear park or green court – courtyard, or community amenities such as swimming pools or other recreational facilities.
- Consideration should be given to locating smaller scaled structures at the site perimeter in order to transition to other residential densities.

## SITE LIGHTING

High efficiency fixtures and sophisticated optics are encouraged to direct light where it is needed without creating excessive glare. Long lasting high pressure sodium lamps are suggested to minimize energy use and lamp replacement. Lights are placed where they are needed for specific uses, rather than a continuous foot-candle requirement across the site, allowing for the appreciation of the dark sky in the residential neighborhoods. The result is that the quantity of fixtures and the total energy required is reduced over conventional communities. This has the benefit of creating a better quality of life, an improved aesthetic, while preserving precious energy and maintenance resources, without compromising safety and security.

To preserve the quality of a dark sky at night, high intensity light fixtures should include a shielded light source that reduces the view to the light source, and directs light away from unmediated areas such as wetlands and their associated buffers and adjoining properties.

*Well articulated massing.*

*Colors and materials wrap onto side elevations.*

*Changes in color, massing and materials enhances the streetscape.*

## ARCHITECTURE

### Massing and Articulation

The building character is important, as it effectively becomes a shared amenity for all residents and visitors. To avoid bland homogenous design and to ensure that the structures maintain a level of interest and variety, the following guidelines shall be applied:

- Unvarying repetitive facades that present a monolithic development should be avoided.
- Building forms should be appropriate to their style.
- Articulate the building massing appropriately to minimize boxiness of elevations facing streets, parks or other greenways.
- Porches, entries or balconies are encouraged.
- Massing should be varied by articulation of elements such as bays, dormers, etc.
- Provide additional articulation and variety to elements by changing materials, details, and/or color.
- To help meet the Design Standard for enhanced elevations (front, sides and rear) where they are visible from the street or public and/or private open space, consider utilizing elements such as changes in building massing, roofline variation and window treatments.
- Incorporate relief, texture and color in façades that enhance the pedestrian experience.
- Varied building heights for multi-unit buildings are encouraged, both to provide visual interest and give the appearance of a collection of smaller structures.
- Expression of individual units within row town homes is encouraged for densities up to 20 du per ac.
- Functional and useable outdoor porches, patios, balconies, courtyards, or other areas for the use of building residents are encouraged for multi-unit buildings.
- Decks should compliment the elevation composition and not appear "tacked on", or as an afterthought.

### Windows and Doors

Windows and doors will naturally vary with the incorporation of a variety of architectural elevation styles.

- Entries should be given special attention as a whole system including door, side windows and porches.
- Entries should be inviting from the street with adequate weather protection.
- Windows should be appropriate to the building's architectural style and combined and arranged to establish clear and rhythmic patterns as appropriate for both the building's architectural style and scale.
- Window grids, if appropriate to the architectural style and used on the front elevation, should be used on all elevations that are visible from streets, open space, or other common areas.
- Though consistency of window use is generally

*Multi-family homes with individual entries.*

*Multi-unit entries highlighted with quality materials and detailing.*

*Roof form and materials are appropriate to architectural style.*

desirable, windows may be provided in various shapes and sizes provided they are appropriate to the building's architectural style or as accents.

### Entries to Multi-Unit Buildings

All entries for main buildings and for individual units should be pedestrian-scaled.

- Utilize courtyard doors, gates, steps and stoops, or other portals at building entries.
- Main building entries should be differentiated from individual street-level unit entries with special detailing, awnings, canopies, or multi-story forms.
- Individual ground level unit entries should have a strong relationship to a fronting street, internal walkway, or courtyard as appropriate to the overall siting concept and housing type. To the extent appropriate to the architectural style, all ground level private dwelling unit entries particularly those fronting a public street should incorporate a porch element or recessed entryway.
- Each dwelling unit's entry should be emphasized and may be differentiated through architectural detailing and elements such as porches, stoops, or roof canopies.
- Where topography allows, street entries to row town homes should be elevated with raised porches or stoops to a height of at least 3 steps above the public sidewalk. Porches or stoops may be paired and share a single set of stairs.

### Detailing, Materials and Colors

- Signature or custom detailing should re-enforce and support the neighborhood character.
- Details and materials should be appropriate to the style the building is expressing.
- Gutters, downspouts and rainwater leader heads should be integrated into the roof/wall detailing and designed as part of the trim.
- Materials should be incorporated such that they do not appear to be merely surface applications but as an integral component of the architectural style.
- Natural and natural appearing materials should be used as details to complement the selected architectural style such as wood, stone, brick and iron.
- Materials should be attractive, durable, sustainable, low maintenance, and appropriate to the character of the neighborhood. To the extent possible, materials should also be of local origin.
- When not used uniformly about a building, accent materials such as brick and stone used on street facing elevations should be returned to a logical point of termination such as an inside corner, on the adjacent side elevation.
- Color should be used as an important design element in a building's appearance. Garish and incompatible colors should be avoided. Appropriate use of more than one predominant paint color is encouraged. Compatible

*Detail at windows as design element.*

*Utilize accent materials appropriate to architectural style.*

*Provide variation in color, roofline and massing to break down scale of buildings.*

accent colors are encouraged to enhance important building elements.

- On an individual building, color variety should relate to changes of building forms and materials, such as body, accent and trim.
- Roof colors must relate to overall building colors.
- Use of accent colors to emphasize the building's details such as window sash, mullions, and trims is strongly encouraged when appropriate to an architectural style.
- Wall mounted mechanical equipment should be screened as much as is practical considering the function of the equipment.

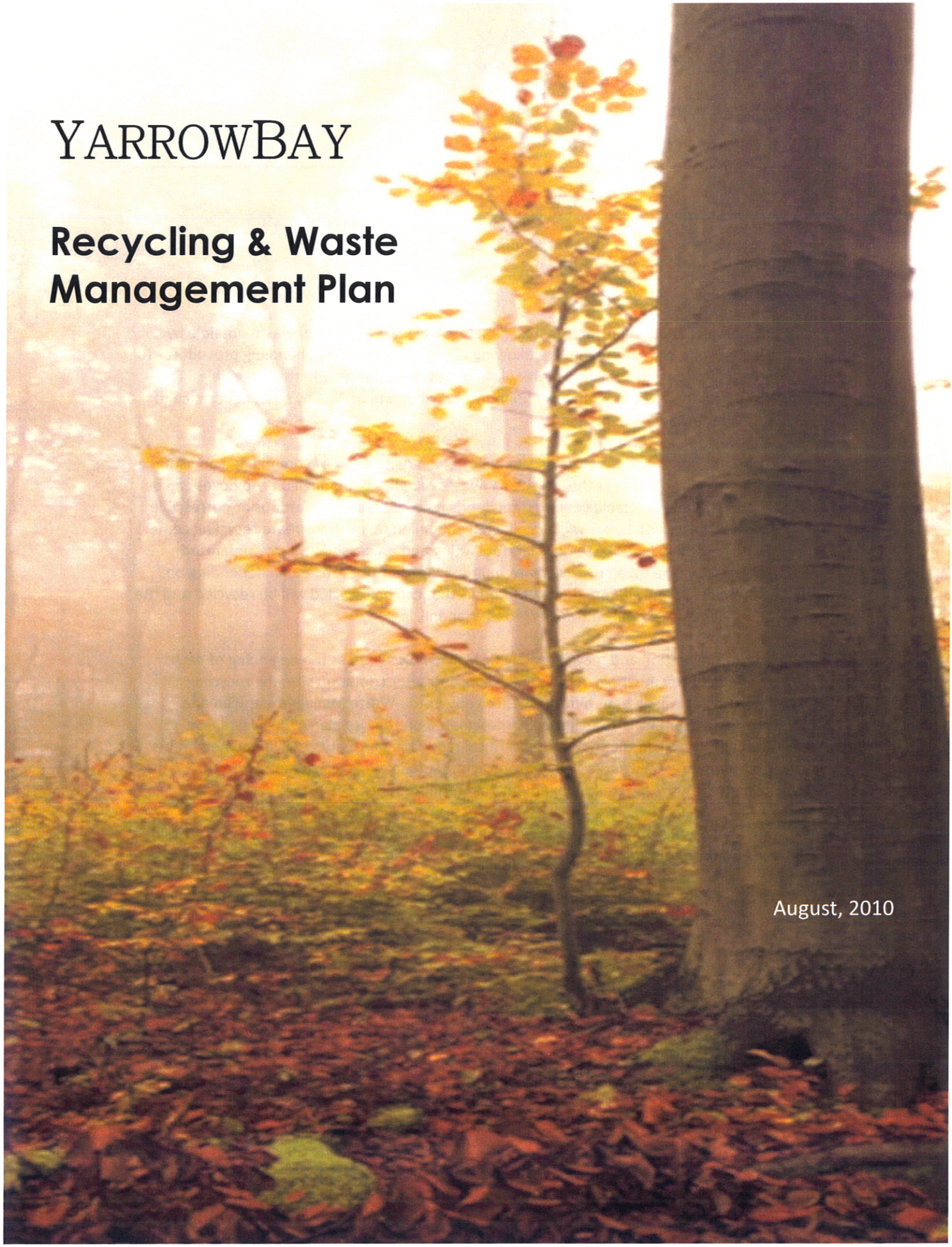
### Roofs

A variety of roof plans and pitches is desired, as roof forms and their materials have a significant impact on the impression of variety within a neighborhood.

- Roofing materials should be appropriate to their related style and pitch.
- Variation in ridgeline heights and alignments should be incorporated in order to create visual interest.
- Flat or very shallow sloped roofs should be appropriate to their architectural style. Built-up or roofing materials that are predominantly used on flat roofs are only permitted if they are not visible from the street or other public area.
- Roof penetrations for vents should be consolidated and located on the rear side of roof ridges or a portion of the roof not visible from a public street, park or common green, whenever possible.

# Exhibit J

## Construction Waste Management Plan



YARROWBAY

# Recycling & Waste Management Plan

August, 2010

# YARROWBAY
## Waste Management Plan

**Contractor:** YarrowBay
**Project(s):** Lawson Hills MPD and The Villages MPD
**Location:** Black Diamond, WA
**Recycling Coordinator:** _____

1. This project and its contractors shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials wherever possible. This project is expected to achieve a minimum recycling rate of 75% by strict adherence to this Waste Management Plan.

2. YarrowBay or the contractors on site will keep on hand a mix of commingled and source separated drop boxes at the job site as phases dictate. Commingled drop boxes can be filled with any recyclable construction debris material except hazardous or putrescible waste. These drop boxes will be collected and taken to an appropriate recycling center by an acknowledged waste recycler for sorting and processing. Source separated materials will be taken to any one of multiple locations for processing depending on material type and site proximity. Materials that can be recycled will be recycled and the residual materials will be transferred to a landfill.

3. Waste prevention and recycling activities will be discussed at the beginning of each monthly safety meeting. As each new subcontractor comes on site, the recycling coordinator will present him/her with a copy of the Waste Management Plan and provide a tour of the recycling areas designated on the site plan. The Waste Management Plan, site plan and all critical recycling information will be posted in the designated recycling area. All subcontractors will be expected to make sure their crews comply with the Waste Management Plan requirements.

4. YarrowBay will generate a report that shows how much waste was recycled. This report will be used to track progress.

5. The following chart identifies the waste materials that will be generated on this project, the recycling/disposal method for each material and any specific handling procedures.

# YARROWBAY
## Waste Management Plan

| Material | Qty. | Recycling/Disposal Method | Handling Procedures |
|---|---|---|---|
| Asphalt, Brick, Concrete, Masonry | | YarrowBay and subcontractors to place material in **Concrete Only** recycling drop box. | **Concrete Only** drop boxes will be hauled directly to Kangley Rock and Recycle in Renton, WA to be processed as recycled aggregate and granular fill. |
| Cardboard | | YarrowBay and subcontractors to place material in **Cardboard Only** recycling drop box. | Cardboard will be broken up and folded into flat sheets to be placed in **Cardboard Only** drop boxes and hauled to an appropriate facility for processing. Paper mills process the materials into pulp for re-use. |
| Gypsum Drywall | | YarrowBay and subcontractors to place material in **Drywall Only** recycling drop box. | **Drywall Only** drop boxes will be hauled directly to an appropriate facility for processing. Gypsum is recycled and manufactured into new wallboard. |
| Metals (All) | | YarrowBay and subcontractors to place all metal debris in **Metal Only** recycling drop box. | **Metal Only** drop boxes will be hauled to an appropriate facility for salvage/recycling. |
| Wood (All) | | YarrowBay and subcontractors to place material in **Wood Only** recycling drop box as clean wood. | **Wood Only** recycling drop boxes will be hauled to an appropriate facility for processing. |
| Commingled Debris | | YarrowBay and subcontractors to place material in **Commingled** Recycling drop box. | **Commingled** drop boxes taken to an appropriate facility for sorting and will be handled per the materials guidelines above. |
| Job Office Waste | | **Recycle Bin** | All recyclable job office waste to be deposited into **Recycle Bins** and hauled by the municipal recycling hauler for sorting and recycling. |
| Non-Recyclable Waste | | YarrowBay and subcontractors to place material in the **Non-Recyclable** Waste Container. | **Non-Recyclable Only** waste containers will be sent to a solid waste transfer station and transferred to a landfill by the municipal solid waste hauler. |

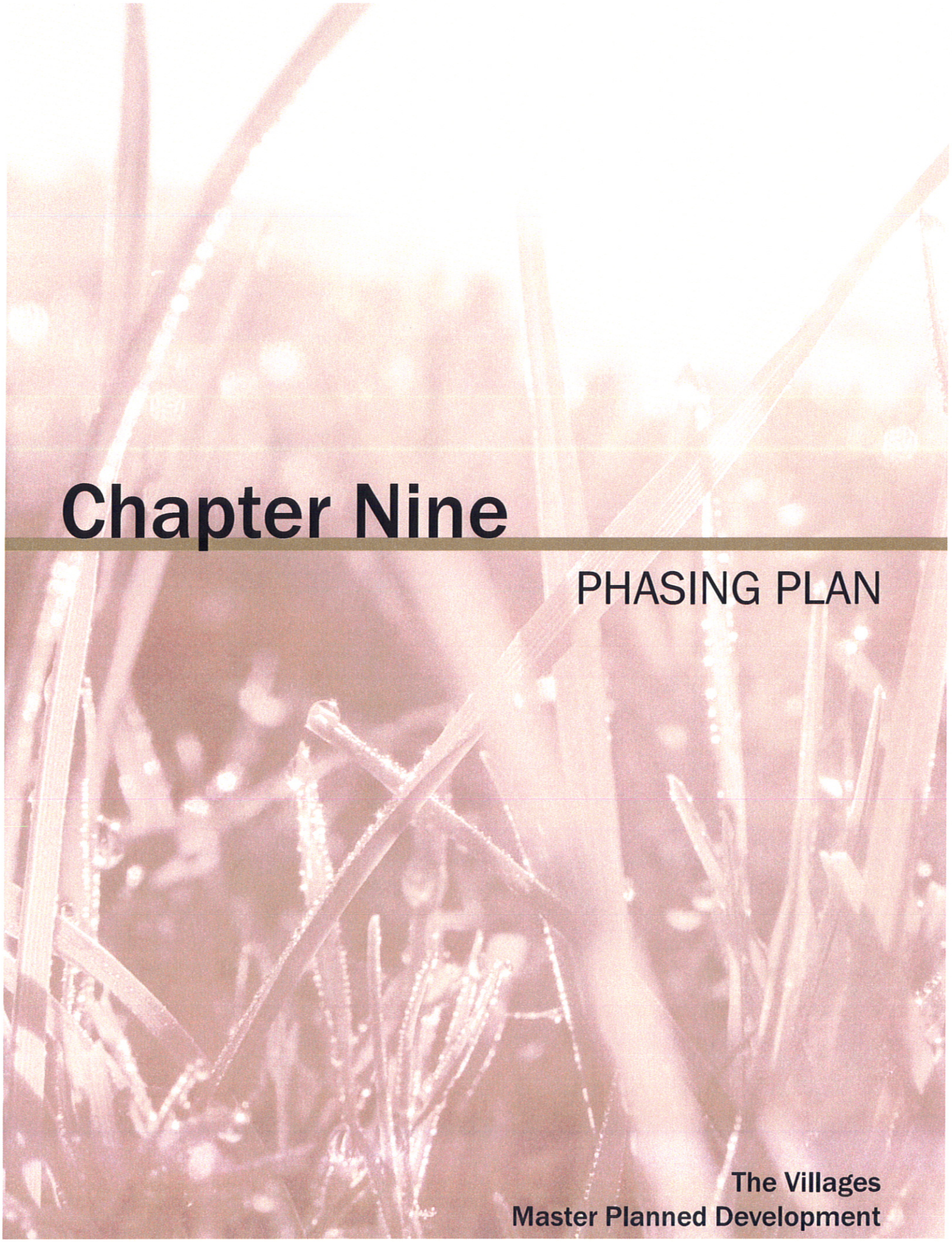
# YARROWBAY
## Program Reports

Progress reports will be submitted to the recycling coordinator and/or designated YarrowBay representative monthly or upon request. The list below provides explanations of the columns shown on the reports:

| Report | Explanation |
|---|---|
| Diversion Report | Details the quantity of material diverted from the landfill to recycling facilities |
| Commingled Debris | Refers to drop boxes that are filled with mixed recyclable materials that are taken to a sorting/processing facility. |
| Source-Separated Material | Refers to drop boxes that are filled with one material type, i.e. concrete only. The source-separated material will be sent directly to a recycling facility. |
| Diversion Rate | Refers to the percentage of materials in the commingled debris or the source-separated debris that is recycled. The remaining material that cannot be recycled is transferred to a landfill. |
| Total Diversion Tonnage | Refers to the total tons of both commingled debris and source-separated debris that is recycled. |
| Tonnage of Materials Generated | Shows the total amount of material generated that is placed in the recycle boxes and hauled off site for recycling. |
| | |

# Exhibit K

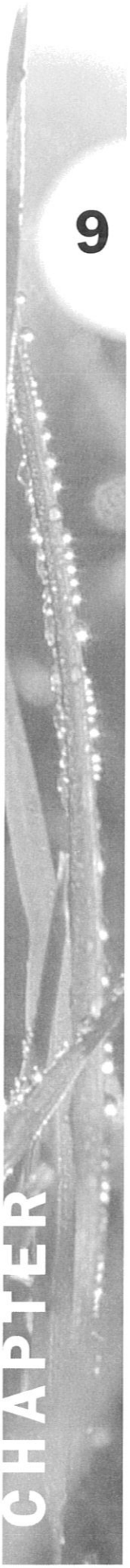
## MPD Phasing Plan



# Chapter Nine

## PHASING PLAN

**The Villages**
**Master Planned Development**



CHAPTER 9

## OVERVIEW

The infrastructure needed to serve the proposed MPD at build-out is substantially more than will be needed to serve the development expected in the first phase of the project, and cannot reasonably be funded years ahead of the development it serves. Since development is expected to occur incrementally, this phasing plan provides a framework and thresholds for providing the infrastructure necessary to serve development as it occurs.

Full build-out of The Villages MPD is anticipated to take approximately 15 years, beginning at the end of 2010 and ending in 2025. Additional extensions of time may be requested for final project completion activities. The estimated absorption of units per year is approximately 250 to 300 units per year. Retail/office absorption could be 75,000 to 150,000 square feet per year. However, these are simple averages and the ultimate absorption rates will vary based on market conditions.

Development is expected to begin to the south of Auburn-Black Diamond Road on Parcel D of The Villages MPD. Development of Parcel C of The Villages MPD and the commercial area of Lawson Hills MPD (North Triangle) are expected to be developed next. Development will progress outward from this point. The last area to be developed will likely be the southeastern portion of The Villages site, Parcel F.

## PHASING PLAN SUBJECT TO CHANGE

The following phasing plan is an estimate of the improvements that will be needed for the project. It may change as a result of final mitigation agreements resulting from the MPD and EIS process.

## PHASING PLAN

For the purposes of infrastructure phasing, there is one phasing plan for both The Lawson Hills and The Villages MPDs. It is anticipated that the initial phases of The Villages MPD will be the first area to develop. The phasing plan includes four phases: 1A, 1B, 2, and 3. These phases represent the likely sequence of development, with 1A being the first phase and 3 being the last phase. The order is not intended to be absolute and represents likely phases based on current market conditions. Phases may be started concurrently. For example, the North Triangle of Lawson Hills may begin construction concurrent with the first residential community on The Villages.

In general, the infrastructure necessary for each phase for each MPD is dependent on the infrastructure built in preceding phases for that MPD. For example, in order to build The Villages Phase 1B, the infrastructure projects listed for The Villages Phase 1A would also be needed. These two phases could be built simultaneously or The Villages Phase 1A could be built first. Development within the Lawson Hills MPD is not dependent on infrastructure required for The Villages and vice versa, with the exception of Parcel B. The Villages Parcel B is dependent on Lawson Hills North Triangle.

Finally, the off-site transportation improvements shown are a general estimate of what will likely be needed for each phase. Monitoring of the off-site intersections will determine the actual timeframe for these improvements.

Figure 9-1 shows the phases in relation to development parcels. Each phase is described and the infrastructure necessary for each is shown in accompanying tables and maps.

## CONSTRUCTION OF IMPROVEMENTS

On and off-site infrastructure facilities are necessary for development to occur on both MPD sites. These facilities are illustrated on the Circulation, Conceptual Water, Sewer, Stormwater and Phasing Plans and described in the tables within this Chapter. Some facilities serve only the MPDs, while other facilities will serve both the MPDs and the rest of the City of Black Diamond. The Applicant/Master Developer is responsible for the design and construction of those facilities that only serve development within the MPD boundaries or that are only necessary as a result of the MPDs. The facilities that serve the MPDs as well as development in areas outside of the MPD project boundaries will be a shared responsibility between the City and Master Developer, with the Master Developer contributing a proportionate share. The column labeled "City Project ID" in the phase improvement lists have numbers corresponding to improvements listed in the "City of Black Diamond Comprehensive Plan dated June 2009 for reference.

## COST RECOVERY MECHANISMS

### A. Local Improvement Districts

The Master Developer will provide infrastructure facilities necessary for both The Villages and Lawson Hills MPDs at its cost, but the City may consider formation of one or more local improvement districts and shall allow credits, offsets or other financing provisions to the extent authorized by law and approved by the City.

### B. Latecomer Agreements

At the Master Developer's request, the City shall agree, as authorized by law, to a latecomer reimbursement system whereby the City will collect a latecomer fee from those persons and properties which connect to or use the facilities installed by the Master Developer and remit those funds to the Master Developer.

### C. Other Financing Mechanisms

At the Master Developer's request the City shall agree to implement other financing mechanisms to recover costs similar to community facility districts to the extent allowed by State Law.

## TIMING OF IMPROVEMENTS

### Timing of Regional Facilities

Preliminary design of Regional Facilities (an on or off-site infrastructure facility that supports development throughouth the MPD and is shown on the Conceptual Circulation, Water, Sewer, Stormwater or Phasing Plans) must be submitted concurrent with or prior to the first preliminary subdivision, preliminary Binding Site Plan or building permit that requires the facility. Final design must be approved and constructed, [redacted] prior to Occupancy of any structure relying on the facility. Model Homes are exempt from this requirement.

### Timing of Project-Level Facilities

Preliminary design of project-level facilities (a street or utility facility that is necessary to serve a specific proposal or development parcel and that is not a regional facility) must be submitted concurrent with or prior to the preliminary subdivision, Binding Site Plan or building permit served by the facilities. Final design and construction plans must be approved and on-site improvements constructed [redacted] prior to final subdivision, final Binding Site Plan approval or occupancy, whichever comes first. Model Homes are exempt from this requirement.

### Timing of Off-Site Transportation Improvements

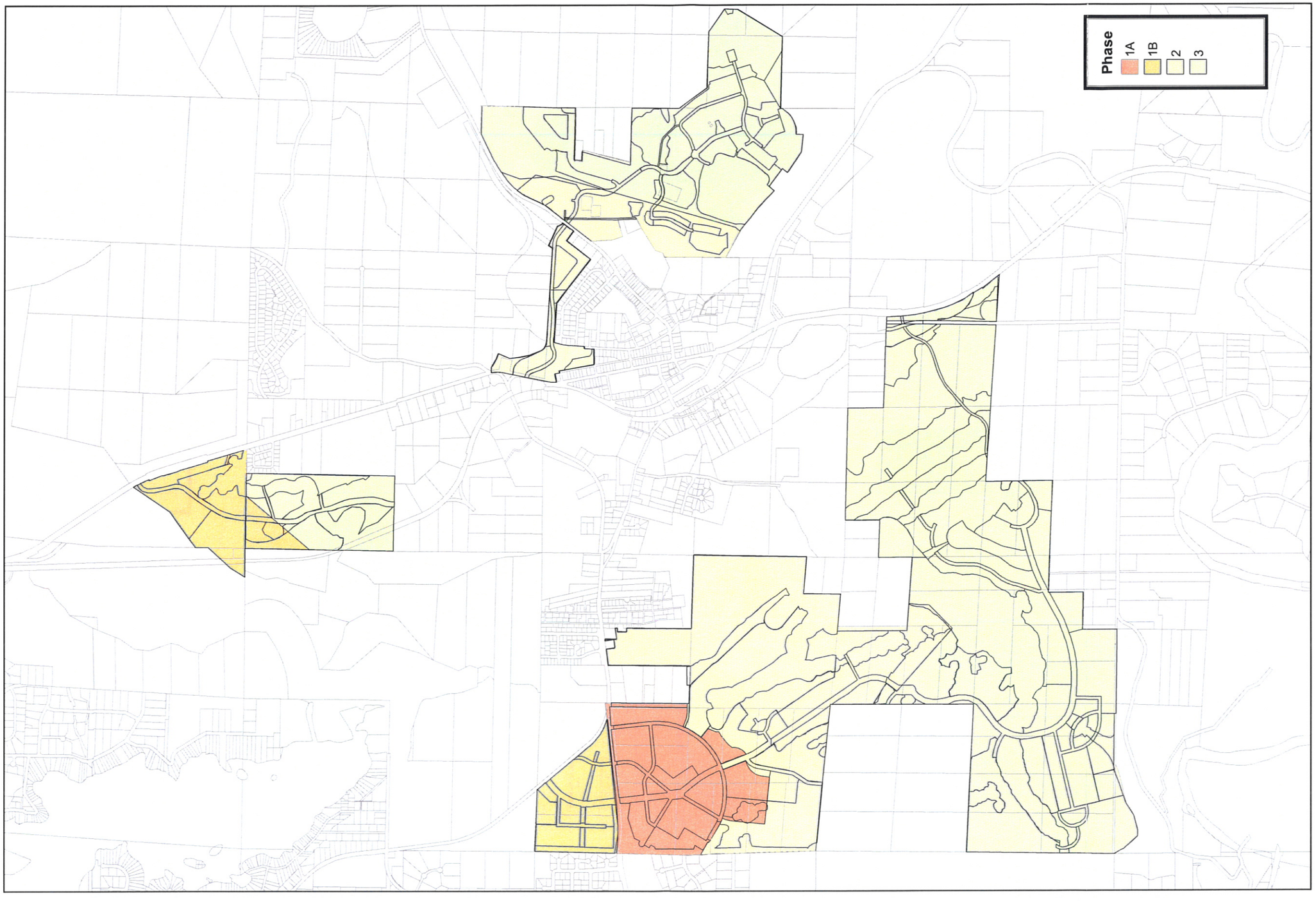
The off-site transportation improvements shown in the Phasing Plan are required when warranted based on the Traffic Monitoring Plan. Pursuant to this Plan, monitoring is triggered for specific facilities identified in the plan based on the number of ERUs issued. The threshold for Master Developer's requirement to perform the required transportation mitigation is when the monitoring shows that level of service (LOS) (as defined in the Highway Capacity Manual, TRB, 2000) of the identified intersections falls below the adopted LOS (as defined in the City of Black Diamond's Comprehensive Plan, 2009) set for each identified facility or, in the event that the LOS is already below the applicable threshold set for a facility, the trigger is when the LOS falls below the pre-development LOS. The Master Developer is required to file applications to initiate the construction of the facility within 6 months of when the monitoring plan shows that any one or more of the transportation facilities has met the designated trigger.

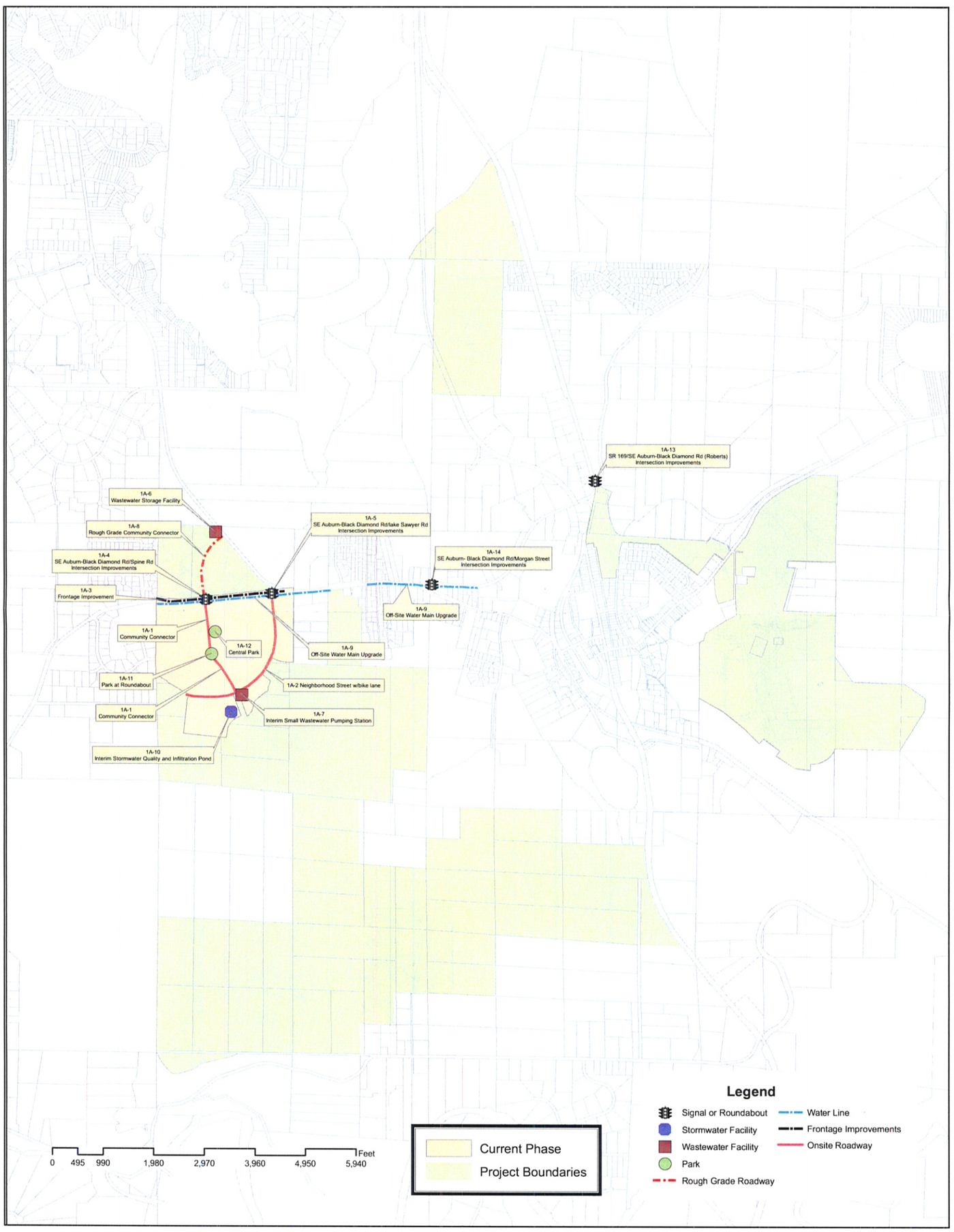
## PHASE 1A

Phase 1A includes approximately 130 acres containing approximately 850 dwelling units in the central portion of The Villages Parcel D. It includes development parcels V10-19, V21 and V24.

Table 9.1
Lawson Hills and The Villages Phase 1A Improvements

| Project ID | Project Description | City Project ID |
|---|---|---|
| IA-1 | Community Connector which is the first segment of roadway providing access and utilities to the Phase 1A Development. | A1 |
| IA-2 | Neighborhood street with bike lane providing secondary Phase 1A access. | |
| IA-3 | Frontage improvements in SE-Auburn-Black Diamond Road. These will be constructed in phases as Phase 1A develops. | |
| IA-4 | Intersection improvements at the intersection of Community Connector and SE Auburn-Black Diamond Road. | B9 |
| IA-5 | Intersection improvements at Auburn-Black Diamond Road/Lake Sawyer Road and neighborhood street. | |
| IA-6 | Wastewater storage facility – King County Metro facility funded by Metro. | |
| IA-7 | Small interim wastewater pumping station. | |
| IA-8 | Rough grade community connector across parcel C to provide access to wastewater storage facility. Includes construction of sewer force main. | |
| IA-9 | Water main upgrade/extension in SE Auburn-Black Diamond Road. | |
| IA-10 | Interim stormwater pond and infiltration facility. | |
| IA-11 | Park at roundabout. | |
| IA-12 | Central park. | |
| IA-13 | Intersection improvement at intersection of SR 169/Roberts Drive. | A8 |
| IA-14 | Intersection improvement at intersection of Morgan Street/Roberts Road. | |


Phase
1A
1B
2
3


1A-13
SR 169/SE Auburn-Black Diamond Rd (Roberts) Intersection Improvements
1A-6
Wastewater Storage Facility
1A-8
Rough Grade Community Connector
1A-5
SE Auburn-Black Diamond Rd/lake Sawyer Rd Intersection Improvements
1A-14
SE Auburn- Black Diamond Rd/Morgan Street Intersection Improvements
1A-4
SE Auburn-Black Diamond Rd/Spine Rd Intersection Improvements
1A-3
Frontage Improvement
1A-9
Off-Site Water Main Upgrade
1A-1
Community Connector
1A-12
Central Park
1A-9
Off-Site Water Main Upgrade
1A-11
Park at Roundabout
1A-2 Neighborhood Street w/bike lane
1A-1
Community Connector
1A-7
Interim Small Wastewater Pumping Station
1A-10
Interim Stormwater Quality and Infiltration Pond
0 495 990 1,980 2,970 3,960 4,950 5,940 Feet
Current Phase
Project Boundaries
Legend
Signal or Roundabout
Stormwater Facility
Wastewater Facility
Park
Rough Grade Roadway
Water Line
Frontage Improvements
Onsite Roadway

## PHASE 1B

Phase 1B includes approximately 120 acres, 66 within The Villages and 54 within Lawson Hills and approximately 200 dwelling units. It includes Parcel C and a portion of Parcel B of The Villages along with the North Triangle of Lawson Hills and development parcels V1, V2, V3, V4, V5, V6, V7, V8, V9, V68 and L27-L30.

Table 9.2
Lawson Hills and The Villages Phase 1B Improvements

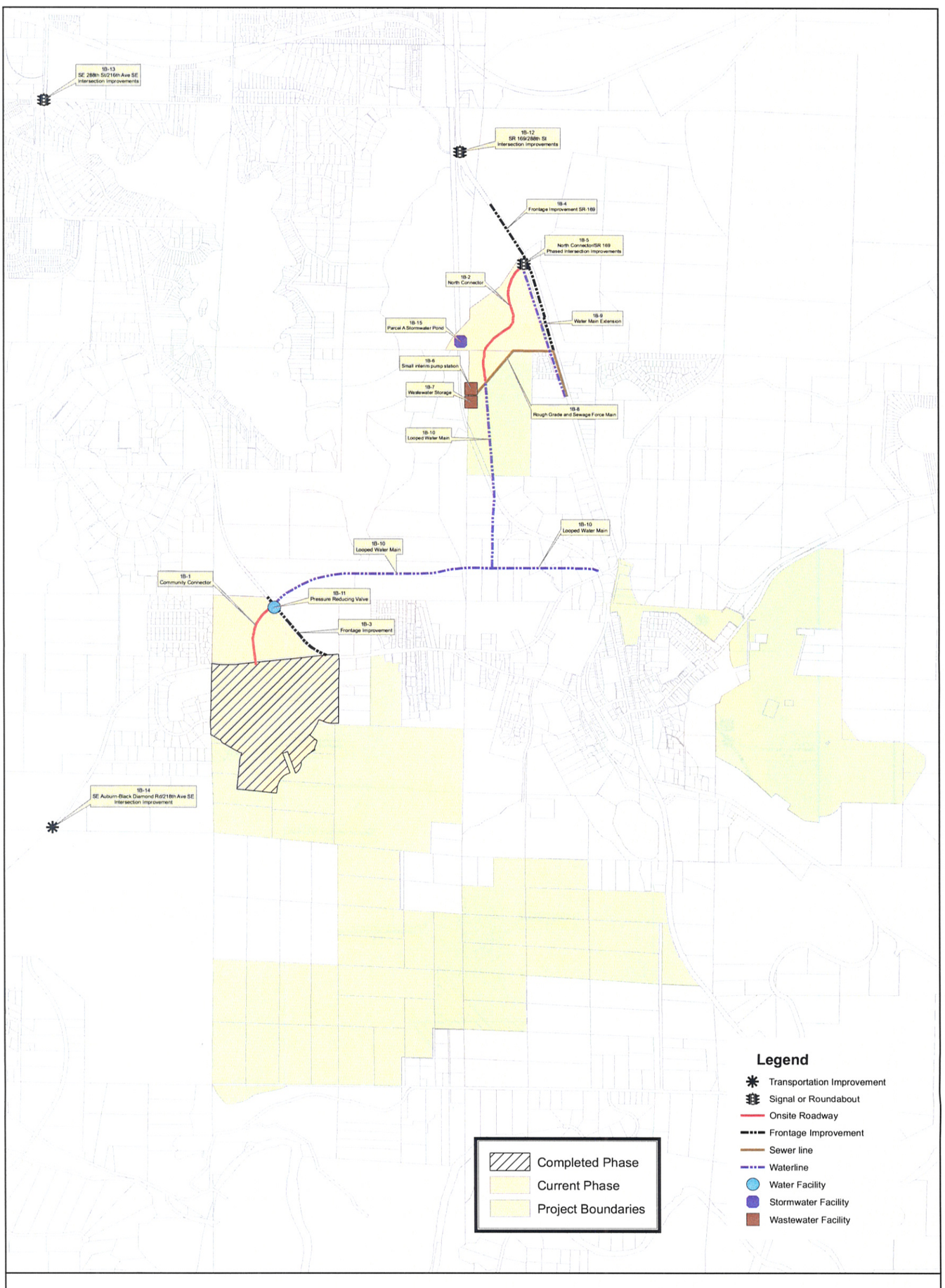
| Project ID | Project Description | City Project ID |
|---|---|---|
| IB-1 | Community Connector between Lake Sawyer Road and Auburn-Black Diamond Road through Parcel C. | A1, T21, PN6 |
| IB-2 | North connector serving North Triangle and Parcel B | A5, PN16 |
| IB-3 | Frontage improvements along Lake Sawyer Road | |
| IB-4 | Frontage improvements along SR 169 | |
| IB-5 | Intersection improvements at SR169/North Connector | A5 |
| IB-6 | Small, interim wastewater pumping station | |
| IB-7 | Wastewater storage facility, if required | |
| IB-8 | Wastewater force main and rough grade access | |
| IB-9 | Off-site water main extension in SR 169 | PN11,PN16 |
| IB-10 | Off-site water main loop – 850 PZ | PN6,PN16 |
| IB-11 | PRV to complete loop on 750 PZ | |
| IB-12 | Intersection improvements at SR 169/SE 288th St | |
| IB-13 | Intersection improvements at SE 288th St/216th Ave SE | |
| IB-14 | Intersection improvements at SE Auburn-Black Diamond Rd/218th Ave SE | |

## PHASE 2

Phase 2 consists of approximately 394 acres, 73 acres in the Lawson Hills MPD and 321 acres in The Villages MPD, with approximately 1500 total dwelling units.

Lawson Hills Phase 2 includes approximately 150 dwelling units. The portion of Lawson Hills included in this phase is Lower Lawson Hills within the 965 Pressure Zone and the Lawson Hills MPD North Triangle. Lawson Hills Phase II development consists of Parcels L3, L4, L5, L22, L23, L24, L25 and L26.

The portion of The Villages MPD included in this phase contains approximately 1,350 dwelling units on the remainder of parcel D, all of Parcel E, a small part of Parcel B, and the northern portion of parcel BDA. The Villages development parcels consists of V20, V22, V23, V25 - V33.






PHASING PLAN
PHASE 1B FIGURE 9-3

PHASE 2 FIGURE 9-4

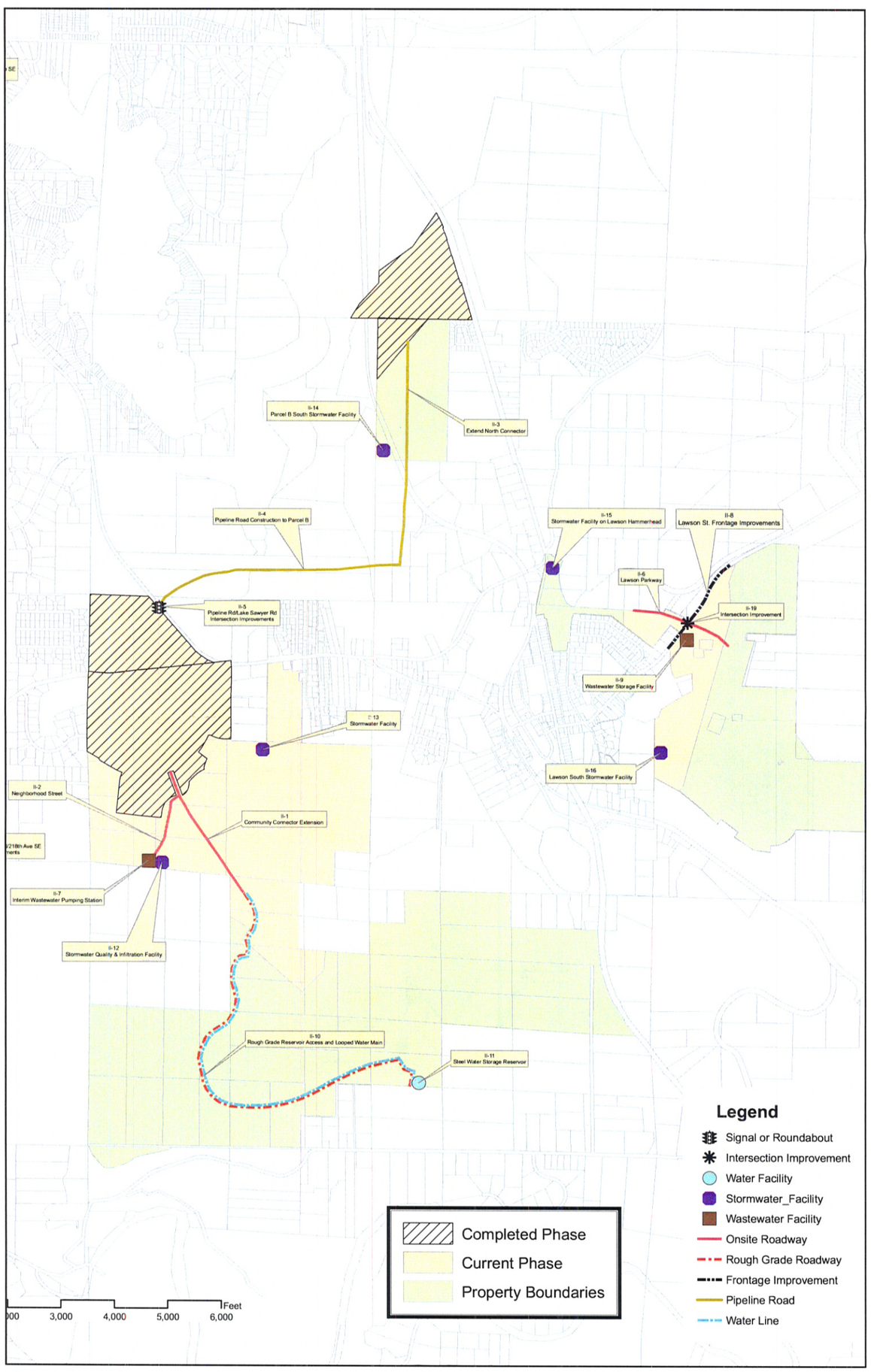


Table 9.3
Lawson Hills and The Villages Phase 2 Improvements

| Project ID | Project Description | City Project ID |
|---|---|---|
| II-1 | Extend Community Connector on South to serve Phase II development area | A1,PN12 |
| II-2 | Construct neighborhood street from community connector to interim pumping station | TL1,FM1 |
| II-3 | Construct north connector through Parcel B | A5 |
| II-4 | Construct Pipeline Road from Lake Sawyer Rd. to Parcel B | A6 |
| II-5 | Intersection improvements at the intersection of Pipeline Rd./Lake Sawyer Rd | A6 |
| II-6 | Lawson Parkway serving Lower Lawson | A3,A9 |
| II-7 | Interim wastewater pumping station | |
| II-8 | Lawson street frontage improvements | |
| II-9 | Wastewater storage facility, if required | |
| II-10 | Rough grade Community Connector for reservoir access | PN12 |
| II-11 | Construct water storage facility | PN12 |
| II-12 | Stormwater quality and infiltration pond | |
| II-13 | Stormwater detention and water quality pond | |
| II-14 | Stormwater detention and water quality pond | |
| II-15 | Stormwater facility on Lawson Hills hammerhead | |
| II-16 | Stormwater detention and water quality pond | |
| II-17 | SE Covington-Sawyer Road/216th Avenue SE intersection improvements | |
| II-18 | SE Auburn-Black Diamond Road/218th Avenue SE intersection improvements | |
| II-19 | Intersection improvements at Lawson Parkway/Lawson Street/Botts Drive intersection | |

## PHASE 3

Phase 3 consists of approximately 926 acres, 247 acres in the Lawson Hills MPD and 679 acres in The Villages MPD , approximately 3500 total dwelling units.

Lawson Hills Phase 3 contains approximately 1,100 dwelling units. Portions of Lawson Hills included in this phase are the Lawson Hills Hammerhead and Upper Lawson . This phase consists of development parcels L1, L2, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, and L21.

The Villages MPD included in this phase includes 679 acres containing approximately 2,400 dwelling units on the remaining portions of Parcels B, BDA and F. The Villages development parcels V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69 , V70 and V71.

Table 9.4
Lawson Hills and The Villages Phase 3 improvements

| Project ID | Project Description | City Project ID |
|---|---|---|
| III-1 | Community Connector extension and water line extension to SR 169 | A1, A8,TL4 |
| III-2 | Community Connector for Lawson Hills main entry | A3, TL2 |
| III-3 | Community Connector for Main Lawson Hills | A8 |
| III-4 | Intersection improvements at intersection of SR 169/ South Connector | A3 |
| III-5 | Intersection improvements at SR 169/Lawson Parkway | A4 |
| III-6 | Intersection improvement of SR 169/SE Auburn-Black Diamond Rd/Ravensdale Rd | FM2 |
| III-7 | Sewer pressure siphon to Metro storage facility | |
| III-8 | Interim large wastewater pumping station | |
| III-9 | Small wastewater pump station | |
| III-10 | Lawson water pump station | PN51 |
| III-11 | Upper Lawson reservoir | PN51 |
| III-12 | Offsite water main to complete 850 PZ loop | PN50 |
| III-13 | Regional Stormwater Facility | |
| III-14 | Stormwater facility for The Villages east basin | |
| III-15 | Parcel B west stormwater facility | |
| III-16 | North Lawson stormwater ponds | |
| III-17 | North Main Lawson stormwater facility | |
| III-18 | Upper Lawson stormwater pond | |
| III-19 | Offsite stormwater bypass to Jones Lake tributary | |
| III-20 | Intersection improvement at SR 169/North Connector | A5 |
| III-21 | Intersection improvement at SR 169/SE 288th St | |
| III-22 | Intersection improvement at SE 288th/232nd St SE | |
| III-23 | Intersection improvements at intersection of SR 169/ Baker Street | |
| III-24 | Intersection improvements at intersection of SR 169/ Lawson Street | |
| III-25 | Intersection improvements at intersection of SR 169/ Jones Lake Rd | A9 |
| III-26 | Intersection improvements at intersection of SE Green Valley Rd/218th | |
| III-27 | SR 169 frontage improvements | |
| III-28 | SR 169 frontage improvements | |

## PHASING OF PARKS

Parks within Phases 1A, 1B and 2 will be built by phase, with construction triggered no later than 60% occupancy of the phase within which the park(s) is located. Construction of parks within Phase 3 will be triggered when certificates of occupancy or final inspection have been issued for 40% of the dwellings on lots located within 1/4 mile of the park. The Master Developer may elect to build parks in advance.

# Exhibit L

## Excerpts from Chapter 3 of MPD Permit Application

## LAND USE

The Villages MPD is organized around the mixed-use Town Center located south of Auburn-Black Diamond Road. The Town Center is proposed to be a pedestrian oriented central gathering place with retail shops, residential, small offices, cafés and higher density residential around a central plaza. Commercial/office/retail areas are proposed adjacent to the Town Center, north of SE Auburn-Black Diamond Road, to provide a critical mass of retail and employees to support the Town Center.

Residential neighborhoods of varying densities are linked to the Town Center by the Community Connector and an extensive open space and trail system. Two higher density residential neighborhoods located on the southwest and southeast portions of the site are surrounded by low density residential neighborhoods. These higher density neighborhoods serve several functions: they create a central focus for the surrounding low density neighborhoods; the overall density is spread throughout the site rather than concentrated; and these areas create variation in the development pattern.

### RESIDENTIAL

Each residential land use category intentionally allows a mix of housing types. This mix is an important component of the organic urbanism concept. It will prevent the cookie-cutter appearance common in many suburban subdivisions and allows for a mix of lot sizes as discussed in "Rural By Design". Common design elements and guidelines will be the thread linking the neighborhoods within the MPD, while the mix of housing types and uses will allow each neighborhood to develop its own individual character. Schools and similar institutional uses are allowed within these categories, provided that a high school located within these categories will require a City of Black Diamond conditional use permit. Live/work units in these areas would be considered home occupations subject to City of Black Diamond Municipal Code.

**Low Density (MPD-L).** The low density residential category provides for predominantly single-family detached housing types. Attached housing in the form of duplexes, triplexes and quadplexes are allowed within the category provided they are designed to fit into the predominantly single-family character of the neighborhood. The density range for this category is 1-8 dwellings per acre.

**Medium Density (MPD-M).** The medium density residential category provides for single-family detached dwellings on small lots, cottages, duplexes, and townhouses. The density range for this category is 7-12 dwelling units per acre.

**High Density (MPD-H).** The high density residential category provides a mix of housing types including cottages, attached townhouses and stacked flats. The density range for this category is 13-30 dwelling units per acre. Most of the high density residential parcels are located around the Town Center to encourage pedestrian activity and to place households closest to areas likely to be served by transit. Three other high density

nodes form the basis for several smaller isolated neighborhood centers throughout the MPD. Densities in the range from 18-30 dwelling units per acre will be allowed, subject to the criteria for such densities contained in the City's Master Planned Development ordinance. Approximately 35 acres of the site could be developed in the 18-30 dwelling unit per acre range. Potential areas are shown on Figure 3-1.

### UNIT COUNTS BY LAND USE CATEGORY

Table 3.2 provides a general estimate of the number of units by designation. Since there are many development parcels within each category and the density may vary on each, this table is not intended to replace the total cap of 4,800 dwelling units proposed. It is intended to show that the typical densities of most development will result in the approximate number of total dwelling units proposed.

Table 3.2
Residential Densities and Projected
Unit Count by Land Use Category

| Land Use Designation | Density Range (du/acre) Min-Max | Target Density (du/acre) | Approximate Acres | Projected Units |
|---|---|---|---|---|
| MPD-L | 1-8 | 6 | 285 | 1710 |
| MPD-M | 7-12 | 10 | 178 | 1780 |
| MPD-H | 13-30 | 16 | 72 | 1152 |
| MPD Mixed Use | Above retail | Above retail | Above retail | 158 |

Note: Total area may shift with final planning and implementation approvals.

### COMMERCIAL/OFFICE/RETAIL

This category includes uses providing services or sale of goods or merchandise to the public. Uses include, but are not limited to: banks, travel agencies, hotel/motels, eating and drinking establishments, clothing stores, drug stores, gift shops, video rental, bookstore, grocery stores, variety stores, paint stores, craft stores, specialty stores, theaters, wholesale clubs, and gas stations. Schools and similar institutional uses are also allowed within these categories, provided that a high school located within this category will require a City of Black Diamond conditional use permit.

Office uses include general office, research and development, technology, biotechnology and medical equipment, light manufacturing, wholesaling, mini-storage, distillery, brewery, winery, religious and educational uses, civic, continuing care, institutional uses and business support services.

Commercial/office/retail uses will be provided in the proposed MPD on both the Main Property and Parcel B. These uses will positively contribute to the City's ability to achieve a net fiscal benefit for the community, as required by the City's MPD standards (BDMC 18.98.120). A wide variety of commercial/retail, office, and civic uses are allowed within this category. These may include educational opportunities and churches as well as a wide range of private or private enterprise recreation such as bowling alley, skating rink, miniature golf, etc.

### MIXED USE – TOWN CENTER

The Mixed Use category is comprised of commercial/office/retail and housing and is proposed in the northern portion of the Main Property, at the intersection of SE Auburn-Black Diamond Road and Main Street. The Town Center is intended to become a focal point for community gathering and pedestrian-oriented development, so the allowed uses are those that promote these activities. Live entertainment is permitted. Higher density housing in and around the center will provide the population needed to support the center and to generate activity.

### SCHOOL

The School category is intended for uses such as schools and other facilities that serve the community and are often provided by a public entity or non-profit organization. In the event that a parcel is not needed for a school, it shall revert to the MPD-M category. There are several school sites proposed throughout the MPD. Parcels V21, V50 and V58 are proposed as Elementary School Sites; Parcel V57 is proposed for a middle school. Walking distances are shown on Figure 3-2. Civic uses are also anticipated to locate in the commercial/office/retail designation, and sufficient land is zoned to accommodate these uses.

### PARKS, OPEN SPACE AND TRAILS

The open space category is intended for protection of certain critical areas, passive and active recreation, and utilities as a secondary use. The Villages MPD includes a coordinated network of open space, parks, and trail corridors. It also provides relief from the built environment by providing physical and visual buffers. The open space provides connectivity to existing and planned open space, trail corridors, and wildlife corridors on and adjacent to the site. A coordinated trail system is proposed to provide links between parks and all uses within the proposed MPD.

~~Per the MPD standards (BDMC 18.98.120 (G), 18.98.140(F) and 18.98.140 (G)) The Villages MPD must provide the open space required by prior agreements. Portions, but not all, of the property are subject to the BDUGGA and Black Diamond Area Open Space Protection Agreement. Additionally, to cluster development or increase densities, the MPD must provide either the open space required per previous agreements or 50% open space where there are no prior open space agreements. According to the City's MPD standards, the BDUGGA and Ordinances 515 and 517, The Villages MPD must provide 145 acres of open space. To use the MPD provisions that allow increases in density, flexible lot sizes~~

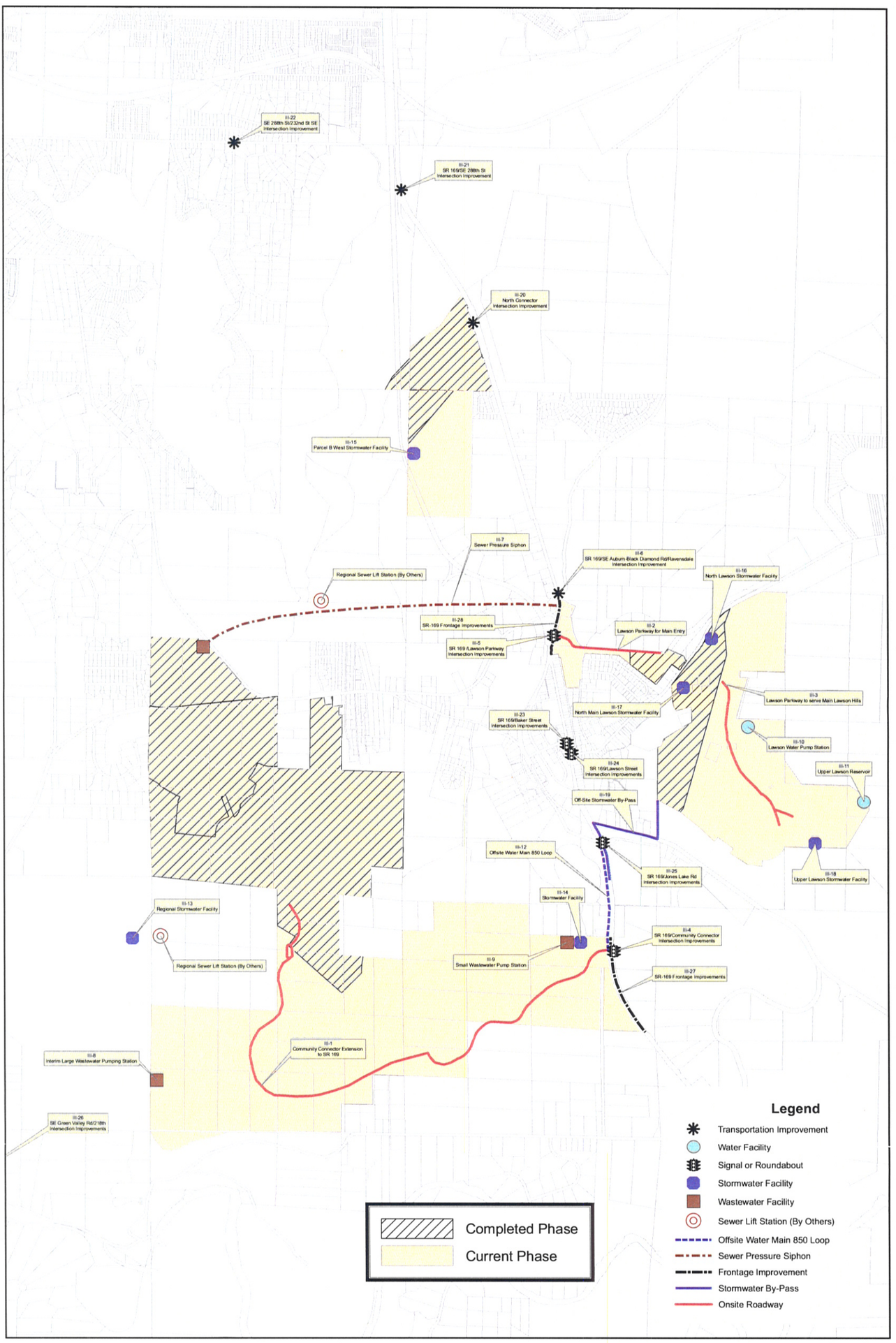

III-22
SE 268th St/232nd Pl SE
Intersection Improvement
III-21
SR 169/SE 288th St
Intersection Improvement
III-20
North Connector
Intersection Improvement
III-15
Parcel B West Stormwater Facility
III-7
Sewer Pressure Siphon
III-6
SR 169/SE Auburn Black Diamond Rd/Ravensdale
Intersection Improvement
Regional Sewer Lift Station (By Others)
III-16
North Lawson Stormwater Facility
III-28
SR-169 Frontage Improvements
III-2
Lawson Parkway for Main Entry
III-5
SR 169 /Lawson Parkway
Intersection Improvements
III-3
Lawson Parkway to serve Main Lawson Hills
III-17
North Main Lawson Stormwater Facility
III-23
SR 169/Baker Street
Intersection Improvements
III-10
Lawson Water Pump Station
III-24
SR 169/Lawson Street
Intersection Improvements
III-11
Upper Lawson Reservoir
III-19
Off-Site Stormwater By-Pass
III-12
Offsite Water Main 850 Loop
III-25
SR 169/Jones Lake Rd
Intersection Improvements
III-18
Upper Lawson Stormwater Facility
III-14
Stormwater Facility
III-13
Regional Stormwater Facility
III-4
SR 169/Community Connector
Intersection Improvements
Regional Sewer Lift Station (By Others)
III-9
Small Wastewater Pump Station
III-27
SR-169 Frontage Improvements
III-1
Community Connector Extension
to SR 169
III-8
Interim Large Wastewater Pumping Station
III-26
SE Green Valley Rd/218th
Intersection Improvements
Legend
Transportation Improvement
Water Facility
Signal or Roundabout
Stormwater Facility
Wastewater Facility
Sewer Lift Station (By Others)
Offsite Water Main 850 Loop
Sewer Pressure Siphon
Frontage Improvement
Stormwater By-Pass
Onsite Roadway
Completed Phase
Current Phase

FIGURE 3-1 LAND USE PLAN

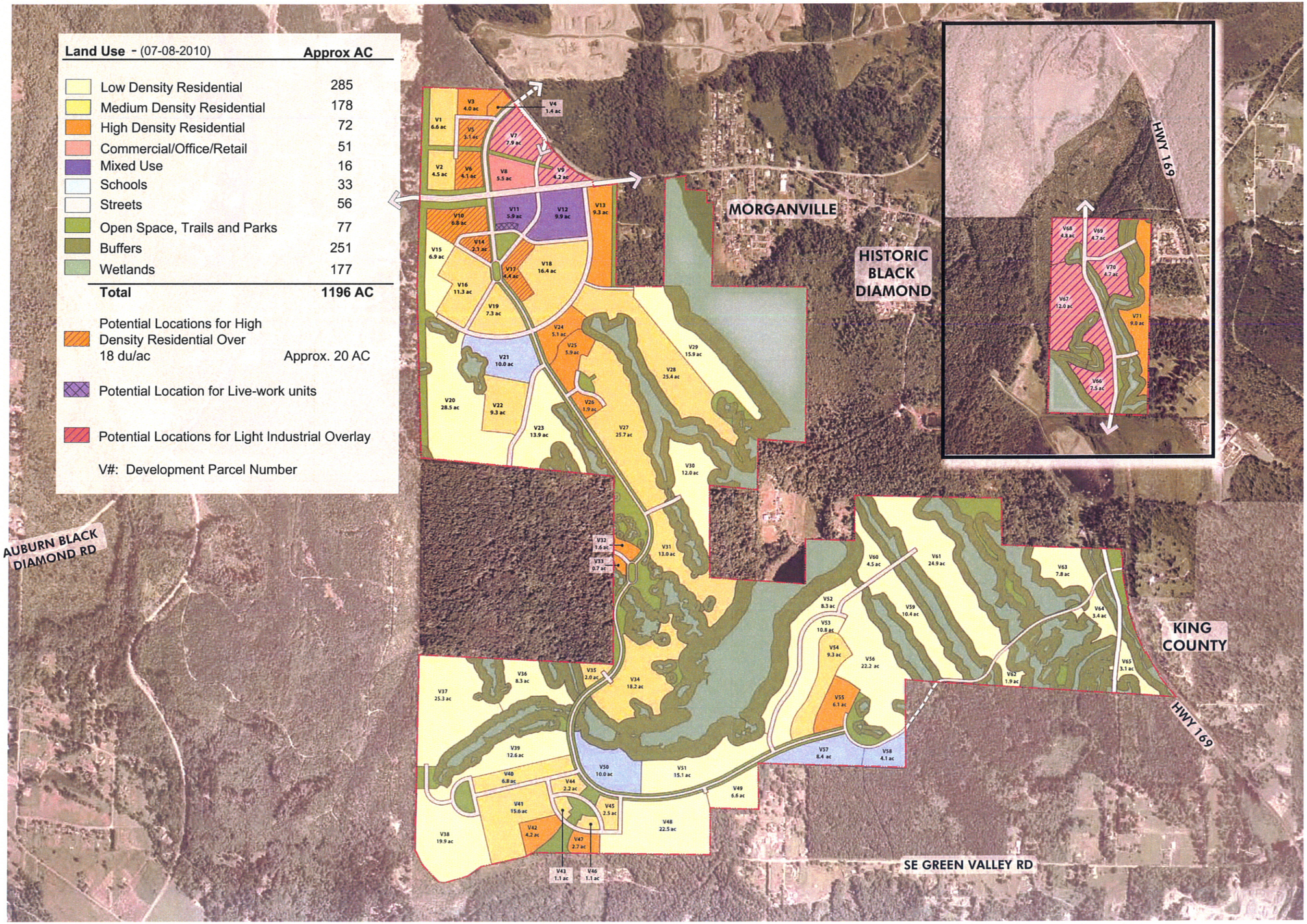
| Land Use - (07-08-2010) | Approx AC |
|---|---|
| Low Density Residential | 285 |
| Medium Density Residential | 178 |
| High Density Residential | 72 |
| Commercial/Office/Retail | 51 |
| Mixed Use | 16 |
| Schools | 33 |
| Streets | 56 |
| Open Space, Trails and Parks | 77 |
| Buffers | 251 |
| Wetlands | 177 |
| **Total** | **1196 AC** |

Potential Locations for High Density Residential Over 18 du/ac — Approx. 20 AC

Potential Location for Live-work units

Potential Locations for Light Industrial Overlay

V#: Development Parcel Number



# Exhibit M

## Mine Hazard Release Form

After Recording Return To:

_____
_____
_____
_____

City of Black Diamond Mine Hazard Release Form

Grantor: _____
(Homeowner)

Grantee: City of Black Diamond

Legal Description: _____

Additional Legal Description: _____

Assessor's Tax Parcel No.: _____

Reference Nos. of Related Documents: _____

_____ ("Homeowner") is purchasing and will be the owner of a home commonly addressed as _____, and legally described on Exhibit A (the "Property"). The Property is part of the Villages Master Planned Development.

The Homeowner acknowledges that the Property is located within a classified or declassified coal mine hazard area and that existing geotechnical information and reports have been prepared and submitted to the City of Black Diamond describing that area and/or the work done to declassify the mine hazard area. By signing below, the Homeowner recognizes that the City of Black Diamond is not liable for actual or perceived damage or impact to the Property from the coal mine hazard area.

This Mine Hazard Release Form shall be deemed a covenant that runs with the land and is binding on all future owners and their heirs, devisees, successors and assigns and all successor owners of the property.

HOMEOWNER:

_____

DATED:_____

_____

DATED:_____

State of Washington

County of KING

I certify that I know or have satisfactory evidence that _____is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument and acknowledged it to be (his/her) free and voluntary act for the uses and purposes mentioned in the instrument.

Dated: . . . . . .

. . . . . .

(Signature)

(Seal or stamp)

. . . . . .

Title

My appointment

expires . . . . . .

# Exhibit N

## MPD Funding Agreement

**MPD Funding Agreement**

This AGREEMENT (hereinafter "**MPD Funding Agreement**" or "**Agreement**") is dated the 15th day of December, 2011, and is entered into by and between BD Village Partners, LP ("**BD Village**"), a Washington limited partnership, BD Lawson Partners, LP, a Washington limited partnership ("**BD Lawson**") (BD Lawson and BD Village are collectively referred to herein as the "**Developer**"), and the City of Black Diamond, a Washington municipal corporation (the "**City**").

**RECITALS**

A. WHEREAS, on June 29, 2007, the City, BD Village, and BD Lawson, LP entered into that certain City of Black Diamond Staff and Facilities Funding Agreement (the "**Staff and Facilities Funding Agreement**") to provide funding for city staff, city consultants, related support facilities, equipment expenses, and legal costs; and

B. WHEREAS, on April 16, 2009, the City, BD Village, and BD Lawson executed an amendment to that Staff and Facilities Funding Agreement (the "**First Amendment**") that allowed for the funding of certain pre-approved economic development activities and increased the frequency of payments under the Staff and Facilities Funding Agreement in order to decrease the City's working capital; and

C. WHEREAS, BD Village has applied for and received approval from the City for The Villages Master Planned Development (the "**Villages MPD**") pursuant to City of Black Diamond Ordinance No. 10-946 (the "**Villages MPD Approval**"); and

D. WHEREAS, BD Lawson has also applied for and received approval from the City for the Lawson Hills Master Planned Development (the "**Lawson Hills MPD**") pursuant to City of Black Diamond Ordinance No. 10-947 (the "**Lawson Hills MPD Approval**"); and

E. WHEREAS, Condition of Approval 2 in Exhibit C of Ordinance No. 10-946 requires that a development agreement ("**The Villages Development Agreement**") be executed between the City and BD Village before the City approves any subsequent implementing permits or approvals for the Villages MPD; and

F. WHEREAS, Condition of Approval 156 in Exhibit C of Ordinance No. 10-946 requires that The Villages Development Agreement include a "specific 'MPD Funding Agreement' which shall replace the existing City of Black Diamond Staff and Facilities Funding Agreement; and

G. WHEREAS, Ordinance No. 10-947 similarly requires that BD Lawson enter into a separate development agreement with the City (the "**Lawson Hills Development Agreement**") and that such development agreement contain a new funding agreement to replace the existing Staff and Facilities Funding Agreement; and

H. WHEREAS, BD Village, BD Lawson, and the City agree that executing a new tri-party MPD funding agreement satisfies Ordinances Nos. 10-946 and No-947; and

I. WHEREAS, the City, BD Village and BD Lawson intend for this Agreement to replace and supersede the Staff and Facilities Funding Agreement and the First Amendment in their entireties; and

J. WHEREAS, the City, BD Village and BD Lawson recognize that while the City currently does not have sufficient revenues to pay for the staff necessary to effectively and efficiently handle its current workload, the parties expect that the Villages MPD and Lawson Hills MPD will produce revenue for the City and, as a result, that the need for some portions of the funding under this MPD Funding Agreement will be reduced over time and ultimately eliminated; and

K. WHEREAS, the City, BD Village and BD Lawson acknowledge that revenue from the Villages MPD and Lawson Hills MPD, including sales tax, real estate excise tax, utility taxes, franchise fees, business license revenues, increased property tax receipts associated with higher land value, and other revenues from any business or land use, as well as the BD Village's and BD Lawson's infrastructure obligations imposed by the Villages MPD Approval and Lawson Hills MPD Approval, respectively, are expected to be sufficient to maintain the Village MPD's and Lawson Hills MPD's proportionate share of the City's adopted staffing levels of service and capital facility needs; and

L. WHEREAS, on an ongoing basis, the City, BD Village and BD Lawson agree to manage their operations in a fiscally responsible manner; and

M. WHEREAS, the City, BD Village, and BD Lawson hereby agree that the purpose of this MPD Funding Agreement is to create an instrument to fund City staff as necessary to implement the Villages MPD and The Villages Development Agreement as well as the Lawson Hills MPD and the Lawson Hills Development Agreement; and

N. WHEREAS, the City, BD Village and BD Lawson hereby also agree that the intent of this MPD Funding Agreement includes the following: (i) to create a mechanism to reduce the Developer's Total Funding Obligation (as defined below) by ultimately eliminating the Developer's funding of City Staffing Shortfalls (as defined below) and instead funding one hundred percent (100%) of such City staff with City revenue; (ii) to establish a hierarchy of City staff necessary to provide basic administrative services within the City and for sufficient City staff to implement the Villages MPD and Lawson Hills MPD, The Villages Development Agreement and Lawson Hills Development Agreement, and to review and process implementing development permits for the Villages MPD and Lawson Hills MPD; (iii) to ensure funding of City staff assigned to the Master Development Review Team ("**MDRT**") to be established as defined herein; (iv) to provide the ability for the City to use consultants for professional review support related to the Villages MPD's and Lawson Hills MPD's implementing development permits; (iv) to provide the ability for the City to be able to quickly adapt to differing levels of work associated with the Villages

MPD and Lawson Hills MPD without hiring permanent staff; and (vi) to allow efficient and consolidated review of implementing development permits for the Villages MPD under The Villages Development Agreement and City code as well as the Lawson Hills MPD under the Lawson Hills Development Agreement and City code; and

O. WHEREAS, the City, BD Village and BD Lawson further agree that this MPD Funding Agreement is intended to cover three types of costs: (i) certain City staffing costs on an interim basis (i.e., City Staffing Shortfalls as defined below); (ii) MDRT Costs (as defined below); and (iii) any fiscal shortfalls created by the Villages MPD pursuant to Condition of Approval 156 of Ordinance No. 10-946 and the Lawson Hills MPD pursuant to Condition of Approval 160 of Ordinance No. 10-947 (defined hereinafter as "**City Fiscal Shortfalls**").

NOW, THEREFORE, in consideration of the mutual agreements set forth herein and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, BD Village, BD Lawson and the City hereby agree as follows:

**AGREEMENT**

1. **Termination of Staff and Facilities Funding Agreement**. This MPD Funding Agreement replaces and supersedes the Staff and Facilities Funding Agreement and First Amendment as to all lands within the Villages MPD and Lawson Hills MPD as legally described in Exhibit A attached hereto and incorporated herein.

    a. **Release of Existing Security**. As a result of the parties' termination of the Staff and Facilities Funding Agreement, the City hereby agrees to execute of the release of the Staff and Facilities Funding Agreement's existing security in the form attached hereto and incorporated herein as Exhibit B.

2. **City Staffing Funding Shortfalls**. Subject to the MDRT Costs provision of this Agreement, Developer commits to fund one hundred percent (100%) of the then-actual salary and benefit costs of the City staff positions listed on Exhibit C attached hereto and incorporated herein, less any amounts actually received by the City from another applicant for payment of such salary and benefit costs (the "**City Staffing Shortfalls**"). Developer's funding obligation in this Section 2 is subject to the condition that all such salary and benefit costs be competitive with similar positions in the municipal community, as evidenced by reference to the Association of Washington Cities annual salary survey and similar documentation. In addition, Developer shall fund one hundred percent (100%) of the total furniture, fixture, and equipment costs ("**FFE**") associated with the City staff positions identified on Exhibit C, less any amounts actually received by the City pursuant to a separate agreement with another applicant or otherwise for payment of such FFE; provided, Developer's share of such FFE shall not exceed $15,000 per month.

    The City staff positions identified on Exhibit C may participate in processing implementing development permits for the Villages MPD and Lawson Hills MPD, and assist other staff who will process development applications submitted by the Developer and Third Parties. The parties acknowledge that the City will solely determine the method and manner of hiring and retaining the

City staff positions identified on Exhibit C or through the Annual Review, and will be solely responsible for all development permit and/or personnel decisions, including compensation amounts which shall be competitive with similar positions in the municipal community.

a. **Reduction of City Staffing Shortfalls**. If the most recent Fiscal Analysis (as defined below) or Annual Review (as defined below), whichever is more current, projects a fiscal benefit for the City, then the City and Developer shall promptly meet and negotiate in good faith to determine whether and when the salary and benefit costs of one or more City staff positions identified on Exhibit C should be funded by the City. If so, then the City shall identify the appropriate City staff position to be removed from the Developer's Total Funding Obligation under this Agreement whether or not the Wind-Down timing threshold associated with such City staff position (identified in Section 2(c)) has been triggered.

b. **Voluntary Agreement**. The parties acknowledge that the Developer's commitment to fund City Staffing Shortfalls is a voluntary agreement into which the Developer freely enters pursuant to state law.

c. **Wind-Down and Wind-Up**. In recognition that: a) the Villages MPD and Lawson Hills MPD build-out may fluctuate to follow market demands; and b) the voluntary nature of the Developer's City Staffing Shortfalls funding obligation, BD Village or BD Lawson may provide notice to the City of Wind-Downs and Wind-Ups of certain City staff positions outlined in Exhibit C.

    i. Wind-Down Notices shall be delivered to the City and shall state that BD Village and/or BD Lawson intends on a date certain to cease paying for certain City Staffing Shortfall positions. In order to be effective, a Wind-Down Notice must comply with the following provisions:

    ii. No Wind-Down Notice may be delivered to the City or otherwise be effective during the first twelve months following the Effective Date of this Agreement. Thereafter, the date certain required to be identified in a Wind-Down Notice may not be sooner than six months after delivery of the Wind-Down Notice to the City. No Wind-Down Notice may be based upon the substance of any prior development permit decision made by the Designated Official or MDRT member(s).

    iii. During months 13 through 18 following the Effective Date, only Support Staff positions identified on Exhibit C may be subject to a Wind-Down Notice from BD Village or BD Lawson.

    iv. During months 19 through 24 following the Effective Date, some or all Support Staff positions and/or Essential Staff positions identified on Exhibit C may be subject to a Wind-Down Notice from BD Village or BD Lawson. This notice

may require Wind-Down of the identified Support Staff and Essential Staff simultaneously.

v. After month 25 following the Effective Date, Support Staff, Essential Staff, and/or Core Staff positions may be subject to a Wind-Down Notice from BD Village or BD Lawson, which Notice may require wind-down of identified City staff simultaneously.

vi. Upon receipt of a Wind-Down Notice and compliance by BD Villages or BD Lawson as appropriate with the above criteria, the City shall thereafter be responsible to determine whether it wants to continue funding the subject staff position(s). Wind-down shall include both the staff position and any related FFE costs.

vii. Wind-Up Notices shall state that BD Village and/or BD Lawson intends to re-initiate payment of certain City Staffing Shortfall costs and request the rehiring of certain City staff or consultant positions.

viii. If no Core Staff position has received a Wind-Down Notice pursuant to subsection (c) above, then City shall complete the hiring of City staff or consultants positions identified in the Wind-Up Notice within six (6) months after receipt of the Notice. In the event the Wind-Up Notice requests Essential Staff or Support Staff, then City shall complete the hiring of the staff and consultants positions identified in the Notice within nine (9) months after receipt of the Notice unless otherwise agreed to by the Developer.

ix. If any Core Staff position has received a Wind-Down Notice pursuant to subsection (c) above, then City shall complete the hiring of staff or consultants positions identified in a Wind-Up Notice within twelve (12) months after receipt of the Wind-Up Notice unless otherwise agreed to by the Developer. In such circumstances, Developer may request rehire of Core Staff positions only or may request Core Staff positions plus Essential Staff positions and/or Support Staff positions.

3. **Master Development Review Team**. The primary function of the MDRT is to process, review, and implement development permits and development agreements of the Villages MPD and the Lawson Hills MPD. The MDRT shall become effective upon approval of The Villages or Lawson Hills Development Agreement, provided that if an additional staff member or consultant has not yet been hired, the City agrees to review and process implementing development permits using City staff funded pursuant to the City Staffing Funding Shortfalls section outlined above.

    a. **MDRT Composition**. The MDRT shall initially be comprised of the following current positions, or their functional equivalent: (i) City's Economic Development Director; (ii) the City's Community Development Director; (iii) the City's MPD planner; (iv) a new City administrative support position; (v) necessary consultants as determined in the

City's sole, reasonable discretion after consultation with the Developer; and (vi) additional City staff as identified by the Developer through the Annual Review described in Section 6, e.g. building official. The MDRT composition may be modified by mutual agreement of the parties. In recognition of the advantage of both parties of ensuring continuity through the review and processing of implementing development permits, the City may choose to offer multiyear employment contracts to some or all members of the MDRT; provided, however, that such contracts shall not increase Developer's Total Funding Obligation nor impair Developer's ability to exercise its rights pursuant to Section 2(c) ("Wind-Down and Wind-Up") as set forth herein.

i. For purposes of this Agreement, consultants include, but are not limited to, professional engineering firms, planning and transportation firms, fiscal or financial consultants, and the City Attorney (which, for purposes of this Agreement, includes any attorney or professional staff in the City Attorney's law firm) and other legal consultants when performing services related to The Villages MPD and Lawson Hills MPD.

b. **MDRT Costs**. The Developer shall fund one hundred percent (100%) of the costs of the MDRT by paying: (i) the salary and benefit costs of City Staff MDRT members identified in Section 3(a), less any amounts actually received by the City from others pursuant to Section 2; (ii) the actual amounts invoiced by consultants; and (iii) the FFE associated with such City Staff MDRT members (the "**MDRT Costs**"). MDRT Costs shall also initially include the purchase of three (3) vehicles exclusively for the MDRT – two (2) pool vehicles and one (1) inspection vehicle – the costs of which shall not exceed $125,000.00 in total. In determining such vehicle purchases, the City shall consider the purchase of hybrid or similar "green" vehicles. Thereafter, the MDRT's FFE shall include all costs associated with the ongoing expense and maintenance of these three (3) vehicles.

i. MDRT Cost Allocation. The City shall allocate MDRT Costs to BD Village and BD Lawson on a proportionate share basis based on time spent.

c. **Reduction or Elimination of MDRT Costs**. In recognition that the Villages MPD and Lawson Hills MPD build-out may fluctuate to follow market demands, the Parties acknowledge and agree that BD Village and/or BD Lawson may elect to reduce, or eliminate, MDRT staffing during the Annual Review described in Section 6. If, during Annual Review, BD Village and/or BD Lawson elect to cease paying all MDRT Costs for a given calendar year, the City's obligations under this Section 3 shall also cease for such calendar year.

d. **City Fee Provision**. In consideration for the Developer's funding of the MDRT and paying the MDRT Costs, the City shall not collect permit or administrative fees or deposits otherwise applicable to implementing project permits sought for the Villages MPD or the Lawson Hills MPD, except for fees or other charges as required by this Agreement; provided, however, that this subsection 3(d) shall be void and Developer

shall be fully responsible for all permit and administrative fees or deposits otherwise applicable to implementing project permits sought for the Villages MPD, the Lawson Hills MPD, and any other property within the City if BD Village or BD Lawson elects to cease paying all MDRT Costs pursuant to Section 3(c).

4. **City Fiscal Shortfalls**. The Developer shall prepare and submit to the City the fiscal analysis in the manner prescribed by Condition of Approval 156 of City of Black Diamond Ordinance No. 10-946 and Section 13.6 of The Villages Development Agreement (the "**Village Fiscal Analysis**"), and by Condition of Approval 160 of City of Black Diamond Ordinance No. 10-947 and Section 13.6 of the Lawson Hills Development Agreement (the "**Lawson Fiscal Analysis**") (collectively the "**Fiscal Analysis**").

    a. **Fiscal Impact**. If the Fiscal Analysis projects a deficit in City revenue required to fund necessary service and maintenance costs (staff and equipment) of facilities that are required to be constructed as a condition of the Villages or Lawson Hills MPD Approvals or any related implementing development permits (the "**City Fiscal Shortfalls**"), then the City, after consultation with Developer, shall determine in its sole reasonable discretion the staff, facilities, and/or equipment necessary for Developer to provide at its sole expense in order to satisfy the interim funding obligations required by the MPD Approvals. To the extent that Developer disagrees with the City's decision regarding the City Fiscal Shortfalls, Developer may pay any disputed amounts or otherwise comply under protest. Developer shall retain the right to utilize the Dispute Resolution process set forth in Section 24. The potential limitation on the use of interim funding set forth in Condition of Approval 156 of City of Black Diamond Ordinance No. 10-946 and Condition of Approval 160 of City of Black Diamond Ordinance No. 10-947 regarding the Fiscal Analysis prepared and submitted to the City prior to the commencement of Phase III shall remain fully applicable. In such case, and prior to City approval of any implementing development permits for projects in Phase III, the City and Developer agree to promptly negotiate in good faith solutions to cure the Phase III fiscal deficit. The City shall not approve any implementing development permits for projects in Phase III before agreement is actually reached in writing on solutions to cure the Phase III fiscal deficit.

5. **Developer's Total Funding Obligation**. The Developer's total funding obligation under this Agreement shall be the sum of the City Staffing Shortfalls plus the MDRT Costs plus the City Fiscal Shortfalls, if any (hereinafter "**Total Funding Obligation**"), less any duplication in Developer's payment obligation among those three funding categories.

6. **Annual Review**. Prior to September 20th of each calendar year or on a date mutually agreed to by the City and Developer, the City and Developer shall conduct an annual review with members of the MDRT (the "**Annual Review**"). The Annual Review shall include, but not be limited to, a review of each of the following items:

    a. Work completed by the MDRT during the prior year including the length of implementing development permit review timeframes and processes;

b. MDRT costs incurred during the prior year and during the term of this Agreement;

c. Extent of work the Developer expects to submit to the City during the next calendar year;

d. MDRT staffing levels needed for the next calendar year commencing in January to perform the work projected by the Developer;

e. Consultants necessary to provide review support and the rate schedule of consultants on the City's MDRT roster;

f. The prior year's Quarterly Accountings;

g. Necessary FFE to support MDRT members for the following calendar year;

h. Fiscal performance of the City as related to the most recent Fiscal Analysis submitted by the Developer. The City and Developer shall review the City's projected budget amounts to determine which, if any, City staff identified on Exhibit C may be removed from the Developer's Total Funding Obligation established by this Agreement and funded by the City; and

i. In the event of: (i) a full Wind-Down of Support Staff, Essential Staff, and Core Staff positions by BD Village and/or BD Lawson; or (ii) a decision by BD Village and/or BD Lawson to cease operations of the MDRT for a calendar year, the City shall exercise its best efforts to organize and make available to Developer at Developer's cost copies of all public records related to the affected MPD or MPDs, and to summarize any open MDRT items.

Provided, however, the first Annual Review to be completed by the City and Developer by September 20, 2011 (or a date mutually agreed to by the City and Developer), shall only review the above items from the Execution Date to the date of the Annual Review itself. During each Annual Review and based upon the above items, the City and Developer shall mutually agree in writing to at least the following items: (i) an annual budget for MDRT Costs for the following calendar year to be included in the Monthly Fixed Amount (as defined below); (ii) a MDRT staffing and work plan/program for the following calendar year; and (iii) any other items required by this Agreement or The Villages Development Agreement or Lawson Hills Development Agreement.

7. **Payment Procedure**.

a. **Monthly Fixed Amount**. During Annual Review, City and Developer shall mutually agree to and determine a monthly fixed amount that the Developer shall deposit with the City by the first (1st) day of each month to cover one-twelfth of the Developer's Total Funding Obligation for that given year (the "**Monthly Fixed Amount**"). Such Monthly Fixed Amount is subject to modification between Annual Reviews upon mutual written agreement of the parties.

b. **Consultant Deposit**. Within forty-five (45) days of the Effective Date, Developer shall provide to the City funds in the amount of fifty thousand dollars ($50,000.00) (the

"**Consultant Deposit**") as a security deposit for ongoing consulting fees and costs incurred under the MDRT for the Villages MPD and/or Lawson Hills MPD implementing development permit review and processing. The City shall invoice the Developer monthly for actual consulting costs paid, which Developer shall pay in the normal course of business. If Developer fails to pay any such invoices within forty-five (45) days, City shall be entitled to deduct the full amount of any such invoices from the security deposit referenced above. In such event, Developer shall replenish the full amount deducted from the security deposit within ten (10) days. The City shall place the Consultant Deposit in an interest bearing account. The City shall relinquish the Consultant Deposit and any accrued interest to the Developer by the later of thirty (30) days after terminating this Agreement or thirty (30) days after payment of all Consultant invoices for services performed prior to the effective date of a Wind-Down Notice from the Developer for all consultants. The amount of funds to be retained as a Consultant Deposit shall be reviewed by the parties during the Annual Review.

c. **Quarterly Accounting**. Within fifteen (15) days after the last day of each calendar quarter, the City shall provide BD Village and BD Lawson with an accounting for the previous quarter (the "**Quarterly Accounting**"). This Quarterly Accounting shall include actual monthly costs of City staff positions included within the Developer's Total Funding Obligation as well as any credits due under the Non-MPD Related Credit Procedure (Section 8) from the previous calendar quarter. In addition, the Quarterly Accounting shall include reports with descriptions for each MDRT member (including City staff and consultants) depicting the amount of time that each MDRT member allocated to MDRT activities during the previous quarter. Any refund or additional amount due shall be invoiced to the Developer, which shall either reduce the next Monthly Fixed Amount due from the Developer or the Developer shall promptly pay the additional amount due with the next Monthly Fixed Amount due within forty-five (45) days. If the Quarterly Accounting shows a deviation of greater than ten (10) percent between actual monthly costs and the Monthly Fixed Amount, the City and Developer shall promptly meet to discuss in good faith whether the Monthly Fixed amount should be adjusted upward or downward for the remainder of the applicable calendar year.

d. **Third Party Payment**. If a Third Party submits to the City a Villages MPD-related implementing development permit application (e.g., building permits) or Lawson Hills MPD-related implementing development permit application that is reviewed by the MDRT, the City shall invoice directly the Third Party for the MDRT's costs of such review on a monthly basis together with such Third Party's proportionate share of any MDRT Costs described in Section 3(b) above. Each quarter, the City shall deduct the total payments received from such Third Parties from the Developer's Monthly Fixed Amount. The City shall exercise its best efforts to identify separately in the Quarterly Accounting the deductions associated with Village MPD-related implementing development permit applications and the deductions associated with Lawson Hills MPD-related implementing development permit applications.

8. **Non-MPD Related Credit Procedure**. As part of the Quarterly Accounting, the City shall account for any non-Villages MPD and non-Lawson Hills MPD related permit revenue over five hundred dollars ($500.00) that was received by the City as a result of City staff positions listed on Exhibit C. The Quarterly Accounting shall show the City providing the Developer a credit towards the following month's Monthly Fixed Amount by that amount of non-Villages MPD and non-Lawson Hills MPD related permit revenue received by the City, provided City staff positions funded by this Agreement worked on that non-Villages MPD and non-Lawson Hills MPD permit.

9. **Building Permit Surcharge**. As anticipated in the Staff and Facilities Funding Agreement, but only to the extent permitted by law, a voluntary agreement under RCW 82.02.020 or other agreement between Developer and its purchasers in which said purchasers release and hold the City harmless from any claims related thereto, and only then if the City Council adopts a resolution, the City hereby agrees to apply a per dwelling unit or equivalent fee on each future building permit issued within the Villages MPD and the Lawson Hills MPD. This fee is intended to recapture the costs incurred by the Developer under the Staff and Facilities Funding Agreement (the "**Surcharge**"), and shall only be assessed on building permits for new construction within The Villages MPD or the Lawson Hills MPD. Remodels, tenant improvements, or reconstruction due to fire damage or other catastrophe shall not be assessed the Surcharge. This Surcharge shall also not apply to Public Uses as defined in The Villages Development Agreement or Lawson Hills Development Agreement.

    a. **Surcharge Calculation**. The Surcharge for the Villages MPD (the "**Village Surcharge**") shall be calculated based on the costs incurred by BD Village from execution date of the Staff and Facilities Funding Agreement to the execution date of The Villages Development Agreement divided by the number of dwelling units or an equivalent thereof. BD Village shall determine the unit number to be included within the calculation of the Village Surcharge prior to the City's issuance of the first building permit for the Villages MPD. As part of the Annual Review, BD Village may request to modify how the Village Surcharge is assessed, such as removing commercial development from the Village Surcharge. The Surcharge for the Lawson Hills MPD (the "**Lawson Surcharge**") shall be calculated based on the costs incurred by BD Lawson from execution date of the Staff and Facilities Funding Agreement to the execution date of the Lawson Hills Development Agreement divided by the number of dwelling units or an equivalent thereof. BD Lawson shall determine the unit number to be included within the calculation of the Lawson Surcharge prior to the City's issuance of the first building permit for the Lawson Hills MPD. As part of the Annual Review, BD Lawson may request to modify how the Lawson Surcharge is assessed, such as removing commercial development from the Lawson Surcharge

    b. **Surcharge Accounting**. Within sixty (60) days following execution of The Villages Development Agreement or the Lawson Hills Development Agreement, the City shall provide BD Village or BD Lawson, respectively, with an accounting of all costs incurred by such party under the Staff and Facilities Funding Agreement and the First Amendment. Within thirty (30) days of receipt of the City's accounting, BD Village or

BD Lawson shall review the cost figures and provide the City with the fee structure for the Village Surcharge or Lawson Surcharge, respectively, based on this final cost.

c. **Surcharge Collection**. The City will collect the Village Surcharge and Lawson Surcharge for BD Village and BD Lawson, respectively, at the issuance of each building permit within the Villages MPD and Lawson Hills MPD, as applicable. As a part of the Quarterly Accounting, the City shall provide an accounting to BD Village and BD Lawson of the Village and Lawson Surcharges collected and the amount due to the BD Village and BD Lawson, respectively. The City shall issue a check in this amount to BD Village and BD Lawson within thirty (30) days of the Quarterly Accounting's issuance.

d. **Surcharge Indemnity**. BD Village shall indemnify, defend and hold harmless the City, its officers, officials, and employees from and against any and all claims, losses, damages, liabilities, actions, and judgments of third parties (including reasonable attorney and expert witness fees) arising out of, relating to, resulting from, or caused by the City's application of the Village Surcharge to the Villages MPD building permits. Similarly, BD Lawson shall indemnify, defend and hold harmless the City, its officers, officials, and employees from and against any and all claims, losses, damages, liabilities, actions, and judgments of third parties (including reasonable attorney and expert witness fees) arising out of, relating to, resulting from, or caused by the City's application of the Lawson Surcharge to the Lawson Hills MPD building permits.

**10. Security.** Security shall be provided by the Developer to the City to assure that, in the event of Developer's default, the City Staffing Shortfalls and MDRT Costs provided under this Agreement are timely paid to the City.

**a. Security Schedule.** The Developer shall provide security as follows:

i. Commencing on the Effective Date and until December 31, 2011, collectively BD Village and BD Lawson shall provide security of three million dollars ($3,000,000.00). To meet this obligation, BD Village and BD Lawson shall collectively provide to the City a letter of credit in a form reasonably acceptable to the City evidencing cash or other liquid assets in the minimum amount of two million dollars ($2,000,000.00). BD Village shall also provide a first position deed of trust to the City on King County Parcel Nos. 0221069024, 0221069030, and 1121069006 of at least one million dollars ($1,000,000.00) no later than the Effective Date (the "**Deed of Trust**") in the form attached hereto as Exhibit D.

ii. For the calendar year 2012, following the Annual Review in year 2011 and until December 31, 2013, BD Village and BD Lawson collectively shall provide a letter of credit to the City totaling 125% of its projected annual City Staffing Shortfalls and MDRT Costs less consultant costs. The City shall automatically release the Deed of Trust when this letter of credit is renewed on December 31, 2011.

iii. Thereafter, the City and Developer shall negotiate renewed and extended security in an amount equal to at least 100% of the projected annual City Staffing Shortfalls and MDRT Costs less consultant costs up to a maximum of two million dollars ($2,000,000.00), after consideration of the extent of development completed at that time.

**b. Security Termination.** The Developer's obligation to provide security shall automatically terminate with termination of this Agreement.

11. **Definitions**. Previously undefined capitalized terms used throughout this Agreement shall be defined as follows:

a. Support Staff: Those positions identified on Exhibit C.

b. Essential Staff: Those positions identified on Exhibit C.

c. Core Staff: Those positions identified on Exhibit C.

d. Third Party: Any party other than BD Village or BD Lawson submitting permit applications for development within the Villages MPD or the Lawson Hills MPD.

e. MPD: Master Planned Development.

f. Phase: The Villages MPD and the Lawson Hills MPD are collectively planned in four Phases: Phase 1A, Phase 1B, Phase 2, and Phase 3. The land areas for each Phase, together with infrastructure plans for each Phase, are shown in Chapter 9 of The Villages Master Planned Development Application dated December 31, 2009 and Chapter 9 of the Lawson Hills Master Planned Development Application dated December 31, 2009.

g. Non-Villages MPD and Non-Lawson Hills MPD related permit revenue: Fees generated by permit applications for development not located within the Villages MPD or the Lawson Hills MPD.

12. **Term**.

a. Effective Date. This Agreement shall take effect upon the date of full execution, which shall be consistent with the date of execution by the last of the parties, as provided in the signature blocks at the end of this Agreement.

b. Termination Date. This MPD Funding Agreement shall terminate upon the later of: (i) the Villages MPD build-out is complete or expiration or revocation of the Villages MPD Approval; or (ii) Lawson Hills MPD build-out is complete or expiration or revocation of the Lawson Hills MPD Approval.

13. **Amendments**. The City or Developer may request changes to this MPD Funding Agreement. Proposed changes that are mutually agreed upon by all parties will be incorporated by mutually executed

written agreement. No amendment to this Agreement shall be effective until approved by the City Council by resolution.

14. **Notices**. Any notice or other communication to any party given under this Agreement will be effective only if in writing and delivered (1) personally, (2) by certified mail, return receipt requested and postage prepaid, (3) by facsimile transmission with written evidence confirming receipt, or (4) by overnight courier (such as UPS, FedEx, or Airborne Express) to the following addresses:

If to BD Village:

BD Village Partners, LP
10220 NE Points Drive, Suite 310
Kirkland, WA 98033
Attn: Brian Ross
Fax: 425-898-2139

With Copy to:

Cairncross & Hempelmann
524 Second Avenue, Suite 500
Seattle, WA 98104-2323
Attn: Nancy Rogers
Fax: 206-587-2308

If to BD Lawson:

BD Lawson Partners, LP
10220 NE Points Drive, Suite 310
Kirkland, WA 98033
Attn: Brian Ross
Fax: 425-898-2139

With Copy to:

Cairncross & Hempelmann
524 Second Avenue, Suite 500
Seattle, WA 98104-2323
Attn: Nancy Rogers
Fax: 206-587-2308

To the City:

City of Black Diamond
P.O. Box 599
Black Diamond, WA 98010
Attn: Mayor
Fax: 360-886-2592

With Copy to:

Michael R. Kenyon
Kenyon Disend, PLLC
11 Front Street South
Issaquah, Washington 98027
Fax: 425-392-7071

The addresses and facsimiles to which notice is to be given may be changed by written notice given in the manner specified in this Section 14 and actually received by the addressee.

15. **Attorney's Fees and Expenses**. In the event that any party requires the services of an attorney in connection with the dispute resolution process outlined in Section 24 of this Agreement, the substantially prevailing party shall be entitled to recover its reasonable attorney, expert witness, and paralegal fees, together with costs, expenses, and arbitration costs.

16. **Successors and Assigns/Binding Effect**. This Agreement shall bind and inure to the benefit of the parties and their respective receivers, trustees, insurers, successors, subrogees, transferees, and assigns. BD Village or BD Lawson shall have the right to assign its obligations under this Agreement as the master developer of the Villages MPD and the master developer of the Lawson Hills MPD, respectively, provided BD Village or BD Lawson gives the City thirty (30) days prior written notice of such assignment and successor/assignee provides evidence of its ability to meet the security obligation outlined in Section 10.

17. **Choice of Law**. This Agreement shall be construed and governed by the laws of Washington State. Any legal proceeding to enforce the terms of this Agreement shall be in King County, Washington.

18. **Execution in Counterparts**. This Agreement may be executed in one or more counterparts and as executed shall constitute one Agreement, binding on all parties, notwithstanding that all parties are not signatory to the same counterpart.

19. **Severability; Captions**. In the event that any clause or provision of this Agreement should be held to be void, voidable, illegal, or unenforceable, the remaining portions of this Agreement shall remain in full force and effect. In lieu of each clause or provision that is determined to be void, voidable, illegal, or unenforceable, there shall be added as a part of this Agreement a similar clause or provision as similar as possible that is legal, valid, and enforceable. Headings or captions in this Agreement are added as a matter of convenience only and in no way define, limit or otherwise affect the construction or interpretation of this Agreement.

20. **Interpretation**. This Agreement shall be given a fair and reasonable interpretation of the words contained in it without any weight being given to whether a provision was drafted by one party or its counsel. The parties hereby acknowledge that this Agreement has been reached as a result of arm's length negotiations with each party represented by counsel. No presumption shall arise as a result of one party or the other having drafted all or any portion of this Agreement.

21. **Entire Agreement**. This Agreement contains all of the terms, promises, conditions and representations made or entered into by and between the parties, supersedes all prior discussions, agreements and memos, whether written or oral between the parties, and constitutes the entire understanding of the parties and shall be subject to modification or change only in writing and signed by all parties. Waiver of any default will not be deemed to be a waiver of any subsequent default. Waiver or breach of any provision of the Agreement will not be deemed to be a waiver of any other or subsequent breach and will not be construed to be a modification of the terms of this Agreement.

22. **Time of the Essence**. Time is of the essence with respect to the performance of every covenant and condition of this Agreement.

23. **Authority**. Each party represents and warrants to the other party that it has full power and authority to make this Agreement and to perform its obligations hereunder and that the person signing this Agreement on its behalf has the authority to sign and to bind that party.

24. **Dispute Resolution**. If a conflict arises under this Agreement, the Parties shall have the right to file a lawsuit to enforce the rights and obligations hereunder and/or to enter into nonbinding mediation pursuant to RCW 7.07, the Uniform Mediation Act. Either Party may initiate mediation by serving a request on the other Party. If either Party files a lawsuit, and mediation has not yet been initiated, then the other Party shall have the right to require the filing Party to enter into nonbinding mediation by serving the filing Party with a notice of mediation within ten (10) days after a complaint is filed. In any case, the mediation shall be scheduled for the earliest date possible, but in no event later than forty-two (42) days before the deadline for filing dispositive motions or a motion for a permanent injunction pursuant to the court's scheduling order.

***[Signatures appear on following page]***

**IN WITNESS WHEREOF**, the parties have executed this MPD Funding Agreement.

**BD VILLAGE PARTNERS, LP**

By: Yarrow Bay Development, LLC, its general partner

By: BRNW, Inc., its member

By: _____
Brian Ross, President

Date: 12/12/11

**BD LAWSON PARTNERS, LP**

By: Yarrow Bay Development, LLC, its general partner

By: BRNW, Inc., its member

By: _____
Brian Ross, President

Date: 12/12/11

**CITY OF BLACK DIAMOND**

_____
Rebecca Olness, Mayor

Date: 12/15/11

Attest:

_____
City Clerk

**EXHIBIT A**

The Villages MPD and Lawson Hills MPD Legal Description

**NORTH TRIANGLE (PORTIONS OF PARCEL NOS. 022106-9024, 032106-9076, 032106-9014, 032106-9015 AND 032106-9001)**

LOTS U, W, X, Y, AND Z OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L05L0097, RECORDED UNDER RECORDING NO. 20051209900003, SITUATE IN SECTIONS 2 AND 3, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9048 AND 132106-9007 (FROM PHASE 1 BEE "PARCEL F")**

THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING WESTERLY AND NORTHWESTERLY OF A LINE BEGINNING ON THE NORTH LINE OF SAID SUBDIVISION AT A POINT BEARING NORTH 03°40'0" WEST FROM A POINT DESIGNATED AS 1438.12 FEET SOUTH AND 680.73 FEET EAST OF THE NORTHWEST OF SAID SECTION 13;
THENCE SOUTH 03°40'00" EAST TO SAID DESIGNATED POINT;
THENCE SOUTH 58°32'19" WEST A DISTANCE OF 198.19 FEET;
THENCE SOUTH 52°19'00" WEST A DISTANCE OF 412.52 FEET;
THENCE SOUTH 18°50'00" WEST A DISTANCE OF 144.72 FEET;
THENCE SOUTH 66°50'00" WEST TO THE SECTION LINE; ALSO

EXCEPT THAT PORTION THEREOF LYING EASTERLY AND NORTHERLY OF A LINE BEGINNING 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 438.25 FEET;
THENCE SOUTH 03°40'00" EAST A DISTANCE OF 348.10 FEET;
THENCE SOUTH 73°44'00" EAST A DISTANCE OF 336.10 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 557.35 FEET, MORE OR LESS, TO A POINT 20 FEET WEST OF AND PARALLEL WITH THE CENTERLINE OF SKID ROAD;
THENCE NORTHEASTERLY ALONG SAID PARALLEL LINE TO THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION;

ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN THE RIGHT OF WAY OF 262ND AVENUE SOUTHEAST.

**PARCEL NO. 132106-9034 (FROM PHASE 1 BEE "PARCEL G")**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°43'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 438.25 FEET;
THENCE SOUTH 03°40'00" EAST A DISTANCE OF 348.10 FEET;
THENCE SOUTH 73°44'00" EAST A DISTANCE OF 336.10 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 557.35 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 20.00 FEET WESTERLY FROM THE CENTERLINE OF A SKID ROAD;
THENCE NORTHERLY ALONG SAID PARALLEL LINE A DISTANCE OF 1110.00 FEET, MORE OR LESS, TO THE NORTHEAST CORNER OF THAT CERTAIN TRACT OF LAND CONVEYED TO LEONARD AND DONALD KUZARO BY DEED RECORDED UNDER RECORDING NUMBER 3794571;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 1060.00 FEET, MORE OR LESS, TO THE POINT OF BEGINNING;

EXCEPT THEREFROM THE FOLLOWING DESCRIBED TRACT:

A PARCEL FROM THE ABOVE TRACT BEGINNING AT A POINT 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13, SAID POINT BEING IDENTICAL WITH THE SOUTHWEST CORNER OF THE TRACT SOLD TO JOHN MAKS, AND RUNNING AS FOLLOWS:

THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 361.40 FEET;
THENCE SOUTH 89°53'42" EAST A DISTANCE OF 514.10 FEET;
THENCE NORTH 00°20'42" WEST A DISTANCE OF 538.30 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 391.30 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9063/132106-9066/132106-9067 (FROM PHASE 2 BEE "PARCEL A")**

THE NORTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 122106-9011 (FROM PHASE 2 BEE "PARCEL C")**

THAT PORTION OF THE WEST HALF OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHEASTERLY OF THE SOUTHEASTERLY MARGIN OF SOUTHEAST GREEN RIVER GORGE ROAD.

EXCEPT THAT PORTION THEREOF LYING WITHIN THE LANDS CONVEYED TO JOHN MAKS AND MARY MAKS BY DEED RECORDED UNDER RECORDING NUMBER 2068851, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 12, AND THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13 IN SAID TOWNSHIP AND RANGE DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST A DISTANCE OF 469.94 FEET;
THENCE NORTH 36°49'00" EAST A DISTANCE OF 311.26 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 725.85 FEET;
THENCE SOUTH 00°33'00" WEST A DISTANCE OF 719.72 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 910.01 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9014**

THAT PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE NORTHWEST CORNER OF SAID SUBDIVISION;
THENCE SOUTH 43°05'17" EAST 1,862.67 FEET TO THE SOUTHEAST CORNER OF SAID SUBDIVISION AND THE TERMINUS OF THE HEREIN DESCRIBED LINE.

**PORTIONS FROM PARCEL NO. 132106-9013, 132106-9057, 132106-9062, AND 132106-9003**

LOT B OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L09L0056, RECORDED UNDER RECORDING NO. 20100608900003, SITUATE IN SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9024 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT 473.50 FEET SOUTH AND 1051.38 FEET EAST OF NORTHWEST CORNER OF SAID SECTION 13, SAID POINT BEING THE ORIGINAL NORTHEAST OF JAMES L. MANOWSKI'S AND JULIE MANOWSKI'S PROPERTY, AS SET FORTH IN A DEED RECORDED UNDER RECORDING NUMBER 6523609;

THENCE SOUTH 89°49'00" FAST A DISTANCE OF 10.00 FEET TO THE NEW NORTHEAST CORNER OF MONAWSKI PROPERTY, PURSUANT TO A BOUNDARY LINE AGREEMENT, SAID POINT BEING THE TRUE POINT OF BEGINNING;

THENCE SOUTH 06°54'16" WEST A DISTANCE OF 180.19 FEET, SAID LINE BEING THE NEW BOUNDARY BETWEEN MANOWSKI AND KUZARO PARCELS BY AGREEMENT, TO THE SOUTHEAST CORNER OF MANOWSKI PROPERTY WHICH BEARS NORTH 89°49'00" WEST AT A DISTANCE OF 10 FEET FROM THE ORIGINAL SOUTHEAST CORNER OF MANOWSKI PROPERTY;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15.00 FEET;
THENCE SOUTH 89°49'00" EAST A DISTANCE OF 60.86 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 167.55 FEET;
THENCE SOUTH 86°40'42" EAST A DISTANCE OF 100.00 FEET;
THENCE NORTH 00°20'42" WEST A DISTANCE OF 367.00 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE
OF 137.89 FEET TO THE TRUE POINT OF BEGINNING;

(ALSO KNOWN AS A PORTION OF BLACK DIAMOND SHORT PLAT NUMBER. 79-734, RECORDED UNDER RECORDING NUMBER 7908069009);

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER THE FOLLOWING DESCRIBED PARCEL:

BEGINNING AT THE NEW SOUTHEAST CORNER OF THE MANOWSKI PROPERTY AS DESCRIBED ABOVE;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15.00 FEET;
THENCE NORTH 89°49'00" EAST A DISTANCE OF 350 FEET, MORE OR LESS, TO THE EAST LINE OF 262ND AVENUE SOUTHEAST AS ESTABLISHED;
THENCE NORTH ALONG SAID EAST LINE A DISTANCE OF 15 FEET, MORE OR LESS, TO A POINT WHICH BEARS NORTH 89°49'00" WEST FROM THE TRUE POINT OF BEGINNING;
THENCE SOUTH 89°49'00" EAST TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9037 (FROM DEED)**

THE SOUTH 180 FEET OF THE FOLLOWING DESCRIBED TRACT:

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMERE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 211.84 FEET SOUTH AND 690.70 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, SAID POINT BEING THE INTERSECTION OF THE EAST AND SOUTH LINES OF TWO ROADWAYS;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 119.68 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 439.59 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET TO THE EAST LINE OF A 30 FOOT ROADWAY;
THENCE ALONG SAID ROADWAY LINE NORTH 00°09'00" EAST A DISTANCE OF 439.74 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9040 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING ON THE SOUTHEASTERLY LINE OF THE FRANKLIN HOWARD COUNTY ROAD NO 1018 AT A POINT WHICH IS 677.39 FEET SOUTH AND 278.50 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION;
THENCE SOUTH 0°16' EAST 264.21 FEET;

THENCE SOUTH 14°54' EAST 97.79 FEET TO THE TRUE POINT OF BEGINNING;
THENCE SOUTH 14°54' EAST 112.02 FEET; THENCE SOUTH 24°20' EAST 86.84 FEET;
THENCE NORTH 71°45' EAST 315.72 FEET TO THE WEST LINE OF A 30 FOOT ROADWAY;
THENCE ALONG SAID ROADWAY LINE NORTH 3°40 FEET WEST 33.28 FEET;
THENCE NORTH 0°29' EAST 173.05 FEET; THENCE SOUTH 69°26' WEST 237.81 FEET;
THENCE SOUTH 75°18' WEST 141.86 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9046 (FROM UNUSED PHASE 3 BEE OPTION 1 "PARCEL A" AND PHASE 4 BEE "PARCEL A")**

THE NORTH HALF OF THE NORTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
EXCEPT THAT PORTION THEREOF LYING WITHIN THE FOLLOWING DESCRIBED TRACT:
BEGINNING AT A POINT 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 865 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9053 (FROM UNUSED PHASE 3 OPTION 1 BEE "PARCEL B" AND PHASE 4 BEE "PARCEL C")**

THAT PORTION OF SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS;

COMMENCING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;
THENCE SOUTH 0°22'10" EAST ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, 530 FEET;
THENCE NORTH 89°37'50" EAST 115 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°37'50" EAST 180 FEET;
THENCE SOUTH 0°22"10" EAST 121 FEET;
THENCE SOUTH 89°37'50" WEST 180 FEET;
THENCE NORTH 0°22'10" WEST 121 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 122106-9012 (FROM UNUSED PHASE 3 OPTION 2 BEE "PARCEL A")**

THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHEASTERLY OF THE SOUTHEASTERLY MARGIN OF SOUTHEAST GREEN RIVER GORGE ROAD;
EXCEPT THAT PORTION THEREOF LYING WITHIN THE LANDS CONVEYED TO JOHN MAKS AND MARY MAKS BY DEED RECORDED UNDER RECORDING NUMBER 2068851, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 12, AND THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13 IN SAID TOWNSHIP AND RANGE DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9008 (FROM PHASE 4 BEE "PARCEL B")**

THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6
EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING NORTHERLY AND WESTERLY OF A LINE BEGINNING 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST 178.96 FEET;
THENCE NORTH 89°28'00" WEST 116.74 FEET;
THENCE SOUTH 00°09'00" WEST 438.25 FEET;
THENCE SOUTH 03°40'00" EAST 348.10 FEET;

THENCE SOUTH 73°44'00" EAST 336.10 FEET;
THENCE SOUTH 89°48'42" EAST 557.35 FEET, MORE OR LESS, TO A POINT 20 FEET WEST OF AND PARALLEL WITH THE CENTERLINE OF SKID ROAD;
THENCE NORTHEASTERLY ALONG SAID PARALLEL LINE TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION; AND

EXCEPT THAT PORTION THEREOF DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;
THENCE SOUTH 0°22'10" EAST, ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER OF THE NORTHWEST
QUARTER, 530 FEET;
THENCE NORTH 89°37'50" EAST 115 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°37'50" EAST 180 FEET;
THENCE SOUTH 0°22'10" EAST 121 FEET;
THENCE SOUTH 89°37'50" WEST 180 FEET;
THENCE NORTH 0°22'10" WEST 121 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9033 (FROM ALTA DATED 09-30-08)**

THE MOST SOUTHERLY HALF OF THE FOLLOWING DESCRIBED TRACT:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET,
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING;
TOGETHER WITH THAT PORTION OF THE NORTH HALF OF SAID SECTION 13 CONVEYED TO JOHN MAKS, JR. AND AMELIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984499, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
THENCE NORTH 00°33'00" EAST 347.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 89°48'22" EAST 640 FEET;
THENCE NORTH 00°33'00" EAST 23.74 FEET;
THENCE NORTH 89°48'22" WEST 640 FEET;
THENCE SOUTH 00°33'00" WEST 23.74 FEET TO THE TRUE POINT OF BEGINNING;
EXCEPT THAT PORTION THEREOF CONVEYED TO THOMAS H. MAKS AND GLORIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984498, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT 807.97 FEET EAST AND 472.7 FEET SOUTH OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 291 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 00°33'00" EAST 56.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET;
THENCE SOUTH 00°33'00" WEST 56.27 FEET;
THENCE NORTH 89°48'22" WEST 270 FEET TO THE TRUE POINT OF BEGINNING OF THIS EXCEPTION.

**PARCEL NO. 132106-9029 (FROM BEE DATED 06-09-08)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 192.15 FEET SOUTH AND 810.57 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°32'00" EAST A DISTANCE OF 189.47 FEET TO SAID NORTH LINE OF SECTION 13;
THENCE NORTH 89°48'42" WEST, ALONG SAID NORTH LINE OF SECTION 13, A DISTANCE OF 37.73 FEET TO THE SOUTHEASTERLY MARGIN OF THE RIGHT OF WAY OF FRANKLIN HOWARD ROAD NO. 1018;
THENCE SOUTH 37°11'00" WEST A DISTANCE OF 237.34 FEET, ALONG SAID RIGHT OF WAY;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 174.10 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9023 (FROM BEE DATED 06-11-07)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 211.84 FEET SOUTH AND 690.70 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, SAID POINT BEING THE INTERSECTION OF THE EAST AND SOUTH LINES OF TWO ROADWAYS;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 119.68 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 439.59 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET TO THE EAST LINE OF A 30-FEET ROADWAY;
THENCE ALONG THE EASTERLY MARGIN OF SAID ROADWAY NORTH 00°08'00" EAST A DISTANCE OF 438.74 FEET TO THE POINT OF BEGINNING;

EXCEPT THE SOUTH 180 FEET THEREOF CONVEYED TO ALFRED R. SHAY AND ELSIE E. SHAY, HIS WIFE, BY STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 6439467.

**PARCEL NO. 132106-9010 (FROM PHASE 3 BEE "PARCEL A")**

LOT A, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

**PARCEL NO. 132106-9011 (FROM IN FOREST BLA DATED 05-30-08)**

LOT B, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

**PARCEL NO. 132106-9009 (FROM IN FOREST BLA DATED 05-30-08)**

LOT C, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

**PARCEL NO. 132106-9021 (FROM ALTA STAMPED 11-29-06)**

THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 12, AND OF THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13, ALL IN TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING;

EXCEPT THE MOST SOUTHERLY HALF THEREOF CONVEYED TO JOHN MAKS JR. BY DEED RECORDED UNDER RECORDING NUMBER 3833110; AND

EXCEPT THAT PORTION THEREOF CONVEYED TO JOHN MAKS, JR. AND AMELIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984499, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 347.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 89°48'22" EAST 640 FEET;
THENCE NORTH 00°33'00" EAST 23.74 FEET;
THENCE NORTH 89°48'22" WEST 640 FEET;
THENCE SOUTH 00°33'00" WEST 23.74 FEET TO THE TRUE POINT OF BEGINNING;

TOGETHER WITH THAT PORTION OF THE NORTH HALF OF THE NORTHWEST QUARTER OF SAID SECTION 13 CONVEYED TO THOMAS H. MAKS AND GLORIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984498, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT 807.97 FEET EAST AND 472.7 FEET SOUTH OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 291 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 00°33'00" EAST 56.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET;
THENCE SOUTH 00°33'00" WEST 56.27 FEET;
THENCE NORTH 89°48'22" WEST 270 FEET TO THE TRUE POINT OF BEGINNING.

**POR. OF PARCELS NO. 112106-9122, 112106-9044, 112106-9015, 112106-9110, 112106-9111, 112106-9112, 112106-9113, 112106-9114, 112106-9020, AND 122106-9049 (HAMMERHEAD)**

LOT 3 OF CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. PLN-10-0010, RECORDED UNDER RECORDING NO. 20100713900006, SITUATE IN SECTIONS 11 AND 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9002 (FROM BEE DATED 07-26-06)**

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THOSE PORTIONS THEREOF LYING SOUTHERLY OF THE NORTHERLY MARGIN OF PARK STREET (NOW KNOWN AS SOUTHEAST 323RD STREET) AND WESTERLY OF THE EASTERLY MARGIN OF 4TH AVENUE (NOW KNOWN AS 254TH AVENUE SOUTHEAST), AND SOUTHERLY OF THE NORTHERLY MARGIN OF JAMES STREET (NOW KNOWN AS SOUTHEAST 321ST STREET), AND SOUTHERLY AND WESTERLY OF THE NORTH AND EAST LINES OF BLOCK 2, ALL AS PLATTED IN BLACK DIAMOND TOWNSITE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 35 OF PLATS, PAGES 23 THROUGH 27, AND WESTERLY OF THE EASTERLY MARGIN OF THE RIGHT OF WAY OF STATE ROAD NO. 5 (THIRD AVENUE); ALSO
EXCEPT THAT PORTION THEREOF LYING EASTERLY OF THE WESTERLY MARGIN OF THE ABANDONED BRUCE SWITCH OF THE COLUMBIA & PUGET SOUND RAILROAD COMPANY RIGHT OF WAY, AS DESCRIBED IN RECORDING NUMBER 543409, AND

TOGETHER WITH THAT PORTION OF SAID NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 14 LYING EASTERLY OF THE EASTERLY MARGIN OF THE ABANDONED BRUCE SWITCH OF THE COLUMBIA & PUGET SOUND RAILROAD COMPANY RIGHT OF WAY, AS DESCRIBED IN RECORDING NUMBER 543409, AND LYING NORTHERLY OF THE NORTH LINE OF LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9063 (FROM BEE DATED 07-26-06)**

THAT PORTION OF THE PACIFIC COAST RAILROAD COMPANY RIGHT OF WAY (FORMERLY KNOWN AS THE ABANDONED BRUCE-LAWSON TRACK OF THE COLUMBIA AND PUGET SOUND RAILROAD) LYING WITHIN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING SOUTHERLY OF THE NORTHERLY MARGIN OF SOUTHEAST 323RD STREET (ALSO KNOWN AS PARK STREET); ALSO

EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF BLACK DIAMOND FOR STREET AND UTILITY PURPOSES BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 9206160254; ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN THE TRACT CONVEYED TO A. P. KINKADE BY DEED RECORDED UNDER RECORDING NUMBER 3008428, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 609.24 FEET SOUTH AND 978.51 FEET WEST OF THE NORTHEAST CORNER OF SAID SECTION 14;
THENCE SOUTH 01°38'00" WEST A DISTANCE OF 211.25 FEET;
THENCE NORTH 88°22'00" WEST A DISTANCE OF 618.60 FEET;
THENCE NORTH 01°38'00" EAST A DISTANCE OF 211.25 FEET ALONG A LINE PARALLEL WITH AND 20 FEET EAST OF THE CENTERLINE OF THE RIGHT OF WAY OF THE BRUCE BRANCH OF THE PACIFIC COAST RAILROAD;
THENCE SOUTH 88°22'00" EAST A DISTANCE OF 618.60 FEET TO THE POINT OF BEGINNING; ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9001 (FROM BEE DATED 07-26-06)**

THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING NORTHERLY OF THE NORTH LINE OF LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON, AND SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF BLACK DIAMOND SHORT PLAT NUMBER 011-08-83 REV, RECORDED UNDER RECORDING NUMBER 8808039001.

**PARCEL NO. 142106-9186 (FROM BEE DATED 07-26-06)**

THAT PORTION OF LOT 1, BLACK DIAMOND SHORT PLAT NUMBER 011-08-83 REV, RECORDED UNDER RECORDING NUMBER 8308299001, AS REVISED UNDER RECORDING NUMBER 8808039001, LYING WITHIN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9054 (FROM BEE DATED 07-26-06)**

THAT PORTION OF LOT 1, BLACK DIAMOND SHORT PLAT NUMBER 011-08-83, RECORDED UNDER RECORDING NUMBER 8308299001, AS REVISED UNDER RECORDING NUMBER 8808039001, LYING WITHIN SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9036 (FROM DEED)**

LOT 1, CITY OF BLACK DIAMOND SHORT PLAT NO. 03-SP-01 RECORDED UNDER RECORDING NUMBER 20030224900001;

BEING A PORTION OF:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 12, AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 13;
THENCE SOUTH 72°38'50" EAST 117.22 FEET TO THE POINT OF BEGINNING;
THENCE SOUTH 54°10' EAST 463.55 FEET TO THE NORTHWESTERLY MARGINAL LINE OF THE FRANKLIN HOWARD ROAD;
THENCE NORTH 37°11' EAST ALONG SAID LINE 189.6 FEET, MORE OR LESS, TO THE SOUTHEAST CORNER OF A TRACT OF LAND CONVEYED TO PAUL SAWICKE BY DEED RECORDED UNDER RECORDING NUMBER 1592304, IN KING COUNTY, WASHINGTON;
THENCE WEST 24 FEET;
THENCE NORTH 0°18' WEST ALONG THE WEST LINE OF SAWICKE TRACT 253.48 FEET TO THE CENTERLINE OF THE GRADE OF AN ABANDONED RAILROAD SPUR;
THENCE NORTHEASTERLY ALONG SAID GRADE 915 FEET, MORE OR LESS, TO A POINT ON A LINE PARALLEL WITH AND 20 FEET SOUTHERLY FROM THE CENTERLINE OF THE ABANDONED PACIFIC COAST RAILROAD, BRUCE BRANCH;
THENCE SOUTHWESTERLY ON SAID LINE, PARALLELING THE CENTERLINE TO A POINT WHICH BEARS NORTH 35°56' EAST FROM THE POINT OF BEGINNING;
THENCE SOUTH 35°56' WEST 440 FEET, MORE OR LESS, TO THE POINT OF BEGINNING;

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS ACROSS TRACT "X" OF SAID SHORT PLAT; AND

TOGETHER WITH AN EASEMENT FOR UTILITIES ACROSS OR UNDER THE EASTERLY 60 FEET OF TRACT "X" AS MEASURED A RIGHT ANGLE TO LAWSON STREET.

**PARCEL NO. 132106-9038, 132106-9022 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING ON THE SOUTHEASTERLY MARGIN OF THE FRANKLIN-HOWARD COUNTY ROAD NO. 1018 (GREEN RIVER GORGE ROAD), AS SAID MARGIN WAS ESTABLISHED BY DEED

RECORDED UNDER RECORDING NUMBER 1107075, AT A POINT WHICH IS 677.39 FEET SOUTH AND 278.50 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, WHICH POINT IS ALSO THE MOST NORTHERLY CORNER OF THAT CERTAIN TRACT OF LAND CONVEYED TO JOHN NEIMCZYK BY DEED RECORDED UNDER RECORDING NUMBER 1449328;
THENCE SOUTH 00°16'00" EAST, ALONG THE EAST LINE OF SAID NEIMCZYK TRACT, A DISTANCE OF 264.21 FEET;
THENCE CONTINUING ALONG THE EAST LINE OF SAID NEIMCYZK TRACT, SOUTH 14°54'00" EAST A DISTANCE OF 97.79 FEET TO THE NORTHWEST CORNER OF A TRACT OF LAND SOLD TO STANLEY V. HAWKINS AND DONNIE L. HAWKINS, HUSBAND AND WIFE, BY REAL ESTATE CONTRACT RECORDED UNDER RECORDING NUMBER 6702196;
THENCE NORTH 75°18'00" EAST, ALONG THE NORTH LINE OF SAID HAWKINS TRACT, A DISTANCE OF 141.86 FEET;
THENCE CONTINUING ALONG THE NORTH LINE OF SAID HAWKINS TRACT, NORTH 69°26'00" EAST A DISTANCE OF 237.81 FEET TO THE WESTERLY MARGIN OF A 30-FOOT ROADWAY (262$^{ND}$ AVENUE SOUTHEAST);
THENCE ALONG SAID ROADWAY MARGIN NORTH 00°29'00" EAST A DISTANCE OF 704.92 FEET TO THE SOUTHERLY MARGIN OF A 30-FOOT ROADWAY;
THENCE NORTH 89°51'00" WEST A DISTANCE OF 39 FEET TO THE SOUTHEASTERLY MARGIN OF THE FRANKLIN-HOWARD COUNTY ROAD;
THENCE ALONG SAID ROAD MARGIN SOUTH 37°11'00" WEST A DISTANCE OF 584.45 FEET TO THE BEGINNING.

**PARCEL NO. 132106-9047 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT 473.50 FEET SOUTH AND 1061.38 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13, AND CONSIDERING THE NORTH LINE OF SAID NORTHWEST QUARTER TO BEAR NORTH 89°48'43" WEST, WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO:
THENCE SOUTH 06°54'16" WEST A DISTANCE OF 180.19 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15 FEET TO THE TRUE POINT OF BEGINNING;
THENCE SOUTH 89°49'00" EAST A DISTANCE OF 60.86 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 167.55 FEET;
THENCE SOUTH 86°40'42" EAST A DISTANCE OF 100.20 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 171.87 FEET;
THENCE NORTH 89°53'42" WEST A DISTANCE OF 514.10 FEET;
THENCE NORTH 00°09'00" EAST A DISTANCE OF 197.82 FEET;
THENCE SOUTH 89°28'00" EAST A DISTANCE OF 200.04 FEET;
THENCE NORTH 00°09'00" EAST A DISTANCE OF 149.00 FEET;
THENCE SOUTH 89°49'00" EAST A DISTANCE OF 150.23 FEET TO THE TRUE POINT OF BEGINNING.
(ALSO KNOWN AS LOT "A", CITY OF BLACK DIAMOND LOT LINE ADJUSTMENT NUMBER 00-01, RECORDED UNDER RECORDING NUMBER 20000301000735.)

WRITTEN BY: ARJ
CHECKED BY: MSH

**EXHIBIT "B"**
**LEGAL DESCRIPTION OF PROPERTY SUBJECT TO THE AGREEMENT**

**PARCEL B**:

THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCELS C, D, AND E**

ALL OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W. M., IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTHEAST QUARTER THEREOF;

ALSO EXCEPT THAT PORTION OF THE NORTHWEST QUARTER THEREOF LYING NORTHERLY OF THE CENTERLINE OF MAPLE VALLEY-LAKE SAWYER ROAD;

ALSO EXCEPT THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER THEREOF.

**PARCEL BDA:**

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER;
THE SOUTH HALF OF THE NORTHEAST QUARTER;
THE SOUTHWEST QUARTER;
THE NORTH HALF OF THE SOUTHEAST QUARTER;
THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER;
THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER,
ALL IN SECTION 22, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL F – NORTH:**

THAT PORTION OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, AND THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER, LYING WESTERLY OF THE WESTERLY MARGIN OF THE ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY;

TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE SOUTH HALF OF THE NORTHWEST QUARTER;

AND TOGETHER WITH:

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER;

AND TOGETHER WITH:

THE SOUTH HALF OF THE NORTHEAST QUARTER LYING SOUTHWESTERLY OF THE SOUTHWESTERLY MARGIN OF ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY.

AND TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, AND THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER;

**PARCEL G:**

LOT A OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L05L0096 AS RECORDED UNDER RECORDING NO. 20051209900002, SITUATE IN SECTION 27, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL GUIDETTI:**

THAT PORTION OF THE EASTERLY 660 FEET OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21, NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING SOUTHERLY OF THE AUBURN-BLACK DIAMOND HIGHWAY;

EXCEPT THE EAST 381.24 FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., LYING SOUTHERLY OF AUBURN-BLACK DIAMOND HIGHWAY AND THE EAST 90 FEET OF THE NORTH 165.70 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON;

(ALSO KNOWN AS PARCEL 1 UNDER SURVEY RECORDED UNDER RECORDING NUMBER 20030917900009.)

**EXHIBIT B**

SECURITY RELEASE

**REQUEST FOR RECONVEYANCE**

To: Stewart Title Company
18000 International Blvd. South, Suite 510
Seattle, Washington 98188

The undersigned "Beneficiary" is the legal owner and holder of the right to payment under that certain City of Black Diamond Staff and Facilities Funding Agreement dated June 29, 2007 (the "Agreement") secured by that certain Deed of Trust dated as of June 29, 2007 (the "Deed of Trust") in which BD Village Partners, LP, a Washington limited partnership, is the "Grantor" and Stewart Title Company is the "Trustee," filed for record on April 8, 2008 under recording number 20080408000669 in the real property records of King County, Washington.

You are requested and directed to reconvey, without warranty, to the Grantor described in the Deed of Trust the right, title and interest now held by you as Trustee under the Deed of Trust in and to the real property covered by the Deed of Trust. The Agreement has been terminated in full and replaced in its entirety with that certain MPD Funding Agreement dated _____, 2011 between Beneficiary and Grantor.

Dated: _____, 2011.

**CITY OF BLACK DIAMOND**, a

Washington municipal corporation

By_____

Name_____

Title_____

## EXHIBIT C

## CITY STAFF POSITIONS & DESIGNATIONS

CORE STAFF

- Asst. City Administrator/City Clerk
- Community Development Director
- Economic Development Director
- Associate Planner (MPD Planner)

ESSENTIAL STAFF

- Public Works Director
- Stewardship Director
- Finance Director
- Permit Technician Supervisor

SUPPORT STAFF

- Deputy Finance Director
- Public Works Administrative Asst.
- IS Manager
- Facilities Coordinator
- Code Enforcement/Building Inspector

**EXHIBIT D**

**DEED OF TRUST**

**WHEN RECORDED RETURN TO:**

**Aleana W. Harris**
**Alston, Courtnage & Bassetti LLP**
**1000 Second Avenue, Suite 3900**
**Seattle, Washington 98104-1045**

| | |
|---|---|
| **Document Title:** | **DEED OF TRUST** |
| **Grantor:** | BD Village Partners, LP |
| **Grantee:** | City of Black Diamond |

**Legal Description:**

**Abbreviated Legal Description:** Ptn. Sec. 2, T 21 N, R 6 E, W.M., King County, Washington

**Full Legal Description:** See Exhibit A attached

**Assessor's Tax Parcel No.: 022106-9030, 112106-9006, 022106-9024**

**Reference Nos. of Documents Released or Assigned:** N/A

**DEED OF TRUST**

This Deed of Trust ("Deed of Trust"), made this ____ day of April, 2011 between BD Village Partners, LP ("Grantor"), whose address is _____ _____; Stewart Title Company ("Trustee"), whose address is 18000 International Blvd. South, Suite 510, Seattle, Washington; and City of Black Diamond, a Washington municipal corporation ("Beneficiary"), whose address is _____.

WITNESSETH:

Grantor hereby sells and conveys to Trustee in trust, with power of sale, the real property known as Assessor's Parcel Numbers 1121069006, 0221069030, and 0221069024 in King County, Washington, which is legally described on attached Exhibit A, together with all the tenements, hereditaments and appurtenances now or hereafter thereunto belonging or in any ways appertaining, and the rents, issues and profits thereof (the "Property"). The Property is not used principally for agricultural or farming purposes.

This Deed of Trust is for the purpose of securing performance of each agreement of Grantor herein contained, and Grantor's obligation to make certain payments (as described in that certain MPD Funding Agreement dated _____, 2011 as set forth in the Agreement between Grantor and Beneficiary (the "Agreement")). Beneficiary and Grantor agree and acknowledge that this Deed of Trust is secondary security for Grantor's payment obligations in the Agreement behind a letter of credit in the amount of Two Million and No/100 Dollars ($2,000,000.00) posted by Grantor for the benefit of Beneficiary, as described in the Agreement. Notwithstanding anything herein to the contrary, Grantor and Beneficiary agree that in the event of a foreclosure sale under this Deed of Trust, any foreclosure proceeds (net of sale costs) in excess of One Million and No/100 Dollars ($1,000,000.00) will be immediately delivered to Grantor by Trustee.

To protect the security of this Deed of Trust, Grantor covenants and agrees as follows:

1. To keep the Property in good condition and repair and to permit no waste thereof; and to comply with all laws, ordinances, regulations, covenants, conditions, and restrictions affecting the Property. Nothing herein will be interpreted as prohibiting or limiting Grantor's right to develop the Property.

2. To pay before delinquent all lawful taxes and assessments upon the Property; and to keep the Property free and clear of all other charges, liens, or encumbrances impairing the security of this Deed of Trust.

3. To defend any action or proceeding purporting to affect the security hereof or the rights or powers of Beneficiary or Trustee, and to pay all costs and expenses, including costs of a title search and attorney's fees in a reasonable amount, in any such action or proceeding, and in any suit brought by Beneficiary to foreclose this Deed of Trust. The parties agree that in the event Beneficiary is required to enforce this Deed of Trust, Beneficiary shall be entitled to its actual reasonable attorney's fees, costs and expenses incurred for the following purposes: any efforts to collect upon the underlying obligation or realize upon any security interest granted by Grantor; the prosecution of any collection proceeding, including actions commenced in litigation, arbitration or any other dispute resolution forum; any efforts to

preserve the Beneficiary's rights to payment or to the underlying collateral in any bankruptcy or other insolvency proceeding (including efforts to monitor or participate in such proceedings); and to any actions of Beneficiary to enforce any judgment, or to execute upon any deficiency judgment or judgment lien. Grantor and Beneficiary agree that any such judgment lien upon the Property of Grantor, now existing or hereafter acquired, shall be in an amount of no less than the cumulative total of Beneficiary's judgment, post-judgment interest, collection costs, reasonable attorney's fees and other related expenditures incurred by Beneficiary.

4. To pay all costs, fees, and expenses in connection with this Deed of Trust, including the expenses of the Trustee incurred in enforcing the obligation secured hereby and Trustee's and attorney's fees actually incurred, as provided by statute.

5. Should Grantor fail to pay when due any taxes, assessments or other charges against the Property hereinabove described, Beneficiary may pay the same, and the amount so paid, with interest at the rate of 8%, shall be added to and become a part of the debt secured in this Deed of Trust.

IT IS MUTUALLY AGREED THAT:

1. In the event any portion of the Property is taken or damaged in an eminent domain proceeding, the entire amount of the award or such portion as may be necessary to fully satisfy the obligation secured hereby, shall be paid to Beneficiary to be applied to said obligation.

2. By accepting payment of any sum secured hereby after its due date, Beneficiary does not waive its right to require prompt payment when due of all other sums so secured or to declare default for failure to so pay.

3. The Trustee shall reconvey all or any part of the Property covered by this Deed of Trust to the person entitled thereto upon the earlier of the following: (i) on written request of the Beneficiary; (ii) on December 31, 2011; (iii) upon satisfaction of the obligation secured hereby and written request for reconveyance made by the Beneficiary or the person entitled thereto; or (iv) if the underlying Agreement is properly terminated by the Grantor and written request for reconveyance made by the Beneficiary or the person entitled thereto.

4. Upon (i) default by Grantor in the payment of the cost described in Section _____ of the Agreement, or (ii) default in the performance of any obligation contained in this Deed of Trust after delivery of written notice to Grantor and expiration of a thirty (30) day cure period, unless the default may not reasonably be cured within thirty (30) days, then such additional time as is reasonably necessary, provided that Grantor commences to cure the default within the 30-day period and diligently pursues the cure to completion, all sums secured hereby shall immediately become due and payable at the option of the Beneficiary. In such event and upon written request of Beneficiary, Trustee shall sell the trust Property in accordance with the Deed of Trust Act of the State of Washington, at public auction to the highest bidder. Any person except Trustee may bid at the Trustee's sale. Trustee shall apply the proceeds of the sale as follows: (a) to the expense of the sale, including a reasonable Trustee's fee and reasonable attorney's fee; (b) to the obligation secured by this Deed of Trust; and (c) the surplus, if any, shall be distributed to the persons entitled thereto.

5. Trustee shall deliver to the purchaser at the sale its deed, without warranty, which shall convey to the purchaser the interest in the Property which Grantor had or had the power to convey at the time of his execution of this Deed of Trust, and such as he may have acquired thereafter. Trustee's deed shall recite the facts showing that the sale was conducted in compliance with all the requirements of law

and of this Deed of Trust, which recital shall be prima facie evidence of such compliance and conclusive evidence thereof in favor of bona fide purchasers and encumbrancers for value.

6. The power of sale conferred by this Deed of Trust and by the Deed of Trust Act of the State of Washington is not an exclusive remedy; Beneficiary may cause this Deed of Trust to be foreclosed as a mortgage.

7. The Beneficiary may appoint in writing a successor trustee, and upon the recording of such appointment in the mortgage records of the county in which this Deed of Trust is recorded, the successor trustee shall be vested with all powers of the original trustee. The Trustee is not obligated to notify any party hereto of a pending sale under any other Deed of Trust or of an action or proceeding in which Grantor, Trustee, or Beneficiary shall be a party unless such action or proceeding is brought by the Trustee.

8. This Deed of Trust applies to, inures to the benefit of, and is binding on not only on the parties hereto, but on their heirs, devisees, legatees, administrators, executors, and assigns.

9. If the Property is sold or transferred by Grantor, other than to an affiliate of Grantor, without Beneficiary's prior written consent, or if title to the Property transfers to an entity other than Grantor by operation of law, Beneficiary may, at Beneficiary's option, declare all the sums secured by this Deed of Trust to be immediately due and payable.

10. Beneficiary agrees that Grantor may substitute other property for some or all of the Property that is the subject of this Deed of Trust. Any such substitution will be subject to the Beneficiary's approval, which shall not be unreasonably withheld, conditioned, or delayed as long as the substitute property has a fair market value of at least One Million and No/100 Dollars ($1,000,000.00) and the Beneficiary will be in first lien position. More particularly, Beneficiary agrees to respond to requests for reconveyance or partial reconveyance within fourteen (14) days of Grantor's request. Grantor shall prepare, for Beneficiary's approval, the documents required for reconveyance and amendment of this Deed of Trust with regard to approved substitution of the Property.

*[Signature appears on following page]*

**GRANTOR**:

**BD VILLAGE PARTNERS, LP**, a Washington limited partnership

By: Yarrow Bay Development, LLC, a Washington limited liability company, its General Partner

By: BRNW, Inc., a Washington corporation, its Member

By_____
Brian Ross, President

STATE OF WASHINGTON )
) ss.
COUNTY OF _____ )

On this _____ day of April, 2011, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn personally appeared **Brian Ross**, known to me to be the President of BRNW, Inc., a member of Yarrow Bay Development, LLC, a general partner of **BD VILLAGE PARTNERS, LP**, the limited partnership that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited partnership, for the purposes therein mentioned, and on oath stated that he was authorized to execute said instrument.

I certify that I know or have satisfactory evidence that the person appearing before me and making this acknowledgment is the person whose true signature appears on this document.

WITNESS my hand and official seal hereto affixed the day and year in the certificate above written.

Signature

Print Name

NOTARY PUBLIC in and for the State of Washington, residing at _____.
My commission expires _____.

## EXHIBIT A

### Legal Description

**King County Parcel Number 1121069006:**

W 1/2 OF NW 1/4 LESS PACIFIC COAST RY R/W THIS PARCEL DESIGNATED FOREST LAND PURSUANT TO SUBSECTION (3) OF RCW 84.33.120 OR 84.33.130

King County Parcel Number 0221069030:

LOT Y OF KING COUNTY LOT LINE ADJUSTMENT NO. L05L0097, RECORDED UNDER RECORDING NO. 20051209900003, SITUATE IN SECTION 2, TOWNSHIP 21 NORTH, RANGE 6, EAST, W.M., N KING COUNTY, WASHINGTON.

**King County Parcel Number 0221069024:**

LOT Z OF KCLLA #L05L0097 REC# 20051209900003 SD LOT BEING LOCATED IN POR OF SW 1/4 OF SW 1/4 OF SEC 2-21-6 & OF SE 1/4 OF SE 1/4 OF SE 1/4 OF SEC 3-21-6

# Exhibit O

## Stormwater Monitoring

TRIAD ASSOCIATES

# MEMORANDUM

| | |
|---|---|
| Date: | September 19, 2011 |
| To: | City of Black Diamond |
| From: | Alan D. Fure, PE |
| Re: | No Net Phosphorous Implementation Plan |
| Triad Job No.: | 05-336 |
| Copies To: | Yarrow Bay Holdings |

---

Requirement: Minimize impacts to water quality in Lake Sawyer by assuring no net increase in phosphorous to Lake Sawyer occurs associated with The Villages and Lawson Hills MPD development within basins that drain to Lake Sawyer. No net increase can be accomplished by on-site or off-site source control or physical/chemical/biological interception (treatment and removal from water system).

Summary of Approach: Establish existing baseline phosphorous contributions from relevant project drainage basins[1] and from potential compensating projects located outside the developed MPD that currently contribute phosphorous to Lake Sawyer. Determine strategies for meeting the no net phosphorous goal ahead of project construction. Implement strategies and then monitor post implementation phosphorous levels to confirm compliance with the requirement. If onsite measures do not meet the requirement, implement compensatory project mitigation. Measure post implementation phosphorous reductions from compensatory projects to confirm the amount of offset.

Monitoring: Prior to construction of the first MPD Implementing Project, the Master Developer shall cause to occur three water quality samples in three separate months during the wet season at three locations within Rock Creek to be mutually agreed to by the City and Master Developer. The City and Master Developer agree that one location will be on the south side of the bridge on Roberts Drive where it crosses Rock Creek. This sampling data shall be provided to the City and be used to establish an interim baseline phosphorous load that will then be further refined by the Baseline Monitoring section below.

Baseline Monitoring: Prior to construction of the first implementing project within the Lake Sawyer drainage basin, the Master Developer, in conjunction with the City of Black Diamond shall review, plan and institute the following:

---

[1] The first areas of The Villages project planned to be developed are in drainage basins that do not drain to Lake Sawyer.

1. Monitor pre-development phosphorous levels at pre-determined locations within the project drainage basins. Monitoring is to occur consistently over the course of at least one water year (October to September) in accordance with the procedures and criteria outlined in Chapters 6 through 12 of the QAPP (see Attachment 1). Use data collected over the water year to establish a baseline phosphorous load from the project. This load should be factored to an average year rainfall volume for future comparisons of phosphorous loads for years where the rainfall is more or less than the average.

2. Select one or two possible compensation projects. Offsite compensation projects will be on land not being actively developed for the MPD but that includes features that

   currently contribute phosphorus to Lake Sawyer that are amenable to reductions of phosphorus, such as roadway segments or intersections, pastures with farm animals, or existing developed property all lacking modern stormwater controls, or erosive slopes or streams. Monitor pre-mitigation phosphorous levels at pre-determined locations within the compensating project drainage basin. Monitoring is to occur consistently over the course of at least one water year (October to September) in accordance with the procedures and criteria outlined in Chapters 6 through 12 of the QAPP (see Attachment 1). Use data collected over the water year to establish a baseline phosphorous load from the compensating project. This load should be factored to an average year rainfall volume for future comparisons of phosphorous loads for years where the rainfall is more or less than the average.

Project Design Phase: In conjunction with City of Black Diamond review, prepare on-site drainage designs with phosphorous mitigation solutions which include the following:

1. Phosphorous control menu items from the 2005 DOE Manual (or later manuals if adopted and imposed for later Project phases).
2. Any additional AKART (all known and reasonable technologies) not identified in 1. above, that are in compliance with The Villages MPD Permit Approval Condition No. 76 or the Lawson Hills MPD Permit Approval Condition No. 79.
3. Drainage designs should include contingency planning for augmentation of treatment so that future interventions can be made if needed.

Project Construction Phase: Upon commencement of implementing project construction the following shall be instituted:

1. Monitoring shall be performed at all drainage facility outlet points to establish post-construction phosphorous levels. This monitoring is to occur consistently over the course of the water year in accordance with the procedures and criteria outlined in the QAPP (see Attachment 1).
2. Regular comparisons shall be made to determine if stormwater management strategies are achieving goals established in the design phase. If levels are exceeding goals, source

control interventions shall be implemented within 30 days of obtaining a substandard sampling measurement.

3. Upon completion of the water year compare actual loads to pre-development loads. If loads are exceeding pre-development loads, institute compensatory project(s) within 6 months (subject to City approvals). Mitigation projects can include on-site or off-site measures that reduce the Tp input to the Lake Sawyer Basin.

Project Build-Out Phase: Continue monitoring of drainage outlets for five years following the completion of development that discharges into that facility to confirm compliance with the no net phosphorous goal as per procedures noted above. Completion shall be defined as the date the City's maintenance bond, as required by BDMC 14.04.360 and the Black Diamond Engineering Design and Construction Standards (Exhibit "E") Section 1.5, is released or expires for a given facility. If data show variations from the standard, institute source control or improved maintenance solutions. If these interventions are insufficient, institute alternate compensatory projects or mitigations.

# Attachment 1

---

## Quality Assurance Project Plans for:

- **Nutrient Removal Effectiveness by The Villages to Rock Creek**
- **Nutrient Removal Effectiveness by Basin A (Wet Pond #1 & #2) to Lawson Creek**

# Quality Assurance Project Plan
# for
# Nutrient Removal Effectiveness
# by The Villages to Rock Creek:
# Lake Sawyer Implementation Plan

## Yarrow Bay Development Company
## Contract Work 20-15-101-00
## Contract/Project Number:

## January 2011


### Prepared by
Robert Plotnikoff, Harry Gibbons, Shannon Brattebo and Gene Welch

Tetra Tech, Inc.
1420 Fifth Avenue
Seattle, WA 98101


### Prepared for
**BD Village Partners LP.**

Approval Signatures:

_____ Date: _____
Project Manager

_____ Date: _____
Senior Technical Staff

_____ Date: _____
Additional

_____ Date: _____
Additional

# Table of Contents and Distribution List

1.0 BACKGROUND ..... 1

2.0 PROJECT DESCRIPTION ..... 2

3.0 ORGANIZATION AND SCHEDULE ..... 5

4.0 QUALITY OBJECTIVES ..... 7

5.0 SAMPLING PROCESS DESIGN ..... 11

6.0 SAMPLING PROCEDURES ..... 18

7.0 MEASUREMENT PROCEDURES ..... 22

8.0 QUALITY CONTROL ..... 24

9.0 DATA MANAGEMENT PROCEDURES ..... 29

10.0 AUDITS AND REPORTS ..... 31

11.0 DATA VERIFICATION AND VALIDATION ..... 33

12.0 DATA QUALITY (USABILITY) ASSESSMENT ..... 38

13.0 REFERENCES ..... 39

APPENDIX A ..... 40

## Distribution List

| Name, Title | Phone, Fax, E-mail | Mailing Address |
|---|---|---|
| **Yarrow Bay Development Company** | | |
| | | |
| | | |
| | | |
| **Triad Associates, Inc.** | | |
| | | |
| | | |
| | | |
| **Tetra Tech, Inc. Surface Water Group** | | |
| | | |
| | | |
| | | |

# 1.0 Background

## 1.1 Study Area and Surroundings

Lake Sawyer is located near the city of Black Diamond, and is a popular recreational resource for the area. Lake Sawyer is 280 acres in size and its watershed occupying approximately 8,300 acres. The watershed is divided into three sub-basins: Rock Creek, Ravensdale Creek, and the nearshore area of Lake Sawyer that serve as management areas for water quality improvement. Lake Sawyer serves is part of the migratory pathway for late-winter Coho salmon (*Oncorhynchus kisutch*) and spawn in Ravensdale Creek and Rock Creek drainages. Resident rainbow trout, cutthroat trout, kokanee, and several warm-water fish species are present in Lake Sawyer (King County 2000).

The lake has generally good water quality, but has elevated phosphorus concentrations. Historically, in the 1970's Black Diamond lacked sewage treatment plant facilities and effluent was treated by septic tanks and drainfields, including a city septic tank located just south of Auburn-Black Diamond Road that discharged to Ginder Creek. These methods for effluent treatment also resulted in elevated concentrations of fecal coliform, nitrogen, and biochemical oxygen demand in Ginder Creek.

High nutrient concentrations were likely associated with high phosphorus concentrations which would have promoted increased loading to Lake Sawyer. The Black Diamond Wastewater Treatment Plant (WWTP) began operation in 1981 and discharged effluent to a natural wetland coincident with the mouth of Rock Creek. The strategy for use of a natural wetland as part of the treatment train used to abate the pollutants in WWTP effluent rapidly became ineffective with signs of eutrophication in Lake Sawyer. Algal blooms were commonly detected in the late 1980's. The treatment using the wetland system was closed. Department of Ecology developed a TMDL (Total Maximum Daily Load) model predicting phosphorus concentrations under various loading scenarios.

# 2.0 Project Description

## 2.1 Tasks

The following tasks for this project have been developed:

Task 1. Evaluate Water Quality conditions in the stormwater pond structure to determine total phosphorus load reduction from The Villages development.
Task 2. Determine effectiveness of the stormwater structure from the Villages development area, conveyance of treated surface water to the natural creek channel, and influence of the treated water once introduced into Rock Creek.

## 2.2 Objectives

Information in this Quality Assurance Project Plan (QAPP) is organized to provide sampling and analysis methods that will generate data and interpretations necessary to address the following objective:

1. To determine whether annual average total phosphorus discharge concentrations from a representative stormwater structure as predicted in the EIS water quality technical report (FEIS Appendix M, A.C. Kindig & Co. 2008) for the Villages MPD (Master Planned Development) is meeting regulatory requirements of the approved MPD permit.

## 2.3 BMP and Stream Sampling

The proposed project describes a monitoring strategy that evaluates nutrient (phosphorus input) introduction to the constructed BMP, the efficiency of the BMP in removing entrained nutrients, and the resulting output concentration. The second step in the monitoring strategy measures the nutrient load in the receiving water (Rock Creek) to determine the nutrient portion originating from the BMP and the background load originating from other sources. This QAPP has been developed to ensure that all methods used and all data collected during the project is defensible and repeatable. The QAPP has been developed for monitoring effectiveness of BMP implementation as required by the Washington Department of Ecology's QAPP Guidance.

**a) BMP/LID Effectiveness Monitoring**
Purpose: Determine efficiency of BMP facilities in removal of phosphorus routed to each structure from overland flow in the Development during storm events. The parameter of concern is phosphorus.

Sampling of BMP facilities within the Development will occur during 6 to 8 storm events per year. Storm water samples will be collected during the wet season which is defined as October 1st through March 31st. Samples will be collected from the input and outflow of each BMP facility in order to determine nutrient removal efficiencies. Samples will be collected manually. The grab samples will be delivered to an accredited Washington Laboratory and analyzed for total phosphorus and soluble reactive phosphorus.

For the purposes of defining a single storm event, the minimum amount of rainfall should be at least 0.2 inches and the event must be preceded by a dry period of at least 4 hours. Two of the 8 storm events should have a minimum amount of rainfall of at least 0.5 inches. To account for the variability of each sampling event, storm conditions, and pond discharge, each sampling event will last for four hours or for the duration of the storm. Samples will be collected at defined time intervals, i.e. one sample every hour. Flow at the facility input and outflow will be measured continuously with a data logger. Flow data will be used to volume and time-weight nutrient concentrations in and out of each facility over a storm event.

**b) Rock Creek Monitoring**

Purpose: Determine the nutrient load contributed from The Villages Development to the receiving water (Rock Creek). Use results from the nutrient loading analysis to inform on contributions from the Development versus other non-point sources.

Grab samples will be collected in Rock Creek at two points on the creek to characterize both baseline nutrient conditions and conditions during storm events. Grab samples will be collected in Rock Creek just upstream of the point of treated effluent discharge, upstream and downstream of the BMP facility within the Development, as well as upstream of all Development property. Collecting nutrient samples from these locations will provide information on nutrient loading not only from the Development but also from other non-point sources within the watershed. Baseline nutrient monitoring in Rock Creek will include collection of samples at the above mentioned locations on a monthly basis. Baseline monitoring of Rock Creek will provide information on nutrient concentrations and conditions without influence or impact from the Development. Samples will also be collected in Rock Creek during storm events to help characterize nutrient loading associated with stormwater runoff. Storm event sampling in Rock Creek will correspond with sampling of BMP facilities within The Villages Development. All samples collected in Rock Creek will be analyzed for total phosphorus and soluble reactive phosphorus. Continuous flow measurements and field parameters (e.g., temperature, pH, conductivity, and dissolved oxygen) will also be collected during each sampling event.

## 2.4 Water Quality Constituents to Monitor (Primary Monitoring Program)

Phosphorus, both soluble reactive (SRP) and TP is the most important constituent ultimately controlling the DO levels. Analytical procedures are extremely important. Laboratory quality control can be acceptable, while determined concentrations in the river may be in error, especially for TP due to different digestion procedures and contamination. SRP should be determined on samples filtered through P-free filters using the EPA 365.1 ascorbic acid method. TP should be determined by the same method for SRP following digestion with persulfate according to Standard Methods (APHA 2005). A contract laboratory that can meet these rigorous reporting limit and laboratory performance requirements is required for analysis of P forms.

Other constituents to monitor include temperature, dissolved oxygen concentration, pH, and specific conductance. All of these can be used to indicate sources of contamination in the same way dissolved oxygen concentrations are usually used as a surrogate to indicate increased concentrations of phosphorus and loading present in the basin.

**Precipitation**

Phosphorus content should be determined in bulk and wet fall (rain-containing phosphorus in dry and wet forms. Review of data collected in the fall from the October 1st through March 31st will be used to forecast volume and intensity of rainfall events throughout this monitoring period.

One location for a unit to monitor wet and dry fall (use a rain gage) on a weekly- or twice-monthly basis should be adequate. The rainfall patterns measured during the proposed monitoring period will provide perspective on the amount of airborne phosphorus that might be expected to be loading into the Basin and the receiving stream (Rock Creek).

# 3.0 Organization and Schedule

The purpose of this document is to present the quality assurance project plan (QAPP) for collecting water quality and other data to assess the chemical, physical, and biological characteristics of non-point sources of pollution affecting Lake Sawyer, Washington. A team of technical professionals will conduct journey-level scientific investigations that include: 1) collection of environmental data (routine monitoring and source-tracing), 2) collection and interpretation of phosphorus loading data from the stormwater Basin, and 3) interpreted technical information used to inform on effectiveness of BMP operation.

This QAPP provides general descriptions of the work to be performed to collect the samples, the standards to be met, and the procedures that will be used to ensure that the data are scientifically valid and defensible and that uncertainty has been reduced to a known and practical minimum. It describes the procedures used to obtain concentrations of the desired chemical analytes and other parameters of concern.

The organizational aspects of a program provide the framework for conducting tasks. The organizational structure can also facilitate project performance and adherence to quality control (QC) procedures and quality assurance (QA) requirements. Key project roles are filled by those persons responsible for ensuring the collection of valid data and the routine assessment of the data for precision and accuracy, as well as the data users and the person(s) responsible for approving and accepting final products and deliverables. The key personnel and responsibilities for this project for The Villages MPD (Master Planned Development) in the Lake Sawyer drainage in urban Black Diamond are listed in Table 3.0-1.

**Table 3.0-1.** Project/Task organization and responsibility summary.

| Personnel | Responsibility | Address/E-Mail | Phone Number |
|---|---|---|---|
| Al Fure, Triad Associates, Inc. | Project Manager | Al Fure<br>Triad Associates, Inc.<br>12112 115th Avenue NE<br>Kirkland, WA 98034<br>afure@triadassociates.net | (425)216-2110 |
| Harry Gibbons, Tetra Tech, Inc.<br>Robert Plotnikoff, Tetra Tech, Inc. | Co-Project Leads | Tt Surface Water Group<br>1420 Fifth Avenue, Ct. E<br>Seattle, WA 98101<br>harry.gibbons@tetratech.com<br>robert.plotnikoff@tetratech.com | (206)728-9655 |
| Name, Position, Tetra Tech, Inc. | Field Lead | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |
| Name, Position, Tetra Tech, Inc. | Quality Assurance Officer (QAO) | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |
| Name, Position, Tetra Tech, Inc. | Data Manager | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |

Each component of the Nutrient Removal Effectiveness Monitoring Study has specific milestones and products. The project schedule contains several deliverables in draft and final form. The schedule for each of these products is outlined here:

**Table 3.0-2.** Project deliverables and typical target calendar dates for The Villages MPD monitoring.

| Deliverables | Target Date |
|---|---|
| Final Approved QA Project Plan | One month prior to start of sampling |
| Sampling Start/End | October 1st/March 31st |
| Draft Study Report | May 31st |
| Final Study Report | July 15th |
| Submit Data to Client | Within 45 days following each sampling event |

## 3.1 Priority of Task Implementation

The monitoring strategies described in this QAPP are implemented simultaneously in order to determine source and quantity of phosphorus loading. Each of the monitoring strategies will build upon the base of information informing on source and magnitude of non-point pollution originating from The Villages MPD Basins and from other sources. The following is the suggested priority for implementing each monitoring strategy:

1. The Villages Stormwater Structure Sampling (nutrient sources)
2. Rock Creek Receiving Water Sampling (transport to Lake Sawyer)

# 4.0 Quality Objectives

Data quality objectives (DQOs) are qualitative and quantitative statements that clarify the intended use of the data, define the types of data needed to support the decision, identify the conditions under which the data should be collected, and specify tolerable limits on the probability of making a decision error due to uncertainty in the data (if applicable). Data users develop DQOs to specify the data quality and quantity needed to support specific decisions.

## 4.1 Decision (Data) Quality Objectives

Data, or decision, quality objectives determine when data will be used to select between management alternatives or to determine compliance with a standard. Management decisions for improving lake quality by using monitoring data will require generation of an adequate quantity of data influenced by numbers, locations, and frequency of samples from sites that must be analyzed. A set of data eventually used to make management decisions will meet various standards or comply with minimum requirements of a statistical evaluation and have the ability to distinguish between two environmental conditions (e.g., impaired or not-impaired) with an acceptable level of uncertainty.

The quality of an environmental monitoring program can be evaluated in three steps: (1) establishing scientific assessment quality objectives, (2) evaluating program design to evaluate whether the objectives can be met, and (3) establishing assessment and measurement quality objectives that can be used to evaluate the appropriateness of the methods being used in the program. The quality of a particular data set is some measure of the types and amount of error associated with the data.

Sources of error or uncertainty in statistical inference are commonly grouped into two categories:

1. *Sampling error:* The difference between sample values and *in situ* "true" values from unknown biases due to sampling design. Sampling error includes natural variability (spatial heterogeneity and temporal variability in population abundance and distribution) not specifically accounted for in a design (for design-based inference), and variability associated with model parameters or incorrect model specification (for model-based inference).
2. *Measurement error:* The difference between sample values and *in situ* "true" values associated with the measurement process. Measurement error includes bias and imprecision associated with sampling methodology, specification of the sampling unit, sample handling, storage, preservation, identification, instrumentation, and the like.

The data requirements for this project encompass aspects of laboratory analysis and database management to reduce sources of errors and uncertainty in the use of the data.

## 4.2 Measurement Quality Objectives

### Type and Frequency of Laboratory Quality Control Samples

For samples analyzed at a commercial laboratory, the type and frequency of the quality control samples to be analyzed are summarized in Table 4.0-1 and Table 4.0-2. Additional quality

control sampling will be conducted in the field and is detailed in Section 8.0 Quality Control Procedures.

**Table 4.2-1.** Laboratory quality control samples.

| Type of Quality Control Sample | Description |
|---|---|
| Method Blank | Reagent grade sample matrix analyzed to provide an indication of laboratory contamination. |
| Check Sample | Generally purchased, prepared independently from analytical standards and used to provide an indication of the accuracy of the analytical determination. |
| Laboratory Duplicate | A second aliquot of a sample, processed in exactly the same manner. |
| Matrix Spike | An aliquot of a sample to which known quantities of analytes are added, processed in exactly the same manner. |
| Field Duplicate | A split sample, labeled in a similar manner as regular samples, submitted to laboratory, and processed in exactly the same manner. |

**Precision**

Precision is a measure of the scatter in the data due to random error that is expected primarily from sampling and/or analytical procedures. Laboratory duplicates for assessment of precision will be analyzed at a frequency of about 10 percent of the total number of samples submitted to the laboratory or at least one per sample batch. In addition, field duplicates will be collected for approximately 10 percent of samples submitted to the laboratory. For sample results which exceed the reporting detection limit (RDL), the relative percent difference (RPD) will be less than or equal to 20 percent.

This QC calculation also addresses uncertainty due to natural variation and sampling error. Precision is calculated from two duplicate samples by relative percent difference (RPD) as follows:

$$RPD = \frac{|C_1 - C_2|}{Mean(C_1, C_2)} x100$$

where $C_1$ = the first of the two values and $C_2$ = the second of the two values.

For laboratory sample results with values less than 5 units, the precision criterion will be less than or equal to 1.5 units rather than the RPD to account for the effect of smaller values on percent differences. No criteria are presented for duplicates which are below the RDL, as these data are provided for informational purposes only. For instance, where one result is below the RDL, professional judgment will be used in determining the compliance of the data to project requirements.

**Table 4.2-2.** Frequency of laboratory quality control samples.

| Parameter | Matrix | Check Standards | Method Blanks | Analytical Duplicates | Matrix Spikes | Field Duplicates |
|---|---|---|---|---|---|---|
| Total Phosphorus | Water | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | Minimum 10% of samples |
| Soluble Reactive Phosphorus | Water | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | Minimum 10% of samples |

**Bias**

Bias provides an indication of the accuracy of the analytical data, as provided by both method blanks and percent recovery of target analytes from reagent and field sample matrix. Check samples will be used to provide compliance criteria for bias. The percent recovery of the matrix spikes and standard reference materials will be less than or equal to +/- 20 percent.

Method blank samples will be analyzed with each batch of samples. Results for method blank samples should be less than the minimum detection limit for each parameter.

**Accuracy**

Accuracy is a measure of confidence that describes how close a measurement is to its "true" value. Methods to ensure accuracy of field measurements include instrument calibration and maintenance procedures. Sample handling procedures and procedures for verification of data influence the accuracy of results.

Analytical laboratory accuracy is normally determined by the percent recovery of the target analyte in spiked samples and also by the recoveries of the surrogates in all samples and Quality Control samples. Laboratory accuracy ranges are specified in the contract laboratory Quality Management Plan and depend on the parameter being measured. Accuracy is calculated as follows:

$$\%Rec = \frac{\text{Analyzed value}}{\text{True value}} \times 100$$

The Tetra Tech Technical Lead will ensure the contract laboratory accuracy by meeting %Recovery (Rec) values specified by EPA methods and listed in Table 4.0-3.

In addition, performance of field equipment and operation of meters will be evaluated by meeting relative percent difference goals for each of the parameters (Table 4.0-4). Accuracy for field measurements cannot be measured directly, but can be evaluated based on description of equipment performance.

**Table 4.2-3.** Measurement quality objectives for laboratory analysis.

| | Precision | | Bias/Accuracy | | | |
|---|---|---|---|---|---|---|
| **Parameter** | **Analytical Duplicate Samples** | **Field Duplicate Samples** | **Check Standard (LCS)** | **Matrix Spikes** | **Method Blanks** | **Lowest Concentrations of Interest** |
| | **Relative Percent Difference (RPD)** | **Relative Percent Difference (RPD)** | **% Recovery Limits** | **% Recovery Limits** | **Units** | **Units of Concentration** |
| **Surface Water** | | | | | | |
| Total Phosphorus | ±20 [a] | ±20 [a] | ±10 | ±20 | < RL | Reporting Limit [b], µg/L |
| Soluble Reactive Phosphorus | ±20 [a] | ±20 [a] | ±10 | ±20 | < RL | Reporting Limit [b], µg/L |

[a] For sample results with values of less than 5 units, the precision criterion will be less than or equal to 1.5 units rather than the RPD to account for the effect of smaller values on percent differences.
[b] The Required Reporting Limit (or Minimum Detection Limit) is listed in Table 5.0-1.

**Table 4.2-4.** Measurement quality objectives for field measurements.

| | **Precision (from replicate measurements** | **Bias/Accuracy** | **Lowest Values of Interest** |
|---|---|---|---|
| **Parameter** | **Relative Percent Difference (RPD)** | **(% Recovery) (deviation from true value)** | **Units of Measurement** |
| Dissolved Oxygen (LDO)[a†] | 10 | N/A | Minimum detection limit [b] |
| Conductivity† | 5 | N/A | Minimum detection limit [b] |
| pH† | 5 | N/A | 4.0 units |
| Temperature† | 5 | N/A | 0 °C |
| River and Lake Level | 0.5 inches | N/A | 0.5 inches |

[a] Luminescent Dissolved Oxygen Probe.
[b] The Minimum Detection Limit is listed in Table 5.0-1.
† Parameters collected continuously at 15-minute intervals.

# 5.0 Sampling Process Design

## 5.1 Sampling Design and Rationale

Nutrient introduction into Lake Sawyer has been identified as a primary cause for promoting nuisance algal blooms caused by periodic high total phosphorus concentrations during portions of the year. Following almost two decades of phosphorus reduction efforts, concentrations of this nutrient are generally being met throughout the year. The Washington Department of Ecology (Ecology) and the City of Black Diamond have expended effort in fixing some of the obvious source problems for nutrient in the drainage; primarily on-site septic systems and drainage from a wetland originally expected to treat effluent discharged from a wastewater treatment plant. Other basin-wide implementation measures have been identified by the Department of Ecology (WSDOE 2009).

The Villages MPD permit approval includes conditions to identify the estimated maximum annual volume of total phosphorus from the MPD site and that will comply with the TMDL for Lake Sawyer, and to monitor phosphorus coming from the MPD site. The sampling design and rationale presented are intended to provide information that can be used in an adaptive management program and continually update/upgrade the phosphorus monitoring program.

The sampling design meets the requirements from the City of Black Diamond as Conditions of Approval for the Lawson Hills Master Planned Development approval (Exhibit C: Conditions 76, 82, and 85) that monitoring of the stormwater treatment facility and the influence on receiving water be described. Exceedence of the allowable estimated maximum annual volume of total phosphorus discharged from the Development site will require a redesign of existing structures, modify the design of new treatment facilities, or implementation of another project in the Lake Sawyer basin that results in a reduction in total phosphorus so the annual maximum load is below the target quantity outlined in the Condition.

The proposed monitoring strategy addresses each of the potential sources of non-point nutrient total phosphorus contributions and methods that would detect presence of this pollutant and directly address tasks described in Section 2.0. The Sampling Process Design is described here based on each of these tasks:

**Task 1**. Evaluate Water Quality conditions in The Villages stormwater structures to determine total phosphorus load from The Villages Development Basin.

### THE VILLAGES STORMWATER STRUCTURES

Locations: Outlet/Inlet of the stormwater structure or treatment train (BMP)

A. Parameters:
   The stormwater structures are designed to remove phosphorus from surface water runoff originating in The Villages Development. The efficiency and the effectiveness of this BMP or treatment train will determine whether the structure is operating properly, needs retrofitting or maintenance, or informs on contaminant loads in stormwater that were greater than expected. The data from these monitoring efforts serve as a feedback

mechanism for making future decisions in meeting treated water requirements. The monitoring effort and decision-making process in determining effectiveness of stormwater phosphorus mitigation is directed by Conditions of the MPD agreement.

Parameters will be measured below the stormwater structure Outlet and the Incoming conduit to the stormwater structure. Total Phosphorus will be sampled as well as flow (both incoming and outgoing). Continuous field monitoring will be conducted at the outlet of the stormwater structure in order to isolate effects of any potential temperature increases from the standing water. In addition, flow measurements will be recorded by calibrating a flow rating curve with pressure transducer readings. The pressure transducer readings will be converted into flow estimates following collection and download of this data. Periodic check for actual flow measurements will be made during sample collection for Total Phosphorus.

The Total Phosphorus load will be calculated using the flow estimates from both incoming and outgoing conduits associated with the stormwater structure(s). Since loading rates combine flow and parameter concentration, data comparisons can be made directly among months or years. These comparisons provide insight into short and long-term patterns for determining the effectiveness of the implementation plan for this drainage.

B. Reasons for Monitoring Design and Parameter Analysis:
Requirements for discharge of Total Phosphorus from the stormwater structures are set by The Villages MPD permit and guidelines and expected to be entrained in surface water runoff from storm events. For this reason, the winter wet season is targeted for most of the monitoring and is the time of year when water levels are sufficiently high to enable the stormwater structures to begin working as designed.

**Task 2.** Determine effectiveness of the stormwater structure(s) in removing phosphorus load and conveyance to receiving water (Rock Creek).

**ROCK CREEK** (Conveyance from the stormwater structures to receiving water)

The stormwater structures may change some of the physical characteristics of the water depending on residence time, incoming volume, and time of year. These factors may influence surface water temperature which is of concern during the warmer months of the year (when water is present). A sampling design describing temperature was recommended in order to demonstrate the potential for the stormwater structure(s) to increase temperature of surface water in a natural receiving water stream. This sampling schedule targets a period of the year when this parameter is most likely to increase due to climate conditions and when declining flows cease to dissipate heat energy. Although the primary concern is during the storm season and lower water temperatures, surface water characteristics may change with increasing human activity during the cold weather seasons.

## 5.2 Sampling Locations and Frequencies

The two tasks described in Section 5.1 require collection of physicochemical field data and water samples for laboratory analysis. The following description of proposed study sites and design for

sampling (at discrete sites) are presented in descriptive and map form (Figure 5.2-1). The proposed discrete sites for sampling will be field-verified prior to final location. Once selections are made for sites they will be monumented by using a GPS locational unit.

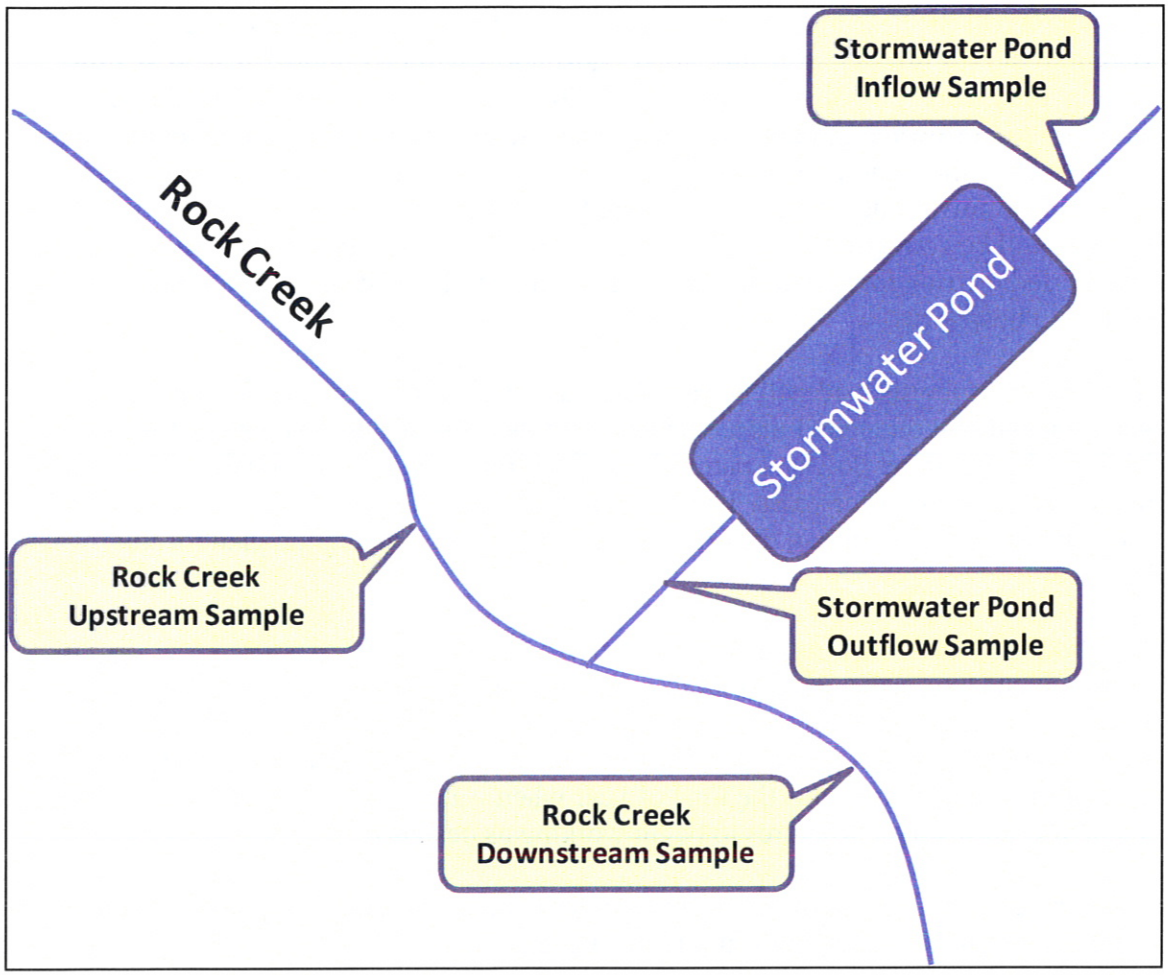



**Figure 5.2-1.** Proposed sample sites and locations for collection of surface water data.

Task 1. The Villages Stormwater Structure(s)

A. Frequency of Sample Collection:
Sample collection timing and frequency is determined by the occurrence of storm events. Ideally, monitoring will be completed at 6-8 storm events; each with varying intensities of rainfall and longevity of the storm event. Monitoring based on these 2 factors provides some level of detail in understanding optimum effectiveness of the BMP (stormwater structures) under varying storm conditions. The period of monitoring is established from October 1st through March 31st of each calendar year for five years following the completion of development that discharges into this stormwater structure. Completion shall be defined as the date the City's maintenance bond, as required by BDMC 14.04.360 and the Black Diamond Engineering Design and Construction Standards (Exhibit "E") Section 1.5, is released or expires for such facility.

Grab samples will be collected in order for sample integrity to be maintained and for making observations about environmental conditions when an investigator is present.

Information gathered about physical characteristics of the water, how water travels to and from the stormwater structures, and surrounding information that might explain why specific water quality problems might arise are reasons why being present and sampling affords a greater opportunity to construct information for the critical feedback loop.

Task 2. Rock Creek

A. Upstream of Discharge

a. Surface Water temperature (Continuous data logging)

The upstream site for monitoring surface water temperature will serve as the control for determining if the stormwater structure discharge is a cause for increased downstream temperatures. The monitoring frequency is recommended at 15 minute intervals so that 7-day average of the daily maximum temperatures (7-DADMax) can be calculated from the continuous monitoring data. Additional monitoring effort will be conducted at both the upstream and downstream site; including continuous monitoring with a HydroLab® unit. Additional parameters that will be collected are:

- Water Temperature
- Dissolved Oxygen concentration
- Conductivity
- pH

These additional parameters are important for understanding how the receiving water assimilates effects from additional nutrient input. Conversely, the receiving water may, at times, have higher concentrations of nutrient input that uses up the assimilative capacity. By generating a greater amount of information about water quality characteristics, identification of nutrient sources will assist in making drainage-level management decisions to assure The Villages MPD permit Conditions are met.

B. Downstream of Discharge

a. Surface Water temperature (Continuous data logging)

Comparison between upstream and downstream (of the stormwater structure outfall) water quality characteristics will evaluate the effect treated stormwater pond water has on receiving water. The upstream/downstream sample design with site located in close proximity to the outfall will isolate effects from the BMP output. Water quality parameter measurements will be sampled identical to those described for the upstream site above. In addition, flow monitoring will be conducted using pressure transducers calibrated using a flow-rating curve. The total phosphorus loads originating from upstream of the stomrwater structure outfall will be combined with stormwater structure loads and the resulting load compared against the downstream estimate. This analytical exercise is intended to reveal the dynamic nature of nutrients in natural streams receiving treated stormwater.

## 5.3 Order (Timing) of Sampling

Non-point source pollutants enter streams and lakes at different rates during each season throughout the year with transfer and distance of travel influenced primarily by climatic events. Each of the tasks addresses potential source and pathway for introduction of nutrient pollution into nearby receiving streams and accounts for optimal time of year when pollution is either detectable or loading is greatest to surface water. In some cases, a division of the year that

differentiates wet- from dry seasons is used as a contrast to estimate the magnitude of nutrient pollution load introduced during a time period. Distinguishing seasons and differences in pollution load is used as a guide to suggest abatement of pollution by using BMPs (best management practices). The suggested monitoring interval is has been determined from previous studies and has sufficient flows to enable measurement of effectiveness of phosphorus removal from surface water.

The following are descriptive examples for sampling dates and frequencies for satisfying study objectives in each of the tasks:

**Task 1**

- Sampling Intervals for the constructed stormwater BMP(s); Rainfall Events and No. of Visits
  October 1st – March 31st (6-8 visits)

**Task 2**

- Rock Creek upstream/downstream sampling:
- October 1st – March 31st
- Continuous Surface Water Temperature monitoring (15-minute intervals)
- Dissolved Oxygen concentration (15-minute intervals)
- Conductivity (15-minute intervals)
- pH (15-minute intervals)
-
- April 1st – September 30th
- Continuous Surface Water Temperature monitoring (15-minute intervals)

## 5.4 Representativeness

Sample representativeness will be addressed at two distinct steps in the data collection process. During sample collection, the use of generally accepted sampling procedures in a consistent manner throughout the project will ensure that representative samples are obtained. During sub-sampling within the laboratory, samples will be mixed by inverting several times to ensure that the analytical sub-sample is representative of the sample container contents.

**Stormwater Structure Water Quality**
Representativeness will be achieved through collection of samples aimed at capturing the complexity and dynamics of the treatment pond. Locations surrounding the treatment pond will be sampled to characterize water quality at multiple depths to adequately describe nutrient levels and other conditions related to dissolved oxygen. Sampling will be concentrated during summer to determine worst-case conditions and magnitude of internal P loading.

**Rock Creek Water Quality**
Data will be gathered to characterize water quality constituents during dry and wet seasons of the year. Sample collection will be conducted less frequently during the dry season as ambient conditions remain similar throughout this period of time. Sample collection will increase in frequency during wet season portions of the year in order to characterize ambient conditions and the influence from stormwater events. Stormwater samples will be collected manually and at

equal time intervals in order to characterize storm events that present combinations of duration and intensity (i.e., distribution of precipitation quantity with time). Additional detail is provided for description of storm events in Western Washington and the characteristics that will be described by stormwater monitoring (see Section 5.2, Task 2). Loading estimates will characterize storm flow.

## 5.5 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid according to specific criteria and are entered into the data management system. Lack of data entry into the database will reduce the ability to perform analyses, integrate results, and prepare reports. Therefore, every effort is made to avoid accidental or inadvertent sample or data loss. Accidents during sample transport or lab activities that cause the loss of the original samples will result in irreparable loss of data. Samples will be stored and transported in unbreakable (plastic) containers wherever possible. All sample processing (sub-sampling, sorting, identification, and enumeration) will occur in a controlled environment within the laboratory. Field personnel will assign a set of continuous identifiers to a batch of samples.

Percent completeness (*%C*) for measurement parameters can be defined as follows:

$$\%C = \frac{V}{T} x100$$

where $V$ = the number of measurements judged valid and $T$ = the total number of measurements taken

For this project, sampling will be considered complete when no less than 90 percent of the samples collected during a particular sampling event are judged valid. At any time where data are not complete, decisions regarding re-sampling and/or re-analysis will be made by Tetra Tech. These decisions will take into account the project data quality objectives as presented above.

Completeness will also be judged by comparison to the monitoring parameters and frequency laid out in the monitoring schedule. For this criterion, completeness is defined as the number of measurements taken divided by the number of measurements scheduled. While the goal for this criterion is 100 percent completeness, a lower percent completeness may be acceptable for a volunteer monitoring program.

## 5.6 Comparability

Two data sets are considered to be comparable when there is confidence that the two sets can be considered equivalent with respect to the measurement of a specific variable or group of variables. Comparability is dependent on the proper design of the sampling program and on adherence to accepted sampling techniques, SOPs (Standard Operating Procedures), and QA (Quality Assurance) guidelines.

Data comparability generated throughout The Villages Study Area will be ensured through application of standardized sampling procedures and convergence with methods and practices of existing monitoring programs (e.g., Washington Department of Ecology), analytical methods (e.g., state-accredited laboratories), units of measurement, and detection limits. The sampling results will be tabulated in a database for comparison between sampling events and sampling sites.

Method detection limits and laboratory methods for surface water quality variables analyzed in The Villages projected are listed in Table 5.0-1.

**Table 5.6-1.** Reporting limits and analytical methods for surface water and sediment data.

| Water Quality Parameter | Units | Minimum Reporting Limit | Accuracy | Method |
|---|---|---|---|---|
| **Surface Water** | | | | |
| Total Phosphorus, TP | µg/L | 2.0 | ±2 | EPA 365.1 |
| Soluble Reactive Phosphorus, SRP | µg/L | 1.0 | ±2 | EPA 365.1 |
| Temperature | °C | 0.5 | ±0.5 | [a] Thermometer |
| | | 0.01 | ±0.1 | [a] HydroLab MS5 |
| Dissolved Oxygen | mg/L | 0.2 (test kit)<br>0.01 (meter) | ±0.4 (test kit)<br>±0.2 (meter) | Bioluminescence Probe (LDO)<br>HydroLab MS5 |
| pH | pH units | 0.1 | ±0.2 | HydroLab MS5 |
| Conductivity | µmhos/cm | 5 | ±1 | HydroLab MS5 |
| [b] Creek/Basin level | inches | 0.5 | ±0.5 | Pressure Transducer |

Note:
[a] Calibration checks of the HydroLab® will be checked with a field thermometer twice during the monitoring year using a NIST-approved calibration thermometer.
[b] Select locations of the Stormwater Basin will be continuously monitored for level (pressure transducer) in order to estimate flow for determining loading estimates of nutrient pollutants.

# 6.0 Sampling Procedures

Sampling methods focus on characterization of surface water chemistry (e.g., dissolved oxygen and pH) and some of the physical properties (e.g., temperature and conductivity). The collection of samples prescribes collection periods, handling procedures, and identification procedures that minimize and identify systematic error in the The Villages MPD project. Performance expectations of the samplers described in this section records information that can be used for data verification and validation.

Achieving accuracy in data generation begins with a sampling procedure that is well conceived, described, and carefully implemented (WSDOE 2001). The sampling locations, sample types, sampling equipment, and methods were briefly described in *Section 2.0 Project Description*. This section of the QAPP discusses the details of the sample collection method and the sample handling and labeling procedures (U.S. EPA 1990).

## 6.1 Sampling Schedule

Stormwater structure and Creek sampling will occur over a six month Index Period; characterizing the variety of storm events through several water quality collection events will capture pollutant loading from intensity and length of individual storms. Measurements will be taken at pre-determined locations for characterizing water quality in each component of the study area and during specific periods of the year (e.g., optimal times for characterizing water quality conditions) based on information reported in Table 6.1-1.

**Table 6.1-1.** Monitoring schedule and timing/frequency for collection of samples.

| Sampling Routine | Jan. | Feb | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Task #1 | Inflow/Outflow Monitoring | | | | | | | | | Inflow/Outflow Monitoring | | |
| Task #2 | Upstream/Downstream Monitoring | | | Continuous Temperature Monitoring | | | | | | Upstream/Downstream Monitoring | | |

Note: Task #1 – Continuous field monitoring parameters and 12 water quality samples collected per storm event (6-8 storm events characterized).
Task #2 - Continuous field monitoring parameters and 12 water quality samples collected per storm event (6-8 storm events characterized).

## 6.2 Sample Collection and Handling

Recommended sample sizes, containers, preservation techniques, and holding times for measurement of the conventional water quality parameters are listed in Table 6.2-1. Sample containers will be kept closed until each set of sample containers is filled. All samples will be placed immediately in a cooler and kept cool and dark until delivered to the lab.

Water samples will be collected for each monitoring program using specific devices that minimize potential for contamination and that enable samples to be collected safely. Each of the monitoring programs presents challenges in locating and collecting a representative water sample. The following collection devices and locations for sampling will be used for each monitoring program:

1. Stormwater Structure Sampling: cleaned collection vessel from bank or in the pond.
2. Creek Sampling: Surface water collected from bank or while standing downstream of the sample collection location.

Note:

a. Bank sampling or instream/pond sampling will be conducted by filling collection bottles supplied by the contract laboratory.

Total phosphorus and soluble reactive phosphorus will be collected in polyethylene or glass bottles provided by the laboratory. Sample bottles and laboratory glassware for lake-related sampling shall be reserved for ultra-low P waters (i.e. lakes, streams, or basins) and can never be used for sampling or analyzing wastewater or agricultural runoff where there is a potential to exceed 100 µg/L. All sample bottles are to be acid washed with 1N HCL six times followed by 6 rinses with de-ionized water (for low-level nutrient analysis and to ensure acid is rinsed away, especially in soft water). Dissolved oxygen samples will be collected in glass bottles.

Whenever possible, samples will be processed within the recommended holding time. However, when volunteers are available for monitoring duties there may be a delay on delivery of samples when collected on weekends; not delivered to the laboratory until Monday. This would exceed the recommended holding time for select variables like soluble reactive phosphorus samples. Lab results from samples exceeding holding times may be accepted as usable data depending on sample storage conditions following collection. Data Management Section 9.0 further outlines how to record variation from QAPP protocol or DQOs (Data Quality Objectives).

**Table 6.2-1.** Containers, preservation techniques, and holding times for measurement of water quality and sediment parameters.

| Parameters | Sample Container | Sample Volume | Preservation | Recommended Holding Time |
|---|---|---|---|---|
| **Surface Water** | | | | |
| Total Phosphorus | Polyethylene, Glass | 50 ml | Cool, <4°C | 28 days |
| Soluble Reactive Phosphorus | Polyethylene, Glass | 125 ml | Filter within 12 hours, Cool <4°C | 48 hours |

## 6.3 Field Recording Methods

When visiting a sampling station, the sample collector will record the following information on water-proof field sheets. Detailed information on field observations should include the following:

- Date
- Time
- Names of sampling personnel
- Number/type of samples collected
- Weather
- Descriptions of any photographs taken
- On-site field measurement (e.g., temperature, water level)
- Color of water
- Unusual conditions (changes in land uses, presence of oil sheens, odors, nuisance conditions).

## 6.4 Sampling Identification and Custody

Each sample bottle will have a waterproof sample identification label or tag. All sample bottles will be labeled with an indelible marker before the time of collection. Sample labels will include station designation, date, time, collectors' initials and type of sample. Special analyses to be performed and any pertinent remarks will also be recorded on the label.

All water quality samples will be delivered by courier to the contract commercial laboratory. Samples will be accompanied by the sample tracking forms with sample numbers, requested analyses, number of bottles, bottle sizes and contact information. An example of the sample tracking (or Chain-of-Custody) form that may be used for The Villages project is presented in the Appendix A.

Water samples will be collected, placed in the labeled transfer bottles, and delivered to the laboratory as soon as possible following collection. Bottleware for each parameter, including the container types and preservatives, will be supplied by the contract laboratory and used to collect samples. Handling requirements for samples collected in Lawson Hills study area will also be provided by the ;laboratory. The samples taken for laboratory analysis will be stored in coolers containing re-sealable bags of ice. The temperature inside the coolers and acid preservation for samples will be verified by the receiving laboratory as a component of field quality control.

All samples will be transferred to the receiving analytical laboratory using Chain of Custody forms. The sample Chain of Custody form (included in Appendix A) acts as a record of sample shipment and a catalog of the contents of each shipment (coinciding with information on the field record), in addition to maintaining a complete record of evidentiary custody transfer. It will contain the following, at a minimum:

- Sampler's name
- Project name
- Page number (e.g., 1 of 1)
- Sample location (facility name, waste stream, sampling point)
- Collection date and time
- Sample number
- Number of containers
- Type of analysis required
- Laboratory recipient signature
- Laboratory receipt date and time

Immediately following the packing of each shipping container, each container (cooler) will be secured with packaging tape.

# 7.0 Measurement Procedures

All analysis methods used for this project are approved standard analytical methods approved for use by the EPA and Ecology (Table 5.0-1). Water quality parameters including pH, dissolved oxygen, conductivity and temperature will be measured in the field during each sampling event using a YSI®, Hydrolab®, or other similar multi-parameter probe. Routine maintenance on the multi-parameter probe will be conducted according to schedules described in the manual provided by the manufacturer and recorded in the maintenance log for each instrument. All technical maintenance or repairs of the instrumentation while in use will be reported to the suppliers' trained staff upon completion of each sampling event for suggestions on corrective action.

The contracted laboratory for the program must be Ecology-certified for drinking-water analyses, and this lab will perform all other physicochemical analyses for this study. The contract laboratory QMP (Quality Management Plan) must be on file with Ecology detailing their quality assurance procedures.

## 7.1 Field Sampling Procedures and Laboratory Analysis Procedures

Procedures describing field sampling are fully described for each parameter in Section 6. Laboratory Analysis procedures are described in Section 5. All water sample analyses except the field measurements of temperature, DO (dissolved oxygen), conductivity, and pH will be completed by fully qualified subcontract laboratories. The analytical chemistry methods to be used, as well as the sample volume requirements, detection limits, and holding times, will be consistent with the laboratory's QA and QC plans and SOPs.

## 7.2 Calibration of Equipment

Care will be taken to ensure that the multi-parameter probes used for field measurement are calibrated and adjusted prior to sampling by using known buffer solutions (low ionic strength buffers) that are included with the instrument. The multi-parameter probes will be calibrated following the manufacturer's designated procedures. Field measurements that exceed the normal range of values for each parameter will require that a calibration check of the instrument be completed upon return from the field. If the calibration check falls outside the acceptable calibration limits, the instrument will be re-calibrated and a new field measurement will be taken at the site. All calibration checks and remediation actions taken will be recorded on field forms and in calibration logs and be available upon request.

Laboratory turnaround times must be within 10 to 20 working days. Any issues regarding analytical data quality will be resolved by the Tetra Tech and Triad Associates Program Directors through regular communication with the laboratory project manager.

Laboratory analytical procedures will follow U.S. EPA (1983, 1991) or APHA et al. (2005) methods. Detection limits and methods are summarized in Section 5 and in Table 5.0-1.

**Table 7.2-1.** Measurement methods for laboratory analysis of surface water and sediment samples.

| Analyte | Sample Matrix | Samples [Number/ Arrival Date] | Expected Range of Results | Reporting Limit (RL) | Sample Prep Method | Analytical (Instrumental) Method |
|---|---|---|---|---|---|---|
| Total Phosphorus | Water | TBD | | 2.0 µg/L | Persulfate, autoclave | EPA 365.1 |
| Soluble Reactive Phosphorus | Water | TBD | | 1.0 µg/L | 0.45u filtration | EPA 365.1 |
| Dissolved Oxygen (DO)[a] | Water | TBD | RL to 12 mg/L | <0.1 mg DO/L | None | Standard Methods 4500-O G [b] |
| pH [a] | Water | TBD | pH 3-9 | pH<1 | None | Standard Methods 4500-$H^+$ [b] |
| Temperature [a] | Water | TBD | 0-30 $^0$C | 32°C | None | Standard Methods 2550B [b] |
| Conductivity a | Water | TBD | RL to 200 µsiemens/cm | 1 Microsiemens/cm[e] | None | USGS NFM 6.3.3A-SW |

NOTES:

a. This is a field measurement.
b. Cell chosen, based on anticipated conductance will determine reporting limit.

# 8.0 Quality Control

Data quality is addressed, in part, by consistent performance of valid procedures documented in Standard Operating Procedures (SOPs). It is enhanced by the training and experience of project staff (Section 3.0) and documentation of project activities (Section 5.0). This QAPP and other supporting materials will be distributed to all sampling personnel. A QC Officer will ensure that samples are taken according to the established protocols and that all forms, checklists, and measurements are recorded and completed correctly during the sampling event.

To establish the precision, accuracy, and representativeness of data obtained from the sampling effort, QC samples for laboratory analyses will be analyzed according to methods reported in Table 5.0-1 and collected at the frequency described in Figure 4.0-2. Three types of QA and QC samples will be analyzed during each sampling event: field blanks, sample QC, and laboratory QC.

**Field blanks** will be collected during each sampling event for all the chemical parameters listed in Section 4.2 to ensure that no contamination was introduced during sample collection, preservation, and handling. At the same time samples are collected, field blanks will be prepared by running analyte-free deionized water through the same equipment used to collect the samples, collecting it in the appropriate sample containers, and preserving it with the same procedures used to preserve the samples. The field blanks will be collected, stored, shipped, and analyzed with the associated samples. In addition, a transport blank will be included in the cooler to determine if cross-contamination among samples occurs. If field blank target analyte concentrations are detected, the field blanks will be examined to determine the source of contamination.

Analyte concentrations measured in samples collected during the event will be considered valid when no corresponding field blank analyte concentrations are detected or when the sample analyte concentrations are at least 10 times the field blank analyte concentrations. If a sample analyte concentration is at least 5 times but less than 10 times the field blank analyte concentration, the laboratory will report the numerical result as an upper limit of the true analyte concentration by the laboratory. If a sample analyte concentration is less than 5 times the field blank sample concentration, the results for that analyte will be considered unacceptable, and the result will be reported as undetected using the value as the limit of quantitation for the sample.

**Analytical QC** samples must be collected for 10 percent of the samples for each sampling event. The additional volumes collected for analytical QC are used to perform duplicate and spiked sample analyses or matrix spike and matrix spike duplicate analyses, depending on method requirements. For the purpose of this collection, sample QC will be evaluated using the criteria established in Table 5.0-1 (Target analytes, analysis methods, and quantitation limits), and as detailed in the reference methods and the laboratory QA Plan. Any results noted as deviating from program or laboratory QC acceptance criteria require immediate investigation, and thorough documentation as detailed in the assessment and response actions of this QAPP. Corrective actions might vary widely from re-preparation and reanalysis to disqualification of sample data for use. Under no circumstances will outlying sample or QC results be submitted without a detailed explanation. The Project Manager should be contacted immediately regarding

deviations for which there is not a suitable analytical corrective action due to holding time or other restrictions, so that recollection can be requested, if possible.

In addition, **laboratory QC** analyses will be performed concurrently with sample preparation and analysis. Laboratory QC includes analysis of appropriate reagent or method blanks for each analytical method or technique, as well as analysis of laboratory control sample or certified standard reference materials as appropriate. Method and reagent blanks should be free from analytes of interest at levels above the project quantitation limits. The same criteria applied to field blanks will be applied to laboratory blanks in sample data interpretation for use. (Analyte concentrations measured in samples collected during the event will be considered valid when no corresponding field blank analyte concentrations are detected or when the sample analyte concentrations are at least 10 times the field blank analyte concentrations. If a field blank analyte concentration is at least 5 times, but less than 10 times the sample analyte concentration, the numerical result will be reported as an upper limit of the true analyte concentration by the laboratory. If a blank sample analyte concentration is less than 5 times the sample analyte concentration, the results for that analyte will be considered unacceptable.)

Following data entry operations, all spreadsheets or database printouts will be proofread using the original handwritten field and laboratory data sheets, where available. Someone other than the data entry specialist will conduct this review.

Measurement performance criteria for data to be collected during this project are discussed in the following sections.

## 8.1 Precision

Precision is a measure of internal method consistency. It is demonstrated by the degree of mutual agreement between individual measurements or enumerated values of the same property of a sample, usually under demonstrated similar conditions. Precision of sampling methods is estimated by taking duplicate samples at the same sampling station at approximately 10 percent of the sites, usually at the final sampling point(s). Duplicate sampling for this system, due to its current impairment status, might indicate significant variability for some parameters because of differing amounts of suspended biological (algal) and organic materials. The usability assessment will include consideration of this condition in evaluating field duplicates as a measure of the entire measurement system. Although precision evaluations within 20 percent relative percent difference (RPD) are generally considered acceptable for water quality studies and analyses, no data validation or usability action will be taken for results in excess of the 20 percent limit. Instead, the results will be noted and compared with the balance of the parameters analyzed for a more comprehensive assessment before any negative assessment, disqualification, or exclusion of data.

This QC calculation also addresses uncertainty due to natural variation and sampling error. Precision is calculated from two duplicate samples by RPD as follows:

$$RPD = \frac{|C_1 - C_2|}{(C_1, C_2)} \times 100\%$$

where $C_1$ = the first of the two values and $C_2$ = the second of the two if precision is to be calculated from three or more replicate samples (as is often the case in laboratory analytical work), the relative standard deviation (RSD) will be used and is calculated as

$$RSD = \frac{s}{\chi}$$

where $\chi$ is the of the replicate samples, and $s$ is the standard deviation and is determined by the following equation:

$$SD = \sqrt{\frac{\sum_{i=1}^{n} (\chi_i - \overline{\chi})^2}{n-1}}$$

where $\chi_i$ is the measured value of the replicate, $\overline{\chi}$ is the mean of the measured values, and $n$ is the number of replicates.

For this project, duplicate field samples will be collected to assess sampling precision and field blanks will accompany samples to assess the potential for contamination in the sample collection process.

## 8.2 Accuracy

Accuracy is defined as the degree of agreement between an observed value and an accepted reference or true value. Accuracy is determined by using a combination of random error (precision) and systematic error (bias) due to sampling and analytical operations. Bias is the systematic distortion of a measurement process that causes errors in one direction so that the expected sample measurement is always greater or lesser to the same degree than the sample's true value. EPA now recommends that the term *accuracy* not be used and that *precision* and *bias* be used instead.

Because accuracy is the measurement of a parameter and comparison to a *truth*, and the true values of environmental physicochemical characteristics cannot be known, use of a surrogate is required. Accuracy of field measurements will be assumed to be determined through use of precision. Accuracy of laboratory chemical measurements will be determined by analysis of matrix spikes and matrix spike duplicates, laboratory control samples (fortified blanks), and other method-specified QC samples. Analyses for specific nutrients will include the use of spiked samples or certified standard reference materials, where appropriate, to determine percent recovery. In the absence of manufacturers' certified range, the recoveries for spiked analytes should not exceed $\pm$20 percent of the true values to be acceptable (unbiased). Bias is assessed in

terms of recovery of a known value for control samples and matrix spikes and is calculated as follows:

***% Recovery (LCS)***:

$$\%\,\mathrm{Recovery} = \frac{analytical\,result}{truevalue} \times 100\%$$

***% Recovery (MS):***

$$\%\,\mathrm{Recovery} = \frac{(spikedsampleresult - sampleresult)}{amountspiked} \times 100\%$$

The accuracy of field equipment for the measurement of temperature, DO, conductivity, salinity, and pH will be determined at a minimum of two points that span the expected range of values for these parameters. Instruments used and procedures for determining accuracy include the following:

**Temperature sensors**:

The accuracy of temperature sensors used in this project will be checked using a standard thermometer.

**DO sensors**:

The accuracy of DO sensors and methods used in this project will have higher standards based on performance of the optical probes. The LDO (luminescent dissolved oxygen) sensor uses luminescent technology that results in the lowest level of drift over continuous use. Calibration is completed using air-saturated water equilibrated over a 12-24 hour period. Determination of dissolved oxygen concentration is adjusted according to barometric pressure at the time of calibration and the probe meter adjusted to the calculated dissolved oxygen concentration.

**Conductivity sensors**:

The accuracy of the salinity and conductivity sensor used in this project will be checked using the autocal solution provided by the manufacturer. The conductivity sensor is calibrated from the autocal solution, which contains a certified 0.449 µS/cm solution (or other low-level conductivity solution).

**pH sensors**:

The accuracy of pH sensors used in this project will be checked using calibration solution provided by the manufacturer (or equivalent quality), which contains any two of three buffer solutions (pH 4, pH 7, pH 10). These solutions will be low-ionic strength with meter calibration accounting for temperature of the solution at the time of meter adjustment.

## 8.3 Representativeness

Data representativeness is defined as the degree to which data accurately and precisely represents a characteristic of a population, parameter, and variations at a sampling point, a process condition, or an environmental condition. It therefore addresses the natural variability or the

spatial and temporal heterogeneity of a population. The number of sampling points and their location within the study area will be examined to ensure that representative sample collection of each area of the watersheds and each target analyte series occurs. Multiple sampling episodes will be conducted over a period of 6 months to obtain sufficient data to determine analyte concentration variability.

## 8.4 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid according to specific criteria and entered into the data management system. To achieve this objective, every effort is made to avoid accidental or inadvertent sample or data loss. Accidents during sample transport or lab activities that cause the loss of the original samples will result in irreparable loss of data. Lack of data entry into the database will reduce the ability to perform analyses, integrate results, and prepare reports. Samples will be stored and transported in unbreakable (plastic) containers wherever possible. All sample processing (sub-sampling, sorting, identification, and enumeration) will occur in a controlled environment within the laboratory. Field personnel will assign a set of continuous identifiers to a batch of samples.

Percent completeness (*%C*) for measurement parameters can be defined as follows:

$$\%C = \frac{V}{T} \times 100\%$$

where $V$ = the number of measurements judged valid and $T$ = the total number of measurements planned. For this project, sampling will be considered complete when no less than 90 percent of the samples collected during a particular sampling event are judged valid.

## 8.5 Comparability

Two data sets are considered to be comparable when there is confidence that the two sets can be considered equivalent with respect to the measurement of a specific variable or group of variables. Comparability is dependent on the proper design of the sampling program and on adherence to accepted sampling techniques, SOPs, and QA guidelines.

**Table 8.5-1.** Quality Control samples; sample types and frequency.

| | Matrix | Field | | Laboratory (%) | | | |
|---|---|---|---|---|---|---|---|
| Parameter | | Blanks | Replicates | Check Standards | Method Blanks | Analytical Duplicates | Matrix Spikes |
| Total Phosphorus | Water | 1 | 1 | Minimum once per quarter | One per analysis batch of 20 samples | Minimum 10% of samples | Minimum 10% of samples |
| Soluble Reactive Phosphorus | Water | 1 | 1 | Minimum once per quarter | One per analysis batch of 20 samples | Minimum 10% of samples | Minimum 10% of samples |

# 9.0 Data Management Procedures

Samples will be documented and tracked on Field Data Record forms, Sample Identification labels, and Chain of Custody records (Appendix A). The Field Task Leader will be responsible for ensuring that these forms are completed and reviewed for correctness and completeness by the designated field QC Officer. Triad Associates, Inc. will maintain copies of these forms in the project files. A sampling report will be prepared following each sampling event. Another person will manually check data entered into any spreadsheet or other format against the original source to ensure accurate data entry. If there is any indication that requirements for sample integrity or data quality have not been met (for samples or measurements collected by Triad Associates, Inc. or contractors), the Triad Associates Project Manager will be notified immediately (with an accompanying explanation of the problems encountered).

Laboratory data will be managed in accordance with established protocols. The data will be submitted to Triad Associates and shared with Yarrow Bay Development Company in hard copy and in electronic database format, as well as scanned data recorded on CD-ROM. The electronic data will be submitted in a format to be negotiated with the lab. At a minimum, the electronic data files will include the date and time of sample collection, date received, date of preparation or analysis, requested parameter, analytical batch ID, results, and data qualifiers. Electronic data will be provided for all samples and QC, including laboratory blanks, control samples, duplicates, and spiked samples analyzed in a format compatible with the requirements of Spokane County's (or Contractor) statistical and modeling software routines. Hard copy data packages will be paginated, fully validated raw data packages that include an analytical narrative with a signed certification of compliance with this QAPP and all method requirements; copies of Chain of Custody forms; sample inspection records; laboratory sample and QC results; calibration summaries; example calculations by parameter; and copies of all sample preparation, analysis, and standards logs adequate to reconstruct the entire analysis. The CD-ROM data will include a full copy of the paginated report scanned and stored in portable document format (PDF) for potential future submission to the client, if requested, and for long-term storage in the project files. Initially, the full raw data package will be submitted to the Tetra Tech and Triad Associates QAO for assessment of compliance with the program goals and guidance.

All computer files associated with the project will be stored in a project sub-directory by Tetra Tech and Triad Associates (subject to regular system backups) and will be copied to disk for archive for 5 years subsequent to project completion (unless otherwise directed).

Data obtained during sampling activities will be entered into field notebooks.
The following is a list of data information that will be kept at Tetra Tech and Triad Associates or the contract laboratory for review upon request:

- Field equipment and chemicals maintenance, cleaning and calibration records;
- Field notebooks;
- Sample Data Sheets;
- Photographs of sampling stations and events;
- Chain-of-Custody forms;
- Laboratory equipment maintenance, cleaning and calibration records;

- Laboratory bench sheets, control charts, and SOPs;
- Records of QA/QC problems and corrective actions (field and/or laboratory);
- Laboratory data QC records;
- Records of data review sheets;
- Duplicate, performance evaluation records and other QA/QC control records (field and laboratory); and
- Data review, verification and validation records.

Data handling equipment will include computer software applications Microsoft Excel® and Access®. Data will be entered into the Access® database in a form compatible with requirements specified by the developer.

Field notebooks will be filled out using *Write in the Rain*® ink or pencil, and will not be erased. Changes will be made by crossing out errors, initialing, and adding correct information. Field notebooks will be bound with numbered pages.

Laboratory data results will be recorded on laboratory data sheets, bench sheets and/or in laboratory logbooks for each sampling event. These records as well as control charts, logbook records of equipment maintenance records, calibration and quality control checks, such as preparation and use of standard solutions, inventory of supplies and consumables, check-in of equipment, equipment parts and chemicals will be kept on file at the laboratory.

Any procedural or equipment problems will be recorded in the field notebooks. Any deviation from this Quality Assurance Project Plan will also be noted in the field notebooks. Data results will include information on field and/or laboratory QA/QC problems and corrective actions.

Standard turnaround time for the analytical samples taken to the contract laboratory will be seven to ten working days.

Chain-of-custody forms will be kept with the sample during transport and will accompany data results back to Spokane County. Training records and data review records will be kept on file at Spokane County and be available on request. All sample analysis records and documents are kept at the contract laboratory and will be available for inspection at any time. In addition to any written report, data collected for the project will be provided electronically via a CD-ROM or e-mail ZIP file.

All records will be retained by the contract laboratory for five years. All project records at Tetra Tech and Triad Associates should be retained permanently.

A Microsoft Access data management system should be developed for use in analyzing and interpreting results. The system should be a relational database that enables the analyst to aggregate data from a variety of tables and identify correlates among media and settings in each study reach.

# 10.0 Audits and Reports

Upon completion of periodic sampling activities, the Project Leader will summarize sampling team progress. Following completion of field sampling, the Project Leader will prepare a field sample collection summary (detailed listing of all sampling participants, sampling locations, and specimens collected) for review by the Project Manager.

Following the completion of each data quality assessment, the Project Manager or designee will prepare a Data Quality Assessment Report and submit copies to the Project Manager for inclusion in project records. The data quality assessment will include any required qualification of data based on observations, relevant laboratory or field QC analyses, or other observations that might affect data quality. The laboratory data can then be incorporated into final sampling event reports to consolidate the information corresponding to each event.

When required, reports summarizing incidents of technical direction requests from laboratory or field staff, required corrective actions, and any other issues affecting data quality or usability will be submitted to the Project Leader. These observations will be compiled and submitted in interim QA reports where warranted, in informal file memoranda to the Project Manager for inclusion in the project files. These regular QA reports and memoranda, along with routine data quality assessments performed throughout the data collection will be the basis of the final QA report for this collection effort.

## 10.1 Audits

Should the sampling staff, laboratory personnel or Project Manager find errors in sampling or analysis, the Project Manager will notify the party responsible for the error or deficiency and recommend methods of correcting the deficiency. The responsible party will then take action to correct the problem and will report corrections to the QAO and Project Manager.

The Quality Assurance Officer will review the QA/QC procedures used for the sampling and analytical program. Procedures for this review, included in Section 8, will meet the data quality criteria specified in Section 4. The Project Manager will ensure the documentation of these assessment records in the Draft and Final Reports.

## 10.2 Reports to Management

Sampling results will be summarized in the draft and final reports completed for this project. These reports will include the field and laboratory results of project assessments listed above. Reports will be submitted to the Project Manager at Triad Associates. Email updates will be submitted to the Project Manager after each sampling event providing notification of any issues or problems for which corrective actions have been taken. The results of all corrective actions or data quality assessments will be reported to the Project Manager from Triad Associates upon completion.

Standard reporting formats will be developed and approved by Triad Associates Managers. These will be used to produce interim and final reports following completion of this study.

Consistency in reporting of progress, data generation, and interpretations will be maintained in order to improve comparability between related studies and where data-sharing is needed between monitoring efforts that address each of the project tasks (*e.g.*, mass loading analysis, stormwater runoff, etc.).

# 11.0 Data Verification and Validation

Data validation and review services provide a method for determining the usability and limitations of data and provide a standardized data quality assessment. All Field Data forms and Chain of Custody forms will be reviewed by the Project Leader (assisted by the Project Manager, as needed) for completeness and correctness. The Project Leader will be responsible for reviewing data entries and transmissions for completeness and adherence to QA requirements. Data quality will be assessed by comparing entered data to original data or by comparing results to the measurement performance criteria summarized in Section 4.2 to determine whether to accept, reject, or qualify the data. Results of the review and validation processes will be reported to the Program Manager. Analytical data provided by the laboratories will be reviewed before its release by the laboratory QAO, and laboratory manager, and will include a certifying statement that the data included have been reviewed for compliance with the reference methods and this QAPP.

The Project Lead or designee will review all Field Data Record forms and Chain of Custody forms. The Project QAO will review a minimum of 5 percent of the Field Data Record forms and other records. Any discrepancies in the records will be reconciled with the appropriate associated field personnel and will be reported to the Project Lead. Laboratory validation and verification methods are outside the scope of this QAPP; however, it is expected that the laboratory validation and verification will include an assessment of completeness and method compliance, including verification of sample calculations and of any required manual data entry. The analytical narrative reports will include discussions of attainment of the program goals as established herein. Samples submitted to the sample analysis laboratory will include Chain of Custody forms documenting sampling time and date. This information will be checked by the analytical laboratory to ensure that holding times have not been exceeded. Violations of holding times will be reported (by the laboratory) to the Project Lead, who will consult with the Project QAO to develop corrective action recommendations and define any recommended technical directives. Finally, the Project Manager will be consulted with deficiencies, observations, and findings, as well as with corrective action and technical directive recommendations for consideration and approval.

Data verification and validation includes completeness of data entry into a data management system, correctness of data entry, and assurance that entries fall within the expected range for each analyte. These exercises prevent generation of poor results when analyzing data for cause-and-effect relationships or for status of environmental resources. Missing or incorrect data can bias description of environmental resources and result in false conclusions.

## 11.1 Data Review, Validation & Verification Requirements

Analytical results will be reviewed and validated in accordance with EPA documents, including the *USEPA Guidance on Environmental Data Verification and Validation* (EPA QA/G-8), 2002b; the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 540/R-94/012), 1999; and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 540/R-94/013), 1994b. Tetra Tech will conduct data review and validation using the following methods on 10% of the

primary project samples, including their associated quality control duplicates and laboratory quality control samples.

- A review of sample handling and analytical and field data for completeness, accuracy, holding time compliance, and quality control (QC) sample frequency compliance.
- Evaluation of laboratory blank samples.
- Evaluation of the accuracy and precision of field duplicate samples, laboratory control samples (LCS), and matrix spike/spike duplicate (MS/MSD) samples.
- Assignment of data qualifiers, when necessary, to reflect limitations identified in the data assessment process.
- Estimation of completeness.

## 11.2 Validation and Verification Methods

The following procedures will be used to determine if data meets the measurement and data quality objectives and criteria specified in Section 4. If data QA/QC procedures do not meet the specified criteria, the Quality Assurance Officer will review all field and laboratory records to determine the cause. If equipment failures are limiting the usability of the data, calibration and maintenance procedures will be reviewed and changed as needed. If sampling or analytical procedures are the source of failures, methods will be reviewed to resolve the errors. Any changes or modifications to quality control procedures will be approved by the Project Manager prior to inclusion in the QAPP.

**Review of Sample Handling**

Proper sample handling techniques are required to ensure sample integrity. During data review, the sample handling procedures identified below are evaluated to determine potential effects on data quality.

- Review of field sample collection and preservation procedures to determine whether they were completed in accordance with the requirements specified by the analytical methods.
- Review of chain-of-custody documentation to ensure control and custody of the samples was maintained.
- Review of sample holding times between sample collection, extraction, and analysis (see Table 6.2-1 in Section 6).
- Review of sample conditions upon receipt at the contract laboratory.
- Review of Quality Assurance/Quality Control (QA/QC) Samples. Specific procedures for review of QA/QC samples are included in the sections below.

**Laboratory Blank Samples**

Laboratory blank samples (method and instrument blanks) are laboratory-prepared, analyte-free samples used to detect the introduction of contamination or other artifacts into the laboratory sample handling and analytical process. These blanks play an especially important role in sampling programs involving trace-level analyses or analytes that are common solvents found in a laboratory. None of the analytes of concern for this project are common laboratory contaminants. If a contaminant is discovered in the analytical sample at less than five times the concentration it is found in the laboratory blank, it will be considered a laboratory contaminant. Otherwise, it will be reported as an environmental contaminant.

**Laboratory Control Samples**

Laboratory control samples are used to assess analytical performance under a given set of standard conditions. Synthetic samples, containing some or all of the analytes of interest at known concentrations, are prepared independently from calibration standards. The samples consist of laboratory control samples (LCS) and laboratory control sample duplicates (LCSD). Laboratory control samples will be analyzed with each analytical batch. LCS may be used to estimate analytical accuracy and precision by comparing measured results to actual concentrations. LCS/LCSD percent recoveries will be checked on laboratory reports to ensure they are within the limits set by the EPA methods listed in Table 4.0-3.

LCS are also duplicated in the laboratory and then analyzed in an identical manner by the laboratory to assess the laboratory's internal precision. The analytical precision is expressed by the relative percent difference (RPD) (equation 11.2-1). Analytical precision and accuracy should meet the method criteria listed in Table 4.0-3 in Section 4.

$$\frac{X_1 - X_2}{X_{ave}} x100 = RPD$$

$X_1$ = duplicate no. 1
$X_2$ = duplicate no. 2
$X_{ave}$ = mean of two sample duplicates
RPD = relative percent difference

**Matrix Spike and Matrix Spike Duplicates**

Matrix spike samples are actual field samples to which known amounts of select compounds (one, or more, of the analytes of interest) are added. Both spiked and unspiked aliquots (sample portions) are analyzed. The difference between the concentration of the spike compound(s) in the spiked and unspiked aliquots is compared to the amount of spike added before the extraction process. Since actual samples are used for the recovery determination, the matrix effects can be evaluated. Usually expressed as a percentage of the mass of the spiked amount, spike recovery is the measurement of accuracy anticipated for the sample matrix. Percent recoveries will be compared to EPA method specific recoveries listed in Table 4.0-3.

Matrix spike samples are also duplicated in the laboratory and then analyzed in an identical manner by the laboratory to assess sample reproducibility and the laboratory's internal precision. The analytical precision is expressed by the RPD between the measurement results of the two duplicate samples. Analytical precision and accuracy should meet the criteria provided in Table 4.0-3. MS/MSD samples will be run on each batch of samples.

**Field Duplicate Samples**

Field duplicate samples will be collected simultaneously with a primary project sample. Duplicates are treated in the same manner as the primary sample during all phases of sample collection, handling, and analysis. Duplicate sample results are used to assess precision, including variability associated with both the laboratory analysis and the sample collection process (i.e., QC purposes). At least one duplicate field sample will be collected and submitted blind to the laboratory during each sampling date for this program.

Analytical results will be reviewed for agreement with each other or their respective reporting limits and evaluated for comparability. Estimated results quantified below the reporting limit and qualified with a "J" flag are not considered significant for the purpose of data agreement. The comparison between project and field duplicate sample results should meet RSD (relative standard deviation) criteria for each method listed in Table 4.0-3.

**Reporting Limits**

The reporting limits are the lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory conditions. For many analytes, the reporting limit analyte concentration is selected by the laboratory as the lowest non-zero standard in the calibration curve. Sample reporting limits vary based on sample matrix and dilution of the samples during analysis. Reporting limits should be equal to or below the PQLs (Practical Quantitation Limits) provided in Table 7.0-1 for each method.

**Data Qualification**

Qualifiers will be applied to QC samples when acceptance criteria are not met and corrective action is not performed or is unsuccessful. These same qualifiers will be applied to the associated sample data, as defined in the following table.

**Table 11.2-1.** Data Qualifiers.

| Qualifier | Description |
|---|---|
| J | The analyte was positively identified, the quantitation is estimated. |
| U | The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit (MDL). |
| F | The analyte was positively identified but the associated numerical value is below the reporting limit (RL). |
| R | The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria. |
| B | The analyte was found in an associated blank, as well as in the sample. |
| M | A matrix effect was present. |
| H | Analysis was performed outside of the recommended holding time. |

**Completeness**

Completeness is calculated after the QC data have been evaluated, and the qualifiers have been applied to the sample data. Invalid results, broken or spilled samples, and samples that are unable to be analyzed for other reasons are included in the assessment of completeness. The criteria and calculation to determine completeness are provided in Section 5. If data cannot be qualified to meet completeness goals, Tetra Tech will consult with the Project Manager to determine if additional sampling should be performed to accomplish data quality objectives.

## 11.3 Reconciliation with User Requirements

The Project Manager will review all data deliverables upon receipt from the lab. Laboratory results will be checked for data qualifiers entered by the lab to ensure that sample collection and preservation procedures were adequate and that laboratory analysis procedures met quality assurance objectives. Any outstanding issues will be addressed immediately with the lab and/or sampling staff to ensure that project quality assurance objectives are met.

The Project Manager will review and validate the data during interim reporting to management and final reporting stages of the project. If there are any problems with quality sampling and analysis, these issues will be addressed immediately and methods will be modified to ensure that data quality objectives are being met. Modifications to monitoring will require notification to the Project Manager and subsequent edits to the approved QAPP.

# 12.0 Data Quality (Usability) Assessment

As soon as possible following completion of the sample collection and analyses, Tetra Tech and Triad Associates will assess the precision, accuracy, and completeness measures and compare them with the criteria discussed in Section 4.0. This will be the final determination of whether the data collected are of the correct type, quantity, and quality to support their intended use for this project. Any problems encountered in meeting the performance criteria (or uncertainties and limitations in the use of the data) will be discussed with the project QA personnel and will be reconciled if possible.

## 12.1 Interpreting Data

**Task 1**
Total phosphorus loads will be calculated (inflow and outflow of the stormwater pond) and compared against the performance goal of 50% removal. This goal for removal applies to influent concentration ranges from 0.1 – 0.5 mg/L total phosphorus.

**Task 2**
Total phosphorus concentrations and loads will be compared between upstream and downstream of the treated stormwater input location to Rock Creek. Continuous temperature monitoring data generated for each of the monitoring periods (October 1$^{st}$ - March 31$^{st}$ and April 1$^{st}$ – September 30$^{th}$) will be compared (upstream to downstream of the point of entry of stormwater), especially during the warmer months, for influence, if any, on temperature of the receiving water (Rock Creek).

# 13.0 References

APHA. 2005. Standard Methods for the Examination of Water and Wastewater, 21st Edition. American Public Health Association Press, Washington, D.C.

Kindig, A.C. 2008. The Villages MPD Water Quality Technical Analysis Evaluation. Appendix M in the Villages FEIS. September 10, 2008.

King County. 2000. Lake Sawyer Management Plan. King County Surface Water Management. July 2000.

The Lawson Hills Master Planned Development Permit: Conditions of Development Approval. Exhibit C: Conditions #16, #81, and #85.

United States Environmental Protection Agency (USEPA). 1990. Recommended Protocols for Measuring Conventional Water Quality Variables and Metals in Fresh Water of the Puget Sound Region. Prepared by Tetra Tech, Inc. Bellevue, WA for the USEPA Region X Office of Puget Sound, Seattle, WA.

EPA (U.S Environmental Protection Agency). 1998. EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5). Office of Research and Development, EPA/600/R-98/018. Washington, D.C. 136p.

USEPA (U.S. Environmental Protection Agency). 2002. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review,* OSWER 9240.1-35, EPA 540-R-01-008. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.

Washington State Department of Ecology (WSDOE). 2001. Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies. February 2001. No. 01-03-003. Olympia, WA.

Washington State Department of Ecology (WSDOE). 2009. Lake Sawyer Total Phosphorus Total Maximum Daily Load: Water Quality Implementation Plan. Publication No. 09-10-053. Olympia, WA. 75p.

# Appendix A

## Chain-of-Custody Form
## Field Data Report Form
## Meter Calibration Log Form

**Aquatic Research Inc.**
3927 Aurora Avenue N, Seattle, WA 98103
P 206.632.2715 | F 206.632.2417

www.aquaticresearchinc.com

SHEET _____ OF _____

CLIENT: **CHAIN-OF-CUSTODY RECORD**
SAMPLING DATE: _____
SAMPLERS: _____

PROJECT ID: _____
CASE FILE NO.: _____
DATA RECORDED BY: _____

**SAMPLE INFORMATION**

| SAMPLE ID | DATE/TIME COLLECTED | PARAMETERS | BOTT # | NOTES |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| Printed Name | | | | |
| Signature | | | | |
| Affiliation | | | | |

| | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| Printed Name | | | | |
| Signature | | | | |
| Affiliation | | | | |

Miscellaneous Notes (Hazardous Materials, Quick turn-around time, etc.): _____

3927 Aurora Ave. N | Seattle, WA 98103 | 206.632.2715

TETRA TECH

# FIELD DATA REPORT FORM

Y M M D D
0

SURVEY ..... SAMPLER ..... PAGE ..... OF .....

| STATION NO. | STATION NAME | TIME | TEMP °C | DO mg/L | DO # | pH | TRUE pH METER | COND. µMHOS/CM | REDOX POTENTIAL | *L/M/R | DEPTH (meters) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

WEATHER:

ADDITIONAL COMMENTS:

Tt (Rev. 11/07)

* L = Left Bank; M = Middle Bank; R = Right Bank

Project: _____ Date: _____

# Meter Calibration Log Form

Cond Meter# _____ Initial Cell Constant _____ Standard _____ µmhos/cr Meter _____ µmhos/cm

pH Meter # _____ pH Probe # _____

Thermistor # _____ Thermistor _____ °C Thermometer _____ °C Correction _____

**DAY 1**

Low Ionic Strength pH Value vs. Temp. °C

| | 7 | 10 |
|---|---|---|
| **10** | 7.01 | 9.27 |
| **15** | 6.99/7.00 | 9.23 |
| **20** | 6.98 | 9.19 |

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

**DAY 2**

Initial Cell Constant _____ Standard _____ µmhos/cm Meter _____ µmhos/cm

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

**DAY 3**

Initial Cell Constant _____ Standard _____ µmhos/cm Meter _____ µmhos/cm

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

# Quality Assurance Project Plan
# for
# Nutrient Removal Effectiveness by Basin A (Wet Pond #1 & #2) to Lawson Creek: Lake Sawyer Implementation Plan

## Yarrow Bay Development Company
## Contract Work 20-15-010-00
## Contract/Project Number:

## January 2011


### Prepared by
Robert Plotnikoff, Harry Gibbons, Shannon Brattebo and Gene Welch

Tetra Tech, Inc.
1420 Fifth Avenue
Seattle, WA 98101


### Prepared for
**BD Lawson Partners, LP**

Approval Signatures:

_____ Date: _____
Project Manager

_____ Date: _____
Senior Technical Staff

_____ Date: _____
Additional

_____ Date: _____
Additional

# Table of Contents and Distribution List

**1.0 BACKGROUND** 1

**2.0 PROJECT DESCRIPTION** 2

**A) BMP/LID EFFECTIVENESS MONITORING** 2

**B) LAWSON CREEK MONITORING** 3

**3.0 ORGANIZATION AND SCHEDULE** 5

**5.0 SAMPLING PROCESS DESIGN** 11

**6.0 SAMPLING PROCEDURES** 18

6.1 SAMPLING SCHEDULE 18
6.3 FIELD RECORDING METHODS 20
6.4 SAMPLING IDENTIFICATION AND CUSTODY 20

**7.0 MEASUREMENT PROCEDURES** 22

**8.0 QUALITY CONTROL** 24

**9.0 DATA MANAGEMENT PROCEDURES** 29

**10.0 AUDITS AND REPORTS** 31

**11.0 DATA VERIFICATION AND VALIDATION** 33

**12.0 DATA QUALITY (USABILITY) ASSESSMENT** 38

**13.0 REFERENCES** 40

**APPENDIX A** 41

## Distribution List

| Name, Title | Phone, Fax, E-mail | Mailing Address |
|---|---|---|
| **Yarrow Bay Development Company** | | |
| | | |
| | | |
| | | |
| **Triad Associates, Inc.** | | |
| | | |
| | | |
| | | |
| **Tetra Tech, Inc. Surface Water Group** | | |
| | | |
| | | |
| | | |

# 1.0 Background

## 1.1 Study Area and Surroundings

Lake Sawyer is located near the city of Black Diamond, and is a popular recreational resource for the area. Lake Sawyer is 280 acres in size and has a watershed of approximately 8,300 acres. The watershed is divided into three sub-basins: Rock Creek, Ravensdale Creek, and the nearshore area of Lake Sawyer. These sub-basins of the Lake Sawyer watershed serve as management areas for water quality improvement. Lake Sawyer serves as part of the migratory pathway for late-winter Coho salmon (*Oncorhynchus kisutch*) which spawn in Ravensdale Creek and Rock Creek drainages. Resident rainbow trout, cutthroat trout, kokanee, and several warm-water fish species are present in Lake Sawyer (King County 2000).

The lake has generally good water quality, but experiences elevated phosphorus concentrations. In the 1970's Black Diamond lacked sewage treatment plant facilities and effluent was treated by septic tanks and drainfields, including a city septic tank located just south of Auburn-Black Diamond Road that discharged to Ginder Creek. These methods for effluent treatment also resulted in elevated concentrations of fecal coliform, nitrogen, and biochemical oxygen demand in Ginder Creek.

High nutrient concentrations from the treated sewerage effluent were likely associated with high phosphorus concentrations which promoted increased loading to Lake Sawyer. The Black Diamond Wastewater Treatment Plant (WWTP) began operation in 1981 and discharged effluent to a natural wetland coincident with the mouth of Rock Creek. The strategy for use of a natural wetland as part of the treatment train used to abate pollutants in the WWTP effluent rapidly became ineffective as signs of eutrophication in Lake Sawyer appeared. Algal blooms were commonly detected in the late 1980's. The treatment plant using the wetland system was closed. The Department of Ecology (Ecology) developed a Total Maximum Daily Load (TMDL) model for Lake Sawyer predicting phosphorus concentrations under various loading scenarios.

# 2.0 Project Description

## 2.1 Tasks

The following tasks for this project have been developed:

Task 1. Evaluate Water Quality conditions in Wet Pond #1 to determine total phosphorus load from The Lawson MPD development areas into Basin A.
Task 2. Determine effectiveness of the Wet Pond in removing phosphorus load and conveyance to receiving water (Lawson Creek a tributary to Jones Lake and Rock Creek).

## 2.2 Objectives

Information in this Quality Assurance Project Plan (QAPP) is organized to provide sampling and analysis methods that will generate data and interpretations necessary to address the following objective:

2. To determine whether annual average total phosphorus discharge concentrations from a representative Large Wet Pond are as predicted in the EIS water quality technical report (FEIS Appendix M, A.C. Kindig & Co. 2008) for the Lawson Hills MPD (Master Planned Development) and are meeting regulatory requirements of the approved MPD permit.

## 2.3 BMP and Stream Sampling

The monitoring strategy for this project includes elements that evaluate nutrient (phosphorus input) introduction to the constructed stormwater Best Management Practice (BMP) (Wet Pond #1), determine the efficiency of the BMP in removing entrained nutrients, and describe the resulting output phosphorus concentration. The second step in the monitoring strategy measures the nutrient load in the receiving water (Lawson Creek and ultimately to Rock Creek) to determine the nutrient portion originating from the stormwater BMP (Wet Pond #1) and the background load originating from other sources in the watershed. This QAPP has been developed to ensure that all methods used and all data collected during the project is defensible and repeatable. The QAPP has been developed for monitoring effectiveness of BMP implementation as required by the Washington Department of Ecology's QAPP Guidance.

### a) BMP/LID Effectiveness Monitoring

Purpose: Determine efficiency of BMP facilities in removal of phosphorus routed to each structure from overland flow in the Development during storm events. The parameter of concern is phosphorus.

Sampling of the BMP facility (Wet Pond #1) within Lawson Development will occur during 6 to 8 storm events per year. Storm water samples will be collected during the wet season which is defined as October 1st through March 31st. Samples will be collected from the input and outflow of each BMP facility in order to determine nutrient removal efficiencies. Samples will be collected manually. The grab samples will be delivered to an accredited Washington Laboratory and analyzed for total phosphorus and soluble reactive phosphorus.

For the purposes of defining a single storm event, the minimum amount of rainfall should be at least 0.2 inches and the event must be preceded by a dry period of at least 4 hours. Two of the 8 storm events should have a minimum amount of rainfall of at least 0.5 inches. To account for the variability of each sampling event, storm conditions, and pond discharge, each sampling event will last for four hours or for the duration of the storm. Samples will be collected at defined time intervals, i.e. one sample every hour, which will result in 4 or less nutrient samples per storm event. Flow at the facility input and outflow will be measured continuously with a data logger, which will be installed prior to the start of monitoring activities. Flow data will be used to volume and time-weight nutrient concentrations in and out of each facility over a storm event.

### b) Lawson Creek Monitoring

Purpose: Determine the nutrient load contributed from the Lawson Development to the receiving water (Lawson Creek). Use results from the nutrient loading analysis to inform on contributions from the Development versus other non-point sources.

Grab samples will be collected in Lawson Creek at several locations to characterize both baseline nutrient conditions and conditions during storm events. Grab samples will be collected in Lawson Creek just upstream of and downstream of each BMP facility within the Development, as well as upstream of all Development property. Collecting nutrient samples from these locations will provide information on nutrient loading not only from Lawson Development but also from other non-point sources within the watershed. Baseline nutrient monitoring in Lawson Creek will include collection of samples at the above mentioned locations on a monthly basis. Baseline monitoring of Lawson Creek will provide information on nutrient concentrations and conditions without influence or impact from the Lawson Development. Samples will also be collected in Lawson Creek during storm events to help characterize nutrient loading associated with stormwater runoff. Storm event sampling in Lawson Creek will correspond with sampling of BMP facilities within the Lawson Development. All samples collected in Lawson Creek will be analyzed for total phosphorus and soluble reactive phosphorus. Flow measurements and field parameters (e.g., temperature, pH, conductivity, and dissolved oxygen) will also be collected during each sampling event.

## 2.4 Water Quality Constituents to Monitor (Origin of Phosphorus Sources)

Phosphorus, both soluble reactive and total phosphorus are important constituents ultimately controlling DO levels in receiving water and in Lake Sawyer. Analytical procedures used to determine concentration of phosphorus are extremely important and need to be consistent. Soluble reactive phosphorus should be determined on samples filtered through phosphorus-free filters using the EPA 365.1 ascorbic acid method. Total phosphorus should be determined with the exception of filtering, by the same method for soluble reactive phosphorus following digestion with persulfate according to Standard Methods (APHA 2005). A contract laboratory

that can meet these rigorous reporting limit and laboratory performance requirements is required for analysis of phosphorus forms.

Other constituents that will be monitored include temperature, dissolved oxygen concentration, pH, and specific conductance. These constituents can be used to indicate sources of contamination in the same way dissolved oxygen concentrations are usually used as a surrogate to indicate increased concentrations of phosphorus and loading present in the basin.

**Precipitation**

Phosphorus content within precipitation should be determined in bulk and wet fall (rain-containing phosphorus in dry and wet forms). Review of precipitation data collected in the fall from the October 1st through March 31st will be used to forecast volume and intensity of rainfall events throughout this monitoring period.

One location for a unit to monitor wet and dry fall (use a rain gage) on a weekly- or twice-monthly basis should be adequate. The rainfall patterns measured during the proposed monitoring period will provide perspective on the amount of airborne phosphorus that might be expected to be loading into the Wet Pond and the receiving stream (Lawson Creek).

# 3.0 Organization and Schedule

The purpose of this document is to present the quality assurance project plan (QAPP) for collecting water quality and other data to assess the chemical, physical, and biological characteristics of non-point sources of pollution affecting Lake Sawyer. A team of technical professionals will conduct scientific investigations that include: 1) collection of environmental data (routine monitoring), 2) collection and interpretation of phosphorus loading data from a stormwater BMP (Wet Pond #1), and 3) interpret technical information used to inform on effectiveness of the BMP operation.

This QAPP provides general descriptions of the work to be performed to collect the samples, the standards to be met, and the procedures that will be used to ensure that the data are scientifically valid and defensible and that uncertainty has been reduced to a known and practical minimum. It describes the procedures used to obtain concentrations of the desired chemical analytes and other parameters of concern.

The organizational aspects of a program provide the framework for conducting tasks. The organizational structure can also facilitate project performance and adherence to quality control (QC) procedures and quality assurance (QA) requirements. Key project roles are filled by those persons responsible for ensuring the collection of valid data and the routine assessment of the data for precision and accuracy, as well as the data users and the person(s) responsible for approving and accepting final products and deliverables. The key personnel and responsibilities for this project for Lawson Hills MPD (Master Planned Development) in the Lake Sawyer drainage in urban Black Diamond are listed in Table 3.0-1.

**Table 3.0-1.** Project/Task organization and responsibility summary.

| Personnel | Responsibility | Address/E-Mail | Phone Number |
|---|---|---|---|
| Al Fure,Triad Associates, Inc. | Project Manager | Al Fure<br>Triad Associates, Inc.<br>12112 115th Avenue NE<br>Kirkland, WA 98034<br>afure@triadassociates.net | (425)216-2110 |
| Harry Gibbons, Tetra Tech, Inc.<br>Robert Plotnikoff, Tetra Tech, Inc. | Co-Project Leads | Tt Surface Water Group<br>1420 Fifth Avenue, Ct. E<br>Seattle, WA 98101<br>harry.gibbons@tetratech.com<br>robert.plotnikoff@tetratech.com | (206)728-9655 |
| Name, Position, Tetra Tech, Inc. | Field Lead | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |
| Name, Position, Tetra Tech, Inc. | Quality Assurance Officer (QAO) | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |
| Name, Position, Tetra Tech, Inc. | Data Manager | Tt Surface Water Group<br>Address<br>City, WA<br>Email address | Contact Information |

Each component of this project has specific milestones and products. The project schedule contains several deliverables in draft and final form. The schedule for each of these products is outlined in Table 3.0-2.

**Table 3.0-2.** Project deliverables and typical target calendar dates for Lawson Hills MPD monitoring.

| Deliverables | Target Date |
|---|---|
| Final Approved QA Project Plan | One month prior to start of sampling |
| Sampling Start/End | October 1st/March 31st |
| Draft Study Report | May 31st |
| Final Study Report | July 15th |
| Submit Data to Client | Within 45 days following each sampling event |

## 3.1 Priority of Task Implementation

The monitoring strategies described in this QAPP are implemented simultaneously in order to determine source and quantity of phosphorus loading. Each of the monitoring strategies will build upon the base of information informing on source and magnitude of non-point pollution originating from The Lawson Hills Development stormwater basin and from other sources. The following is the suggested priority for implementing each monitoring strategy:

3. Wet Pond #1 Stormwater Sampling (nutrient sources)
4. Lawson Creek Receiving Water Sampling (transport to Jones Lake)

# 4.0 Quality Objectives

Data quality objectives (DQOs) are qualitative and quantitative statements that clarify the intended use of the data, define the types of data needed to support the decision, identify the conditions under which the data should be collected, and specify tolerable limits on the probability of making a decision error due to uncertainty in the data (if applicable). Data users develop DQOs to specify the data quality and quantity needed to support specific decisions.

## 4.1 Decision (Data) Quality Objectives

Data, or decision, quality objectives determine when data will be used to select between management alternatives or to determine compliance with a standard. Management decisions for improving lake quality by using monitoring data will require generation of an adequate quantity of data influenced by numbers, locations, and frequency of samples from sites that must be analyzed. A set of data eventually used to make management decisions will meet various standards or comply with minimum requirements of a statistical evaluation and have the ability to distinguish between two environmental conditions (e.g., impaired or not-impaired) with an acceptable level of uncertainty.

The quality of an environmental monitoring program can be evaluated in three steps: (1) establishing scientific assessment quality objectives, (2) evaluating program design to evaluate whether the objectives can be met, and (3) establishing assessment and measurement quality objectives that can be used to evaluate the appropriateness of the methods being used in the program. The quality of a particular data set is some measure of the types and amount of error associated with the data.

Sources of error or uncertainty in statistical inference are commonly grouped into two categories:

3. *Sampling error:* The difference between sample values and *in situ* "true" values from unknown biases due to sampling design. Sampling error includes natural variability (spatial heterogeneity and temporal variability in population abundance and distribution) not specifically accounted for in a design (for design-based inference), and variability associated with model parameters or incorrect model specification (for model-based inference).
4. *Measurement error:* The difference between sample values and in situ "true" values associated with the measurement process. Measurement error includes bias and imprecision associated with sampling methodology, specification of the sampling unit, sample handling, storage, preservation, identification, instrumentation, and the like.

The data requirements for this project encompass aspects of laboratory analysis and database management to reduce sources of errors and uncertainty in the use of the data.

## 4.2 Measurement Quality Objectives

### Type and Frequency of Laboratory Quality Control Samples

For samples analyzed at a commercial laboratory, the type and frequency of the quality control samples to be analyzed are summarized in Table 4.0-1 and Table 4.0-2. Additional quality control sampling will be conducted in the field and is detailed in Section 8.0 Quality Control Procedures.

**Table 4.2-1.** Laboratory quality control samples.

| Type of Quality Control Sample | Description |
|---|---|
| Method Blank | Reagent grade sample matrix analyzed to provide an indication of laboratory contamination. |
| Check Sample | Generally purchased, prepared independently from analytical standards and used to provide an indication of the accuracy of the analytical determination. |
| Laboratory Duplicate | A second aliquot of a sample, processed in exactly the same manner. |
| Matrix Spike | An aliquot of a sample to which known quantities of analytes are added, processed in exactly the same manner. |
| Field Duplicate | A split sample, labeled in a similar manner as regular samples, submitted to laboratory, and processed in exactly the same manner. |

### Precision

Precision is a measure of the scatter in the data due to random error that is expected primarily from sampling and/or analytical procedures. Laboratory duplicates for assessment of precision will be analyzed at a frequency of about 10 percent of the total number of samples submitted to the laboratory or at least one per sample batch. In addition, field duplicates will be collected for approximately 10 percent of samples submitted to the laboratory. For sample results which exceed the reporting detection limit (RDL), the relative percent difference (RPD) will be less than or equal to 20 percent.

This QC calculation also addresses uncertainty due to natural variation and sampling error. Precision is calculated from two duplicate samples by relative percent difference (RPD) as follows:

$$RPD = \frac{|C_1 - C_2|}{Mean(C_1, C_2)} x100$$

where $C_1$ = the first of the two values and $C_2$ = the second of the two values.

For laboratory sample results with values less than 5 units, the precision criterion will be less than or equal to 1.5 units rather than the RPD to account for the effect of smaller values on percent differences. No criteria are presented for duplicates which are below the RDL, as these data are provided for informational purposes only. For instance, where one result is below the RDL, professional judgment will be used in determining the compliance of the data to project requirements.

**Table 4.2-2**. Frequency of laboratory quality control samples.

| Parameter | Matrix | Check Standards | Method Blanks | Analytical Duplicates | Matrix Spikes | Field Duplicates |
|---|---|---|---|---|---|---|
| Total Phosphorus | Water | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | Minimum 10% of samples |
| Soluble Reactive Phosphorus | Water | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | One per analysis batch of 20 samples | Minimum 10% of samples |

**Bias**

Bias provides an indication of the accuracy of the analytical data, as provided by both method blanks and percent recovery of target analytes from reagent and field sample matrix. Check samples will be used to provide compliance criteria for bias. The percent recovery of the matrix spikes and standard reference materials will be less than or equal to +/- 20 percent.

Method blank samples will be analyzed with each batch of samples. Results for method blank samples should be less than the minimum detection limit for each parameter.

**Accuracy**

Accuracy is a measure of confidence that describes how close a measurement is to its "true" value. Methods to ensure accuracy of field measurements include instrument calibration and maintenance procedures. Sample handling procedures and procedures for verification of data influence the accuracy of results.

Analytical laboratory accuracy is normally determined by the percent recovery of the target analyte in spiked samples and also by the recoveries of the surrogates in all samples and Quality Control samples. Laboratory accuracy ranges are specified in the contract laboratory Quality Management Plan and depend on the parameter being measured. Accuracy is calculated as follows:

$$\%Rec = \frac{\text{Analyzed value}}{\text{True value}} \times 100$$

The Tetra Tech Technical Lead will ensure the contract laboratory accuracy by meeting %Recovery (Rec) values specified by EPA methods and listed in Table 4.0-3.

In addition, performance of field equipment and operation of meters will be evaluated by meeting relative percent difference goals for each of the parameters (Table 4.0-4). Accuracy for field measurements cannot be measured directly, but can be evaluated based on description of equipment performance.

**Table 4.2-3.** Measurement quality objectives for laboratory analysis.

| | Precision | | Bias/Accuracy | | | |
|---|---|---|---|---|---|---|
| **Parameter** | **Analytical Duplicate Samples** | **Field Duplicate Samples** | **Check Standard (LCS)** | **Matrix Spikes** | **Method Blanks** | **Lowest Concentrations of Interest** |
| | **Relative Percent Difference (RPD)** | **Relative Percent Difference (RPD)** | **% Recovery Limits** | **% Recovery Limits** | **Units** | **Units of Concentration** |
| **Surface Water** | | | | | | |
| Total Phosphorus | ±20 [a] | ±20 [a] | ±10 | ±20 | < RL | Reporting Limit [b], µg/L |
| Soluble Reactive Phosphorus | ±20 [a] | ±20 [a] | ±10 | ±20 | < RL | Reporting Limit [b], µg/L |

[a] For sample results with values of less than 5 units, the precision criterion will be less than or equal to 1.5 units rather than the RPD to account for the effect of smaller values on percent differences.

[b] The Required Reporting Limit (or Minimum Detection Limit) is listed in Table 5.0-1.

**Table 4.2-4.** Measurement quality objectives for field measurements.

| | **Precision (from replicate measurements** | **Bias/Accuracy** | **Lowest Values of Interest** |
|---|---|---|---|
| **Parameter** | **Relative Percent Difference (RPD)** | **(% Recovery) (deviation from true value)** | **Units of Measurement** |
| Dissolved Oxygen (LDO)[a†] | 10 | N/A | Minimum detection limit [b] |
| Conductivity† | 5 | N/A | Minimum detection limit [b] |
| pH† | 5 | N/A | 4.0 units |
| Temperature† | 5 | N/A | 0 °C |
| Flow | 0.5 inches | N/A | 0.5 inches |

[a] Luminescent Dissolved Oxygen Probe.

[b] The Minimum Detection Limit is listed in Table 5.0-1.

[†] Parameters collected continuously at 15-minute intervals.

# 5.0 Sampling Process Design

## 5.1 Sampling Design and Rationale

Nutrient introduction into Lake Sawyer has been identified as a primary cause for promoting nuisance algal blooms caused by periodic high total phosphorus concentrations during portions of the year. Following almost two decades of phosphorus reduction efforts, concentrations of this nutrient are generally being met throughout the year. Ecology and the City of Black Diamond have expended effort in fixing some of the obvious source problems for nutrient in the drainage; primarily on-site septic systems and drainage from a wetland originally expected to treat effluent discharged from a wastewater treatment plant. Other basin-wide implementation measures have been identified by the Department of Ecology (WSDOE 2009).

The Lawson Hills MPD permit approval includes conditions to identify the estimated maximum annual volume of total phosphorus from the MPD site and that will comply with the TMDL for Lake Sawyer, and to monitor phosphorus coming from the MPD site. The sampling design and rationale presented are intended to provide information that can be used in an adaptive management program and continually update/upgrade the phosphorus monitoring program.

The sampling design meets the requirements from the City of Black Diamond as Conditions of Approval for the Lawson Hills Master Planned Development approval (Exhibit C: Conditions 76, 82, and 85) that monitoring of the stormwater treatment facility and the influence on receiving water be described. Exceedence of the allowable estimated maximum annual volume of total phosphorus discharged from the Development site will require a redesign of existing structures, modify the design of new treatment facilities, or implementation of another project in the Lake Sawyer basin that results in a reduction in total phosphorus so the annual maximum load is below the target quantity outlined in the Condition.

The proposed monitoring strategy addresses each of the potential sources of non-point nutrient total phosphorus contributions and methods that would detect presence of this pollutant and directly address tasks described in Section 2.0. The Sampling Process Design is described here based on each of these tasks:

**Task 1**. Evaluate Water Quality conditions in Wet Pond #1 (Basin A) to determine total phosphorus load from the Lawson Hills Development Basin.

**WET POND #1**

Locations: Outlet/Inlet of the first constructed Wet Pond (BMP)

C. Parameters:

The Wet Ponds are designed to remove phosphorus from surface water runoff originating in the Lawson Hills Development. The efficiency and the effectiveness of this BMP will determine whether the structure is operating properly, needs retrofitting or maintenance, or informs on contaminant loads in stormwater that were greater than expected. The data from these monitoring efforts serve as a feedback mechanism for making future decisions in meeting treated water requirements. The monitoring effort and decision-making

process in determining effectiveness of stormwater phosphorus mitigation is directed by Condition #85 in Exhibit C of Lawson Hills MPD agreement.

Parameters will be measured below the Wet Pond Outlet and the Incoming conduit to the Wet Pond. Total Phosphorus will be sampled as well as flow (both incoming and outgoing). Continuous field monitoring will be conducted at the outlet of the Wet Pond in order to measure direct effects of stormwater on the natural streams and delayed effects once the storms have subsided. In addition, flow measurements will be recorded by calibrating a flow rating curve with pressure transducer readings. The pressure transducer readings will be converted into flow estimates following collection and download of this data. Periodic check for actual flow measurements will be made during sample collection for total phosphorus.

The total phosphorus load will be calculated using the flow estimates from both incoming and outgoing conduits associated with the Wet Pond. Since loading rates combine flow and parameter concentration, data comparisons can be made directly among months or years. These comparisons provide insight into short and long-term patterns for determining the effectiveness of the implementation plan for this drainage.

D. Reasons for Monitoring Design and Parameter Analysis:
Requirements for discharge of total phosphorus from the Wet Pond #1 are set by the Lawson Hills MPD Permit Conditions, and expected to be entrained in surface water runoff from storm events. For this reason, the winter wet season is targeted for most of the monitoring and is the time of year when water levels are sufficiently high to enable the Wet Pond to begin working as designed.

**Task 2.** Determine effectiveness of Wet Pond #1 in removing phosphorus load and conveyance to receiving water (Lawson Creek).

**LAWSON CREEK** (Conveyance from Wet Pond #1 to receiving water)

The Wet Pond may change some of the physical characteristics of the water depending on residence time, incoming volume, and time of year. These factors may influence surface water temperature which is of concern during the warmer months of the year. A sampling design describing temperature was recommended in order to demonstrate the potential for the Wet Pond to increase temperature of surface water in a natural receiving water stream. This sampling schedule targets a period of the year when this parameter is most likely to increase due to climate conditions and when declining flows cease to dissipate heat energy.

## 5.2 Sampling Locations and Frequencies

The two tasks described in Section 5.1 require collection of physicochemical field data and water samples for laboratory analysis. The following description of proposed study sites and design for sampling (at discrete sites) are presented in descriptive and map form (Figure 5.2-1). The proposed discrete sites for sampling will be field-verified prior to final location. Once selections are made for sites they will be monumented by using a GPS locational unit.

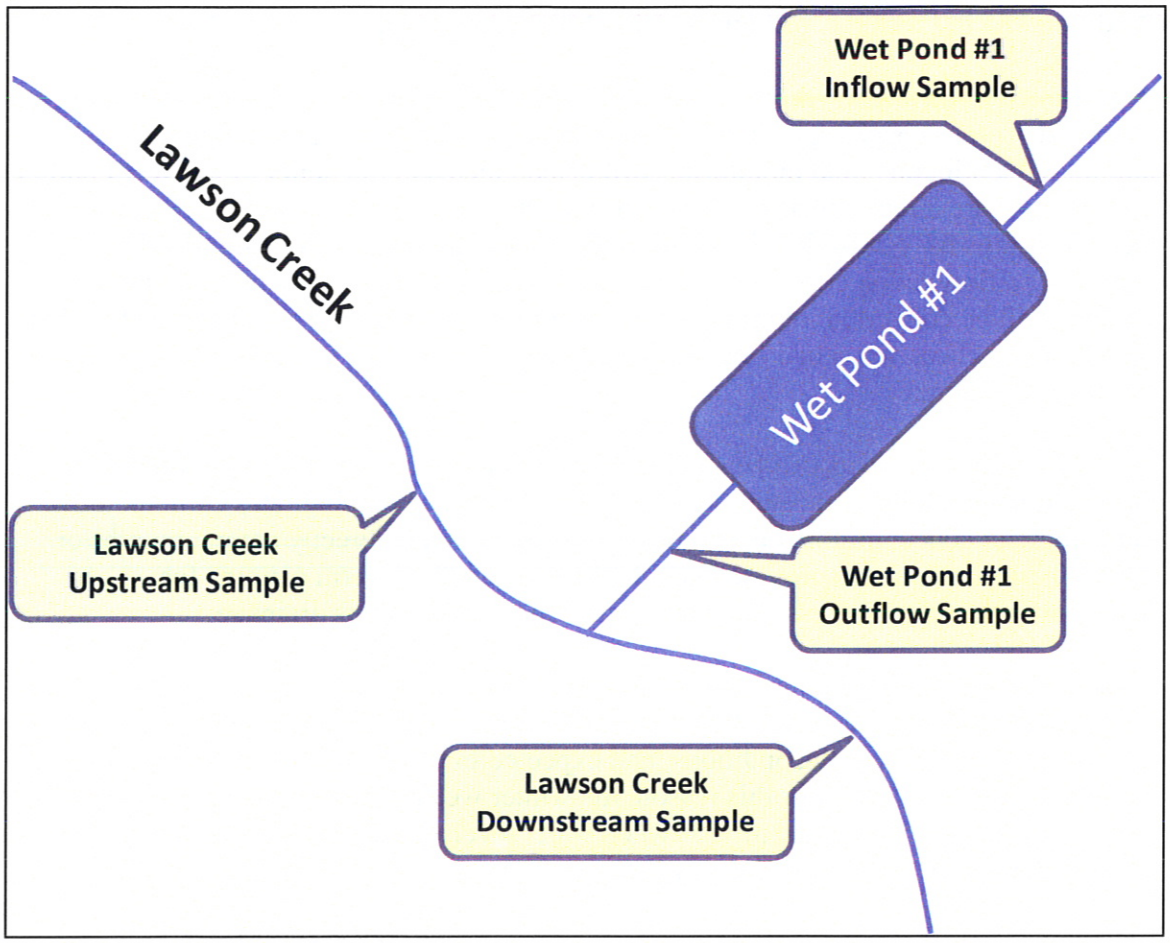



**Figure 5.2-1.** Proposed sample sites and locations for collection of surface water data.

Task 1. Wet Pond #1

B. Frequency of Sample Collection:

Sample collection timing and frequency is determined by the occurrence of storm events. Ideally, monitoring will be completed at 6-8 storm events; each with varying intensities of rainfall and longevity of the storm event. Monitoring based on these 2 factors provides some level of detail in understanding optimum effectiveness of the BMP (Wet Pond) under varying storm conditions. The period of monitoring is established from October 1st through March 31st of each calendar year for five years following the completion of development that discharges into Wet Pond #1. Completion shall be defined as the date the City's maintenance bond, as required by BDMC 14.04.360 and the Black Diamond Engineering Design and Construction Standards (Exhibit "E") Section 1.5, is released or expires for such facility.

Grab samples will be collected in order for sample integrity to be maintained and for making observations about environmental conditions when an investigator is present. Information gathered about physical characteristics of the water, how water travels to and from the Wet Pond, and surrounding information that might explain why specific water quality problems might arise are reasons why being present and sampling affords a greater opportunity to construct information for the critical feedback loop.

Task 2. Lawson Creek

C. Upstream of Discharge

b. Surface Water Parameters (Continuous data)

The upstream site for monitoring surface water quality will serve as the control for determining if the Wet Pond discharge is a cause for increased downstream temperatures. The monitoring frequency is recommended at 15 minute intervals so that 7-day average of the daily maximum temperatures (7-DADMax) can be calculated from the continuous monitoring data. Additional monitoring effort will be conducted at both the upstream and downstream site; including continuous monitoring with a HydroLab® unit. Additional parameters that will be collected are:

- Water Temperature
- Dissolved Oxygen concentration
- Conductivity
- pH

These additional parameters are important for understanding how the receiving water assimilates effects from additional nutrient input. Conversely, the receiving water may, at times, have higher concentrations of nutrient input that uses up the assimilative capacity. By generating a greater amount of information about water quality characteristics, identification of nutrient sources will assist in making drainage-level management decisions to meet the goals of the TMDL Implementation Strategy.

D. Downstream of Discharge

a. Surface Water Parameters (Continuous data)

Comparison between upstream and downstream (of the Wet Pond outfall) water quality characteristics will evaluate the effect Wet Pond water has on receiving water. The upstream/downstream sample design with site located in close proximity to the outfall will isolate effects from the BMP output. Water quality parameter measurements will be sampled identical to those described for the upstream site above. In addition, flow

monitoring will be conducted using pressure transducers calibrated using a flow-rating curve. The total phosphorus loads originating from upstream of the Wet Pond outfall will be combined with Wet Pond loads and the resulting load compared against the downstream estimate. This analytical exercise is intended to reveal the dynamic nature of nutrients in natural streams receiving treated stormwater.

## 5.3 Order (Timing) of Sampling

Non-point source pollutants enter streams and lakes at different rates during each season throughout the year with transfer and distance of travel influenced primarily by climatic events. Each of the tasks addresses potential source and pathway for introduction of nutrient pollution into nearby receiving streams and accounts for optimal time of year when pollution is either detectable or loading is greatest to surface water. In some cases, a division of the year that differentiates wet- from dry seasons is used as a contrast to estimate the magnitude of nutrient pollution load introduced during a time period.

The following are descriptive examples for sampling dates and frequencies for satisfying study objectives in each of the tasks:

**Task 1**

- Sampling Intervals for the constructed Wet Pond #1; Rainfall Events and No. of Visits
  October 1st – March 31st (6-8 visits)

**Task 2**

- Lawson Creek upstream/downstream sampling:
  October 1st – March 31st
  Continuous Surface Water Temperature monitoring (15-minute intervals)
  Dissolved Oxygen concentration (15-minute intervals)
  Conductivity (15-minute intervals)
  pH (15-minute intervals)

  April 1st – September 30th
  Continuous Surface Water Temperature monitoring (15-minute intervals)

## 5.4 Representativeness

Sample representativeness will be addressed at two distinct steps in the data collection process. During sample collection, the use of generally accepted sampling procedures in a consistent manner throughout the project will ensure that representative samples are obtained. During sub-sampling within the laboratory, samples will be mixed by inverting several times to ensure that the analytical sub-sample is representative of the sample container contents.

**Wet Pond #1 Water Quality**

Representativeness will be achieved through collection of samples aimed at capturing the characteristics of the stormwater entering and exiting the BMP. The Wet Pond #1 will be sampled to characterize water quality during multiple storms of varying sizes.

**Lawson Creek Water Quality**
Data will be gathered to characterize water quality constituents during dry and wet seasons of the year. Additional detail is provided for description of storm events in Western Washington and the characteristics that will be described by stormwater monitoring (see Section 5.2, Task 2).

## 5.5 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid according to specific criteria and are entered into the data management system. Lack of data entry into the database will reduce the ability to perform analyses, integrate results, and prepare reports. Therefore, every effort is made to avoid accidental or inadvertent sample or data loss. Accidents during sample transport or lab activities that cause the loss of the original samples will result in irreparable loss of data. Samples will be stored and transported in unbreakable (plastic) containers wherever possible. All sample processing (sub-sampling, sorting, identification, and enumeration) will occur in a controlled environment within the laboratory. Field personnel will assign a set of continuous identifiers to a batch of samples.

Percent completeness (*%C*) for measurement parameters can be defined as follows:

$$\%C = \frac{V}{T} x100$$

where $V$ = the number of measurements judged valid and $T$ = the total number of measurements taken

For this project, sampling will be considered complete when no less than 90 percent of the samples collected during a particular sampling event are judged valid. At any time where data are not complete, decisions regarding re-sampling and/or re-analysis will be made by Tetra Tech. These decisions will take into account the project data quality objectives as presented above.

Completeness will also be judged by comparison to the monitoring parameters and frequency laid out in the monitoring schedule. For this criterion, completeness is defined as the number of measurements taken divided by the number of measurements scheduled. While the goal for this criterion is 100 percent completeness, a lower percent completeness may be acceptable for a volunteer monitoring program.

## 5.6 Comparability

Two data sets are considered to be comparable when there is confidence that the two sets can be considered equivalent with respect to the measurement of a specific variable or group of variables. Comparability is dependent on the proper design of the sampling program and on adherence to accepted sampling techniques, SOPs (Standard Operating Procedures), and QA (Quality Assurance) guidelines.

Data comparability generated throughout The Lawson Hills Development will be ensured through application of standardized sampling procedures and convergence with methods and practices of existing monitoring programs (e.g., Ecology), analytical methods (e.g., state-accredited laboratories), units of measurement, and detection limits. The sampling results will be tabulated in a database for comparison between sampling events and sampling sites.

Method detection limits and laboratory methods for surface water quality variables analyzed in the Lawson Hills project are listed in Table 5.0-1.

**Table 5.6-1.** Reporting limits and analytical methods for surface water and sediment data.

| Water Quality Parameter | Units | Minimum Reporting Limit | Accuracy | Method |
|---|---|---|---|---|
| **Surface Water** | | | | |
| Total Phosphorus, TP | µg/L | 2.0 | ±2 | EPA 365.1 |
| Soluble Reactive Phosphorus, SRP | µg/L | 1.0 | ±2 | EPA 365.1 |
| Temperature | °C | 0.5 | ±0.5 | [a] Thermometer |
| | | 0.01 | ±0.1 | [a] HydroLab |
| Dissolved Oxygen | mg/L | 0.2 (test kit)<br>0.01 (meter) | ±0.4 (test kit)<br>±0.2 (meter) | Bioluminescence Probe |
| pH | pH units | 0.1 | ±0.2 | HydroLab |
| Conductivity | µmhos/cm | 5 | ±1 | HydroLab |
| [b] Creek/Basin level | inches | 0.5 | ±0.5 | Pressure Transducer |

Note:
[a] Calibration checks of the HydroLab will be checked with a field thermometer twice during the monitoring year using a NIST-approved calibration thermometer.
[b] Select locations of the Stormwater Basin will be continuously monitored for level (pressure transducer) in order to estimate flow for determining loading estimates of nutrient pollutants.

# 6.0 Sampling Procedures

Sampling methods focus on characterization of surface water chemistry (e.g., phosphorus, dissolved oxygen and pH) and some of the physical properties (e.g., temperature and conductivity). The collection of samples prescribes collection periods, handling procedures, and identification procedures that minimize and identify systematic error in the Lawson Hills project. Performance expectations of the samplers described in this section records information that can be used for data verification and validation.

Achieving accuracy in data generation begins with a sampling procedure that is well conceived, described, and carefully implemented (WSDOE 2001). The sampling locations, sample types, sampling equipment, and methods were briefly described in *Section 2.0 Project Description.* This section of the QAPP discusses the details of the sample collection method and the sample handling and labeling procedures (U.S. EPA 1990).

## 6.1 Sampling Schedule

Wet Pond and Creek sampling will occur over a six month Index Period; characterizing the variety of storm events through several water quality collection events will capture pollutant loading from intensity and length of individual storms. Measurements will be taken at pre-determined locations for characterizing water quality in each component of the study area and during specific periods of the year (e.g., optimal times for characterizing water quality conditions) based on information reported in Table 6.1-1.

**Table 6.1-1.** Monitoring schedule and timing/frequency for collection of samples.

| Sampling Routine | Jan. | Feb | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Task #1 | Inflow/Outflow Monitoring | | | | | | | | | Inflow/Outflow Monitoring | | |
| Task #2 | Upstream/Downstream Monitoring | | | Continuous Temperature Monitoring | | | | | | Upstream/Downstream Monitoring | | |

Note: Task #1 – Continuous field monitoring parameters and 12 water quality samples collected per storm event (6-8 storm events characterized).
Task #2 - Continuous field monitoring parameters and 12 water quality samples collected per storm event (6-8 storm events characterized).

## 6.2 Sample Collection and Handling

Recommended sample sizes, containers, preservation techniques, and holding times for measurement of the conventional water quality parameters are listed in Table 6.2-1. Sample containers will be kept closed until each set of sample containers is filled. All samples will be placed immediately in a cooler and kept cool and dark until delivered to the lab.

Water samples will be collected for each monitoring program using specific devices that minimize potential for contamination and that enable samples to be collected safely. Each of the monitoring programs presents challenges in locating and collecting a representative water sample. The following collection devices and locations for sampling will be used for each monitoring program:

3. Wet Pond #1 Sampling: cleaned collection vessel from bank or in the pond.
4. Creek Sampling: Surface water collected from bank or while standing downstream of the sample collection location.

Note:

b. Bank sampling or instream/pond sampling will be conducted by filling collection bottles supplied by the contract laboratory.

Total phosphorus and soluble reactive phosphorus will be collected in polyethylene or glass bottles provided by the laboratory. Sample bottles and laboratory glassware for lake-related sampling shall be reserved for ultra-low P waters (i.e. lakes, streams, or basins) and can never be used for sampling or analyzing wastewater or agricultural runoff where there is a potential to exceed 100 µg/L. All sample bottles are to be acid washed with 1N HCL six times followed by 6 rinses with de-ionized water (for low-level nutrient analysis and to ensure acid is rinsed away, especially in soft water). Whenever possible, samples will be processed within the recommended holding time. This would exceed the recommended holding time for select variables like soluble reactive phosphorus samples. Lab results from samples exceeding holding times may be accepted as usable data depending on sample storage conditions following collection. Data Management Section 9.0 further outlines how to record variation from QAPP protocol or DQOs (Data Quality Objectives).

**Table 6.2-1**. Containers, preservation techniques, and holding times for measurement of water quality and sediment parameters.

| Parameters | Sample Container | Sample Volume | Preservation | Recommended Holding Time |
|---|---|---|---|---|
| **Surface Water** | | | | |
| Total Phosphorus | Polyethylene, Glass | 50 ml | Cool, <4°C | 28 days |
| Soluble Reactive Phosphorus | Polyethylene, Glass | 125 ml | Filter within 12 hours, Cool <4°C | 48 hours |

## 6.3 Field Recording Methods

When visiting a sampling station, the sample collector will record the following information on water-proof field sheets. Detailed information on field observations should include the following:

- Date
- Time
- Names of sampling personnel
- Number/type of samples collected
- Weather
- Descriptions of any photographs taken
- On-site field measurement (e.g., temperature, water level)
- Color of water
- Unusual conditions (changes in land uses, presence of oil sheens, odors, nuisance conditions).

## 6.4 Sampling Identification and Custody

Each sample bottle will have a waterproof sample identification label or tag. All sample bottles will be labeled with an indelible marker before the time of collection. Sample labels will include station designation, date, time, collectors' initials and type of sample. Special analyses to be performed and any pertinent remarks will also be recorded on the label.

All water quality samples will be delivered by courier to the contract commercial laboratory. Samples will be accompanied by the sample tracking forms with sample numbers, requested analyses, number of bottles, bottle sizes and contact information. An example of the sample tracking (or Chain-of-Custody) form that may be used for the Lawson Hills project is presented in Appendix A.

Water samples will be collected, placed in the labeled transfer bottles, and delivered to the laboratory as soon as possible following collection. Bottleware for each parameter, including the container types and preservatives, will be supplied by the contract laboratory and used to collect samples. Handling requirements for samples collected in Lawson Hills study area will also be provided by the ;laboratory. The samples taken for laboratory analysis will be stored in coolers containing re-sealable bags of ice. The temperature inside the coolers and acid preservation for samples will be verified by the receiving laboratory as a component of field quality control.

All samples will be transferred to the receiving analytical laboratory using Chain of Custody forms. The sample Chain of Custody form (included in Appendix A) acts as a record of sample shipment and a catalog of the contents of each shipment (coinciding with information on the field record), in addition to maintaining a complete record of evidentiary custody transfer. It will contain the following, at a minimum:

- Sampler's name
- Project name
- Page number (e.g., 1 of 1)
- Sample location (facility name, waste stream, sampling point)
- Collection date and time
- Sample number
- Number of containers
- Type of analysis required
- Laboratory recipient signature
- Laboratory receipt date and time

Immediately following the packing of each shipping container, each container (cooler) will be secured with packaging tape.

# 7.0 Measurement Procedures

All analysis methods used for this project are approved standard analytical methods approved for use by the EPA and Ecology (Table 5.0-1). Water quality parameters including pH, dissolved oxygen, conductivity and temperature will be measured in the field during each sampling event using a YSI®, Hydrolab®, or other similar multi-parameter probe. Routine maintenance on the multi-parameter probe will be conducted according to schedules described in the manual provided by the manufacturer and recorded in the maintenance log for each instrument. All technical maintenance or repairs of the instrumentation while in use will be reported to the suppliers' trained staff upon completion of each sampling event for suggestions on corrective action.

The contracted laboratory for the program must be Ecology-certified for drinking-water analyses, and this lab will perform all other physicochemical analyses for this study. The contract laboratory QMP (Quality Management Plan) must be on file with Ecology detailing their quality assurance procedures.

## 7.1 Field Sampling Procedures and Laboratory Analysis Procedures

Procedures describing field sampling are fully described for each parameter in Section 6. Laboratory Analysis procedures are described in Section 5. All water sample analyses except the field measurements of temperature, DO (dissolved oxygen), conductivity, and pH will be completed by fully qualified subcontract laboratories. The analytical chemistry methods to be used, as well as the sample volume requirements, detection limits, and holding times, will be consistent with the laboratory's QA and QC plans and SOPs.

## 7.2 Calibration of Equipment

Care will be taken to ensure that the multi-parameter probes used for field measurement are calibrated and adjusted prior to sampling by using known buffer solutions (low ionic strength buffers) that are included with the instrument. The multi-parameter probes will be calibrated following the manufacturer's designated procedures. Field measurements that exceed the normal range of values for each parameter will require that a calibration check of the instrument be completed upon return from the field. If the calibration check falls outside the acceptable calibration limits, the instrument will be re-calibrated and a new field measurement will be taken at the site. All calibration checks and remediation actions taken will be recorded on field forms and in calibration logs and be available upon request.

Laboratory turnaround times must be within 10 to 20 working days. Any issues regarding analytical data quality will be resolved by the Tetra Tech and Triad Associates Program Director through regular communication with the laboratory project manager.

Laboratory analytical procedures will follow U.S. EPA (1983, 1991) or APHA et al. (1998) methods. Detection limits and methods are summarized in Section 5 and in Table 5.0-1.

**Table 7.2-1.** Measurement methods for laboratory analysis of surface water and sediment samples.

| Analyte | Sample Matrix | Samples [Number/ Arrival Date] | Expected Range of Results | Reporting Limit (RL) | Sample Prep Method | Analytical (Instrumental) Method |
|---|---|---|---|---|---|---|
| Total Phosphorus | Water | TBD | | 2.0 µg/L | Persulfate, autoclave | EPA 365.1 |
| Soluble Reactive Phosphorus | Water | TBD | | 1.0 µg/L | 0.45u filtration | EPA 365.1 |
| Dissolved Oxygen (DO)[a] | Water | TBD | RL to 12 mg/L | <0.1 mg DO/L | None | Standard Methods 4500-O G [b] |
| pH [a] | Water | TBD | pH 3-9 | pH<1 | None | Standard Methods 4500-$H^{+}$ [b] |
| Temperature [a] | Water | TBD | 0-30 $^{0}$C | 32°C | None | Standard Methods 2550B [b] |
| Conductivity a | Water | TBD | RL to 200 µsiemens/cm | 1 Microsiemens/cm[e] | None | USGS NFM 6.3.3A-SW |

NOTES:

c. This is a field measurement.

d. Cell chosen, based on anticipated conductance will determine reporting limit.

# 8.0 Quality Control

Data quality is addressed, in part, by consistent performance of valid procedures documented in Standard Operating Procedures (SOPs). It is enhanced by the training and experience of project staff (Section 3.0) and documentation of project activities (Section 5.0). This QAPP and other supporting materials will be distributed to all sampling personnel. A QC Officer will ensure that samples are taken according to the established protocols and that all forms, checklists, and measurements are recorded and completed correctly during the sampling event.

To establish the precision, accuracy, and representativeness of data obtained from the sampling effort, QC samples for laboratory analyses will be analyzed according to methods reported in Table 5.0-1 and collected at the frequency described in Figure 4.0-2. Three types of QA and QC samples will be analyzed during each sampling event: field blanks, sample QC, and laboratory QC.

**Field blanks** will be collected during each sampling event for all the chemical parameters listed in Section 4.2 to ensure that no contamination was introduced during sample collection, preservation, and handling. At the same time samples are collected, field blanks will be prepared by running analyte-free deionized water through the same equipment used to collect the samples, collecting it in the appropriate sample containers, and preserving it with the same procedures used to preserve the samples. The field blanks will be collected, stored, shipped, and analyzed with the associated samples. In addition, a transport blank will be included in the cooler to determine if cross-contamination among samples occurs. If field blank target analyte concentrations are detected, the field blanks will be examined to determine the source of contamination.

Analyte concentrations measured in samples collected during the event will be considered valid when no corresponding field blank analyte concentrations are detected or when the sample analyte concentrations are at least 10 times the field blank analyte concentrations. If a sample analyte concentration is at least 5 times but less than 10 times the field blank analyte concentration, the laboratory will report the numerical result as an upper limit of the true analyte concentration by the laboratory. If a sample analyte concentration is less than 5 times the field blank sample concentration, the results for that analyte will be considered unacceptable, and the result will be reported as undetected using the value as the limit of quantitation for the sample.

**Analytical QC** samples must be collected for 10 percent of the samples for each sampling event. The additional volumes collected for analytical QC are used to perform duplicate and spiked sample analyses or matrix spike and matrix spike duplicate analyses, depending on method requirements. For the purpose of this collection, sample QC will be evaluated using the criteria established in Table 5.0-1 (Target analytes, analysis methods, and quantitation limits), and as detailed in the reference methods and the laboratory QA Plan. Any results noted as deviating from program or laboratory QC acceptance criteria require immediate investigation, and thorough documentation as detailed in the assessment and response actions of this QAPP. Corrective actions might vary widely from re-preparation and reanalysis to disqualification of sample data for use. Under no circumstances will outlying sample or QC results be submitted without a detailed explanation. The Project Manager should be contacted immediately regarding

deviations for which there is not a suitable analytical corrective action due to holding time or other restrictions, so that recollection can be requested, if possible.

In addition, **laboratory QC** analyses will be performed concurrently with sample preparation and analysis. Laboratory QC includes analysis of appropriate reagent or method blanks for each analytical method or technique, as well as analysis of laboratory control sample or certified standard reference materials as appropriate. Method and reagent blanks should be free from analytes of interest at levels above the project quantitation limits. The same criteria applied to field blanks will be applied to laboratory blanks in sample data interpretation for use. (Analyte concentrations measured in samples collected during the event will be considered valid when no corresponding field blank analyte concentrations are detected or when the sample analyte concentrations are at least 10 times the field blank analyte concentrations. If a field blank analyte concentration is at least 5 times, but less than 10 times the sample analyte concentration, the numerical result will be reported as an upper limit of the true analyte concentration by the laboratory. If a blank sample analyte concentration is less than 5 times the sample analyte concentration, the results for that analyte will be considered unacceptable.)

Following data entry operations, all spreadsheets or database printouts will be proofread using the original handwritten field and laboratory data sheets, where available. Someone other than the data entry specialist will conduct this review.

Measurement performance criteria for data to be collected during this project are discussed in the following sections.

## 8.1 Precision

Precision is a measure of internal method consistency. It is demonstrated by the degree of mutual agreement between individual measurements or enumerated values of the same property of a sample, usually under demonstrated similar conditions. Precision of sampling methods is estimated by taking duplicate samples at the same sampling station at approximately 10 percent of the sites, usually at the final sampling point(s). Duplicate sampling for this system, due to its current impairment status, might indicate significant variability for some parameters because of differing amounts of suspended biological (algal) and organic materials. The usability assessment will include consideration of this condition in evaluating field duplicates as a measure of the entire measurement system. Although precision evaluations within 20 percent relative percent difference (RPD) are generally considered acceptable for water quality studies and analyses, no data validation or usability action will be taken for results in excess of the 20 percent limit. Instead, the results will be noted and compared with the balance of the parameters analyzed for a more comprehensive assessment before any negative assessment, disqualification, or exclusion of data.

This QC calculation also addresses uncertainty due to natural variation and sampling error. Precision is calculated from two duplicate samples by RPD as follows:

$$RPD = \frac{|C_1 - C_2|}{(C_1, C_2)} \times 100\%$$

where $C_1$ = the first of the two values and $C_2$ = the second of the two if precision is to be calculated from three or more replicate samples (as is often the case in laboratory analytical work), the relative standard deviation (RSD) will be used and is calculated as

$$RSD = \frac{s}{\bar{\chi}}$$

where $\chi$ is the of the replicate samples, and $s$ is the standard deviation and is determined by the following equation:

$$SD = \sqrt{\frac{\sum_{i=1}^{n}\left(\chi_i - \bar{\chi}\right)^2}{n-1}}$$

where $\chi_i$ is the measured value of the replicate, $\bar{\chi}$ is the mean of the measured values, and $n$ is the number of replicates.

For this project, duplicate field samples will be collected to assess sampling precision and field blanks will accompany samples to assess the potential for contamination in the sample collection process.

## 8.2 Accuracy

Accuracy is defined as the degree of agreement between an observed value and an accepted reference or true value. Accuracy is determined by using a combination of random error (precision) and systematic error (bias) due to sampling and analytical operations. Bias is the systematic distortion of a measurement process that causes errors in one direction so that the expected sample measurement is always greater or lesser to the same degree than the sample's true value. EPA now recommends that the term *accuracy* not be used and that *precision* and *bias* be used instead.

Because accuracy is the measurement of a parameter and comparison to a *truth*, and the true values of environmental physicochemical characteristics cannot be known, use of a surrogate is required. Accuracy of field measurements will be assumed to be determined through use of precision. Accuracy of laboratory chemical measurements will be determined by analysis of matrix spikes and matrix spike duplicates, laboratory control samples (fortified blanks), and other method-specified QC samples. Analyses for specific nutrients will include the use of spiked samples or certified standard reference materials, where appropriate, to determine percent recovery. In the absence of manufacturers' certified range, the recoveries for spiked analytes should not exceed $\pm$20 percent of the true values to be acceptable (unbiased). Bias is assessed in terms of recovery of a known value for control samples and matrix spikes and is calculated as follows:

***% Recovery (LCS)***:

$$\%\,\mathrm{Recovery} = \frac{analyticalresult}{truevalue} \times 100\%$$

***% Recovery (MS):***

$$\%\,\mathrm{Recovery} = \frac{(spikedsampleresult - sampleresult)}{amountspiked} \times 100\%$$

The accuracy of field equipment for the measurement of temperature, DO, conductivity, salinity, and pH will be determined at a minimum of two points that span the expected range of values for these parameters. Instruments used and procedures for determining accuracy include the following:

**Temperature sensors**:

The accuracy of temperature sensors used in this project will be checked using a standard thermometer.

**DO sensors**:

The accuracy of DO sensors and methods used in this project will have higher standards based on performance of the optical probes. The LDO (luminescent dissolved oxygen) sensor uses luminescent technology that results in the lowest level of drift over continuous use. Calibration is completed using air-saturated water equilibrated over a 12-24 hour period. Determination of dissolved oxygen concentration is adjusted according to barometric pressure at the time of calibration and the probe meter adjusted to the calculated dissolved oxygen concentration.

**Conductivity sensors**:

The accuracy of the salinity and conductivity sensor used in this project will be checked using the autocal solution provided by the manufacturer. The conductivity sensor is calibrated from the autocal solution, which contains a certified 0.449 µS/cm solution (or other low-level conductivity solution).

**pH sensors**:

The accuracy of pH sensors used in this project will be checked using calibration solution provided by the manufacturer (or equivalent quality), which contains any two of three buffer solutions (pH 4, pH 7, pH 10). These solutions will be low-ionic strength with meter calibration accounting for temperature of the solution at the time of meter adjustment.

## 8.3 Representativeness

Data representativeness is defined as the degree to which data accurately and precisely represents a characteristic of a population, parameter, and variations at a sampling point, a process condition, or an environmental condition. It therefore addresses the natural variability or the spatial and temporal heterogeneity of a population. The number of sampling points and their location within the study area will be examined to ensure that representative sample collection of each area of the watersheds and each target analyte series occurs. Multiple sampling episodes will be conducted over a period of 6 months to obtain sufficient data to determine analyte concentration variability.

## 8.4 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid according to specific criteria and entered into the data management system. To achieve this objective, every effort is made to avoid accidental or inadvertent sample or data loss. Accidents during sample transport or lab activities that cause the loss of the original samples will result in irreparable loss of data. Lack of data entry into the database will reduce the ability to perform analyses, integrate results, and prepare reports. Samples will be stored and transported in unbreakable (plastic) containers wherever possible. All sample processing (sub-sampling, sorting, identification, and enumeration) will occur in a controlled environment within the laboratory. Field personnel will assign a set of continuous identifiers to a batch of samples.

Percent completeness (*%C*) for measurement parameters can be defined as follows:

$$\%C = \frac{V}{T} \times 100\%$$

where $V$ = the number of measurements judged valid and $T$ = the total number of measurements planned. For this project, sampling will be considered complete when no less than 90 percent of the samples collected during a particular sampling event are judged valid.

## 8.5 Comparability

Two data sets are considered to be comparable when there is confidence that the two sets can be considered equivalent with respect to the measurement of a specific variable or group of variables. Comparability is dependent on the proper design of the sampling program and on adherence to accepted sampling techniques, SOPs, and QA guidelines.

**Table 8.5-1.** Quality Control samples; sample types and frequency.

| | Matrix | Field | | Laboratory (%) | | | |
|---|---|---|---|---|---|---|---|
| Parameter | | Blanks | Replicates | Check Standards | Method Blanks | Analytical Duplicates | Matrix Spikes |
| Total Phosphorus | Water | 1 | 1 | Minimum once per quarter | One per analysis batch of 20 samples | Minimum 10% of samples | Minimum 10% of samples |
| Soluble Reactive Phosphorus | Water | 1 | 1 | Minimum once per quarter | One per analysis batch of 20 samples | Minimum 10% of samples | Minimum 10% of samples |

# 9.0 Data Management Procedures

Samples will be documented and tracked on Field Data Record forms, Sample Identification labels, and Chain of Custody records (Appendix A). The Field Task Leader will be responsible for ensuring that these forms are completed and reviewed for correctness and completeness by the designated field QC Officer. Triad Associates, Inc. will maintain copies of these forms in the project files. A sampling report will be prepared following each sampling event. Another person will manually check data entered into any spreadsheet or other format against the original source to ensure accurate data entry. If there is any indication that requirements for sample integrity or data quality have not been met (for samples or measurements collected by Triad Associates, Inc. or contractors), the Triad Associates Project Manager will be notified immediately (with an accompanying explanation of the problems encountered).

Laboratory data will be managed in accordance with established protocols. The data will be submitted to Triad Associates and shared with Yarrow Bay Development Company in hard copy and in electronic database format, as well as scanned data recorded on CD-ROM. The electronic data will be submitted in a format to be negotiated with the lab. At a minimum, the electronic data files will include the date and time of sample collection, date received, date of preparation or analysis, requested parameter, analytical batch ID, results, and data qualifiers. Electronic data will be provided for all samples and QC, including laboratory blanks, control samples, duplicates, and spiked samples analyzed in a format compatible with the requirements ofTriad Associate's (or Contractor) statistical and modeling software routines. Hard copy data packages will be paginated, fully validated raw data packages that include an analytical narrative with a signed certification of compliance with this QAPP and all method requirements; copies of Chain of Custody forms; sample inspection records; laboratory sample and QC results; calibration summaries; example calculations by parameter; and copies of all sample preparation, analysis, and standards logs adequate to reconstruct the entire analysis. The CD-ROM data will include a full copy of the paginated report scanned and stored in portable document format (PDF) for potential future submission to the client, if requested, and for long-term storage in the project files. Initially, the full raw data package will be submitted to the Triad Associates and Tetra Tech QAO for assessment of compliance with the program goals and guidance.

All computer files associated with the project will be stored in a project sub-directory by Tetra Tech and Triad Associates (subject to regular system backups) and will be copied to disk for archive for 5 years subsequent to project completion (unless otherwise directed).

Data obtained during sampling activities will be entered into field notebooks.
The following is a list of data information that will be kept at Tetra Tech and Triad Associates or the contract laboratory for review upon request:

- Field equipment and chemicals maintenance, cleaning and calibration records;
- Field notebooks;
- Sample Data Sheets;
- Photographs of sampling stations and events;
- Chain-of-Custody forms;
- Laboratory equipment maintenance, cleaning and calibration records;

- Laboratory bench sheets, control charts, and SOPs;
- Records of QA/QC problems and corrective actions (field and/or laboratory);
- Laboratory data QC records;
- Records of data review sheets;
- Duplicate, performance evaluation records and other QA/QC control records (field and laboratory); and
- Data review, verification and validation records.

Data handling equipment will include computer software applications Microsoft Excel® and Access®. Data will be entered into the Access® database in a form compatible with requirements specified by the developer.

Field notebooks will be filled out using *Write in the Rain*® ink or pencil, and will not be erased. Changes will be made by crossing out errors, initialing, and adding correct information. Field notebooks will be bound with numbered pages.

Laboratory data results will be recorded on laboratory data sheets, bench sheets and/or in laboratory logbooks for each sampling event. These records as well as control charts, logbook records of equipment maintenance records, calibration and quality control checks, such as preparation and use of standard solutions, inventory of supplies and consumables, check-in of equipment, equipment parts and chemicals will be kept on file at the laboratory.

Any procedural or equipment problems will be recorded in the field notebooks. Any deviation from this Quality Assurance Project Plan will also be noted in the field notebooks. Data results will include information on field and/or laboratory QA/QC problems and corrective actions.

Standard turnaround time for the analytical samples taken to the contract laboratory will be seven to ten working days.

Chain-of-custody forms will be kept with the sample during transport and will accompany data results back toTetra Tech. Training records and data review records will be kept on file at Tetra Tech and be available on request. All sample analysis records and documents are kept at the contract laboratory and will be available for inspection at any time. In addition to any written report, data collected for the project will be provided electronically via a CD-ROM or e-mail ZIP file.

All records will be retained by the contract laboratory for five years. All project records at Tetra Tech and Triad Associates should be retained permanently.

A Microsoft Access data management system should be developed for use in analyzing and interpreting results. The system should be a relational database that enables the analyst to aggregate data from a variety of tables and identify correlates among media and settings in each study reach.

# 10.0 Audits and Reports

Upon completion of periodic sampling activities, the Project Leader will summarize sampling team progress. Following completion of field sampling, the Project Leader will prepare a field sample collection summary (detailed listing of all sampling participants, sampling locations, and specimens collected) for review by the Project Manager.

Following the completion of each data quality assessment, the Project Manager or designee will prepare a Data Quality Assessment Report and submit copies to the Project Manager for inclusion in project records. The data quality assessment will include any required qualification of data based on observations, relevant laboratory or field QC analyses, or other observations that might affect data quality. The laboratory data can then be incorporated into final sampling event reports to consolidate the information corresponding to each event.

When required, reports summarizing incidents of technical direction requests from laboratory or field staff, required corrective actions, and any other issues affecting data quality or usability will be submitted to the Project Leader. These observations will be compiled and submitted in interim QA reports where warranted, in informal file memoranda to the Project Manager for inclusion in the project files. These regular QA reports and memoranda, along with routine data quality assessments performed throughout the data collection will be the basis of the final QA report for this collection effort.

## 10.1 Audits

Should the sampling staff, laboratory personnel or Project Manager find errors in sampling or analysis, the Project Manager will notify the party responsible for the error or deficiency and recommend methods of correcting the deficiency. The responsible party will then take action to correct the problem and will report corrections to the Project Manager.

The Project Manager will review the QA/QC procedures used for the sampling and analytical program. Procedures for this review, included in Section 8, will meet the data quality criteria specified in Section 4. The Project Manager will ensure the documentation of these assessment records in the Draft and Final Reports.

## 10.2 Reports to Management

Sampling results will be summarized in the draft and final reports completed for this project. These reports will include the field and laboratory results of project assessments listed above. Reports will be submitted to the Project Manager at Triad Associates. Email updates will be submitted to the Project Manager after each sampling event providing notification of any issues or problems for which corrective actions have been taken. The results of all corrective actions or data quality assessments will be reported to the Project Manager from Triad Associates upon completion.

Standard reporting formats will be developed and approved by Triad Associates Managers. These will be used to produce interim and final reports following completion of this study.

Consistency in reporting of progress, data generation, and interpretations will be maintained in order to improve comparability between related studies and where data-sharing is needed between monitoring efforts that address each of the project tasks (*e.g.*, mass loading analysis, stormwater runoff, etc.).

# 11.0 Data Verification and Validation

Data validation and review services provide a method for determining the usability and limitations of data and provide a standardized data quality assessment. All Field Data forms and Chain of Custody forms will be reviewed by the Project Leader (assisted by the Project Manager, as needed) for completeness and correctness. The Project Leader will be responsible for reviewing data entries and transmissions for completeness and adherence to QA requirements. Data quality will be assessed by comparing entered data to original data or by comparing results to the measurement performance criteria summarized in Section 4.2 to determine whether to accept, reject, or qualify the data. Results of the review and validation processes will be reported to the Program Manager. Analytical data provided by the laboratories will be reviewed before its release by the laboratory QAO, and laboratory manager, and will include a certifying statement that the data included have been reviewed for compliance with the reference methods and this QAPP.

The Project Lead or designee will review all Field Data Record forms and Chain of Custody forms. The Project QAO will review a minimum of 5 percent of the Field Data Record forms and other records. Any discrepancies in the records will be reconciled with the appropriate associated field personnel and will be reported to the Project Lead. Laboratory validation and verification methods are outside the scope of this QAPP; however, it is expected that the laboratory validation and verification will include an assessment of completeness and method compliance, including verification of sample calculations and of any required manual data entry. The analytical narrative reports will include discussions of attainment of the program goals as established herein. Samples submitted to the sample analysis laboratory will include Chain of Custody forms documenting sampling time and date. This information will be checked by the analytical laboratory to ensure that holding times have not been exceeded. Violations of holding times will be reported (by the laboratory) to the Project Lead, who will consult with the Project QAO to develop corrective action recommendations and define any recommended technical directives. Finally, the Project Manager will be consulted with deficiencies, observations, and findings, as well as with corrective action and technical directive recommendations for consideration and approval.

Data verification and validation includes completeness of data entry into a data management system, correctness of data entry, and assurance that entries fall within the expected range for each analyte. These exercises prevent generation of poor results when analyzing data for cause-and-effect relationships or for status of environmental resources. Missing or incorrect data can bias description of environmental resources and result in false conclusions.

## 11.1 Data Review, Validation & Verification Requirements

Analytical results will be reviewed and validated in accordance with EPA documents, including the *USEPA Guidance on Environmental Data Verification and Validation* (EPA QA/G-8), 2002b; the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 540/R-94/012), 1999; and the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 540/R-94/013), 1994b. Tetra Tech will conduct data review and validation using the following methods on 10% of the

primary project samples, including their associated quality control duplicates and laboratory quality control samples.

- A review of sample handling and analytical and field data for completeness, accuracy, holding time compliance, and quality control (QC) sample frequency compliance.
- Evaluation of laboratory blank samples.
- Evaluation of the accuracy and precision of field duplicate samples, laboratory control samples (LCS), and matrix spike/spike duplicate (MS/MSD) samples.
- Assignment of data qualifiers, when necessary, to reflect limitations identified in the data assessment process.
- Estimation of completeness.

## 11.2 Validation and Verification Methods

The following procedures will be used to determine if data meets the measurement and data quality objectives and criteria specified in Section 4. If data QA/QC procedures do not meet the specified criteria, the Quality Assurance Officer will review all field and laboratory records to determine the cause. If equipment failures are limiting the usability of the data, calibration and maintenance procedures will be reviewed and changed as needed. If sampling or analytical procedures are the source of failures, methods will be reviewed to resolve the errors. Any changes or modifications to quality control procedures will be approved by the Project Manager prior to inclusion in the QAPP.

**Review of Sample Handling**

Proper sample handling techniques are required to ensure sample integrity. During data review, the sample handling procedures identified below are evaluated to determine potential effects on data quality.

- Review of field sample collection and preservation procedures to determine whether they were completed in accordance with the requirements specified by the analytical methods.
- Review of chain-of-custody documentation to ensure control and custody of the samples was maintained.
- Review of sample holding times between sample collection, extraction, and analysis (see Table 6.2-1 in Section 6).
- Review of sample conditions upon receipt at the contract laboratory.
- Review of Quality Assurance/Quality Control (QA/QC) Samples. Specific procedures for review of QA/QC samples are included in the sections below.

**Laboratory Blank Samples**

Laboratory blank samples (method and instrument blanks) are laboratory-prepared, analyte-free samples used to detect the introduction of contamination or other artifacts into the laboratory sample handling and analytical process. These blanks play an especially important role in sampling programs involving trace-level analyses or analytes that are common solvents found in a laboratory. None of the analytes of concern for this project are common laboratory contaminants. If a contaminant is discovered in the analytical sample at less than five times the concentration it is found in the laboratory blank, it will be considered a laboratory contaminant. Otherwise, it will be reported as an environmental contaminant.

**Laboratory Control Samples**

Laboratory control samples are used to assess analytical performance under a given set of standard conditions. Synthetic samples, containing some or all of the analytes of interest at known concentrations, are prepared independently from calibration standards. The samples consist of laboratory control samples (LCS) and laboratory control sample duplicates (LCSD). Laboratory control samples will be analyzed with each analytical batch. LCS may be used to estimate analytical accuracy and precision by comparing measured results to actual concentrations. LCS/LCSD percent recoveries will be checked on laboratory reports to ensure they are within the limits set by the EPA methods listed in Table 4.0-3.

LCS are also duplicated in the laboratory and then analyzed in an identical manner by the laboratory to assess the laboratory's internal precision. The analytical precision is expressed by the relative percent difference (RPD) (equation 11.2-1). Analytical precision and accuracy should meet the method criteria listed in Table 4.0-3 in Section 4.

$$\frac{X_1 - X_2}{X_{ave}} x100 = RPD$$

$X_1$ = duplicate no. 1
$X_2$ = duplicate no. 2
$X_{ave}$ = mean of two sample duplicates
RPD = relative percent difference

**Matrix Spike and Matrix Spike Duplicates**

Matrix spike samples are actual field samples to which known amounts of select compounds (one, or more, of the analytes of interest) are added. Both spiked and unspiked aliquots (sample portions) are analyzed. The difference between the concentration of the spike compound(s) in the spiked and unspiked aliquots is compared to the amount of spike added before the extraction process. Since actual samples are used for the recovery determination, the matrix effects can be evaluated. Usually expressed as a percentage of the mass of the spiked amount, spike recovery is the measurement of accuracy anticipated for the sample matrix. Percent recoveries will be compared to EPA method specific recoveries listed in Table 4.0-3.

Matrix spike samples are also duplicated in the laboratory and then analyzed in an identical manner by the laboratory to assess sample reproducibility and the laboratory's internal precision. The analytical precision is expressed by the RPD between the measurement results of the two duplicate samples. Analytical precision and accuracy should meet the criteria provided in Table 4.0-3. MS/MSD samples will be run on each batch of samples.

**Field Duplicate Samples**

Field duplicate samples will be collected simultaneously with a primary project sample. Duplicates are treated in the same manner as the primary sample during all phases of sample collection, handling, and analysis. Duplicate sample results are used to assess precision, including variability associated with both the laboratory analysis and the sample collection process (i.e., QC purposes). At least one duplicate field sample will be collected and submitted blind to the laboratory during each sampling date for this program.

Analytical results will be reviewed for agreement with each other or their respective reporting limits and evaluated for comparability. Estimated results quantified below the reporting limit and qualified with a "J" flag are not considered significant for the purpose of data agreement. The comparison between project and field duplicate sample results should meet RSD (relative standard deviation) criteria for each method listed in Table 4.0-3.

### Reporting Limits

The reporting limits are the lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory conditions. For many analytes, the reporting limit analyte concentration is selected by the laboratory as the lowest non-zero standard in the calibration curve. Sample reporting limits vary based on sample matrix and dilution of the samples during analysis. Reporting limits should be equal to or below the PQLs (Practical Quantitation Limits) provided in Table 7.0-1 for each method.

### Data Qualification

Qualifiers will be applied to QC samples when acceptance criteria are not met and corrective action is not performed or is unsuccessful. These same qualifiers will be applied to the associated sample data, as defined in the following table.

**Table 11.2-1.** Data Qualifiers.

| Qualifier | Description |
|---|---|
| J | The analyte was positively identified, the quantitation is estimated. |
| U | The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit (MDL). |
| F | The analyte was positively identified but the associated numerical value is below the reporting limit (RL). |
| R | The data are unusable due to deficiencies in the ability to analyze the sample and meet QC criteria. |
| B | The analyte was found in an associated blank, as well as in the sample. |
| M | A matrix effect was present. |
| H | Analysis was performed outside of the recommended holding time. |

### Completeness

Completeness is calculated after the QC data have been evaluated, and the qualifiers have been applied to the sample data. Invalid results, broken or spilled samples, and samples that are unable to be analyzed for other reasons are included in the assessment of completeness. The criteria and calculation to determine completeness are provided in Section 5. If data cannot be qualified to meet completeness goals, Tetra Tech will consult with the Project Manager to determine if additional sampling should be performed to accomplish data quality objectives.

## 11.3 Reconciliation with User Requirements

The Project Manager will review all data deliverables upon receipt from the lab. Laboratory results will be checked for data qualifiers entered by the lab to ensure that sample collection and preservation procedures were adequate and that laboratory analysis procedures met quality assurance objectives. Any outstanding issues will be addressed immediately with the lab and/or sampling staff to ensure that project quality assurance objectives are met.

The Project Manager will review and validate the data during interim reporting to management and final reporting stages of the project. If there are any problems with quality sampling and analysis, these issues will be addressed immediately and methods will be modified to ensure that data quality objectives are being met. Modifications to monitoring will require notification to the Project Manager and subsequent edits to the approved QAPP.

# 12.0 Data Quality (Usability) Assessment

As soon as possible following completion of the sample collection and analyses, Tetra Tech and Triad Associates will assess the precision, accuracy, and completeness measures and compare them with the criteria discussed in Section 4.0. This will be the final determination of whether the data collected are of the correct type, quantity, and quality to support their intended use for this project. Any problems encountered in meeting the performance criteria (or uncertainties and limitations in the use of the data) will be discussed with the project QA personnel and will be reconciled if possible.

## 12.1 Interpreting Data

**Task 1**
Total phosphorus loads will be calculated (inflow and outflow of Wet Pond #1) and compared against the performance goal of 50% removal. This goal for removal applies to influent concentration ranges from 0.1 – 0.5 mg/L total phosphorus.

**Task 2**
Total phosphorus concentrations and loads will be compared between upstream and downstream of the treated stormwater input location to Lawson Creek. Continuous temperature monitoring data generated for each of the monitoring periods (October 1$^{st}$, 2010 - March 31$^{st}$, 2011 and April 1$^{st}$, 2011 – September 30$^{th}$, 2011) will be compared (upstream to downstream of the point of entry of stormwater), especially during the warmer months, for influence, if any, on temperature of the receiving water (Lawson Creek).

# 13.0 References

APHA. 2005. Standard Methods for the Examination of Water and Wastewater, 21st Edition. American Public Health Association Press, Washington, D.C.

Kindig, A.C. 2008. The Villages MPD Water Quality Technical Analysis Evaluation. Appendix M in the Villages FEIS. September 10, 2008.

King County. 2000. Lake Sawyer Management Plan. King County Surface Water Management. July 2000.

The Lawson Hills Master Planned Development Permit: Conditions of Development Approval. Exhibit C: Conditions #16, #81, and #85.

United States Environmental Protection Agency (USEPA). 1990. Recommended Protocols for Measuring Conventional Water Quality Variables and Metals in Fresh Water of the Puget Sound Region. Prepared by Tetra Tech, Inc. Bellevue, WA for the USEPA Region X Office of Puget Sound, Seattle, WA.

EPA (U.S Environmental Protection Agency). 1998. EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5). Office of Research and Development, EPA/600/R-98/018. Washington, D.C. 136p.

USEPA (U.S. Environmental Protection Agency). 2002. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review,* OSWER 9240.1-35, EPA 540-R-01-008. U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC.

Washington State Department of Ecology (WSDOE). 2001. Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies. February 2001. No. 01-03-003. Olympia, WA.

Washington State Department of Ecology (WSDOE). 2009. Lake Sawyer Total Phosphorus Total Maximum Daily Load: Water Quality Implementation Plan. Publication No. 09-10-053. Olympia, WA. 75p.

# Appendix A

## Chain-of-Custody Form
## Field Data Report Form
## Meter Calibration Log Form

**Aquatic Research Inc.**
3927 Aurora Avenue N, Seattle, WA 98103
P 206.632.2715 | F 206.632.2417
www.aquaticresearchinc.com

SHEET _____ OF _____

CLIENT: **CHAIN-OF-CUSTODY RECORD**
SAMPLING DATE: _____
SAMPLERS: _____

PROJECT ID: _____
CASE FILE NO.: _____
DATA RECORDED BY: _____

**SAMPLE INFORMATION**

| SAMPLE ID | DATE/TIME COLLECTED | PARAMETERS | BOTT # | NOTES |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| Printed Name | | | | |
| Signature | | | | |
| Affiliation | | | | |

| | Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| Printed Name | | | | |
| Signature | | | | |
| Affiliation | | | | |

Miscellaneous Notes (Hazardous Materials, Quick turn-around time, etc.): _____

3927 Aurora Ave. N | Seattle, WA 98103 | 206.632.2715

TETRA TECH

## FIELD DATA REPORT FORM

Y M M D D
0

SURVEY ..... SAMPLER ..... PAGE ..... OF .....

| STATION NO. | STATION NAME | TIME | TEMP °C | DO mg/L | DO # | pH | TRUE pH / METER | COND. µMHOS/CM | REDOX POTENTIAL | *L/M/R | DEPTH (meters) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

WEATHER:

ADDITIONAL COMMENTS:

Tt (Rev. 11/07)

* L = Left Bank; M = Middle Bank; R = Right Bank

Project: _____ Date: _____

# Meter Calibration Log Form

Cond Meter# _____ Initial Cell Constant _____ Standard _____ µmhos/cr Meter _____ µmhos/cm

pH Meter # _____ pH Probe # _____

Thermistor # _____ Thermistor _____ °C Thermometer _____ °C Correction _____

**DAY 1**

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

Low Ionic Strength pH Value vs. Temp. °C

| | 7 | 10 |
|---|---|---|
| 10 | 7.01 | 9.27 |
| 15 | 6.99/7.00 | 9.23 |
| 20 | 6.98 | 9.19 |

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

**DAY 2**

Initial Cell Constant _____ Standard _____ µmhos/cm Meter _____ µmhos/cm

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

**DAY 3**

Initial Cell Constant _____ Standard _____ µmhos/cm Meter _____ µmhos/cm

Slope _____ 92-102%
mv @ pH 7 _____ ± 30 mv
mv @ pH 4/10 _____ Difference between mv @ pH7 160-180
Response Time _____ < 90 seconds
Time of Day _____

| | true pH | meter | time of day | | |
|---|---|---|---|---|---|
| QA Check #1 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #2 | _____ | _____ | _____ | Recalibrated | Y / N |
| QA Check #3 | _____ | _____ | _____ | Recalibrated | Y / N |

*If meter pH is not within 0.10 pH units of true value in pH 7 buffer, then recalibrate & re-read sample.*

Conductivity Standard _____ µmhos/cm Meter _____ µmhos/cm

## Exhibit P

## Green Valley Road Measures

### 1. Traffic Calming Measures

The following measures ("Traffic Calming Measures") have been identified as the reasonable measures that the Green Valley Road Review Committee ("Committee") will consider for implementation:

A. Reduced Speed Limits
B. Radar Speed Alert Signs
C. Speed Humps/Cushions/Tables
D. Stop Signs
E. Surface Treatments

These measures are identified in Exhibit 9 of the "SE Green Valley Road – Traffic Calming Strategies" report dated November 29, 2010, prepared by Parametrix as directed by the City.

Any potential traffic calming strategies will need to be evaluated with respect to maintaining historical and cultural character of SE Green Valley Road since this roadway is identified as one of nine Heritage Corridors in King County.

**2. Permit Process and Timing**

A. Upon commencement of Phase 1A, or earlier at the discretion of the Master Developer, the Committee shall meet to consider the Traffic Calming Measures identified in 1(A) above. The intent of the Committee is to attempt to reach an agreement on whether any suggested Traffic Calming Measures should be provided. If the community members decide against the Traffic Calming Measures, then the Master Developer need not construct any of them. The Committee shall also meet to review the plan to prohibit or discourage the use of Plass Road.

B. If the Committee agrees to one or any Traffic Calming Measure(s), the Master Developer shall be responsible, at its expense, for drafting a report to the City Council regarding the Committee's findings on the Traffic Calming Measure(s) and on Plass Road.

C. Prior to the conclusion of construction in Phase 1A, the Master Developer shall submit to King County permit applications for any Traffic Calming Measures chosen by the Committee on Green Valley Road.

   i. Following King County's approval of any necessary permits for constructing the chosen Traffic Calming Measures, the Master Developer shall cause the construction to be complete one hundred-eighty days (180) after approval.

D. For any Implementing Project submitted to the City that includes a new roadway crossing or intersecting Plass Road, that permit shall also include the provisions identified by the Committee to prohibit or discourage traffic from using Plass Road.

# Exhibit Q

## MAPLE VALLEY TRANSPORTATION MITIGATION AGREEMENT

# Mitigation Agreement

**THIS MITIGATION AGREEMENT** is entered into this 6th day of October, 2010 by and between BD VILLAGE PARTNERS, LP, a Washington limited partnership, and BD LAWSON PARTNERS, LP, a Washington limited partnership (collectively "Owner"); and the CITY OF MAPLE VALLEY, a Washington municipal corporation ( "Maple Valley").

## RECITALS

**WHEREAS,** Owner owns the real property in Black Diamond, Washington which is more particularly described on Exhibit A attached hereto (the "Property").

**WHEREAS,** Owner has applied for and received approval from the City of Black Diamond, pursuant to Ordinances Nos. 10-946 and 10-947, to construct two Master Planned Developments on the Property, which developments are commonly known as The Villages and Lawson Hills (the "MPDs").

**WHEREAS,** traffic generated by the MPDs will utilize roads in Maple Valley.

**WHEREAS,** Maple Valley is concerned the traffic from the MPDs will cause unacceptable degradation of the levels of service on Maple Valley roads, and was prepared to file an appeal of the MPD permits had this Agreement not been reached.

**WHEREAS,** Owner desires to mitigate adverse impacts from the traffic from the MPDs and to avoid Maple Valley appeals of the approvals for the MPDs, the development agreements for the MPDs, and any implementing approvals for the MPDs.

**NOW THEREFORE,** the parties agree as follows:

## AGREEMENTS

**1. Contribution to Transportation Projects.** Owner shall pay Maple Valley a certain percentage share of the cost of the transportation projects on Exhibit B attached hereto (the "Projects"). Owner's percentage share of the cost of each of the Projects is set forth in the column on Exhibit B titled Percentage Payment by Owner ("Owner's Share"). Owner's obligation to pay Owner's Share to Maple Valley shall be applied to the costs of acquiring necessary right-of-way ("ROW") for the Projects, designing the Projects, and constructing the Projects. Owner's obligation to pay Owner's Share of the cost of constructing each Project is triggered by the City of Black Diamond's issuance of the specified number of dwelling unit building permits (regardless of type) set forth in the column entitled "Dwelling Unit Trigger" on Exhibit B (the "Dwelling Unit Trigger"). For example, if a building permit is issued for a 100-unit apartment building, this shall be counted as 100 dwelling units for purposes of the Dwelling Unit Trigger. While the parties have agreed to use Dwelling Unit Trigger for timing of payment, all non-residential uses have been factored into the traffic impact analysis that generated Exhibit B, so building permits for non-residential uses are not counted for purposes of determining Owner's obligations under this Agreement. Building permits for Accessory Dwelling Units (ADUs) shall be counted toward the Dwelling Unit Trigger, provided that building permits for the first 200 ADUs shall not count toward the Dwelling Unit Trigger. For the purposes of this Agreement, "Accessory Dwelling Unit" means a second dwelling unit

either attached to or located on a lot occupied by an owner-occupied single family dwelling. An ADU provides a separate and completely independent dwelling unit with facilities for cooking, sanitation and sleeping and has a separate and independent entry/exit other than the one utilized for the primary residence. An ADU shall not exceed 50% of the size of the primary dwelling on the lot or 800 square feet, whichever is less. "Owner occupancy" means a property owner, as reflected in the real estate tax rolls, who makes his or her legal residence at the subject lot, as evidenced by voter registration, vehicle registration, or similar means, and actually resides upon the lot more than six months out of any given year.

A. Project Scope. Owner's Share obligations under this Agreement for design, ROW, or construction costs shall be based solely and exclusively on and be limited to the scope of the Projects set forth in the column entitled "Project Scope" on Exhibit B (the "Project Scope"). Maple Valley may, at its sole discretion, elect to design, purchase ROW, and construct projects that encompass more or less improvements than described for a given Project on Exhibit B. If Maple Valley constructs less than the Project Scope of a particular Project, Owner's Share shall apply to the actual costs of the portion of the Project actually constructed and to the Official Mitigation Estimate of the portion of the Project not constructed. This effectively allows Maple Valley to construct any Project in phases and/or to only construct a portion of a Project and to apply Owner's Share of the unconstructed portion to another Project. If Maple Valley designs a larger project, purchases right of way that would not be necessary for the Project Scope or constructs more than the Project Scope of a particular project, Maple Valley actual costs shall be apportioned such that Owners Share only applies to the portion of the actual costs that would have been incurred if

Maple Valley had limited the Project Scope to that set forth on Exhibit B.

i. Corporate Limits. Project Scope for all Projects on Exhibit B shall only include improvements within the corporate limits of Maple Valley. In no circumstance, shall Maple Valley require Owner to make Project improvements or pay for portions of Projects outside Maple Valley's city limits.

**2. Design Standards for Projects.** The Projects shall be designed consistent with the applicable Maple Valley and/or WSDOT design standards in effect at the time the Project is designed. If the Project design exceeds the applicable standards, the cost of the Project attributable to the elective additional design features shall not be included in the Project cost for purposes of calculating Owner's Share of the construction cost. Project costs shall include any necessary storm water facilities required for the road construction, but shall not include other utility costs, except for costs associated with relocating or undergrounding existing utilities to the extent required by applicable standards. If the applicable Maple Valley and/or WSDOT design standards require curb, gutter, lighting, sidewalk, bike lane, and/or other features, then those features shall be included in the Project cost for purposes of calculating Owner's Share.

**3. Construction Cost and Construction Cost Estimates.**

A. Actual Costs. If the payment for a Project's construction costs is triggered (*see* Paragraph 5(A) on timing of payment below) when actual construction costs are known, Owner's Share shall be applied against the actual costs of construction, including any construction contingency, change order costs, construction

management costs and permitting costs ("Owner's Actual Construction Cost Obligation").

B. Estimated Costs. If payment for a Project's construction costs is triggered before actual construction costs are known, the dollar value of Owner's Share shall be calculated based on Maple Valley's estimate of construction costs, and the estimate shall not include any construction contingency budget or any share of relocation and/or undergrounding cost obligation that is borne by a utility or franchisee. This estimate shall be referred to as the Official Mitigation Estimate and shall be distinguished from any estimate that Maple Valley might prepare for internal planning purposes (the "Official Mitigation Estimate").

C. Reconciliation. If the Project for which Owner paid Owner's Share based upon the Official Mitigation Estimate is later built within the duration of this Agreement, the dollar value of Owner's Share of construction costs shall be reconciled after construction of the Project is completed to reflect the actual costs of construction and Maple Valley shall give Owner notice of final reconciliation of construction costs (the "Reconciled Cost"). Maple Valley shall refund to Owner any overpayment by Owner within sixty (60) days after notice that the Reconciled Cost is completed. Owner shall pay to Maple Valley any underpayment by Owner within sixty (60) days after notice that the Reconciled Cost is completed. No interest charges shall be applied to such Reconciled Cost amounts. If Owner makes a payment for a Project based upon an Official Mitigation Estimate and that Project is built after this Agreement has expired, there will be no reconciliation of the Owner's share of the construction costs.

D. Timing of Estimate. For purposes of this Agreement, the Official Mitigation Estimate, together with the plans and specifications upon which the estimate was based for any Project may be delivered to Owner before the Dwelling Unit Trigger for that Project is reached if the quarterly accounting projections prepared by Owner as described in Paragraph 7 below indicate that the Dwelling Unit Trigger is likely to be reached during the upcoming six-month period. If the Dwelling Unit Trigger is reached before Maple Valley has sent Owner the Official Mitigation Estimate, Maple Valley may opt to defer sending an invoice for the triggered Project, provided it provides notice to Owner of such deferral, until it has a construction cost estimate that it is likely to obtain in the ordinary course of business, e.g., the pre-bid estimate that Maple Valley would typically obtain before sending a project out to bid. Maple Valley may then designate the pre-bid or other estimate as the Official Mitigation Estimate and require payment from Owner within sixty (60) days of providing the Official Mitigation Estimate to Owner consisting of the pre-bid or any other estimate obtained in Maple Valley's ordinary course of business.

## 4. Resolution of Cost Disputes.

A. Project Scope. Owner may dispute Maple Valley's calculation of Owner's Share of design costs, ROW costs, or constructions costs (i.e., Owner's Actual Construction Cost Obligation, Reconciled Cost, or Official Mitigation Estimate) based on use of the wrong Project Scope. For example, if Maple Valley determines that the second northbound turn lane for Project C should be 500 feet long instead of 300 feet (as called for in Exhibit B), Owner shall not be responsible for any costs (inclusive of design,

ROW, or construction) associated with the additional 200 feet of turn lane. In the event Owner disputes Maple Valley's application of Owner's Share based on Project Scope, the parties shall utilize the following procedure to resolve the dispute:

i. Within ten (10) business days after receipt of disputed payment notice, Owner shall request a meeting with Maple Valley to discuss Project Scope. Parties shall meet and confer within ten (10) business days to see if they can reach agreement regarding Project Scope for purposes of applying Owner's Share to design, ROW purchase, and/or construction costs. If parties reach agreement, then Owner's Share shall be based on the agreed Project Scope.

ii. If parties cannot reach agreement, then parties agree to retain a mutually acceptable third party mediator to help the parties reach agreement on a given Project Scope. Costs for the third party mediator shall be shared equally among the parties. If the mediator cannot resolve the dispute then either party may sue for monetary damages.

The parties shall attempt to resolve Project Scope issues first. If the parties are unable to resolve Project Scope issues pursuant to the process set forth in this Agreement, then Owner shall pay to Maple Valley any disputed amount under protest so that Maple Valley's design or construction of a Project will not be delayed by failure to resolve Project Scope issues first.

B. Actual Construction Costs.

i. Except for any Projects that have already been constructed or published for bid prior to the date of this Agreement, Maple Valley will provide Owner with a complete set of proposed plans and specifications for each Project thirty (30) days before Maple Valley intends to publish the availability of plans and specifications to proposed bidders. Owner shall have ten (10) days to propose changes to Maple Valley's proposed plans and specifications. Maple Valley shall not be obligated to accept Owner's proposed changes and if Maple Valley does not accept Owner's proposed changes, Owner shall not have right to dispute Owner's Actual Construction Cost Obligation on the basis of Maple Valley's rejection of Owner's proposed changes.

ii. Owner shall have the right to dispute Owner's Actual Construction Cost Obligation to the extent that Owner alleges that the Project Scope has been exceeded (see example in subparagraph A above) and shall be resolved pursuant to subparagraph A above.

iii. Owner shall have the right to dispute Owner's Actual Construction Cost Obligation to the extent the Project has been designed in excess of the requirements of applicable standards. An example of designing beyond requirements of applicable standards would be if the standards required a six-foot wide bike lane and Maple Valley constructed a ten-foot wide bike lane.

iv. As a general rule, Owner shall not have the right to dispute Owner's Actual Construction Cost Obligation and shall pay Maple Valley the Owner's Actual

Construction Cost Obligation, subject to the following strictly limited bases for disputing Maple Valley's actual costs which are collectively referred to as the "Permissible Bases for Disputing Actual Costs": a) errors in accounting of Maple Valley's actual costs; b) failure by Maple Valley to reduce total Project costs for grant funding Maple Valley received for a particular Project; c) failure to reduce total Project costs for payments received from a utility or franchisee pursuant to a tariff or franchise; d) Project Scope in excess of that set forth in Exhibit B (see paragraph 4.B.ii, above, in which case the procedures set forth in subparagraph 4.A shall be followed); e) construction in excess of applicable Maple Valley and/or WSDOT standards (see paragraph 4.B.iii, above); f) failure by Maple Valley to comply with the procedures specified in subparagraph 4.B.i (in which case Owner shall have the right to bring challenges that could otherwise have been brought by Owner had Maple Valley complied with those procedures, unless Owner has actual notice at least thirty (30) days prior to publication of plans and specifications for proposed bidders); or g) noncompliance with any other express provision of this Agreement that relates to actual costs. As an example, and not by way of limitation, Owner shall not have the right to dispute Owner's Actual Construction Cost Obligation on the basis of inefficient construction, methods of construction, and/or construction in conformance with the specifications previously provided to Owner by Maple Valley or as modified by agreement of the parties.

v. If Owner alleges one or more Permissible Bases for Disputing Actual Costs, the parties shall utilize the following procedure to resolve the dispute:

a. Owner shall prepare a summary of its cost disputes regarding Owner's Actual Construction Cost Obligation, consistent with WSDOT and/or Maple Valley standards, and deliver it to Maple Valley within thirty (30) days after receipt of an invoice for Owner's Actual Construction Cost Obligation from Maple Valley. The parties shall meet and confer within ten (10) business days after receipt by Maple Valley of Owner's dispute summary to see if they can reach agreement on the amount of the Owner's Actual Construction Cost Obligation. If the parties cannot reach agreement, then the parties shall retain a mutually agreed upon third-party arbitrator. The cost of such third party arbitrator shall be borne solely by Owner. The arbitrator shall establish further procedures for resolving the dispute and shall ultimately make the final determination as to whether Owner's dispute is valid. Owner shall bear the burden of proof in any such arbitration of a dispute regarding Owner's Actual Construction Cost Obligation.

C. Reconciled Cost. As a general rule, Owner shall not have the right to dispute the Reconciled Cost. In the event Owner disputes the Reconciled Cost for a Project on any basis allowed under paragraph 4.B above, the parties shall utilize the procedures set forth in subparagraph 4.B above to resolve the dispute.

D. Construction Cost Estimates. If Owner accepts the Official Mitigation Estimate, Owner shall pay Maple Valley based on the Official Mitigation Estimate. In the event Owner disputes the Official Mitigation Estimate for a Project, the

parties shall utilize the following procedure to resolve the dispute:

i. Owner shall prepare its own Project construction estimate, consistent with WSDOT and/or Maple Valley standards, and deliver it to Maple Valley within thirty (30) days after receipt of the Official Mitigation Estimate. If Owner's estimate is greater than ninety percent of the Official Mitigation Estimate, then Owner shall pay Maple Valley based upon the Official Mitigation Estimate.

ii. If Owner's estimate is less than the Official Mitigation Estimate by ten percent (10%) or more, the parties shall meet and confer within ten (10) business days to see if they can reach agreement on the amount of the Project construction estimate. If the parties cannot reach agreement, then, within thirty (30) days of Maple Valley's receipt of Owner's estimate, the parties shall retain a mutually agreed upon third-party estimator to prepare a third estimate. The parties recognize that Maple Valley may be required to comply with public procurement procedures before retaining the agreed third party estimator. The third party estimator shall be directed to estimate the Project assuming that prevailing wages and other public bidding requirements apply. The third party estimator shall be provided with the Original Mitigation Estimate and Owner's estimate. Neither party shall engage in ex parte communications with the third party estimator.

iii. If the third-party estimate is within five percent (5%) of the mid-point between the Official Mitigation Estimate and Owner's estimate, then Owner shall pay

Maple Valley based upon the third party estimate and the parties shall split the cost of the third party estimate equally. If the third party estimate is not within five percent (5%) of the mid-point between the Official Mitigation Estimate and Owner's estimate, then Owner shall pay Maple Valley Owner's Share based upon the mid-point between the third party estimate and either the Official Mitigation Estimate or the Owner's estimate, whichever is closer to the third party estimate (the "Arbitrated Estimate"). The party whose estimate is farther from the third-party estimate shall pay all of the costs of the third-party estimator.

E. Payment Under Protest. Any time Owner disputes an invoice from Maple Valley for Owner's Share for any Project, Owner shall make such disputed payment in a timely manner, under protest, to Maple Valley according to the timeframes set forth in this Agreement. Following resolution of the dispute per the processes set forth in this Paragraph 4, Maple Valley shall refund any over payment to Owner within thirty (30) days of final resolution.

**5. Timing of Payment for Transportation Improvements.**

A. Timing of Payment for ROW and Design Costs. Owner shall pay Owner's share of ROW and design costs as those costs are incurred by Maple Valley, except as set forth below, within thirty (30) days after receipt of notice of such costs.

B. Timing of Payment for Construction Costs. Owner shall pay to Maple Valley Owner's share of the cost of constructing a particular Project once its given Dwelling Unit Trigger is reached. Owner's payment shall be due the later of: (i) five (5) business days after the issuance of

the building permit for the Dwelling Unit Trigger; (ii) or sixty (60) days after Maple Valley has delivered to Owner an invoice reflecting Owner's Actual Construction Cost Obligation or Owner's Share of the Official Mitigation Estimate. Owner shall not be allowed to defer payment in the event of a dispute over actual or estimated costs, but shall be entitled to make such payment to Maple Valley under protest. Upon completion of the dispute resolution procedures set forth in Paragraph 4 above, Maple Valley shall refund the difference within thirty (30) days, if any, between the amount paid under protest and the amount ultimately determined owed by Owner under that process.

C. Construction Prior to Dwelling Unit Trigger. If Maple Valley constructs any of the Projects prior to their associated Dwelling Unit Triggers, the Owner shall have no obligation to pay Owner's Share of the construction cost until the Dwelling Unit Trigger is reached. However, Owner's Share of the cost shall accrue interest at the Agreement Interest Rate, as defined in Paragraph 17 from the time the construction of the Project starts until the Owner pays its share of the construction cost. Notwithstanding the foregoing, Owner shall not be required to pay any interest on the T-7 portion of Project E even though the City is likely to construct the T-7 portion of Project E prior to the Dwelling Unit Trigger for Project E being reached. The T-7 portion of Project E is the Maple Valley transportation project titled T-7 in the 2010 Transportation Improvement Project.

D. Limited Option to Pre-pay Actual Costs to Avoid Interest. Owner shall have the option, in its sole discretion, to pay its share of the actual cost of construction of a Project prior to the time the Dwelling Unit Trigger for that Project is reached. This option to pre-pay shall only apply to

Projects or portions of Projects that have actually been constructed prior to the Dwelling Unit Trigger.

E. Owner Obligations Under Early Termination of MPDs. Owner has no obligation to pay for constructing any of the Projects on Exhibit B until the Dwelling Unit Trigger for the particular Project is reached. Under certain scenarios, the Dwelling Unit Trigger may not be reached during the duration of this Agreement. Owner has no obligation to pay for ROW and design costs incurred by Maple Valley after the duration of this Agreement.

F. Right of Way and Design Acquisition Costs. Owner shall pay Owner's Share of ROW acquisition costs and Project design costs when those costs are incurred by Maple Valley, even if the Dwelling Unit Trigger has not been reached, with the following exceptions:

i. Maple Valley shall defer invoicing Owner for Owner's share of any ROW or design costs for any Project until Black Diamond has issued the building permit for the 300th dwelling unit within the MPDs collectively.

ii. For the T-7 portion of Project E, Maple Valley shall not invoice the Owner for ROW or design costs until the Dwelling Unit Trigger for Project E has been reached.

iii. Maple Valley shall not invoice Owner for ROW and design costs for Projects C, G, H, I, and L until Black Diamond has issued the building permit for the 1200th dwelling unit in the MPDs collectively.

iv. Maple Valley shall not invoice Owner for ROW and design costs for Projects J and K until Black

Diamond has issued the building permit for the 2700th dwelling unit in the MPDs collectively.

v. Maple Valley shall not invoice Owner for ROW and design costs for Projects W and X until Black Diamond has issued the building permit for the 4200th dwelling unit in the MPDs collectively.

vi. For purposes of this Agreement, ROW acquisition costs shall include purchase price and/or just compensation amount, legal fees directly related to acquisition and/or condemnation of the ROW, appraisal fees directly related to acquisition and/or condemnation of the ROW, expert witness fees directly related to condemnation of the ROW, ROW agent fees directly related to acquisition and/or condemnation of the ROW, and relocation expenses directly related to acquisition and/or condemnation of the ROW.

G. Payment for Costs of Projects Y& Z.

i. Owner shall pay its share of design costs for Projects Y and Z when City has incurred the design costs, but only after Black Diamond has issued the building permit for the 300th dwelling unit in the MPDs collectively.

ii. When Maple Valley has acquired all of the ROW necessary for Project Z, Maple Valley can invoice Owner for Owner's share of the ROW cost for Project Z. Maple Valley shall not invoice Owner for ROW costs for Project Y until Maple Valley has acquired all of the ROW necessary for Project Z and Project Y.

iii. When Maple Valley is prepared to put Project Z out for bid, Maple Valley may invoice Owner for Owner's share of the cost of constructing Project Z, but only after Black Diamond has issued the building permit for the 1500th dwelling unit in the MPDs collectively. Maple Valley may not invoice Owner for Project Y construction costs unless Maple Valley is prepared to put Project Z out for bid and Maple Valley has either already constructed Project Y or is putting Project Y out for bid but only after Black Diamond has issued the building permit for the 1500th dwelling unit in the MPDs collectively.

6. **Use of Funds.** The payments made by Owner pursuant to this Agreement may be applied toward any Projects described on Exhibit B, subject to the following restrictions:

A. Maple Valley cannot use any funds paid by Owner for actual or estimated construction costs of the Projects toward Maple Valley's costs for ROW or design costs.

B. Funds paid by Owner for Projects Y and Z cannot be used on other Projects. Maple Valley can otherwise apply construction funds for any Projects toward any other Project(s). For example, Maple Valley would be entitled to apply Owner's payment of construction costs for Project E to Project Z.

C. If Maple Valley does not spend funds paid by Owner for any Official Mitigation Estimate for a given Project within five (5) years of the payment of the funds, then Maple Valley must repay those funds to Owner, with interest at the Agreement Interest Rate. The Official Mitigation Estimate shall be considered spent, for purposes of this paragraph, if it has been applied toward

another Project that was actually constructed within five (5) years of Maple Valley's receipt of those funds. If this Agreement expires before five (5) years has elapsed from any particular payment made by Owner, that payment need not be repaid and Owner agrees not to seek repayment from the City through any legal means.

D. Maple Valley may not use any funds paid by Owner for maintenance, road overlays, or any other purpose than the acquisition of ROW for the Projects, design of the Projects, or the construction of the Projects.

7. **Reporting.** In order to facilitate the implementation of the Agreement, the Owner and Maple Valley shall provide periodic reports to each other as follows:

A. Annually, on or before January 31 of each year, Maple Valley shall provide Owner with an accounting for the previous year indicating the Projects on which Maple Valley spent money contributed by Owner pursuant to this Agreement in order for Owner to verify the money was spent on one of the Projects; the money contributed by Owner was spent within five (5) years of the date paid; and that the money contributed by Owner was spent on the appropriate ROW acquisition, design, and Project construction. For any Project under construction, Maple Valley shall provide Owner with notice of any Project change orders and, when available, the estimated costs associated with the change orders.

B. Quarterly, on or before January 31, April 30, July 31, and October 31 of each year following issuance of the first dwelling unit building permit for the MPDs,

Owner shall submit to Maple Valley an accounting for the previous quarter showing the number of preliminary plat and final plat applications filed for the Property; the number of preliminary plat and final plat approvals issued for the Property, the number of building permits issued to date for dwelling units on the Property, the number of ADUs approved by building permit or otherwise, and the number of preliminary plats, final plats, and building permits projected to be approved in the subsequent quarter. Maple Valley has the right to require verification of this information from the City of Black Diamond. Maple Valley may use these projections as a basis for determining when to obtain construction cost estimates. If a Project's Dwelling Unit Trigger is reached between quarterly reports, Owner shall notify Maple Valley of that fact within ten (10) business days of the Dwelling Unit Trigger being reached.

**8. Funding by Other Agencies.** The parties shall work together to obtain state and federal grants and other funding to apply to the cost of the Projects. If either party obtains state or federal grant funding for all or a portion of any Project, the amount of the grant funding shall be subtracted from the total cost of the Project prior to determining the dollar value of Owner's share of the cost of the Project.

**9. Construction of Projects by Owner.** If the parties agree on timing, scope, and design, Owner may construct one or more of the Projects pursuant to engineering documents approval by Maple Valley. If Owner constructs a Project pursuant to this paragraph, any portion of Maple Valley's share of the cost of the Project not paid by Maple Valley shall be a credit, with interest at the Agreement Interest Rate, against Owner's share of future Projects, rather than a cash contribution from Maple Valley at the time Owner constructs the Project(s). If required, Owner shall comply with prevailing wage law. Maple Valley shall have

the same rights that Owner has under paragraph 4. B. to dispute actual costs, subject to the same burden of proof and cost obligations that Owner has in that paragraph.

**10. Enforcement of Owner's Performance.** In order to enforce Owner's performance of its obligations pursuant to the Agreement, Maple Valley may file a lawsuit for breach of this Agreement if Owner fails to fulfill its obligations under this Agreement. Maple Valley's right to enforce the terms of this Agreement shall not be subject to any requirements of the Land Use Petition Act ("LUPA"), Chapter 36.70C RCW, and Owner shall not assert that any such lawsuit for breach of this Agreement is subject to LUPA. Notwithstanding the appeal forbearance provisions contained in Paragraph 13, Maple Valley does not waive any rights it may have under LUPA, if there is a land use decision issued while Owner is alleged to be in breach of this Agreement. The parties expressly agree that Maple Valley may obtain an injunction that prevents future construction, including but not limited to construction of homes after final plats have been recorded within the MPDs until the breach of payment obligation has been cured; provided, however, if Owner pays the disputed amount to Maple Valley under protest, any injunction shall be lifted and Owner may proceed with development pending resolution of the dispute. Except for the property described in Exhibit C and except for any parcels conveyed to the Enumclaw School District, as long as no residential development is proposed on those parcels, Owner and Maple Valley agree to the following:

A. Owner and Maple Valley shall submit a joint letter to the Black Diamond City Council and Owner shall submit new and/or revised sections of the MPD development agreements requesting that the council insert into the development agreement for each MPD a provision stating that if Maple Valley files a lawsuit alleging breach of this Agreement and seeks injunctive relief, Black Diamond shall not issue any additional building permits for either MPD until that lawsuit is

resolved or Owner pays, under protest, the disputed amount to Maple Valley.

B. In the event Maple Valley files a lawsuit alleging nonpayment by Owner of amounts owed pursuant to this Agreement, Maple Valley shall have the right to file a lis pendens against any lots that have not been occupied by third parties, including lots or parcels planned for commercial construction. To the extent Black Diamond issues certificates of occupancy for construction, such certificate shall satisfy this "occupied by third parties" criteria. If certificates of occupancy are not issued for certain types of construction, then "occupancy by third parties" shall be satisfied upon final inspection under the building permit.

C. Owner shall not file any additional applications for subdivisions, binding site plans, design review, clearing and grading, or other land use or building permits, or approvals after the date Maple Valley files any lawsuit alleging breach of this Agreement until the lawsuit is resolved. However, Owner may proceed to file land use applications for either of the MPDs if Owner pays, under protest, the disputed amount to Maple Valley.

D. Owner shall place a note on all preliminary plats, final plats and binding site plans that references Owner's obligations under this Agreement.

E. Owner and Maple Valley shall submit a joint letter to the Black Diamond City Council and Owner shall submit new and/or revised sections of the MPD development agreements requesting that the development agreements for the MPDs provide for

Maple Valley to be a third party beneficiary of conditions and provisions that require Owner to abide by the terms of this Agreement.

F. Owner and Maple Valley shall submit a joint letter to the Black Diamond City Council and Owner shall submit new and/or revised sections of the development agreements requesting Black Diamond's cooperation in providing quarterly accounting to the Owner and to Maple Valley to facilitate the requirements of Paragraph 7(A) of this Agreement.

G. Owner and Maple Valley shall submit a joint letter to the Black Diamond City Council and Owner shall submit new and/or revised sections of the MPD development agreements that require the placement of a note on all preliminary plat, final plats, and binding site plans to facilitate the requirements of Paragraph 10(D) of this Agreement.

H. Owner and Maple Valley shall submit a joint letter to the Black Diamond City Council and Owner shall submit new and/or revised sections of the MPD development agreements that limit the number of Accessory Dwelling Units within the MPDs collectively to 450.

I. The provisions of Paragraph 13 notwithstanding, the parties agree that Maple Valley shall have the limited right to appeal any failure by Black Diamond to incorporate provisions in Paragraphs 10(A),(E), (F), (G), and (H) into the development agreements for the MPDs within the time frames required by law for appeal of those development agreements.

J. The joint letter and new and/or revised sections of the MPD development agreements referenced in Paragraphs 10(A), (E), (F), (G), and (H) shall be submitted to Black Diamond on or before November 5, 2010.

K. The boundaries of Exhibit C to this Agreement may be modified slightly at Owner's sole discretion provided that at least fifty (50) percent of the area described in Exhibit C must remain the same and further provided that the total area of Exhibit C shall not be expanded by more than one acre. If Owner elects to modify the boundaries of Exhibit C it shall provide notice to Maple Valley of such election and shall record a similar notice with the King County Recorder's Office,

11. **Transportation Improvement Program ("TIP") and Projects.** On an annual basis, City staff shall recommend to the Maple Valley City Council that the Projects be placed on Maple Valley's TIP. However, the parties recognize that future Maple Valley City Councils cannot be bound by any provisions of this Agreement in regards to the Projects on Maple Valley's TIP.

12. **No Protest.** Maple Valley shall not protest the formation in the City of Black Diamond of any community facility district ("CFD") to finance the construction of improvements for the MPDs, including the Projects, as long as the property to be included within the CFD is located solely within Black Diamond.

13. **Forbearance from Appeals.** Maple Valley shall not object to, appeal, or support third-party objections or appeals of the MPD permits, or any associated environmental review. Maple Valley shall not object to, appeal, or support third-party objections or appeals of the development agreements for the MPDs or any associated environmental review (subject to the exceptions in Paragraph 10). Maple Valley shall

not object to, appeal, or support third-party objections or appeals of any implementing approvals for the MPDs, including any associated environmental review based on traffic impacts and shall not seek additional traffic mitigation through appeal of implementing land use approvals, Maple Valley's appeal forbearance is conditioned upon this Agreement being fully incorporated into the Owner's development agreement for each MPD and the Owner not being in breach of this Agreement. Notwithstanding the language above, Maple Valley reserves the right to object to and appeal land use decisions that specify haul routes for trucks bringing construction materials to and from the Property, provided that Maple Valley's appeal shall be limited to the haul route impacts in the Maple Valley city limits. This Agreement not to object or appeal shall not apply to any MPD major amendment or other land use decision that allows an increase above 6050 dwelling units or an increase in the commercial square footage over what was analyzed in the Final Environmental Impact Statements for the MPDs. If the MPD permits issued by the City of Black Diamond to the Owner lapse, and/or if an implementing development agreement issued by the City of Black Diamond to the Owner expires, the agreement by Maple Valley to forbear shall have no force or effect, except to the extent that this Agreement has addressed mitigation obligations for any development that has received preliminary plat or binding site plan approval prior to lapse or expiration of the MPD permit approvals or the development agreements.

14. **Relationship to MPD Approval.** This Agreement supersedes any provisions of the approval for the MPDs that are not consistent with the terms of this Agreement. More specifically, Conditions of Approval 9-13 and 15-31 within Exhibit C of the Lawson Hills MPD, Ordinance No. 10-947, and Conditions of Approval 10-14, and 16-34 within Exhibit C of the Villages MPD, Ordinance No. 10-946, are superseded by this Agreement, and as a result, shall have no applicability to Maple Valley and/or the mitigation set forth in this Agreement.

15. **Duration of Agreement.** This Agreement shall expire upon issuance of the 6050th building permit (not including the first 200 ADUs), provided that Owner may elect to terminate the Agreement after the 5500th building permit has issued if Owner has made the required payments associated with Projects W and X, and if Owner is not alleged to otherwise be in default under this Agreement.

A. Major Amendments. Major amendments to the MPDs and/or the development agreements for the MPDs shall not terminate this Agreement.

B. Release of Large Lots on Expiration/Revocation. Any lot or parcel 5-acres or larger that has not been built on during the term of the MPD permit and/or accompanying development agreement, and that is not the subject of a pending application for preliminary plat approval, final plat approval, binding site plan approval, or other land use processes, shall be automatically released from the purview of this Agreement upon the later of: (i) expiration of the applicable MPD permit; (ii) expiration of the applicable development agreement; (iii) revocation of the applicable MPD permit; or (iv) revocation of the applicable development agreement. Any subdivision of real estate released under this provision shall be subject to whatever future traffic mitigation measures are imposed at the time such property is approved for development.

16. **Notices**. Any notice or other communication to any party given under this Agreement will be effective only if in writing and delivered (1) personally, (2) by certified mail, return receipt requested and postage prepaid, (3) by facsimile transmission with written evidence confirming receipt, or (4) by overnight courier (such as UPS, FedEx, or Airborne Express) to the following addresses:

If to Owner:

YarrowBay Holdings LLC
Attn: Colin Lund
10220 NE Points Drive, Suite 120
Kirkland, WA 98033
Phone: (425) 898-2100
Facsimile: (425) 898-2139

With a copy to:

Cairncross and Hempelmann
524 Second Avenue, Suite 500
Seattle, WA 98104-2323
Attn: Donald Marcy
Facsimile: (206) 587-2308

If to City:

City of Maple Valley
Attn: City Manager
PO Box 320
Maple Valley, WA 98038

With a copy to:

City of Maple Valley
Attn: City Attorney
PO Box 320
Maple Valley, WA 98038

The addresses and addressees to which notice is to be given may be changed by written notice given in the manner specified in this Paragraph 16 and actually received by the addressee.

17. **Agreement Interest Rate.** For those circumstances in this Agreement where interest is to be paid by Owner or Maple Valley, the amount of interest owed shall be based upon the amount of interest that either was earned or would have been earned on those funds had they been deposited in the State of Washington Local Government Investment Pool for the period of time specified in this Agreement during which interest accrues.

18. **Attorney's Fees and Expenses**. In the event either party requires the services of an attorney in connection with a suit brought for breach of any covenant or condition of this Agreement and/or to enforce the terms of this Agreement, the substantially prevailing party shall be entitled to a reasonable sum for attorney's and paralegal's fees, expenses and court costs, including those relating to any appeal.

19. **Successors and Assign**. All of the covenants and conditions contained in this Agreement shall run with the land and apply to and be binding upon the parties and their respective heirs, executors, administrators, successors and assigns. Owner shall have the right to assign its obligations as the master developer of the MPDs, provided Owner gives Maple Valley thirty (30) days prior written notice of such assignment.

20. **Choice of Law**. This Agreement shall be construed and governed by the laws of Washington State. Any legal proceeding to enforce the terms of this Agreement shall be in King County, Washington.

21. **Execution in Counterparts**. This Agreement may be executed in one or more counterparts and as executed shall constitute one Agreement, binding on all parties, notwithstanding that all parties are not signatory to the same counterpart.

22. **Severability; Captions**. In the event that any clause or provision of this Agreement should be held to be void, voidable, illegal,

or unenforceable, the remaining portions of this Agreement shall remain in full force and effect. In lieu of each clause or provision that is determined to be void, voidable, illegal, or unenforceable, there shall be added as a part of this Agreement a similar clause or provision as similar as possible that is legal, valid and enforceable. Headings or captions in this Agreement are added as a matter of convenience only and in no way define, limit or otherwise affect the construction or interpretation of this Agreement.

23. **Interpretation**. Whenever a provision of this Agreement uses the term "include" or "including", that term shall not be limiting but shall be construed as illustrative. This Agreement shall be given a fair and reasonable interpretation of the words contained in it without any weight being given to whether a provision was drafted by one party or its counsel.

24. **Entire Agreement**. This Agreement contains all of the terms, promises, conditions and representations, made or entered into by and between the parties, supersedes all prior discussions, agreements and memos, whether written or oral between the parties, and constitutes the entire understanding of the parties and shall be subject to modification or change only in writing and signed by all parties.

25. **Time of the Essence**. Time is of the essence with respect to the performance of every covenant and condition of this Agreement.

26. **Recording of Agreement.** The Parties agree that this Agreement shall be recorded with the King County Recorder's Office and that the costs of recording shall be equally shared between the Parties. Upon termination of this Agreement and at the request of any Party, the other Party shall promptly execute and deliver a recordable instrument identifying the termination of the Agreement.

27. **Authority**. Each Party represents and warrants to the other Party that it has full power and authority to make this Agreement and to

perform its obligations hereunder and that the person signing this Agreement on its behalf has the authority to sign and to bind that Party.

28. **Representation and Warranty of Ownership of MPD Property**. Owner represents and warrants to Maple Valley that BD Village Partners, LP and BD Lawson Partners, LP collectively own fee title to all real property described in Exhibit A to this Agreement. Owner further represents and warrants that the real property described in Exhibit A encompasses all real property that is subject to Black Diamond Ordinances Nos. 10-946 and 10-947, provided that the Parties acknowledge that the legal descriptions in Exhibit A may require revisions based errors or omissions identified during the course of MPD development. If the legal description in Exhibit A does not fully incorporate the Property that is subject to the forthcoming development agreements and any other implementing land use approval, Owner agrees to amend Exhibit A to fully incorporate the legal descriptions of the property that is subject to the development agreements or any implementing land use approval. If, as a result of this Agreement, Maple Valley is sued by any party alleging improper slander of title related to recording this Agreement, Owner shall indemnify, defend and hold Maple Valley harmless from all damages and costs, including costs of defense in any such litigation.

28. **Cost Reimbursement.** Within forty five (45)days from the date of receipt of an invoice from Maple Valley, Owner shall pay Maple Valley $10,000.00 as reimbursement for costs associated with the costs of negotiating this Agreement.

29. **Exhibits**. The following exhibits attached to this Agreement are incorporated by reference and made a part hereof:

EXHIBIT A: MPD Property Legal Description

EXHIBIT B: Project Scope, Owner's Share, and Dwelling Unit Trigger

EXHIBIT C: Property legally described in option recorded under King County Recording No. 20061012001735.

IN WITNESS WHEREOF, the parties have executed this Mitigation Agreement on the date first set forth above.

**BD Lawson Partners, LP,**
a Washington limited partnership

By: YARROW BAY DEVELOPMENT, LLC, its general partner

By: BRNW, Inc., its Member

By: _____
Brian Ross, President

**BD Village Partners, LP,**
a Washington limited partnership

By: YARROW BAY DEVELOPMENT, LLC, its general partner

By: BRNW, Inc., its Member

By: _____
Brian Ross, President

City of Maple Valley, a
Washington municipal
Corporation

By: _____
David Johnston, City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
Christy Todd, City Attorney

ACKNOWLEDGMENT

STATE OF WASHINGTON )
) ss.
COUNTY OF KING )

On this 8th day of October, 2010, before me personally appeared David W. Johnston to me know to be the City Mgr. of the City of Maple Valley, Washington, a municipal corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said municipal corporation, for the uses and purposes therein mentioned, and on oath stated that he/~~she~~ was authorized to execute said instrument and that the seal affixed thereto (if any) is the seal of said municipal corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

BONNIE GILLEN BARNEY NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 5-09-12

_____
Print name: Bonnie Gillen Barney
NOTARY PUBLIC in and for the St. of WA
Residing at Kent
Commission expires 05/09/2012

STATE OF WASHINGTON )
) ss.
COUNTY OF King )

On this 7th day of October, 2010, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn personally appeared Brian Ross, known to me to be the President of BRNW, Inc., a Member of Yarrow Bay Development, LLC, the general partner of **BD Village Partners, L.P.**, a Washington limited partnership, the limited partnership that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited partnership, for the purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument.

I certify that I know or have satisfactory evidence that the person appearing before me and making this acknowledgment is the person whose true signature appears on this document.

WITNESS my hand and official seal hereto affixed the day and year in the certificate above written.

DANA LYNN MERENESS NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 03-28-13

Signature

Dana Lynn Mereness
Print Name
NOTARY PUBLIC in and for the State of Washington, residing at Edmonds
My commission expires 3/28/13

STATE OF WASHINGTON )
) ss.
COUNTY OF King )

On this 7th day of October, 2010, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn personally appeared Brian Ross, known to me to be the President of BRNW, Inc., a Member of Yarrow Bay Development, LLC, the general partner of **BD Lawson Partners, L.P.**, a Washington limited partnership, the limited partnership that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited partnership, for the purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument.

I certify that I know or have satisfactory evidence that the person appearing before me and making this acknowledgment is the person whose true signature appears on this document.

WITNESS my hand and official seal hereto affixed the day and year in the certificate above written.

DANA LYNN MERENESS NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 03-28-13

Signature

Dana Lynn Mereness
Print Name
NOTARY PUBLIC in and for the State of Washington, residing at Edmonds
My commission expires 3/28/13

# EXHIBIT A

MPD Property Legal Description

This Exhibit A consists of the following documents:

1) The Villages Legal Description consisting of three (3) pages including Parcel B; Parcels C, D, and E; Parcel BDA; Parcel F-North; Parcel G; Parcel Guidetti.

2) Lawson Hills Legal Description consisting of nine (9) pages produced by Triad Associates.

**EXHIBIT "A"**
**LEGAL DESCRIPTION OF PROPERTY SUBJECT TO THE AGREEMENT**

**PARCEL B:**

THE WEST HALF OF THE NORTHWEST QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCELS C, D, AND E**

ALL OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W. M., IN KING COUNTY, WASHINGTON;

EXCEPT THE NORTHEAST QUARTER THEREOF;

ALSO EXCEPT THAT PORTION OF THE NORTHWEST QUARTER THEREOF LYING NORTHERLY OF THE CENTERLINE OF MAPLE VALLEY-LAKE SAWYER ROAD;

ALSO EXCEPT THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER THEREOF.

**PARCEL BDA:**

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER;
THE SOUTH HALF OF THE NORTHEAST QUARTER;
THE SOUTHWEST QUARTER;
THE NORTH HALF OF THE SOUTHEAST QUARTER;
THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER;
THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER,
ALL IN SECTION 22, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL F – NORTH:**

THAT PORTION OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, AND THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER, LYING WESTERLY OF THE WESTERLY MARGIN OF THE ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY;

TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE SOUTH HALF OF THE NORTHWEST QUARTER;

AND TOGETHER WITH:

THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER;

AND TOGETHER WITH:

THE SOUTH HALF OF THE NORTHEAST QUARTER LYING SOUTHWESTERLY OF THE SOUTHWESTERLY MARGIN OF ENUMCLAW-BLACK DIAMOND ROAD (SR 169) RIGHT OF WAY.

AND TOGETHER WITH:

THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER, AND THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER;

**PARCEL G:**

LOT A OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L05L0096 AS RECORDED UNDER RECORDING NO. 20051209900002, SITUATE IN SECTION 27, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL GUIDETTI:**

THAT PORTION OF THE EASTERLY 660 FEET OF THE WEST HALF OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21, NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING SOUTHERLY OF THE AUBURN-BLACK DIAMOND HIGHWAY;

EXCEPT THE EAST 381.24 FEET OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., LYING SOUTHERLY OF AUBURN-BLACK DIAMOND HIGHWAY AND THE EAST 90 FEET OF THE NORTH 165.70 FEET OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON;

(ALSO KNOWN AS PARCEL 1 UNDER SURVEY RECORDED UNDER RECORDING NUMBER 20030917900009.)

**NORTH TRIANGLE (PORTIONS OF PARCEL NOS. 022106-9024, 032106-9076, 032106-9014, 032106-9015 AND 032106-9001)**

LOTS U, W, X, Y, AND Z OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L05L0097, RECORDED UNDER RECORDING NO. 20051209900003, SITUATE IN SECTIONS 2 AND 3, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9048 AND 132106-9007 (FROM PHASE 1 BEE "PARCEL F")**

THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING WESTERLY AND NORTHWESTERLY OF A LINE BEGINNING ON THE NORTH LINE OF SAID SUBDIVISION AT A POINT BEARING NORTH 03°40'0" WEST FROM A POINT DESIGNATED AS 1438.12 FEET SOUTH AND 680.73 FEET EAST OF THE NORTHWEST OF SAID SECTION 13;
THENCE SOUTH 03°40'00" EAST TO SAID DESIGNATED POINT;
THENCE SOUTH 58°32'19" WEST A DISTANCE OF 198.19 FEET;
THENCE SOUTH 52°19'00" WEST A DISTANCE OF 412.52 FEET;
THENCE SOUTH 18°50'00" WEST A DISTANCE OF 144.72 FEET;
THENCE SOUTH 66°50'00" WEST TO THE SECTION LINE; ALSO

EXCEPT THAT PORTION THEREOF LYING EASTERLY AND NORTHERLY OF A LINE BEGINNING 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 438.25 FEET;
THENCE SOUTH 03°40'00" EAST A DISTANCE OF 348.10 FEET;
THENCE SOUTH 73°44'00" EAST A DISTANCE OF 336.10 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 557.35 FEET, MORE OR LESS, TO A POINT 20 FEET WEST OF AND PARALLEL WITH THE CENTERLINE OF SKID ROAD;
THENCE NORTHEASTERLY ALONG SAID PARALLEL LINE TO THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION;

ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN THE RIGHT OF WAY OF 262ND AVENUE SOUTHEAST.

**PARCEL NO. 132106-9034 (FROM PHASE 1 BEE "PARCEL G")**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°43'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 438.25 FEET;
THENCE SOUTH 03°40'00" EAST A DISTANCE OF 348.10 FEET;
THENCE SOUTH 73°44'00" EAST A DISTANCE OF 336.10 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 557.35 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 20.00 FEET WESTERLY FROM THE CENTERLINE OF A SKID ROAD;
THENCE NORTHERLY ALONG SAID PARALLEL LINE A DISTANCE OF 1110.00 FEET, MORE OR LESS, TO THE NORTHEAST CORNER OF THAT CERTAIN TRACT OF LAND CONVEYED TO LEONARD AND DONALD KUZARO BY DEED RECORDED UNDER RECORDING NUMBER 3794571;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 1060.00 FEET, MORE OR LESS, TO THE POINT OF BEGINNING;

EXCEPT THEREFROM THE FOLLOWING DESCRIBED TRACT:

A PARCEL FROM THE ABOVE TRACT BEGINNING AT A POINT 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13, SAID POINT BEING IDENTICAL WITH THE SOUTHWEST CORNER OF THE TRACT SOLD TO JOHN MAKS, AND RUNNING AS FOLLOWS:

THENCE SOUTH 00°32'00" WEST A DISTANCE OF 178.96 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET;
THENCE SOUTH 00°09'00" WEST A DISTANCE OF 361.40 FEET;
THENCE SOUTH 89°53'42" EAST A DISTANCE OF 514.10 FEET;
THENCE NORTH 00°20'42" WEST A DISTANCE OF 538.30 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 391.30 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9063/132106-9066/132106-9067 (FROM PHASE 2 BEE "PARCEL A")**

THE NORTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 122106-9011 (FROM PHASE 2 BEE "PARCEL C")**

THAT PORTION OF THE WEST HALF OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHEASTERLY OF THE SOUTHEASTERLY MARGIN OF SOUTHEAST GREEN RIVER GORGE ROAD.

EXCEPT THAT PORTION THEREOF LYING WITHIN THE LANDS CONVEYED TO JOHN MAKS AND MARY MAKS BY DEED RECORDED UNDER RECORDING NUMBER 2068851, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 12, AND THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13 IN SAID TOWNSHIP AND RANGE DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST A DISTANCE OF 469.94 FEET;
THENCE NORTH 36°49'00" EAST A DISTANCE OF 311.26 FEET;
THENCE SOUTH 89°48'42" EAST A DISTANCE OF 725.85 FEET;
THENCE SOUTH 00°33'00" WEST A DISTANCE OF 719.72 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE OF 910.01 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9014**

THAT PORTION OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE NORTHWEST CORNER OF SAID SUBDIVISION;
THENCE SOUTH 43°05'17" EAST 1,862.67 FEET TO THE SOUTHEAST CORNER OF SAID SUBDIVISION AND THE TERMINUS OF THE HEREIN DESCRIBED LINE.

**PORTIONS FROM PARCEL NO. 132106-9013, 132106-9057, 132106-9062, AND 132106-9003**

LOT B OF KING COUNTY BOUNDARY LINE ADJUSTMENT NO. L09L0056, RECORDED UNDER RECORDING NO. 20100608900003, SITUATE IN SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9024 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT 473.50 FEET SOUTH AND 1051.38 FEET EAST OF NORTHWEST CORNER OF SAID SECTION 13, SAID POINT BEING THE ORIGINAL NORTHEAST OF JAMES L. MANOWSKI'S AND JULIE MANOWSKI'S PROPERTY, AS SET FORTH IN A DEED RECORDED UNDER RECORDING NUMBER 6523609;

THENCE SOUTH 89°49'00" FAST A DISTANCE OF 10.00 FEET TO THE NEW NORTHEAST CORNER OF MONAWSKI PROPERTY, PURSUANT TO A BOUNDARY LINE AGREEMENT, SAID POINT BEING THE TRUE POINT OF BEGINNING;

THENCE SOUTH 06°54'16" WEST A DISTANCE OF 180.19 FEET, SAID LINE BEING THE NEW BOUNDARY BETWEEN MANOWSKI AND KUZARO PARCELS BY AGREEMENT, TO THE SOUTHEAST CORNER OF MANOWSKI PROPERTY WHICH BEARS NORTH 89°49'00" WEST AT A DISTANCE OF 10 FEET FROM THE ORIGINAL SOUTHEAST CORNER OF MANOWSKI PROPERTY;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15.00 FEET;
THENCE SOUTH 89°49'00" EAST A DISTANCE OF 60.86 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 167.55 FEET;
THENCE SOUTH 86°40'42" EAST A DISTANCE OF 100.00 FEET;
THENCE NORTH 00°20'42" WEST A DISTANCE OF 367.00 FEET;
THENCE NORTH 89°48'42" WEST A DISTANCE
OF 137.89 FEET TO THE TRUE POINT OF BEGINNING;

(ALSO KNOWN AS A PORTION OF BLACK DIAMOND SHORT PLAT NUMBER. 79-734, RECORDED UNDER RECORDING NUMBER 7908069009);

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER THE FOLLOWING DESCRIBED PARCEL:

BEGINNING AT THE NEW SOUTHEAST CORNER OF THE MANOWSKI PROPERTY AS DESCRIBED ABOVE;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15.00 FEET;
THENCE NORTH 89°49'00" EAST A DISTANCE OF 350 FEET, MORE OR LESS, TO THE EAST LINE OF 262ND AVENUE SOUTHEAST AS ESTABLISHED;
THENCE NORTH ALONG SAID EAST LINE A DISTANCE OF 15 FEET, MORE OR LESS, TO A POINT WHICH BEARS NORTH 89°49'00" WEST FROM THE TRUE POINT OF BEGINNING;
THENCE SOUTH 89°49'00" EAST TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9037 (FROM DEED)**

THE SOUTH 180 FEET OF THE FOLLOWING DESCRIBED TRACT:

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMERE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 211.84 FEET SOUTH AND 690.70 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, SAID POINT BEING THE INTERSECTION OF THE EAST AND SOUTH LINES OF TWO ROADWAYS;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 119.68 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 439.59 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET TO THE EAST LINE OF A 30 FOOT ROADWAY;
THENCE ALONG SAID ROADWAY LINE NORTH 00°09'00" EAST A DISTANCE OF 439.74 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9040 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING ON THE SOUTHEASTERLY LINE OF THE FRANKLIN HOWARD COUNTY ROAD NO. 1018 AT A POINT WHICH IS 677.39 FEET SOUTH AND 278.50 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION;
THENCE SOUTH 0°16' EAST 264.21 FEET;

THENCE SOUTH 14°54' EAST 97.79 FEET TO THE TRUE POINT OF BEGINNING;
THENCE SOUTH 14°54' EAST 112.02 FEET; THENCE SOUTH 24°20' EAST 86.84 FEET;
THENCE NORTH 71°45' EAST 315.72 FEET TO THE WEST LINE OF A 30 FOOT ROADWAY;
THENCE ALONG SAID ROADWAY LINE NORTH 3°40 FEET WEST 33.28 FEET;
THENCE NORTH 0°29' EAST 173.05 FEET; THENCE SOUTH 69°26' WEST 237.81 FEET;
THENCE SOUTH 75°18' WEST 141.86 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9046 (FROM UNUSED PHASE 3 BEE OPTION 1 "PARCEL A" AND PHASE 4 BEE "PARCEL A")**

THE NORTH HALF OF THE NORTH HALF OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
EXCEPT THAT PORTION THEREOF LYING WITHIN THE FOLLOWING DESCRIBED TRACT:
BEGINNING AT A POINT 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 865 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9053 (FROM UNUSED PHASE 3 OPTION 1 BEE "PARCEL B" AND PHASE 4 BEE "PARCEL C")**

THAT PORTION OF SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS;

COMMENCING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;
THENCE SOUTH 0°22'10" EAST ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, 530 FEET;
THENCE NORTH 89°37'50" EAST 115 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°37'50" EAST 180 FEET;
THENCE SOUTH 0°22"10" EAST 121 FEET;
THENCE SOUTH 89°37'50" WEST 180 FEET;
THENCE NORTH 0°22'10" WEST 121 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 122106-9012 (FROM UNUSED PHASE 3 OPTION 2 BEE "PARCEL A")**

THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING SOUTHEASTERLY OF THE SOUTHEASTERLY MARGIN OF SOUTHEAST GREEN RIVER GORGE ROAD;
EXCEPT THAT PORTION THEREOF LYING WITHIN THE LANDS CONVEYED TO JOHN MAKS AND MARY MAKS BY DEED RECORDED UNDER RECORDING NUMBER 2068851, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 12, AND THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13 IN SAID TOWNSHIP AND RANGE DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING.

**PARCEL NO. 132106-9008 (FROM PHASE 4 BEE "PARCEL B")**

THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6
EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING NORTHERLY AND WESTERLY OF A LINE BEGINNING 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION;
THENCE SOUTH 00°32'00" WEST 178.96 FEET;
THENCE NORTH 89°28'00" WEST 116.74 FEET;
THENCE SOUTH 00°09'00" WEST 438.25 FEET;
THENCE SOUTH 03°40'00" EAST 348.10 FEET;

THENCE SOUTH 73°44'00" EAST 336.10 FEET;
THENCE SOUTH 89°48'42" EAST 557.35 FEET, MORE OR LESS, TO A POINT 20 FEET WEST OF AND PARALLEL WITH THE CENTERLINE OF SKID ROAD;
THENCE NORTHEASTERLY ALONG SAID PARALLEL LINE TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION; AND

EXCEPT THAT PORTION THEREOF DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHWEST QUARTER;
THENCE SOUTH 0°22'10" EAST, ALONG THE WEST LINE OF SAID SOUTHEAST QUARTER OF THE NORTHWEST
QUARTER, 530 FEET;
THENCE NORTH 89°37'50" EAST 115 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°37'50" EAST 180 FEET;
THENCE SOUTH 0°22'10" EAST 121 FEET;
THENCE SOUTH 89°37'50" WEST 180 FEET;
THENCE NORTH 0°22'10" WEST 121 FEET TO THE TRUE POINT OF BEGINNING.

**PARCEL NO. 132106-9033 (FROM ALTA DATED 09-30-08)**

THE MOST SOUTHERLY HALF OF THE FOLLOWING DESCRIBED TRACT:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING;
TOGETHER WITH THAT PORTION OF THE NORTH HALF OF SAID SECTION 13 CONVEYED TO JOHN MAKS, JR. AND AMELIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984499, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;
THENCE NORTH 00°33'00" EAST 347.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 89°48'22" EAST 640 FEET;
THENCE NORTH 00°33'00" EAST 23.74 FEET;
THENCE NORTH 89°48'22" WEST 640 FEET;
THENCE SOUTH 00°33'00" WEST 23.74 FEET TO THE TRUE POINT OF BEGINNING;
EXCEPT THAT PORTION THEREOF CONVEYED TO THOMAS H. MAKS AND GLORIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984498, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT 807.97 FEET EAST AND 472.7 FEET SOUTH OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 291 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 00°33'00" EAST 56.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET;
THENCE SOUTH 00°33'00" WEST 56.27 FEET;
THENCE NORTH 89°48'22" WEST 270 FEET TO THE TRUE POINT OF BEGINNING OF THIS EXCEPTION.

**PARCEL NO. 132106-9029 (FROM BEE DATED 06-09-08)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 192.15 FEET SOUTH AND 810.57 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°32'00" EAST A DISTANCE OF 189.47 FEET TO SAID NORTH LINE OF SECTION 13;
THENCE NORTH 89°48'42" WEST, ALONG SAID NORTH LINE OF SECTION 13, A DISTANCE OF 37.73 FEET TO THE SOUTHEASTERLY MARGIN OF THE RIGHT OF WAY OF FRANKLIN HOWARD ROAD NO. 1018;
THENCE SOUTH 37°11'00" WEST A DISTANCE OF 237.34 FEET, ALONG SAID RIGHT OF WAY;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 174.10 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 132106-9023 (FROM BEE DATED 06-11-07)

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 211.84 FEET SOUTH AND 690.70 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, SAID POINT BEING THE INTERSECTION OF THE EAST AND SOUTH LINES OF TWO ROADWAYS;
THENCE SOUTH 89°51'00" EAST A DISTANCE OF 119.68 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 439.59 FEET;
THENCE NORTH 89°28'00" WEST A DISTANCE OF 116.74 FEET TO THE EAST LINE OF A 30-FEET ROADWAY;
THENCE ALONG THE EASTERLY MARGIN OF SAID ROADWAY NORTH 00°08'00" EAST A DISTANCE OF 438.74 FEET TO THE POINT OF BEGINNING;

EXCEPT THE SOUTH 180 FEET THEREOF CONVEYED TO ALFRED R. SHAY AND ELSIE E. SHAY, HIS WIFE, BY STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 6439467.

PARCEL NO. 132106-9010 (FROM PHASE 3 BEE "PARCEL A")

LOT A, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

PARCEL NO. 132106-9011 (FROM IN FOREST BLA DATED 05-30-08)

LOT B, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

PARCEL NO. 132106-9009 (FROM IN FOREST BLA DATED 05-30-08)

LOT C, CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. LLA 07-001, RECORDED UNDER RECORDING NUMBER 20080610900012.

PARCEL NO. 132106-9021 (FROM ALTA STAMPED 11-29-06)

THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SECTION 12, AND OF THE NORTH HALF OF THE NORTHWEST QUARTER OF SECTION 13, ALL IN TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 469.94 FEET;
THENCE NORTH 36°49'00" EAST 311.26 FEET;
THENCE SOUTH 89°48'42" EAST 725.85 FEET;
THENCE SOUTH 00°33'00" WEST 719.72 FEET;
THENCE NORTH 89°48'42" WEST 910.01 FEET TO THE POINT OF BEGINNING;

EXCEPT THE MOST SOUTHERLY HALF THEREOF CONVEYED TO JOHN MAKS JR. BY DEED RECORDED UNDER RECORDING NUMBER 3833110; AND

EXCEPT THAT PORTION THEREOF CONVEYED TO JOHN MAKS, JR. AND AMELIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984499, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT WHICH IS 472.70 FEET SOUTH AND 807.97 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 347.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 89°48'22" EAST 640 FEET;
THENCE NORTH 00°33'00" EAST 23.74 FEET;
THENCE NORTH 89°48'22" WEST 640 FEET;
THENCE SOUTH 00°33'00" WEST 23.74 FEET TO THE TRUE POINT OF BEGINNING;

TOGETHER WITH THAT PORTION OF THE NORTH HALF OF THE NORTHWEST QUARTER OF SAID SECTION 13 CONVEYED TO THOMAS H. MAKS AND GLORIA MAKS, HIS WIFE, BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 4984498, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT 807.97 FEET EAST AND 472.7 FEET SOUTH OF THE NORTHWEST CORNER OF SAID SECTION 13;
THENCE NORTH 00°33'00" EAST 291 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 00°33'00" EAST 56.27 FEET;
THENCE SOUTH 89°48'22" EAST 270 FEET;
THENCE SOUTH 00°33'00" WEST 56.27 FEET;
THENCE NORTH 89°48'22" WEST 270 FEET TO THE TRUE POINT OF BEGINNING.

**POR. OF PARCELS NO. 112106-9122, 112106-9044, 112106-9015, 112106-9110, 112106-9111, 112106-9112, 112106-9113, 112106-9114, 112106-9020, AND 122106-9049 (HAMMERHEAD)**

LOT 3 OF CITY OF BLACK DIAMOND BOUNDARY LINE ADJUSTMENT NO. PLN-10-0010, RECORDED UNDER RECORDING NO. 20100713900006, SITUATE IN SECTIONS 11 AND 12, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9002 (FROM BEE DATED 07-26-06)**

THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THOSE PORTIONS THEREOF LYING SOUTHERLY OF THE NORTHERLY MARGIN OF PARK STREET (NOW KNOWN AS SOUTHEAST 323RD STREET) AND WESTERLY OF THE EASTERLY MARGIN OF 4TH AVENUE (NOW KNOWN AS 254TH AVENUE SOUTHEAST), AND SOUTHERLY OF THE NORTHERLY MARGIN OF JAMES STREET (NOW KNOWN AS SOUTHEAST 321ST STREET), AND SOUTHERLY AND WESTERLY OF THE NORTH AND EAST LINES OF BLOCK 2, ALL AS PLATTED IN BLACK DIAMOND TOWNSITE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 35 OF PLATS, PAGES 23 THROUGH 27, AND WESTERLY OF THE EASTERLY MARGIN OF THE RIGHT OF WAY OF STATE ROAD NO. 5 (THIRD AVENUE); ALSO
EXCEPT THAT PORTION THEREOF LYING EASTERLY OF THE WESTERLY MARGIN OF THE ABANDONED BRUCE SWITCH OF THE COLUMBIA & PUGET SOUND RAILROAD COMPANY RIGHT OF WAY, AS DESCRIBED IN RECORDING NUMBER 543409, AND

TOGETHER WITH THAT PORTION OF SAID NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 14 LYING EASTERLY OF THE EASTERLY MARGIN OF THE ABANDONED BRUCE SWITCH OF THE COLUMBIA & PUGET SOUND RAILROAD COMPANY RIGHT OF WAY, AS DESCRIBED IN RECORDING NUMBER 543409, AND LYING NORTHERLY OF THE NORTH LINE OF LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9063 (FROM BEE DATED 07-26-06)**

THAT PORTION OF THE PACIFIC COAST RAILROAD COMPANY RIGHT OF WAY (FORMERLY KNOWN AS THE ABANDONED BRUCE-LAWSON TRACK OF THE COLUMBIA AND PUGET SOUND RAILROAD) LYING WITHIN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THAT PORTION THEREOF LYING SOUTHERLY OF THE NORTHERLY MARGIN OF SOUTHEAST 323RD STREET (ALSO KNOWN AS PARK STREET); ALSO

EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF BLACK DIAMOND FOR STREET AND UTILITY PURPOSES BY QUIT CLAIM DEED RECORDED UNDER RECORDING NUMBER 9206160254; ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN THE TRACT CONVEYED TO A. P. KINKADE BY DEED RECORDED UNDER RECORDING NUMBER 3008428, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT WHICH IS 609.24 FEET SOUTH AND 978.51 FEET WEST OF THE NORTHEAST CORNER OF SAID SECTION 14;
THENCE SOUTH 01°38'00" WEST A DISTANCE OF 211.25 FEET;
THENCE NORTH 88°22'00" WEST A DISTANCE OF 618.60 FEET;
THENCE NORTH 01°38'00" EAST A DISTANCE OF 211.25 FEET ALONG A LINE PARALLEL WITH AND 20 FEET EAST OF THE CENTERLINE OF THE RIGHT OF WAY OF THE BRUCE BRANCH OF THE PACIFIC COAST RAILROAD;
THENCE SOUTH 88°22'00" EAST A DISTANCE OF 618.60 FEET TO THE POINT OF BEGINNING; ALSO

EXCEPT THAT PORTION THEREOF LYING WITHIN LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 142106-9001 (FROM BEE DATED 07-26-06)**

THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING NORTHERLY OF THE NORTH LINE OF LAWSON HILL ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 162 OF PLATS, PAGES 20 THROUGH 24, IN KING COUNTY, WASHINGTON, AND SOUTHWESTERLY OF THE SOUTHWESTERLY LINE OF BLACK DIAMOND SHORT PLAT NUMBER 011-08-83 REV, RECORDED UNDER RECORDING NUMBER 8808039001.

**PARCEL NO. 142106-9186 (FROM BEE DATED 07-26-06)**

THAT PORTION OF LOT 1, BLACK DIAMOND SHORT PLAT NUMBER 011-08-83 REV, RECORDED UNDER RECORDING NUMBER 8308299001, AS REVISED UNDER RECORDING NUMBER 8808039001, LYING WITHIN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9054 (FROM BEE DATED 07-26-06)**

THAT PORTION OF LOT 1, BLACK DIAMOND SHORT PLAT NUMBER 011-08-83, RECORDED UNDER RECORDING NUMBER 8308299001, AS REVISED UNDER RECORDING NUMBER 8808039001, LYING WITHIN SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON.

**PARCEL NO. 132106-9036 (FROM DEED)**

LOT 1, CITY OF BLACK DIAMOND SHORT PLAT NO. 03-SP-01 RECORDED UNDER RECORDING NUMBER 20030224900001;

BEING A PORTION OF:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 12, AND THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SECTION 13;
THENCE SOUTH 72°38'50" EAST 117.22 FEET TO THE POINT OF BEGINNING;
THENCE SOUTH 54°10' EAST 463.55 FEET TO THE NORTHWESTERLY MARGINAL LINE OF THE FRANKLIN HOWARD ROAD;
THENCE NORTH 37°11' EAST ALONG SAID LINE 189.6 FEET, MORE OR LESS, TO THE SOUTHEAST CORNER OF A TRACT OF LAND CONVEYED TO PAUL SAWICKE BY DEED RECORDED UNDER RECORDING NUMBER 1592304, IN KING COUNTY, WASHINGTON;
THENCE WEST 24 FEET;
THENCE NORTH 0°18' WEST ALONG THE WEST LINE OF SAWICKE TRACT 253.48 FEET TO THE CENTERLINE OF THE GRADE OF AN ABANDONED RAILROAD SPUR;
THENCE NORTHEASTERLY ALONG SAID GRADE 915 FEET, MORE OR LESS, TO A POINT ON A LINE PARALLEL WITH AND 20 FEET SOUTHERLY FROM THE CENTERLINE OF THE ABANDONED PACIFIC COAST RAILROAD, BRUCE BRANCH;
THENCE SOUTHWESTERLY ON SAID LINE, PARALLELING THE CENTERLINE TO A POINT WHICH BEARS NORTH 35°56' EAST FROM THE POINT OF BEGINNING;
THENCE SOUTH 35°56' WEST 440 FEET, MORE OR LESS, TO THE POINT OF BEGINNING;

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS ACROSS TRACT "X" OF SAID SHORT PLAT; AND

TOGETHER WITH AN EASEMENT FOR UTILITIES ACROSS OR UNDER THE EASTERLY 60 FEET OF TRACT "X" AS MEASURED A RIGHT ANGLE TO LAWSON STREET.

**PARCEL NO. 132106-9038, 132106-9022 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING ON THE SOUTHEASTERLY MARGIN OF THE FRANKLIN-HOWARD COUNTY ROAD NO. 1018 (GREEN RIVER GORGE ROAD), AS SAID MARGIN WAS ESTABLISHED BY DEED

RECORDED UNDER RECORDING NUMBER 1107075, AT A POINT WHICH IS 677.39 FEET SOUTH AND 278.50 FEET EAST OF THE NORTHWEST CORNER OF SAID SUBDIVISION, WHICH POINT IS ALSO THE MOST NORTHERLY CORNER OF THAT CERTAIN TRACT OF LAND CONVEYED TO JOHN NEIMCZYK BY DEED RECORDED UNDER RECORDING NUMBER 1449328;
THENCE SOUTH 00°16'00" EAST, ALONG THE EAST LINE OF SAID NEIMCZYK TRACT, A DISTANCE OF 264.21 FEET;
THENCE CONTINUING ALONG THE EAST LINE OF SAID NEIMCYZK TRACT, SOUTH 14°54'00" EAST A DISTANCE OF 97.79 FEET TO THE NORTHWEST CORNER OF A TRACT OF LAND SOLD TO STANLEY V. HAWKINS AND DONNIE L. HAWKINS, HUSBAND AND WIFE, BY REAL ESTATE CONTRACT RECORDED UNDER RECORDING NUMBER 6702196;
THENCE NORTH 75°18'00" EAST, ALONG THE NORTH LINE OF SAID HAWKINS TRACT, A DISTANCE OF 141.86 FEET;
THENCE CONTINUING ALONG THE NORTH LINE OF SAID HAWKINS TRACT, NORTH 69°26'00" EAST A DISTANCE OF 237.81 FEET TO THE WESTERLY MARGIN OF A 30-FOOT ROADWAY (262$^{ND}$ AVENUE SOUTHEAST);
THENCE ALONG SAID ROADWAY MARGIN NORTH 00°29'00" EAST A DISTANCE OF 704.92 FEET TO THE SOUTHERLY MARGIN OF A 30-FOOT ROADWAY;
THENCE NORTH 89°51'00" WEST A DISTANCE OF 39 FEET TO THE SOUTHEASTERLY MARGIN OF THE FRANKLIN-HOWARD COUNTY ROAD;
THENCE ALONG SAID ROAD MARGIN SOUTH 37°11'00" WEST A DISTANCE OF 584.45 FEET TO THE BEGINNING.

**PARCEL NO. 132106-9047 (FROM DEED)**

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 13, TOWNSHIP 21 NORTH, RANGE 6 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT 473.50 FEET SOUTH AND 1061.38 FEET EAST OF THE NORTHWEST CORNER OF SAID SECTION 13, AND CONSIDERING THE NORTH LINE OF SAID NORTHWEST QUARTER TO BEAR NORTH 89°48"43" WEST, WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO:
THENCE SOUTH 06°54'16" WEST A DISTANCE OF 180.19 FEET;
THENCE SOUTH 00°32'00" WEST A DISTANCE OF 15 FEET TO THE TRUE POINT OF BEGINNING;
THENCE SOUTH 89°49'00" EAST A DISTANCE OF 60.86 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 167.55 FEET;
THENCE SOUTH 86°40'42" EAST A DISTANCE OF 100.20 FEET;
THENCE SOUTH 00°20'42" EAST A DISTANCE OF 171.87 FEET;
THENCE NORTH 89°53'42" WEST A DISTANCE OF 514.10 FEET;
THENCE NORTH 00°09'00" EAST A DISTANCE OF 197.82 FEET;
THENCE SOUTH 89°28'00" EAST A DISTANCE OF 200.04 FEET;
THENCE NORTH 00°09'00" EAST A DISTANCE OF 149.00 FEET;
THENCE SOUTH 89°49"00" EAST A DISTANCE OF 150.23 FEET TO THE TRUE POINT OF BEGINNING.
(ALSO KNOWN AS LOT "A", CITY OF BLACK DIAMOND LOT LINE ADJUSTMENT NUMBER 00-01, RECORDED UNDER RECORDING NUMBER 20000301000735.)

WRITTEN BY: ARJ
CHECKED BY: MSH

# EXHIBIT B

Project Scope, Owner's Share, and Dwelling Unit Trigger

## Exhibit B -- Agreed Mitigation Projects for The Villages and Lawson Hills in the City of Maple Valley

| Project | Location Within Maple Valley | Project Scope | Owner's Share | Dwelling Unit Trigger |
|---|---|---|---|---|
| A | SR169/ Wax Road Intersection | Add one southbound through lane on SR 169 from SE 231st Street to Witte Road. The southbound approach at this intersection will include one existing left turn lane (approx. 160 ft.), two through lanes, and one shared through/right turn lane. Add a second eastbound to southbound right turn lane (200 ft.) on Wax Road (double right turn lanes). Upgrade signal equipments to be able to run the eastbound right turn phase with northbound protected left turn phase at the same time. | 25.3% | Payment due upon BP for 965th dwelling unit |
| B | SR 169/ Witte Road SE Intersection | Add once southbound through lane on SR 169 from Wax Road through this intersection. The curb lane will become a right turn lane. The southbound approach to this intersection will be one right turn lane, two through lanes, and one left turn lane. | 26.1% | Payment due upon BP for 885th dwelling unit |
| C | SR 169/ SE 240th Street Intersection | Add a second northbound to westbound left turn lane (300 ft) on SR 169 and a second westbound to southbound left turn lane (400 ft.) on SE 240th Street. Widen SE 240th Street west of SR 169 to add a second westbound lane (500 ft). | 66.6% | Payment due upon BP for 1725th dwelling unit |
| F | SR 169/ SE 244th Street Intersection | Install traffic signal | 63.2% | Payment due upon BP for 1085th dwelling unit |
| I | SR 169 / SE 264th Street, SR 169/ SR 516/, and SR 169/ SE 271st Street Intersections | Upgrade signal equipments to be able to coordinate the following three signals: SR 169/ SE 264th Street, SR 169 / SR 516 and SR 169 / SE 271st Street intersections and set the signal cycle length to be 140 seconds. | 54.6% | Payment due upon BP for 1825th dwelling unit |
| K | SR 169 from SE 280th Street to the South City Limit (SR 169 Milepost 10.19) | Widen to a three-lane section by adding a second southbound lane. | 58.4% | Payment due upon BP for 4802th dwelling unit |
| L | SE 271st Bypass Road from SR 169 to SR 516 | Construct a new 3-lane road. (One eastbound and two westbound lanes) on the SE 271st Street alignment between SR 169 and SR 516. Add a second northbound to westbound left turn lane (200 ft) on SR 169 and a signal at SR 516/ SE 271st intersection. The eastbound approach at SR 169/SE 271st St intersection will include one left turn lane (50'), one through lane and one right turn lane (150'). The westbound approach will include one left turn lane (150'), one through lane and one right turn lane (75'). | 6.8% | Payment due upon BP for 2035th dwelling unit |
| E | SR 169 from Witte Road SE to SE 244th Street | Construct a second southbound lane on SR 169 from Witte Road SE to SE 244th Street and a second northbound lane on SR 169 from 1,000 feet south of SE 240th Street to Witte Road SE. The southbound approach at the SR 169/SE 240th Street intersection will include one existing left turn lane (approx 380 ft.), one through lane, and one shared through/right turn lane. The northbound approach at the SR 169/SE 240th Street intersection will include two left turn lanes (300 ft.), one through lane, and one shared through/right turn lane. | 37.2% | Payment due upon BP for 700th dwelling unit |

## Exhibit B -- Agreed Mitigation Projects for The Villages and Lawson Hills in the City of Maple Valley

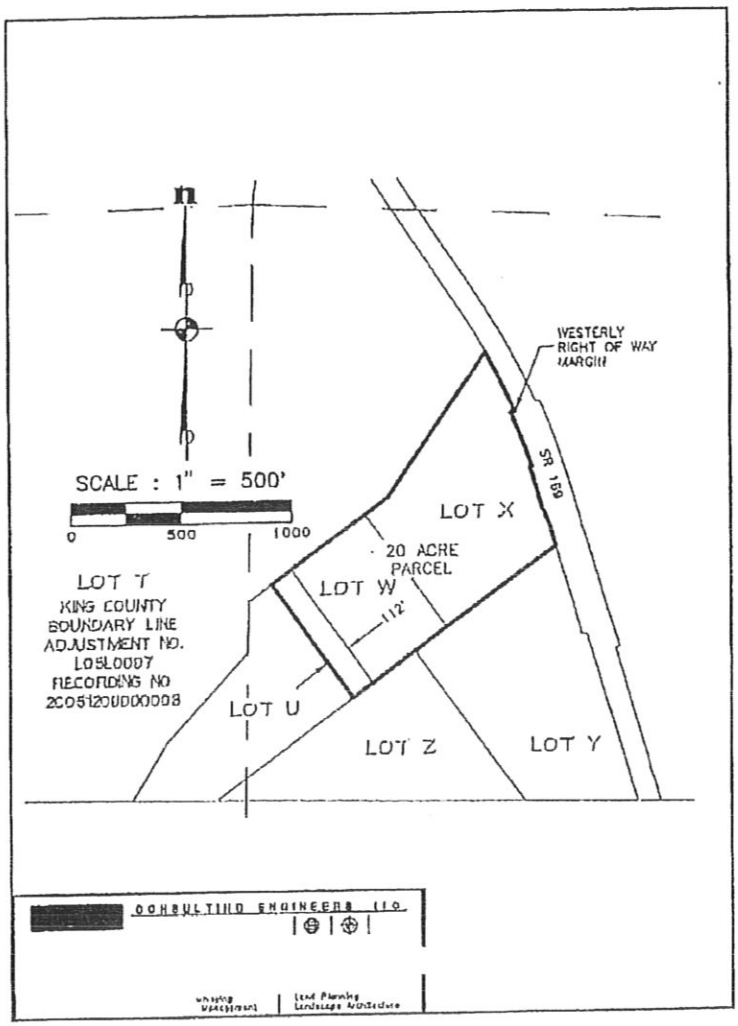
| Project | Location Within Maple Valley | Project Scope | Owner's Share | Dwelling Unit Trigger |
|---|---|---|---|---|
| G | SR 169 from SE 244th Street to SE 264th Street | Construct a second southbound lane on SR 169 from SE 244th Street to SE 264th Street. Construct a second northbound lane on SR 169 from SE 264th Street to 1,000 feet north of SE 264th Street. | 50.8% | Payment due upon BP for 3225th dwelling unit |
| H | SR 169 from SE 264th Street to SE 271st Street | Construct a second southbound lane on SR 169 from south of SR 516 to SE 271st Street. The southbound approach at the SR 169/Goodwill driveway intersection will include one through lane and one shared through/right turn lane. | 59.0% | Payment due upon BP for 2280th dwelling unit |
| J | SR 169 from SE 271st Street to SE 280th Street | Construct a second southbound lane on SR 169 from SE 271st Street to SE 280th Street and a second northbound lane on SR 169 from 1,000 feet south of SE 271st Street to SE 271st Street. The southbound approach at the SR 169/SE 276th Street intersection will include one existing left turn lane (approx. 150 ft.), one through lane, and one shared through/right turn lane. The southbound approach at the SR 169/SE 280th Street intersection will include one through lane and one shared through/right turn lane. The northbound approach at the SR 169/SE 271st Street intersection will include two left turn lanes (200 ft.), two through lanes, and one right turn lane (175 ft.). | 61.25% | Payment due upon BP for 4135th dwelling unit |
| W | SR 516 from 216th Ave SE to West City Limit (SR 516 Milepost 14.42) | Widen to 4/5 lanes with curb, gutter and sidewalks from 216th Ave SE to West City Limit. Add a seond westbound lane on SR 516 to 1000 feet east of 216th Ave SE. The eastbound approach at SR 516/216th Ave SE will include one through lane and one right turn lane. The westbound approach will include one left turn lane (approx. 200') and two through lanes. The northbound approach will include one left turn lane (270') and one shared left/right turn lane. | 29.9% | Payment due upon BP for 5500th dwelling unit |
| X | SR 516 / 216th Ave SE Intersection | Restripe the northbound approach to include one left-turn lane and one left- and right-turn share lane. Increase the left lane pocket length to 270 feet. Modify signal to accommodate eastbound right-turn phase overlapping with northound phase. | 29.9% | Payment due upon BP for 5500th dwelling unit |
| Y | SE 240th Street from SR 169 to Witte Road SE | Construct a second westbound lane on SE 240th Street from 500 feet west SR 169 (see project C) to Witte Road SE. | 13.5% | Payment due no earlier than BP for 1500th dwelling unit* |
| Z | extend SE 240th Street | Construct a 2 to 3 lane (2 through lanes with a center turn lane that becomes a turn lane at intersections) extension of SE 240th St between Wax Road and Witte Road. The eastbound approach at Witte Rd/SE 240th St intersection will include one left turn lane (200'), one through lane and one right turn lane (200'). The westbound approach will include one left turn lane and one shared through/right turn lane. The northbound approach will include one left turn lane (150') and one shared through/right turn lane. The southbound approach will include one left turn lane (150') and one shared through/right turn lane. | 13.5% | Payment due no earlier than BP for 1500th dwelling unit* |

*See paragraph 5.G of the Agreement.

# EXHIBIT C

Lot W, Lot X, and the northeasterly 112 feet of Lot U of that Boundary Line Adjustment No. L05L0097, recorded under Recording No. 20051209900003, situated in the southwest quarter of Section 2, Township 21 North, Range 06 East, Willamette Meridian, City of Black Diamond, King County, Washington.

Containing 20 acres, more or less. See figure below:



# Exhibit R

## COVINGTON TRANSPORTATION MITIGATION AGREEMENT

## SETTLEMENT AGREEMENT

**THIS AGREEMENT** is made and entered into as of this 14TH day of December, 2010 (the "Effective Date"), by and between the **CITY OF COVINGTON**, a municipal corporation organized and existing under the laws of the State of Washington ("Covington") and **BD LAWSON PARTNERS, L.P.** a Washington limited partnership ("Lawson Partners") and **BD VILLAGE PARTNERS, L.P.** a Washington limited partnership ("Village Partners") (Lawson Partners and Village Partners are hereinafter collectively referred to as the "Developer").

## RECITALS

**WHEREAS,** Developer has applied and received approval from the City of Black Diamond, adjacent to Covington, for the Villages Master Planned Development (the "Villages MPD") and the Lawson Hills Master Planned Development (the "Lawson Hills MPD"), City of Black Diamond Ordinance Nos. 10-946 and 10-947, respectively, for which full build-out collectively includes construction of mixed-use projects including 6,050 dwelling units and 1,165,000 square feet of retail, office and light industrial (collectively, the "Black Diamond MPDs"); and

**WHEREAS,** on December 11, 2009, the City of Black Diamond issued a final Environmental Impact Statement ("FEIS") for Lawson Hills MPD and an FEIS for the Villages MPD, and, each FEIS included a section evaluating the cumulative transportation impacts from both the Lawson Hills MPD and the Villages MPD; and

**WHEREAS**, Covington was a party of record in the City of Black Diamond's land use review process for the Villages MPD and Lawson Hills MPD, and requested the imposition of conditions to require mitigation of the Black Diamond MPDs' transportation impacts on streets and highways in Covington; and

**WHEREAS**, the FEISs identified probable significant adverse transportation impacts at three intersections within Covington – SR 516/SE Wax Road (the "Wax Road Intersection"), SR 516/168th Place SE (the "168th Intersection"), and SE 272nd Street/160th Avenue SE (the "272nd/160th Intersection") – that are expected to occur as a result of the cumulative trips generated by the Lawson Hills MPD and the Villages MPD; and

**WHEREAS,** the Developer's transportation engineers, The Transpo Group, Inc., determined that the Black Diamond MPDs, collectively at full build-out, would represent about twenty-one percent (21%) of the total p.m. peak-hour vehicle trips entering the Wax Road Intersection, thirteen percent (13%) of the total p.m. peak-hour vehicle trips entering the 168th Intersection, and eight percent (8%) of the p.m. peak-hour vehicle trips entering the 272nd/160th Intersection; and

**WHEREAS,** Covington believes that it can justify a higher proportionate share contribution from the Black Diamond MPDs at the Wax Road Intersection and desires mitigation from the Developer to address the impacts it expects to occur at the Jenkins Creek Bridge as a result of the cumulative trips generated by the Black Diamond MPDs; and

**WHEREAS**, prior to the commencement of negotiations between the Developer and Covington, the City of Covington had already improved the 168th Intersection with the traffic mitigation measures recommended in the FEISs for the Lawson Hills MPD and the Villages MPD; and

**WHEREAS**, the Developer desires to mitigate adverse transportation impacts from the Black Diamond MPDs and to avoid Covington appeals of the Black Diamond MPDs; and

**WHEREAS,** the Developer and Covington are now willing to compromise and fully agree on the appropriate mitigation required for transportation impacts generated by the Black Diamond MPDs to streets and intersections within the City of Covington;

**NOW, THEREFORE,** in consideration of the mutual agreements set forth herein, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Developer and Covington hereby agree as follows:

**AGREEMENT**

1. **Developer's Mitigation Fee**. To fully mitigate the transportation impacts of the Black Diamond MPDs within the City of Covington (including those impacts identified in the FEISs at the Wax Road Intersection, the 168th Intersection, and the 272nd/160th Intersection), the Developer shall pay to Covington Eight Hundred Thousand Dollars and 00/100 Dollars ($800,000) (the "MPD Mitigation Fee") pursuant to the fee payment schedule set forth in Section 2.

2. **MPD Mitigation Fee Schedule.** The Developer shall pay the MPD Mitigation Fee in four installments (the "MPD Mitigation Fee Installments") as follows:

    A. First Installment: Within ninety (90) days of the City of Black Diamond's issuance of an occupancy permit for the 1st dwelling unit within the Black Diamond MPDs, the Developer shall pay to Covington One Hundred Fifty Thousand and 00/100 Dollars ($150,000) (the "First Installment Payment").

    B. Second Installment: Within thirty (30) days of the City of Black Diamond's issuance of the building permit for the 2000th dwelling unit within the Black Diamond MPDs, the Developer shall pay to Covington Three Hundred Thousand and 00/100 Dollars ($300,000).

    C. Third Installment: Within thirty (30) days of the City of Black Diamond's issuance of the building permit for the 4000th dwelling unit within the Black Diamond MPDs, the Developer shall pay to Covington One Hundred Fifty Thousand and 00/100 Dollars ($150,000).

    D. Fourth Installment: Within thirty (30) days of the City of Black Diamond's issuance of the building permit for the 5800th dwelling unit within the Black Diamond MPDs, the Developer shall pay to Covington Two Hundred Thousand and 00/100 Dollars ($200,000).

E. Annual Adjustment. Each MPD Mitigation Fee Installment payment shall be subject to an annual adjustment based on the Construction Cost Index ("CCI") published in Engineering News Record ("ENR") commencing on January 1, 2012.

Developer shall have the option, in its sole discretion, to pay any of the MPD Mitigation Fee Installments to Covington prior to the time the trigger for that installment payment is reached.

3. **Covington's Use of MPD Mitigation Fee.** Except for the Jenkins Creek Bridge Portion (defined in subsection 3.A below), Covington shall have flexibility in determining how to use the MPD Mitigation Fee Installments paid by the Developer, provided that Covington must use the MPD Mitigation Fee Installments to fund transportation improvements on the SR 516 corridor or a bypass of the SR 516 corridor.

   A. Jenkins Creek Bridge. A portion of the MPD Mitigation Fee totaling Three Hundred Thousand and 00/100 Dollars ($300,000) shall be used by Covington for transportation improvements to the Jenkins Creek Bridge (the "Jenkins Creek Bridge Portion"). The Jenkins Creek Bridge Portion of the MPD Mitigation Fee cannot be used to fund any other transportation improvements within the City of Covington. If, however, Covington has constructed and funded its Jenkins Creek improvement project prior to receiving $300,000 from the Developer, then Covington may use the Jenkins Creek Bridge Portion to fund other transportation improvements on the SR 516 corridor or a bypass of the SR 516 corridor.

   B. Transportation Improvements. Transportation improvements for the purposes of this section include acquisition of right-of-way, design, and construction costs but shall not include maintenance or road overlays.

4. **Nonrefundable**. The MPD Mitigation Fee Installments shall be nonrefundable when paid, provided Covington uses the each installment payment within six (6) years of the date of payment. If Covington fails to use the installment payment within such time period, it shall be returned to the Developer. For purposes of this Section 4, an installment payment shall be considered "used" if earmarked by Covington for a specific transportation improvement(s) on the SR 516 corridor or a bypass of the SR 516 corridor.

5. **Transportation Capacity**. The Developer and Covington agree that this Agreement requires the Black Diamond MPDs to contribute more mitigation to Covington than described in the FEISs. As a result, the Developer and Covington agree to negotiate in good faith with the goal of entering into a separate agreement to address the transportation capacity created as a result of the Developer's payment of the MPD Mitigation Fee Installments.

6. **Contingencies**. The Developer's obligation to fulfill its obligations as set forth herein is contingent on the following: (i) the City of Black Diamond approving the Lawson Hills MPD development agreement; (ii) the City of Black Diamond approving the Villages

MPD development agreement; and (iii) in the event either the Black Diamond MPD permit approvals or development agreements are appealed by a third party, the final resolution of any such appeal in a manner that upholds the City of Black Diamond's decision. The Developer may be released from the terms of this Agreement should the Developer elect not to proceed with the Black Diamond MPDs prior to making the First Installment Payment.

7. **Waiver and Mutual Release of Claims**. Covington and the Developer acknowledge and represent that the terms of this Agreement have been jointly negotiated and that each party enters into this Agreement voluntarily. Further, the parties acknowledge and agree that the Developer's performance of the obligations set forth in this Agreement shall constitute full, sufficient and complete mitigation of the transportation impacts occurring within Covington as a result of full build-out of the Lawson Hills MPD and Villages MPD, and as to Covington transportation matters, this Agreement assures that the Villages MPD and the Lawson Hills MPD has made all appropriate provisions for the public health, safety and welfare. The parties agree that this Agreement is authorized under law and both Covington and the Developer waive any claims that this Agreement is invalid or illegal. Further, Covington hereby covenants and agrees that it will not seek or impose any mitigation measures or fees with respect to the Villages MPD or Lawson Hills MPD in addition to the terms and obligations set forth herein and Covington waives any right to appeal or contest the approval of either the Lawson Hills MPD or the Villages MPD, the development agreements, or any implementing plats or projects or interim reviews, processes, or MPD approval amendments prior to full build-out so long as those reviews, processes and approvals do not increase the number of units or commercial square feet allowed as part of full build-out of the Black Diamond MPDs.

8. **Joint and Several Liability**. Lawson Partners and Village Partners each hereby acknowledge and assume all of the obligations as set forth in this Agreement and each agree, as necessary, to fulfill the obligations of the other as if Lawson Partners or Village Partners, on its own, were the Developer.

9. **Binding on Successors**. This Agreement shall bind and inure to the benefit of the parties and their successors in interest, and may be assigned to any successor in interest to the Lawson Hills MPD property or Villages MPD property.

10. **Event of Default**. If the Developer fails to pay the full amount of the mitigation fees in a timely manner as provided above, then the Developer shall be in default of such obligation. In the event of such default, Covington may enforce its rights under this Agreement by an action for damages or specific performance, or any other remedy available at law or in equity. Any unpaid portion of the MPD Mitigation Fee shall bear interest after its due date at the rate of twelve percent (12%) per annum. Provided, however, that in the event of default, Covington shall not take any action to enforce its rights or pursue any remedy hereunder without first giving the Developer an opportunity to cure the default as follows: In the event of the Developer's default, Covington shall notify the Developer in writing of such default, and the Developer shall have thirty (30) days following receipt of such notice to cure the default without payment of any interest or penalty.

11. **Governing Law**. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Washington. Venue for any action to enforce the terms of this Agreement shall be in King County Superior Court.

12. **Authority**. Covington and the Developer each represents and warrants to the other that it has the authority, and is duly authorized, to execute and deliver this Agreement and that the persons signing on its behalf are duly authorized to do so.

13. **Term**. When fully executed this Agreement shall be in full force and effect until the City of Black Diamond's issuance of the 6050$^{th}$ building permit for a lot within the Black Diamond MPDs.

    A. Major Amendments. Major amendments to the Black Diamond MPDs and/or the development agreements for the Black Diamond MPDs shall not terminate this Agreement; provided, however, if a major amendment allows an increase above the 6050 dwelling units or 1,165,000 square feet of retail, office and light industrial originally approved for the Black Diamond MPDs, Covington and the Developer agree to promptly meet and negotiate in good faith regarding mitigation to address the transportation impacts on streets and highways in Covington associated with the Black Diamond MPDs' increase in dwelling units or commercial square footage.

    B. Release of Large Lots on Expiration/Revocation. Any lot or parcel 5-acres or larger that has not been built on during the term of the MPD permit approval for the Black Diamond MPDs and/or accompanying development agreements, and that is not the subject of a pending application for preliminary plat approval, final plat approval, binding site plan approval, or other land use processes, shall be automatically released from the purview of this Agreement upon the: (i) expiration of the applicable MPD permit approval; (ii) expiration of the applicable development agreement; (iii) revocation of the applicable MPD permit approval; or (iv) revocation of the applicable development agreement. Any subdivision of real estate released under this provision shall be subject to whatever future traffic mitigation measures are imposed at the time such property is approved for development.

14. **Amendments**. This Agreement may not be amended or modified except by a writing, signed by the parties to be bound thereby.

15. **Headings**. The headings in this Agreement are inserted for reference only and shall not be construed to expand, limit or otherwise modify the terms and conditions of this Agreement.

16. **Integration; Scope of Agreement**. This Agreement represents the entire agreement of the parties with respect to the subject matter hereof. There are no other agreements, oral or written, except as expressly set forth herein. This Agreement sets forth all conditions desired or requested by Covington with respect to the Black Diamond MPDs.

17. **No Third Parties**. This Agreement is made and entered into for the benefit of the parties hereto and their successors and assigns. No other person or entity is an intended third party beneficiary. No other person or entity shall have any right of action under this Agreement.

18. **Attorney Fees**. In the event that either party resorts to litigation to enforce any term of this Agreement, the substantially prevailing party in any such litigation shall be entitled to an award of reasonable attorney fees, together with actual court costs, expended in such litigation.

19. **Drafting**. The parties have had an equal opportunity to participate in the preparation of this Agreement.

20. **Full Understanding**. The parties each acknowledge, represent and agree that they have read this Agreement; that they fully understand the terms thereof; and that they have been fully advised by their independent legal counsel or have had the opportunity to be so advised in connection with the terms of this Agreement.

21. **Notices**. Any notice or other communication to any party given under this Agreement will be effective only if in writing and delivered (1) personally, (2) by certified mail, return receipt requested and postage prepaid, (3) by facsimile transmission with written evidence confirming receipt, or (4) by overnight courier (such as UPS, FedEx, or Airborne Express) to the following addresses:

If to Developer:

Yarrow Bay Holdings
10220 NE Points Drive, Suite 120
Kirkland, WA 98033
Attn: Brian Ross
Phone: 425-894-2100

With a copy to:

Yarrow Bay Holdings
10220 NE Points Drive, Suite 120
Kirkland, WA 98033
Attn: Megan Nelson

If to Covington:

City of Covington
16720 SE 271st Street, Suite 100
Covington, WA 98042
Attn: Derek Matheson, City Manager

The addresses and addressees to which notice is to be given may be changed by written notice given in the manner specified in this Section 21 and actually received by the addressee.

22. **Execution in Counterparts**. This Agreement may be executed in one or more counterparts and as executed shall constitute one Agreement, binding on all parties, notwithstanding that all parties are not signatory to the same counterpart.

**BD LAWSON PARTNERS, L.P.**

by **YARROW BAY DEVELOPMENT LLC.**, a Washington limited liability company, Its General Partner

_____
Brian Ross, CEO

Date: _____

**BD VILLAGE PARTNERS, L.P.**

by **YARROW BAY DEVELOPMENT LLC.**, a Washington limited liability company, Its General Partner

_____
Brian Ross, CEO

Date: _____

**CITY OF COVINGTON**

Derek Matheson
By Derek Matheson, City Manager

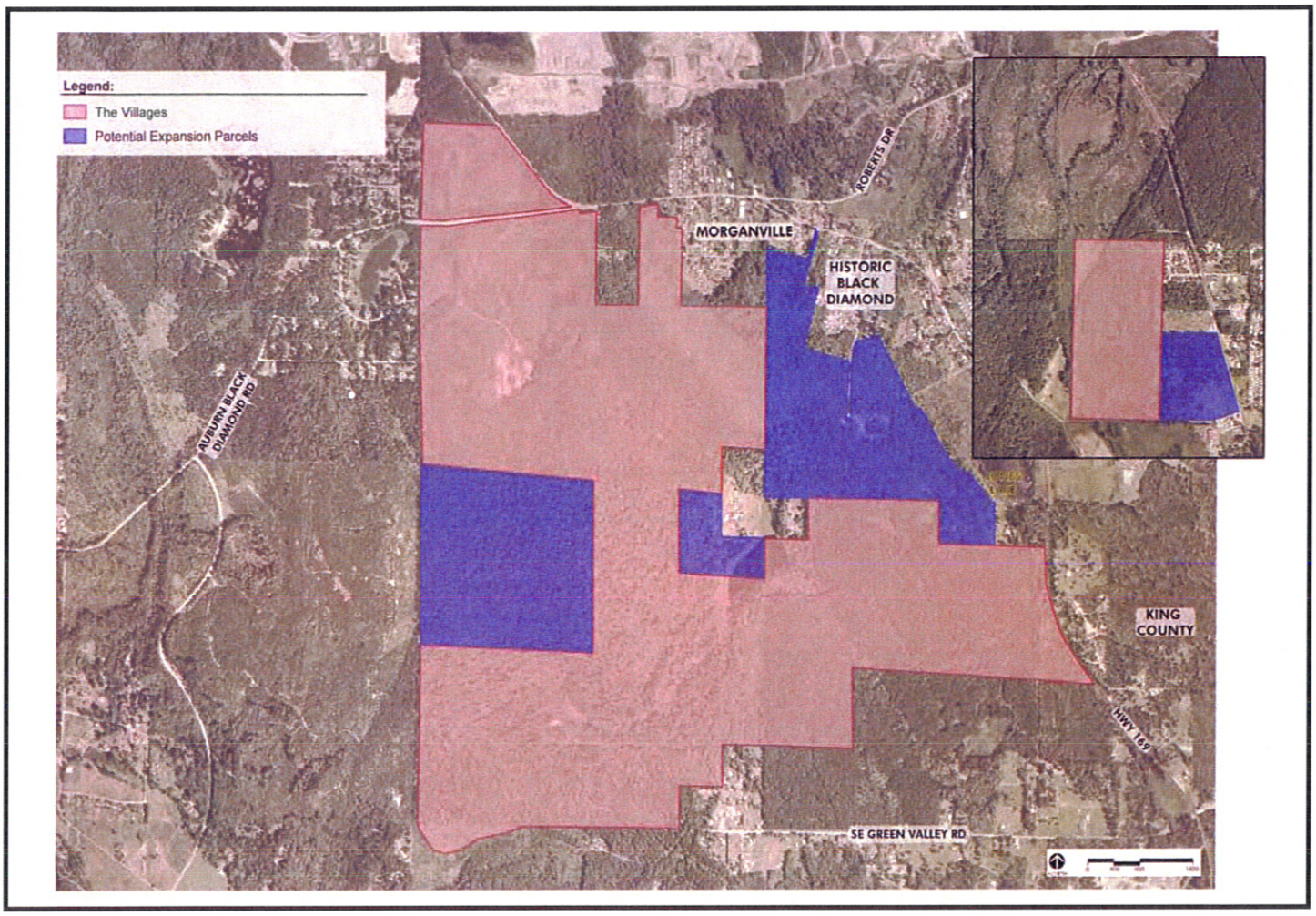
Date: 12/17/10

# Exhibit S

## POTENTIAL EXPANSION AREAS

The Villages
Development Agreement

POTENTIAL EXPANSION AREAS



## Exhibit T

## IMPACT FEES FOR FIRE PROTECTION FACILITIES DATED 1-13-2011

***Review Draft***

# IMPACT FEES

FOR

# FIRE PROTECTION FACILITIES

IN

# CITY OF BLACK DIAMOND, WASHINGTON

Henderson
Young &
Company

January 13, 2011

# 1. INTRODUCTION

The purpose of this study is to establish the rates for impact fees for fire protection facilities in the City of Black Diamond, Washington. The City of Black Diamond, located southeast of Seattle, was established in the late 1880's and incorporated in 1959. The city's current population is approximately 4,200. Development proposed in the Villages MPD and the Lawson Hils MPD will increase the population to nearly 20,000. The growth from the MPDs, and any other new development, will impact the City's fire protection service. This study identifies the rates for impact fees that will pay for the capital cost of fire protection facilities needed to serve new development.

This study of impact fees for fire protection facilities for the City of Black Diamond presents the methodology, summarizes the data, and explains the calculation of the fees. The methodology is designed to comply with the requirements of Washington law. This introduction describes the basis for fire protection impact fees, including:

- Definition and Rationale of Impact Fees
- Statutory Basis For Impact Fees
- Responsibility for Public Facilities
- Need for Additional Fire Protection Facilities
- Determining the Benefit of Fire Protection Facilities to Development
- Methodology and Relationship to Capital Facilities Plan
- Data Sources and Calculation

## Definition and Rationale of Impact Fees

Impact fees are charges paid by new development to reimburse local governments for the capital cost of public facilities that are needed to serve new development and the people who occupy the new development. New development is synonymous with "growth."

Local governments charge impact fees on either of two bases.

- First, as a matter of policy and legislative discretion, they may want new development to pay the full cost of its share of new public facilities because that portion of the facilities would not be needed except to serve the new development. In this case, the new development is required to pay for virtually all the cost of its share of new public facilities[1].

- Second, local governments may use other sources of revenue to pay for the new public facilities that are required to serve new development. If, however, such revenues are not sufficient to cover the entire costs of new facilities necessitated by new development, the new development may be required to pay an impact fee in an amount equal to the difference between the total cost and the other sources of revenue.

There are many kinds of "public facilities" that are needed by new development, including fire protection facilities, parks, schools, roads, water and sewer plants, libraries, and other government facilities. This study covers fire protection facilities for the City of Black Diamond, Washington. Impact fees for fire protection facilities can be charged to all residential and non-residential development within the City of Black Diamond.

## Statutory Basis For Impact Fees

RCW 82.02.050 - 82.02.090 authorizes local governments in Washington to charge impact fees. The impact fees that are described in this study are not mitigation payments authorized by the State Environmental Policy Act (SEPA). There are several important differences between impact fees and SEPA mitigations. Two aspects of impact fees that are particularly noteworthy are: 1) the ability to charge for the cost of public facilities that are "system improvements" (i.e., that provide service to the community at large) as opposed to "project improvements" (which are "on-site" and provide service for a particular development), and 2) the ability to charge small-scale development their proportionate share, whereas SEPA exempts small developments.

The following synopsis of the most significant requirements of the law includes citations to the Revised Code of Washington as an aid to readers who wish to review the exact language of the statutes.

[1] RCW 82.02.050 (2) prohibits impact fees that charge 100% of the cost, but does not specify how much less than 100%, leaving that determination to local governments.

## Types of Public Facilities

Four types of public facilities can be the subject of impact fees: 1) public streets and roads; 2) publicly owned parks, open space and recreation facilities; 3) school facilities; and 4) fire protection facilities. *RCW 82.02.050(2) and (4), and RCW 82.02.090(7)*

## Types of Improvements

Impact fees can be spent on "system improvements" (which are typically outside the development), as opposed to "project improvements" (which are typically provided by the developer on-site within the development). *RCW 82.02.050(3)(a) and RCW 82.02.090(6) and (9)*

## Benefit to Development

Impact fees must be limited to system improvements that are reasonably related to, and which will benefit new development. *RCW 82.02.050(3)(a) and (c).* Local governments must establish reasonable service areas (one area, or more than one, as determined to be reasonable by the local government), and local governments must develop impact fee rate categories for various land uses. *RCW 82.02.060(6)*

## Proportionate Share

Impact fees cannot exceed the development's proportionate share of system improvements that are reasonably related to the new development. The impact fee amount shall be based on a formula (or other method of calculating the fee) that determines the proportionate share. *RCW 82.02.050(3)(b) and RCW 82.02.060(1)*

## Reductions of Impact Fee Amounts

Impact fees rates must be adjusted to account for other revenues that the development pays (if such payments are earmarked for or proratable to particular system improvements). *RCW 82.02.050(1)(c) and (2) and RCW 82.02.060(1)(b)* Impact fees may be credited for the value of dedicated land, improvements or construction provided by the developer (if such facilities are in the adopted CFP and are required as a condition of development approval). *RCW 82.02.060(3)*

## Exemptions from Impact Fees

Local governments have the discretion to provide exemptions from impact fees for low-income housing and other "broad public purpose" development, but all such exemptions must be paid from public funds (other than impact fee accounts). *RCW 82.02.060(2)*

## Developer Options

Developers who are liable for impact fees can submit data and or/analysis to demonstrate that the impacts of the proposed development are less than the impacts calculated in this rate study. *RCW 82.02.060(5).* Developers can pay impact fees under protest and appeal impact fee calculations. *RCW 82.02.060(4) and RCW 82.02.070(4) and (5).* The developer can obtain a refund of the impact fees if the local government fails to expend the impact fee payments within 6 years, or terminates the impact fee requirement, or the developer does not proceed with the development (and creates no impacts). *RCW 82.02.080*

## Capital Facilities Plans

Impact fees must be expended on public facilities in a capital facilities plan (CFP) element (or used to reimburse the government for the unused capacity of existing facilities). The CFP must conform with the Growth Management Act of 1990, and must identify existing deficiencies in facility capacity for current development, capacity of existing facilities available for new development, and additional facility capacity needed for new development. *RCW 82.02.050(4), RCW 82.02.060(7), and RCW 82.02.070(2)*

## New versus Existing Facilities

Impact fees can be charged for new public facilities *(RCW 82.02.060(1)(a))* and for the unused capacity of existing public facilities *(RCW 82.02.060(7))* subject to the proportionate share limitation described above.

## Accounting Requirements

The local government must separate the impact fees from other monies, expend the money on CFP projects within 6 years, and prepare annual reports of collections and expenditures. *RCW 82.02.070(1)-(3)*

## Responsibility for Public Facilities

In general, local governments that are authorized to charge impact fees are responsible for specific public facilities for which they may charge such fees. The City of Black Diamond is legally and financially responsible for the fire protection facilities (stations and apparatus) it owns. The City currently contracts with King County Fire District 44 for the operation of the stations and apparatus. The City has retained ownership of the stations and apparatus, and will own future stations and apparatus that will serve new development, therefore Black Diamond can charge impact fees for fire protection.

The primary fire protection inventory for the City of Black Diamond Fire Department includes Station 98 that is staffed part-time, 1 engine, 1 aid car, 1 staff vehicle and 1 brush truck.

In addition to the primary response assets, the City of Black Diamond has Station 99 that is not staffed, and 4 reserve apparatus (2 engines, 1 aid car, and 1 staff vehicle) that are dispatched as needed within the City of Black Diamond when a primary apparatus is out of service for repairs or maintenance. The reserve station and apparatus are excluded from the impact fee analysis because they are not used frequently enough to have a material effect on the cost of providing fire protection facilities.

## Need for Additional Fire Protection Facilities

The need for fire protection facilities is influenced by a variety of factors, such as response time, call loads, population, non-residential structures, geographical area, topographic and manmade barriers, and standards of the National Fire Protection Association (NFPA).

Black Diamond will become a city of approximately 20,000, so a survey was conducted of Washington cities with populations between 15,000 and 25,000. Eleven cities responded[2] and they average 2.3 fire stations and 7.4 on-duty firefighters.

Emergency calls per dwelling and per square foot of non-residential space can be used to forecast future call loads. The average emergency calls per year in two comparable fire protection providers[3] is 0.116 calls per dwelling unit and 0.1489

[2] Aberdeen, Anacortes, Arlington, Bainbridge Island, Camas, Mercer Island, Moses Lake, Mukilteo, Port Angeles

[3] North Whatcom Fire & Rescue, Eastside Fire & Rescue

calls per 1,000 square feet of non-residential space. Applying these call rates to the 6,050 new dwellings and 1,165,000 square feet of non-residential space in the proposed MPDs would predict 875 emergency calls per year. Adding these calls to the current 170 calls per year produces a total of 1,045 calls per year. If future fire stations handle double the current call load of Station 98, Black Diamond would need a total of 3.1 stations when the MPDs are built out.

The standards of the NFPA indicate the number of firefighters to respond to a structure fire. Specific response standards vary according to the type of emergency, the type of fire protection agency, and the density of development. For this study, it is assumed that approximately 12 firefighters are needed to respond to a fire emergency in Black Diamond. Typical fire station staffing in communities like Blakc Diamond is 4 crew members per station. The NFPA standards indicate a need for 3 fire stations for Black Diamond when fully developed.

As noted above, Black Diamond is expected to grow from its current population of 4,200 to approximately 19,200. The growth of 15,000 people is 3.58 times the current population. If the City's current half-time staffed station is considered the equivalent of 0.5 stations, then 3.58 times 0.5 indicates that the future need for population (excluding commercial development) is at least 1.8 stations.

The preceding analysis of the need for fire stations (with apparatus) in Black Diamond can be summarized as follows.

| Basis of Need | Stations Needed |
|---|---|
| Comparable cities | 2.3 |
| Emergency call load | 3.1 |
| NFPA response standards | 3.0 |
| Population growth | 1.8 |
| Average | 2.5 |

As noted above, Black Diamond currently has the equivalent of 0.5 staffed fire stations, therefore new development in Black Diamond creates the need for an additional fire stations (with apparatus)[4].

[4] 2.5 total – 0.5 current = 2.0 additional

## Determining the Benefit of Fire Protection Facilities to Development

The law imposes three tests of the benefit provided to development by impact fees: 1) proportionate share, 2) reasonably related to need, and 3) reasonably related to expenditure *(RCW 80.20.050(3))*.

### 1. Proportionate Share

First, the "proportionate share" requirement means that impact fees can be charged only for the portion of the cost of public facilities that is "reasonably related" to new development. In other words impact fees cannot be charged to pay for the cost of reducing or eliminating deficiencies in existing facilities.

Second, there are several important implications of the proportionate share requirement that are not specifically addressed in the law, but which follow directly from the law:

- Costs of facilities that will be used by new development and existing users must be apportioned between the two groups in determining the amount of the fee. This can be accomplished in either of two ways: (1) by allocating the total cost between new and existing users, or (2) calculating the cost per unit (i.e., per call for service) and applying the cost only to new development when calculating impact fees.

- Impact fees that recover the costs of existing unused capacity can be based on the government's actual cost or the replacement cost of the facility in order to account for carrying costs of the government's actual or imputed interest expense.

The third aspect of the proportionate share requirement is its relationship to the requirement to provide adjustments and credits to impact fees, where appropriate. These requirements ensure that the amount of the impact fee does not exceed the proportionate share.

- The "adjustments" requirement reduces the impact fee to account for past and future payments of other revenues (if such payments are earmarked for or proratable to the system improvements that are needed to serve new growth).

- The "credit" requirement reduces impact fees by the value of dedicated land, improvements or construction provided by the

developer (if such facilities are in the adopted CFP and are required as a condition of development approval). The law does not prohibit a local government from establishing reasonable constraints on determining credits. For example, the location of dedicated land and the quality and design of a donated public facility can be required to conform to adopted local standards for such facilities.

Without such adjustments and credits, the fee-paying development might pay more than its proportionate share.

**2. Reasonably Related to Need**

There are many ways to fulfill the requirement that impact fees be "reasonably related" to the development's need for public facilities, including personal use and use by others in the family or business enterprise (direct benefit), use by persons or organizations who provide goods or services to the fee-paying property (indirect benefit), and geographical proximity (presumed benefit). These measures of relationship are implemented by the following techniques:

- Fire protection is provided by the City of Black Diamond to all properties regardless of the type of use of the property, therefore, the fire protection impact fees are charged to all residential and non-residential development of the City of Black Diamond because all types of property benefit from fire stations and apparatus.

- The relative needs of different types of growth are considered in establishing fee amounts. Fire protection impact fee rates are calculated separately for residential and non-residential land uses.

- Fee-payers can pay a smaller fee if they can demonstrate that their development will have less impact than is presumed in the calculation of the impact fee schedule for their classification of property. Such reduced needs must be permanent and enforceable (i.e., through land use restrictions).

- Washington law requires one or more service areas as a way of connecting a unit of development and a fire protection facility. All impact fees paid by new development in the service area would be required to be spent on new fire protection facilities in the same service area. The benefits provided by individual fire protection apparatus are not limited to geographic areas surrounding each station within the City of Black Diamond because the apparatus

are frequently called upon to assist with an incident in a different area of the service area when the seriousness of the call suggests a need for additional units or when backup is requested. These response policies make fire protection facilities function as a single system, and all properties benefit from improvements to any part of the system, therefore the fire protection impact fee for each land use category is calculated, collected, and expended in a single service area covering all of the City of Black Diamond.

### 3. Reasonably Related to Expenditures

Two provisions of the law tend to reinforce the requirement that expenditures be "reasonably related" to the development that paid the impact fee. First, the requirement that fee revenue must be earmarked for specific uses related to public facilities ensures that expenditures are on identifiable projects, the benefit of which can be demonstrated. Second, impact fee revenue must be expended within 6 years, thus requiring a timeliness to the benefit to the fee-payer.

## Methodology and Relationship to Capital Facilities Plan

Impact fees for fire protection facilities will be expended on the list of projects in the city's Capital Facilities Plans. The projects in the CFP include the stations and apparatus needed for new development, as quantified above (see "Need for Additional Fire Protection Facilities"). The costs from the CFP are calculated in this study to identify costs per unit of capacity of fire protection facility. The costs per unit of capacity are applied to the incident rate of fire and medical calls per dwelling unit and per non-residential square foot. The amount of the fee is determined by charging each fee-paying development for the number of units of demand that it generates. This methodology fulfills the statutory requirements that impact fees be based on the CFP, and also be based on a formula or other methodology.

## Data Sources and Calculation

### Data Sources

The data in this study of impact fees for fire protection facilities in the City of Black Diamond, Washington was provided by the City of Black Diamond and King County Fire District 44 unless a different source is specifically cited.

## Data Rounding

The data in this study was prepared using computer spreadsheet software. In some tables in this study, there will be very small variations from the results that would be obtained using a calculator to compute the same data. The reason for these insignificant differences is that the spreadsheet software was allowed to calculate results to more places after the decimal than is reported in the tables of these reports. The calculation to extra places after the decimal increases the accuracy of the end results, but causes occasional differences due to rounding of data that appears in this study.

# 2. FIRE PROTECTION IMPACT FEE PER UNIT OF DEVELOPMENT

This chapter presents the methodology, summarizes the data and explains the calculation of the impact fees. The data is presented in four tables.

## 1. Fire Station Capital Cost per New Unit of Development

Table 1 identifies the fire station capital cost per new dwelling unit and per non-residential square foot. There are several steps involved in the calculations shown in Table 1.

**Annual Station Cost**

The first step in calculating the station cost per new unit of development is to determine the annual station cost per square foot. This cost is determined by dividing the station capital cost per square foot by its useful life.

Rows A through C of Table 1 calculate the average annualized fire station cost per square foot. The cost per square foot is based on a survey of comparable fire stations in King County. The costs include land, building, "soft costs" of design, permitting and construction management, and furnishings and equipment.

The useful life represents the length of time the station will last before requiring significant capital cost for repair or renovation. The annualized cost is calculated by dividing the $405.00 cost per square foot (Row A) by the 50 year useful life (Row B), resulting in an annualized station cost of $ 8.10 per square foot, as shown in Row C of Table 1.

**Station Square Feet Per Fire and Medical Incident**

The next step in calculating the station cost per new unit of development is to determine the amount of station square feet per fire and medical incident. This amount is determined by dividing the fire station inventory by the annual incidents.

This calculation is shown in Rows D through F of Table 1: the Station 98 inventory of 4,915 square feet (from Row D) is divided by the 170 annual incidents (from Row E). The result, shown in Row F, is 28.91 station square feet of fire station space per fire and medical incident.

**Station Cost Per Fire and Medical Incident**

Next, the station cost per fire and medical incident is calculated by multiplying the annual station cost per square foot by the station square feet per fire and medical incident.

The result of this calculation is shown in Row G of Table 1: the station cost per square (from Row C) is multiplied times the station square feet per incident (from Row F). The result is the station cost of $234.19 per fire and medical incident. In other words, each fire and medical incident "uses up" $234.19 worth of fire station.

**Station Capital Cost for Residential Development (per dwelling unit)**

The capital station cost of fire and medical incidents per dwelling unit is determined by multiplying the annual fire and medical incidents per dwelling unit times the annual station capital cost per fire and medical incident, then multiplying that result times the useful life of the fire station.

In Rows H through K of Table 1 the fire and medical incident rate of 0.116 emergency calls per year per dwelling unit[5] is multiplied by the annual capital cost of $234.19 per fire incident (from Row G), resulting in a dwelling unit cost of $27.1655 per year (Row I). Since a fire station lasts 50 years the residential dwelling unit needs to pay 50 times the annual rate, therefore the annual cost of $27.1655 is then multiplied times the 50-year useful life of the station (shown in Row J) to calculate the station capital cost of $1,358.27 per dwelling unit (in Row K).

**Station Capital Cost for Non-Residential Development (per square foot)**

The capital station cost of fire and medical incidents per non-residential square foot is determined the same way as for residential development, but using the incidents per non-residential square foot.

In Rows L through O of Table 1 the fire and medical incident rate of 0.0001489 emergency calls per year per non-residential square foot is multiplied by the annual capital cost of $234.19 per fire incident (from Row G), resulting in a non-residential square foot cost of $0.0349 per year. The annual cost of $0.0349 is then

[5] The incident rate in Rows H and L represents the average incident rate of two Washington fire service providers with characteristics relevant to Black Diamond: North Whatcom Fire & Rescue, and Eastside Fire and Rescue.

multiplied times the 50-year useful life of the station (shown in Row N) to calculate the station capital cost of $1.74 per non-residential square foot (see Row O).

***Table 1: Fire Station Cost per New Dwelling Unit and Non-Residential Square Foot***

| Component | Data | Units |
|---|---|---|
| A. Cost | 405.00 | $ per square foot |
| B. Useful Life | 50 | years |
| C. Annual Cost | 8.10 | $ (A ÷ B) |
| | | |
| D. Station Square Feet | 4,915 | square feet |
| E. Annual Incidents | 170 | emergency calls |
| F. Square Feet per Incident | 28.91 | square feet (D ÷ E) |
| | | |
| G. Cost Per Incident | 234.19 | $ (C x F) |
| | | |
| Residential Development (per dwelling | | |
| H. Annual Incidents | 0.116 | emergency calls per year per dwelling |
| I. Cost per Year | 27.1655 | $ (G x H) |
| J. # Years (Useful Life) | 50 | years (same as B) |
| K. Cost for Useful Life | 1,358.27 | $ (I x J) |
| | | |
| Non-Residential Development (per square foot) | | |
| L. Annual Incidents | 0.0001489 | emergency calls per year per sq ft of non-residential |
| M. Cost per Year | 0.0349 | S (G x L) |
| N. # Years (Useful Life) | 50 | years (same as B) |
| O. Cost for Useful Life | 1.74 | S (M x N) |

## 2. Fire Apparatus Capital Cost Per New Unit of Development

Table 2 identifies the fire apparatus capital cost per new dwelling unit and per non-residential square foot. There are several steps involved in the calculations shown in Table 2. The methodology is similar to fire station costs (Table 1), but applied to several types of fire apparatus (engines, aid cars, staff vehicles, and brush trucks).

**Annual Apparatus Cost**

The first step in calculating the apparatus cost per new unit of development is to identify and annualize the cost of each type of apparatus. The capital cost per

apparatus is based on the cost of primary response apparatus and major support equipment. The annualized capital cost per apparatus is determined by dividing the capital cost of each type of apparatus by its useful life:

Rows A through C of Table 2 calculates the average annualized apparatus cost for each of the primary response apparatus: engine, aid car, staff vehicle and brush truck. The cost per apparatus includes the vehicle, fire and medical equipment, and communications equipment.

The useful life of each apparatus is shown in Row B of Table 2 and represents the length of time the apparatus will last before requiring replacement. The annualized cost is calculated by dividing the cost per apparatus (Row A) by the useful life (Row B), resulting in an annualized apparatus cost for each apparatus type, as shown in Row C of Table 1. For example, the cost of an engine is $726,856 and it's expected useful life is 15 years. Annualizing the cost based on a 15 year life results in a cost of $48,457.07 per year.

**Apparatus Cost Per Fire and Medical Response**

The next step in calculating the apparatus cost per new unit of development is to determine the apparatus cost per fire and medical response. The capital cost per fire and medical response is calculated for each apparatus by dividing the annualized cost of the apparatus by the total annual incidents responded to by each type of apparatus. Each type of apparatus is analyzed separately because the number and type of apparatus responding to an incident varies depending on the type and severity of the incident.

This calculation is shown in Rows D and E of Table 2: the annualized cost of one of each type of apparatus (from Row C) is divided by the number of emergency responses for each type of apparatus (Row D) resulting, in Row E in the cost per response for each apparatus type. For example, an engine responded to 77 fire and medical emergency incidents in a year. Dividing the annualized cost of an engine of $48,457.07 (Row C) by the 77 annual responses results in an engine cost of $629.31.

**Apparatus Cost Per Fire and Medical Incident**

The apparatus cost per fire and medical incident is calculated by multiplying the apparatus cost per response by the percent of fire and medical incidents each type of apparatus responds to. This calculation accounts for the fact that different types of fire and medical emergencies need different types or combinations of apparatus. In many cases, more than one apparatus is dispatched to an emergency incident. The number and type of apparatus dispatched to each incident varies depending on the type and severity of the incident. As a result, the usage of apparatus varies among the types of apparatus. The result of this calculation

accounts for the effect of usage on the cost of apparatus per fire and medical incident.

The percent of fire responses by each type of apparatus is shown in Row F of Table 2. The cost per emergency incident in Row G is calculated by multiplying the cost per response (from Row E) by the percentage in Row F. For example, engines respond to 45% of all emergency fire and medical incidents, therefore the engine cost per incident is based on the engine response cost of $629.31 (from Row E) times 45% (see Row F) which results in $283.19 per incident. Another way to understand this data is that one fire or medical incident involves 0.45 engines, therefore the cost of responding to a fire or medical incident includes 45% of the cost of an engine, and therefore an average incident "uses up" $283.19 of fire engine.

**Apparatus Capital Cost for Residential Development (per dwelling unit)**

The apparatus cost of fire and medical incidents per dwelling unit is determined by multiplying the annual fire and medical incidents per dwelling unit times the annual apparatus cost per fire and medical incident, then multiplying that result times the useful life of the apparatus. This calculation is done separately for each apparatus type.

In Rows H through K of Table 2 the fire and medical incident rate of 0.116 emergency calls per year per dwelling unit[6] is multiplied by the annual capital cost per apparatus per fire and medical incident (from Row G). Since an apparatus lasts for a certain number of years the residential dwelling unit needs to pay for the apparatus over the apparatus useful life. For example an engine has a useful life of 15 years (see Row J), therefore, the annual engine cost per incident of $32.8501 (from Row I) is multiplied times the engine useful life of 15 years to calculate the engine capital cost of $492.75 per dwelling unit (in Row K). This calculation is repeated for each of the apparatus types.

**Apparatus Capital Cost for Non-Residential Development (per square foot)**

The apparatus cost of fire and medical incidents per non-residential square foot is is determined the same way as for residential development, but using the incidents per non-residential square foot.

In Rows L through O of Table 2 the fire and medical incident rate of 0.0001489 emergency calls per year per non-residential square foot is multiplied by the annual apparatus cost per fire and medical incident for each apparatus (from

[6] Incident rates for residential and non-residential properties are the same as in Table 1, above.

Row G). Since an apparatus lasts for a certain number of years the non-residential development needs to pay for the apparatus over its useful life. For example an engine has a useful life of 15 years (see Row J), therefore, the annual engine cost per year of $0.0422 per square foot (from Row M) is multiplied times the engine useful life of 15 years to calculate the engine capital cost of $0.63 per non-residential square foot (in Row O). This calculation is repeated for each of the apparatus types.

***Table 2: Fire Apparatus Cost per New Dwelling Unit and Non-Residential Square Foot***

| Component | Units | Engine | Aid Car | Staff Vehicle | Brush Truck |
|---|---|---|---|---|---|
| A. Cost | $ | 726,856 | 251,420 | 55,000 | 90,000 |
| B. Useful Life | years | 15 | 15 | 10 | 20 |
| C. Annual Cost | $ (A ÷ B) | 48,457.07 | 16,761.33 | 5,500.00 | 4,500.00 |
| D. Responses per Year | emergency calls | 77 | 114 | 68 | 3 |
| E. Cost per Response | $ (C ÷ D) | 629.31 | 147.03 | 80.88 | 1,500.00 |
| F. Usage at Incidents | | 45% | 67% | 40% | 2% |
| G. Cost Per Incident | $ (E x F) | 283.19 | 98.51 | 32.35 | 30.00 |
| Residential Development (per dwelling unit) | | | | | |
| H. Annual Incidents | emergency calls per | 0.116 | 0.116 | 0.116 | 0.116 |
| I. Cost per Year | $ (G x H) | 32.8501 | 11.4271 | 3.7529 | 3.4800 |
| J. # Years (Useful | years (same as B) | 15 | 15 | 10 | 20 |
| K. Cost for Useful Life | $ (I x J) | 492.75 | 171.41 | 37.53 | 69.60 |
| Non-residential Development (per square foot) | | | | | |
| L. Annual Incidents | emergency calls per year/sq ft | 0.0001489 | 0.0001489 | 0.0001489 | 0.0001489 |
| M. Cost per Year | $ (G x L) | 0.0422 | 0.0147 | 0.0048 | 0.0045 |
| N. # Years (Useful | years (same as B) | 15 | 15 | 10 | 20 |
| O. Cost for Useful Life | $ (M x N) | 0.63 | 0.22 | 0.05 | 0.09 |

## 3. Total Cost of Response to Fire and Medical Emergencies for Each Land Use Category

The station and apparatus cost per unit of development (from Tables 1 and 2) are combined to determine the total fire and medical cost per dwelling unit or non-residential square foot.

In Table 3 the station and apparatus cost per unit of development (from Tables 1 and 2) are added together to determine the fire and medical cost per dwelling unit or non-residential square foot

***Table 3: Total Cost of Responses to Fire Emergencies By Land Use Category***

| Cost Component | Residential Cost | Non-Residential Cost |
|---|---|---|
| Station | $ 1,358.2747 | $ 1.7435 |
| Engine | 492.7517 | 0.6325 |
| Aid Car | 171.4067 | 0.2200 |
| Staff Vehicle | 37.5294 | 0.0482 |
| Brush Truck | 69.6000 | 0.0893 |
| Total | 2,129.5625 | 2.7336 |

## 4. Fire Impact Fee Per Unit of Development

**Adjustments and Impact Fees**

The final step in determining the fire protection facilities impact fee is to "adjust" (i.e., reduce) the cost per dwelling unit or non-residential square foot Adjustments reflect (1) any credits for other revenue from existing and new development that the City of Black Diamond will use to pay for part of the cost of the same fire services facilities that are the basis of the impact fee (a "revenue credit"), and (2) the portion of costs of new facilities that benefit existing development.

Black Diamond does not have any sources of revenue to pay new development's share of the cost of new fire stations and apparatus, therefore no adjustment is made for "revenue credits". New development will be given an adjustment for future payments of other revenues that are used to pay for the same new fire services facilities that are required to serve the new development.

Existing development in Black Diamond will benefit from new fire stations and apparatus, therefore an adjustment is made to account for that benefit. The amount of the adjustment corresponds to the portion of current calls (170) as a percent of total future calls (1,045). Thus the adjustment is 170 ÷ 1,045 = 16.27%.

Table 4 shows the total cost per dwelling unit or non-residential square foot from Table 3, the 16.27% adjustment, and the impact fee after the adjustment is subtracted from the full cost.

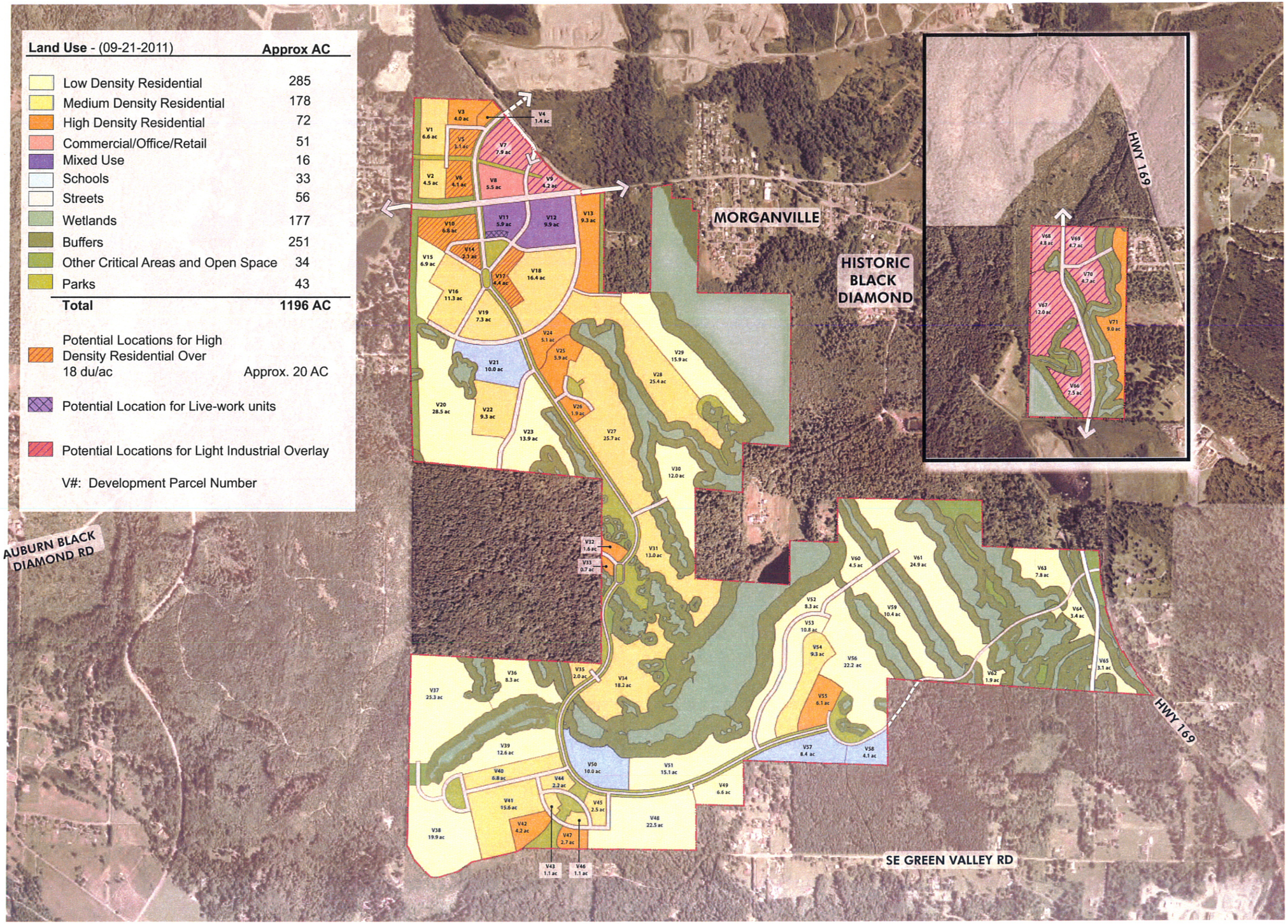
### *Table 4: Impact Fees By Land Use*

| Land Use | Total Fire & Medical Cost Per Unit Of Development | Adjustment For Benefit to Current City Development @ 16.27% | Fire Protection Impact Fee Per Unit of Development | |
|---|---|---|---|---|
| Residential | $ 2,129.56 | $ 346.44 | $ 1,783.13 | per dwelling unit |
| Non-Residential | 2.73 | 0.44 | 2.29 | per square foot |

**Exhibit U**

**Updated MPD Site Plan**

(added pursuant to Examiner's Recommended Implementing Conditions)


Land Use - (09-21-2011) Approx AC
Low Density Residential 285
Medium Density Residential 178
High Density Residential 72
Commercial/Office/Retail 51
Mixed Use 16
Schools 33
Streets 56
Wetlands 177
Buffers 251
Other Critical Areas and Open Space 34
Parks 43
Total 1196 AC
Potential Locations for High Density Residential Over 18 du/ac Approx. 20 AC
Potential Location for Live-work units
Potential Locations for Light Industrial Overlay
V#: Development Parcel Number
MORGANVILLE
HISTORIC BLACK DIAMOND
HWY 169
AUBURN BLACK DIAMOND RD
SE GREEN VALLEY RD
NORTH
0 400 800 1600