City of Bellevue

Transportation Commission Study Session

DATE: June 9, 2016

TO: Chair Lampe and Members of the Transportation Commission

FROM: Catherine A. Drews, Assistant City Attorney (Project Manager)
Development Services Department

Paul A. Bucich, P.E., Assistant Director of Engineering
Utilities Department

SUBJECT: **Update on the Low Impact Development (LID) Principles Project and Introduction to Project Proposals to Integrate LID Principles into Development Codes and Standards**

DIRECTION REQUESTED

___ Action
X Discussion
X Information

This is a study session to discuss proposed amendments to the City of Bellevue's Transportation Code related to the integration of low impact development principles. The Study Session will also highlight amendments to other City codes and standards so that the Transportation Commission can understand how the proposed amendments to the Transportation Code are supported by the project.

BACKGROUND

The 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit ("NPDES Permit") *requires the City to review and revise its development-related codes and standards to incorporate and require low impact development ("LID") principles.* LID principles are "land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff." The intent for the revisions is to make LID the preferred and commonly-used approach to site development.

INFORMATION

The project team presented the LID Principles Project as a briefing to the Council on July 6 2015. At the briefing, Council provided the following direction:

> *Bellevue has a long history of supporting low impact development principles in its development policies and regulations; from early (1987) sensitive or critical areas protection and long-standing significant tree and maximum impervious surface coverage regulations to the clustering and LID incentive regulations included in the recent (2009) Bel-Red Rezone.*
>
> ***Bellevue supports the objective of maintaining the region's quality of life, including that of making low impact development the preferred and commonly used approach to site development.***

During the briefing, Council approved the following project principles intended to ensure that the community's visions and goals are achieved while developing a program that supports development and redevelopment and meets LID Principles.

> ***Bellevue Appropriate.*** *Proposed amendments to Bellevue's development codes and standards will be area and context sensitive. A one-size-fits-all is inappropriate. Attention will be paid to the differing levels of urban development, watershed conditions, impervious surface coverage, tree canopy coverage, and areas of direct discharge. Proposed amendments, where feasible, will provide flexibility, incentives, and innovation in achieving the goal of making LID the preferred and commonly used approach to site development in Bellevue.*
>
> ***Engage Stakeholders****. Provide a public participation process that seeks and includes input from a wide range of stake holders. The process will provide opportunities for interested stakeholders to learn about LID principles, participate in developing options, and provide meaningful and informed comments.*
>
> ***Maintain Bellevue's Compliance Record with its NDPES Stormwater Permit.*** *The LID principles project shall be timely completed to ensure compliance with the requirement that amendments are effective by December 31, 2016.*
>
> ***Build On Existing Information and Programs.*** *The LID Principles Project will build on existing City information and programs to develop and evaluate options to make LID the preferred and commonly used approach to site development.*

Recognize and Seek to Balance Competing Needs. *The LID Principles Project will recognize and seek to balance competing laws applicable to development and redevelopment, by considering and developing effective, innovative, flexible, and/or area-specific options. The LID Principles Project will also recognize that supporting growth in urban areas is appropriate and that balancing environmental benefits with economic development goals is important.*

Council also approved the following areas of focus to explore for integrating LID principles into the City's development codes and standards:

1. *Land Use Code*
    a. *Evaluate use of LID principles (and BMPs) early in the site design process;*
    b. *Reduce impervious surface coverage*
    c. *Preserve and enhance tree canopy*
    d. *Improve options for clustering development*
2. *Transportation Code and Design Standards*
    a. *Reduce impervious surfaces in road rights-of-way*
    b. *Enhance tree canopy in transportation facilities*

The project team briefed the Transportation Commission on the LID Principles Project at its September 10, 2015, study session. A copy of the study session materials, without attachments, is included as Attachment A. At the study session, the project team provided a general background on LID, Council's direction on "Areas of Focus" for staff to explore for potential code amendments, an overview of the public participation plan, schedule for workshops, and briefings to other City boards and commissions. Generally, the Transportation Commission was supportive of the project and the Council approved "Areas of Focus." Questions arose related to the implications from the increased use of permeable surfacing materials on the construction and maintenance of streets and appurtenant pedestrian facilities.

Five public workshops were held from September through December to introduce and educate the public on the LID Principles Project, as well as receive public input on the "Areas of Focus" as potential code amendments that address the goals of the LID Principles Project. The workshops were held throughout the City, to help facilitate the goal of making any proposed code amendments "Bellevue Appropriate" and area and context sensitive.

During September and October 2015, three workshops were held on various evenings during the week at Bellevue City Hall, Lewis Creek Visitors Center, and Cherry Creek Elementary School. A fourth workshop was held at 9 am on November 17, 2015 with the development community at the offices of the Master Builders Association of King and Snohomish Counties. A fifth workshop was held at 10 am on December 9, 2015 at Bellevue City Hall to encourage

attendance of individuals that have challenges with attending evening meetings. To date, nearly 100 comments have been received relating to the LID Principles Project.

The project team also met with the City's development review staff on multiple occasions, first to kick-off the project, and then subsequent meetings from December 2015 through March 2016 to discuss proposed code amendments. Meetings have been held with "Areas of Focus" small teams to focus discussion on certain code topics (relating to minimizing impervious surfaces, tree/vegetation retention, etc.) so that any proposed code amendments addressing LID principles were consistent throughout the City's development codes and standards (e.g., Transportation Code, Land Use Code, Grading Code, etc.)

With respect to the specific proposed Transportation Development Code, the project team met with and received input from Molly Jonson, Development Review Manager; Hillary Stibbard, Principal Office Engineer; and Kevin McDonald, Senior Transportation Planner. Transportation staff concurs with the proposed amendments as presented.

Meetings with the small teams also helped provide the project team with an in depth understanding of how project review occurs, the challenges to applying current or proposed code language, and the issues that may arise for both public and private customers. Finally, the LID project team is coordinating with other planning activities that are underway, such as Eastgate Corridor Study and the Downtown Livability initiative, to ensure there is consistency between the projects and that project principles are achieved.

DISCUSSION/ANALYSIS

Based on feedback from the public, city staff, and local boards and commissions, AHBL has developed proposed code amendments to the Transportation Code, Land Use Code, the Bellevue City Code (BCC), and related development standards. The proposed amendments are intended to meet the project principles and implement the LID principles of minimizing impervious surfaces, native vegetation loss, and stormwater runoff.

The Project Team seeks feedback from the Transportation Commission on the proposed Transportation Code amendments listed below, and are included as Attachment C. Other code amendments are provided to allow the Commission to understand the breadth of the project and how the principles are reinforced in other areas of the City's development controls. These are included as Attachment D

Proposed Transportation Code Amendments:

Chapter 14.60 BCC – Transportation Development Code

1. Storm drainage including bioretention swales and other vegetation-based LID BMPs as potential frontage improvements that may be required.
2. Requiring native plant species to be planted where retention of existing vegetation is not feasible.
3. Calling out the use of bioretention swales within the landscaped island of a cul-de-sac as allowed.

Transportation Design Standards Transportation Design Manual

1. Planter strips should be a minimum of four feet in width.
2. Permeable pavement may be utilized where feasible in pedestrian paths and bicycle lanes.

Transportation Design Standards Development Review Drawings

1. Bioretention and vegetation-based stormwater management facilities may be utilized within landscaped islands and planter strips.
2. Landscaping should utilize native species to the maximum extent possible.

Transportation Design Standards Appendix B Bel-Red Area Standards

1. Native plant species are preferred.
2. Vegetation-based stormwater management facilities are permitted within landscape strips.
3. Where bioretention facilities are proposed in conjunction with trees, tree grates shall be removable.

Changes to Development Codes and Standards outside of the Transportation Code

The following information is provided for the Transportation Commission's information and to allow the Commission to review the proposed Land Use Code amendments within the context of the amendments to the Transportation Code. No action is required from the Transportation Commission.

Proposed Land Use Code Amendments:

Chapter 20.20 LUC – General Development Requirements

1. *LUC 20.20.010* Uses in land use districts dimensional requirements
   a. Comparing allowed maximum impervious surfaces by land use district to what people are actually using. This analysis allows the City to consider reducing allowed maximum impervious surface coverage to 75-85% of the current maximum for some land use districts. No reduction of maximum impervious surfaces is recommended for some land use districts, such as Downtown and Bel-Red where existing building

coverage and impervious surface coverage are identical. Result: The reduced maximum impervious surface coverage provides an allowance of some impervious surface coverage over the maximum lot coverage by structures to allow for the application of impervious surfaces outside of the building footprint.

b. Including a new "maximum hard surface" coverage limit that is the same as the old maximum impervious surface coverage. Result: Property owners are still able to build to the same extent as before (lot coverage by buildings stay the same), however some of the surfacing that may have been impervious will be permeable. Studies have found the costs of pervious surfacing to be comparable to that of traditional surfacing methods when the savings associated with stormwater utility fees are considered during the evaluation.

c. Adding the following new notes:

   i. All areas of lot coverage by structures are included in the calculation of maximum impervious surface, and all areas of impervious surface are included in the calculation of maximum hard surface,

   ii. Referencing (new) section LUC 20.20.425, performance standards for hard surfaces.

   iii. Including criteria for when permeable surfacing is determined to be infeasible that stipulate impervious surfaces may be utilized up to the maximum hard surface limit. The effect is that there would be no reduction in allowable surfacing, only a movement toward pervious surfaces for those sites where pervious surfaces are feasible.

2. *LUC 20.20.025* Intrusions into required setbacks

   a. Including bioretention facilities as improvements that may be located within setbacks.

3. *LUC 20.20.425* Hard surface (Permeable and Impervious Surfaces)

   a. Adding a purpose statement and applicability similar to those found under BCC 20.20.460 Impervious surface.

   b. Adding exemptions to the calculation of hard surfaces for decks/platforms, rockeries, shoreline stabilization measures and landscape features, consistent with those found under BCC 20.20.460. The benefit of this amendment is that it removes language that would be inconsistent with the use of the term "hard surface."

4. *LUC 20.20.4*60 Impervious surface

   a. Removing the exemption for pervious pavement under innovative techniques by specifying that permeable surfaces will be included in the calculation of hard surface. The benefit of this amendment is that it removes language that would be inconsistent with the use of the term "hard surface."

5. *LUC 20.20.590* Parking, circulation and walkway requirements

   a. Including pervious pavement as an acceptable surfacing material for walkways.
6. *LUC 20.20.900* Tree retention and replacement.
   a. Changes include:
      i. Incorporating a "hierarchy" for selecting trees for retention.
      ii. The director may require assurance devices to ensure the continual healthy life of retained trees, similar to how performance standards for wetlands are regulated in the critical areas ordinance.
      iii. Including a provision in the code to include notice on the face of the plat.
   b. Items to note:
      i. Tree retention will still be required only for new or redevelopment, however limitations on when a clearing and grading permit is required have been included in the Clearing and Grading Code (Chapter 23.76 BCC) so that removal of more than 5 trees requires a permit, and the City can more effectively track tree loss.

Part 20.25 LUC – Special and Overlay Districts

1. Allowing bioretention swales and planters within planter strips and landscape buffers.
2. Prioritizing the use of native plant species for landscaping.
3. Including pervious pavement as an acceptable paving material within linear buffers.
4. Requiring the use of LID drainage practices within Bel-Red unless infeasible (previously was recommended).
5. Street trees with grates may be substituted for bioretention facilities.

Part 20.30D – LUC Planned Unit Development (PUDs)

1. Allowing for zero lot line development through reduction in side yard setbacks.
2. Including conservation of vegetation and on-site soils and reduction in hard surfaces as criteria for which PUDs may be evaluated.

Chapter 20.50 – LUC Definitions.

1. Amends the definition of a significant tree to include trees six inches or greater, and to amend how tree size (diameter at breast height or DBH) is measured (four and one half feet above existing grade instead of four feet). Removing the word "healthy" from the definition of a significant tree as all significant trees should be analyzed as a part of a tree retention plan before determining whether or not they are healthy.
2. Included a definition for "landmark trees", and reference to a Development Services Handout determining thresholds for "rare, uncommon, unique or exceptional" trees that should be preserved on development sites.
3. Included a definition for "hard surface", as now used in the dimensional requirements.

Chapter 23.76 BCC – Clearing and Grading Code.

1. A clearing and grading permit will be required for the removal of more than five significant trees, to facilitate tracking of canopy loss.
2. A tree preservation plan will be required to be submitted as a part of clearing and grading approval. Tree preservation plans shall include tree protection measures necessary during construction.

Chapter 24.06 BCC – Storm and Surface Water Utility Code

1. LID BMPS are required unless infeasible.

Storm and Surface Water Engineering Standards

1. Natural drainage practices are required unless infeasible.

Environmental Best Management Practices and Design Standards

1. Bioretention facilities should be utilized where feasible.
2. Removable tree grates should be utilized where street trees are planted within bioretention planter boxes.

Evaluate use of LID principles (and BMPs) early in the site design process. This falls under the application requirements and will require revising the application submittal sheet. The goal is to make consideration of hydrology an integral component of site design early in the process to allow the integration of LID principles and best management practices into site design.

NEXT STEPS

The Transportation Commission is being asked to review and provide feedback on the proposed code amendments prepared by staff and the City's consultants that incorporates LID principles into the City's Transportation Code. The timeline for meeting the December 31 deadline includes the following tentatively scheduled meetings:

1. Planning Commission study session (June 22, 2016)
2. Planning Commission public hearing and recommendation to Council (July 13, 2016)
3. Transportation Commission public hearing (July 14, 2016)
4. Council action on the proposal (November, 2016)
5. East Bellevue Community Council public hearing and final action (December, 2016)

RECOMMENDATION

N/A

NEXT STEPS

The Project Team will present the proposed amendments to the Transportation Code at a public hearing scheduled to occur on July 14, 2016. At the conclusion of the Public Hearing, the Project Team requests the Transportation Commission provide the Council a recommendation on the proposed amendments to the Transportation Code.

ATTACHMENTS

A. September 10, 2015 Study Session materials (without attachments)
B. Proposed Transportation Amendment Package
C. Proposed LID Amendments for City Codes and Standards
D. Project Comments Received as of May 16, 2016

City of Bellevue

Transportation Commission Study Session

DATE: September 10, 2015

TO: Chair Lampe and Members of the Transportation Commission

FROM: Catherine A. Drews, Legal Planner (Project Manager)
Development Services Department

Paul A. Bucich, P.E., Assistant Director of Engineering
Phyllis A. Varner, NPDES Permit Manager
Utilities Department

SUBJECT: **Introduction to the Low Impact Development (LID) Principles Project**

DIRECTION REQUESTED

Action

X Discussion

X Information

This is an informational briefing on the Low Impact Development Principles Project and upcoming opportunities to participate in exploring opportunities to further integrate LID Principles into development-related codes and standards.

BACKGROUND

The 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit ("NPDES Permit") *requires the City to review and revise its development-related codes and standards to incorporate and require low impact development ("LID") principles.* LID principles are "land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff." The intent for the revisions is to make LID the preferred and commonly-used approach to site development.

INFORMATION

Bellevue's review project is called the LID Principles Project (the Project) and the Project deadline is December 31, 2016. The Project Lead Team provided a project update to City Council on July 6, 2015 (Attachment 1) and received approval of the:

- Areas of Focus in the development-related codes and standards to be explored for opportunities to further integrate LID Principles into development-related codes and standards;
- Project Interest Statement
- Project Principles, with some additional language (Attachment 2).

The Project's Public Participation Plan was also introduced to Council and this informational briefing begins implementation of that Plan. Work is underway on the following elements of the public participation plan:

- Development of the LID Principles Project webpages on the City Internet site.
- Public Workshops
    - September 30 at City Hall
    - October 6 at Lewis Creek Park
    - October 15* at Location TBD in North Bellevue (*date subject to change depending on availability of venue).
- Parks Board, October 13 at City Hall

It is possible that amendments to the Transportation Development Code may be required to integrate LID Principles into the City's development-related codes. As with any transportation code amendment, the Transportation Commission will hold a public hearing on the draft amendments followed by a recommendation to the Council.

LID Principles Project staff looks forward to working with the Transportation Commission and will provide a short presentation on the Project to the Commission and respond to questions Commission members may have.

RECOMMENDATION

N/A

NEXT STEPS

Team will provide a briefing at the September Commission meeting and discuss next steps.

ATTACHMENTS

1 LID Principles Project Update July 6, 2015 City Council Study Session Agenda Memo
2 Final LID Principles Project Interest Statement, Project Principles and Areas of Focus

Low Impact Development Principles Project

Chapter 14.60 Transportation Development Code

[…]

14.60.110 Street frontage improvements.

A. The installation of street frontage improvements is required for all new development, subdivisions, and short subdivisions as a condition of development approval in order to incorporate transportation improvements that are reasonably necessary to mitigate the direct impacts of the development. Installation of street frontage improvement is also required when necessary for the mitigation of adverse environmental impacts identified pursuant to the State Environmental Policy Act. For additions and remodels to existing buildings see LUC 20.20.560 and 20.25D.060. This requirement shall not apply to single-family dwellings.

B. Complete street frontage improvements shall be installed along the entire street frontage of the property at the sole cost of the developer as directed by the review engineer. Street frontage improvements may include curb, gutter, sidewalk, storm drainage, street lighting, traffic signal equipment, public utility relocation, franchise utility relocation, landscaping strip, street trees and landscaping, irrigation, street pavement widening, bicycle lanes, safety railings, street signs, pavement marking, and channelization. Storm drainage may include bioretention swales or other vegetation-based LID BMPs. For additional requirements regarding franchise utility relocations, see BCC 14.60.230. Beyond the property frontage, the developer shall provide ramps or other appropriate transition from the new sidewalk or walkway to the existing shoulder, and pavement and channelization tapering back to the existing pavement and channelization as needed for safety. The street frontage improvements shall be continued off-site if, and to the extent, deemed necessary by the review engineer in order to provide a safe condition.

C. The installation of street frontage improvements is required prior to issuance of any certificate of occupancy (including temporary certificate of occupancy) for new construction other than single-family dwellings, or prior to final approval for subdivisions or short subdivisions. Exceptions to this requirement are allowed pursuant to BCC 14.60.260.

D. When (due to site topography, city plans for improvement projects, or other similar reasons) the review engineer determines that street frontage improvements cannot or should not be constructed at the time of building, subdivision, or short subdivision construction, the developer shall, prior to issuance of the building permit or final approval for subdivisions and short subdivisions at the direction of the review engineer, and as authorized by and in a manner consistent with RCW 82.02.020:

    1. Pay to the city an amount equal to the developer's cost of installing the required improvements prior to issuance of a building permit, such construction value to be

based on reasonable estimates of costs, as approved by the director in consultation with the director of the utilities department; or

2. Record an agreement that provides for these improvements to be installed by the developer by a date acceptable to the city; or
3. Record an agreement to not protest a local improvement district to improve the street frontage.

E. If, at a time subsequent to the issuance of a building permit, a local improvement district is established that includes the property for which the building permit was issued, and if such condition or agreement as prescribed in this section has been performed by the developer, the condition or agreement may be considered in the compilation of the local improvement district assessment roll as a preexisting contract with the city, for which the developer may be credited against the assessment with the appropriate amount of costs of construction expended by the developer.

F. The requirement for installation of frontage improvements may be waived or modified by the review engineer if:
   1. Adjacent street frontage improvements are unlikely to be installed in the foreseeable future; or
   2. Installation of the required improvement would cause significant adverse environmental or safety impacts. (Ord. 6181 § 2, 2014.)

14.60.120 Landscaping in right-of-way, easements and access tracts.

A. Applicability. The requirements of this section apply when street frontage improvements are required as part of any development by BCC 14.60.110 or the Land Use Code, as may be hereinafter amended.

B. Required Review. The city shall review proposed street frontage improvements for compliance with this section and other applicable city policies and codes.

C. Preservation of Existing Street Trees and Landscaping.
   1. Retention of existing vegetation may be required along city streets. When retention is not feasible, native plant species, or species with a proven ability to survive in an urban environment are preferred for landscaping.
   2. When permitted to remove or relocate plant materials from the right-of-way in connection with the widening of the street or highway, the paving of a sidewalk, or the installation of ingress or egress, the developer shall replant such trees or replace them according to city standards.
   3. Any landscaping in the right-of-way that is disturbed by construction activity on private property, including but not limited to damaged trees or trees that need to be removed, shall be replaced or restored to its original condition by the developer. If such replacement or restoration is not physically or practically possible, as determined by the

review engineer, the developer may be required to instead reimburse the city for the value of the removed, damaged or destroyed landscaping. Such reimbursement value shall be determined under the methods described in the Guide for Establishing Value of Trees and Other Plants, published by the International Society of Arboriculture, now or as hereafter amended. The value of other landscape plants shall be determined by the city based upon reasonable estimates.

4. Landscaping and other improvements such as fencing and rockeries within the right-of-way are subject to removal by the city or at the request of the city.

D. Street Tree and Landscaping Installation Requirement.
   1. Street landscape installation or improvement is required when applicable projects are to be undertaken along any public street as identified in, and according to the guidelines of, city codes, standards, adopted street design plans, and adopted city plans including the capital investment plan, transportation facilities plan, pedestrian and bicycle transportation plan, and comprehensive plan.
   2. Where not in conflict with other applicable code provisions, ground cover shall be provided for street frontage of the site in order to control erosion.

E. Species Selection. Refer to LUC 20.25A.060 and Chapter 20.25D LUC for selection of tree species. If not otherwise specified in code, tree species selection shall be listed in the City of Bellevue Environmental Best Management Practices and Design Standards, now or as hereafter amended.

F. Maintenance of Plant Materials.
   1. Landscaping in the right-of-way shall be maintained by the abutting property owner(s) unless maintenance has been accepted by the city.
   2. All landscape materials in the right-of-way shall be maintained to industry standards. Trees shall be pruned according to standards adopted by the International Society of Arboriculture.
   3. The property owner is responsible for ensuring that landscaping fronting his/her property does not impair driver or pedestrian sight distance as described in the transportation department design manual.
   4. Topping of street trees and other pruning that does not conform to industry standards is a civil violation under Chapter 1.18 BCC and subject to penalties set forth in BCC 1.18.045. (Ord. 6181 § 2, 2014.)

14.60.130 Private roads.

A. Private roads shall be contained in an easement or tract and will be allowed when:
   1. A covenant that provides for maintenance and repair of the private road by property owners has been approved by the city and recorded with King County; and

2. The covenant includes a condition that the private road will remain open at all times for emergency and public service vehicles; and
3. The private road would not hinder public street circulation; and
4. At least one of the following conditions exists:
    a. The road would ultimately serve no fewer than three lots and no more than nine lots; or
    b. The road would ultimately serve more than nine lots, and the review engineer and the fire marshal determine that due to physical site constraints or preexisting development no other reasonable access is available. In addition, the proposed private road would be adequate for transportation and fire access needs, and the private road would be compatible with the surrounding neighborhood character; or
    c. The private road would be part of a commercial or residential planned unit development; or
    d. The private road would serve commercial or industrial facilities where no circulation continuity is necessary.
5. Absent any of the above, public streets are required.

B. The design and construction of private roads shall conform to the requirements of the transportation department design manual and the fire department development standards.
C. Private roads shall be designed such that vehicles attempting to enter the private road will not impede vehicles in the travel lane of the public street.
D. Combined vehicular access for adjoining properties is encouraged. Joint access shall be established in a tract or easement.
E. Access onto arterial streets from private roads may be denied at the discretion of the review engineer if alternate access is available.
F. The continued used of a preexisting private road is not guaranteed with the development of a site.
G. All abandoned private roads on the street frontage to be improved shall be removed and new curb, gutter and sidewalk shall be installed.
H. Private road grade and configuration shall accommodate future street widening as described in adopted city plans and codes to prevent the need for major private road reconstruction.
I. No private road shall be approved where undesirable impacts, such as vehicles backing onto the public sidewalk or street, will occur.
J. Left turns to and from a private road may be restricted either at the time of development or in the future if such maneuvers are found by the city to be hazardous.
K. The requirements of this section may be modified by the director if:
    1. The modification is reasonable and necessary for development of the property; and

DRAFT

Low Impact Development Principles Project

2. The modification will result in more efficient access to and circulation within the property; and
3. The modification will not create a hazardous condition for motorists or pedestrians. (Ord. 6181 § 2, 2014.)

[…]

14.60.170 Street ends.

A. All dead-end public streets and private roads greater than 150 feet in length shall be constructed with a turnaround facility per the Transportation Department Design Manual Standard 7 – Street End Designs, as currently adopted or hereafter amended. The street or road may extend up to 150 feet beyond the approved turnaround facility.
B. Streets that temporarily dead-end and will be extended in the future need not have a turnaround facility unless determined necessary by the review engineer and the fire marshal. When no turnaround facility is provided, street-end barricading shall be installed and must conform to the most recent edition of the Manual on Uniform Traffic Control Devices.
C. Where the turnaround facility is a circular turnaround, a landscaped island delineated by curbing shall be provided in the circular turnaround by the developer. Bioretention swales or other vegetation-based LID BMPs may be located in the landscaped island. The landscaping shall be maintained by the homeowners' association or adjacent property owners. The developer shall record an agreement to ensure maintenance of the landscaping, either with the recording of the final plat or as a separate document if the development is occurring outside a plat. (Ord. 6181 § 2, 2014.)

DRAFT

Low Impact Development Principles Project

Transportation Design Standards - Transportation Design Manual

2. Public Streets External to Subdivisions

B. Provision of a minimum four-foot planter strip with landscaping or drainage swale between the curb and the sidewalk is preferred. Where site conditions preclude provision of a full four-foot planter strip, a narrower planter strip is preferable to none at all. The requirement to provide a planter strip and landscaping between the curb and the sidewalk (outside Downtown) will be determined by the review engineer, based upon site conditions. Landscaping design must conform to Water Utility Code (BCC 24.02) requirements for water conservation. Landscaping requirements for Downtown are specified by Land Use Code 20.25A.060.

3. Public Streets Internal to Subdivisions

D. Provision of a minimum four-foot planter strip with landscaping or drainage swale between the curb and the sidewalk is preferred. Where site conditions preclude provision of a full four-foot planter strip, a narrower planter strip is preferable to none at all.

14. Sidewalks and Nonmotorized Facilities

B. Pedestrian Facility Construction

(3) Paved path construction:

a. Acceptable surface materials are asphalt and concrete.

b. Permeable pavement may be used where feasible and effective.

(4) Concrete sidewalk construction:

a. All sidewalks shall be constructed with five-inch-thick Class 3000 concrete with a non-slip broom finish, except Downtown. For Downtown sidewalk construction standards, see also Land Use Code 20.25A.060. Downtown projects are also subject to special requirements through the design review process.

b. At driveways, the concrete shall be Class 4000 per City of Bellevue Transportation Standard drawings.

c. Specialty finishes may be allowed with the approval of the review engineer when the proposed material will provide a non-slip surface when wet and the adjacent property owner agrees to maintain, repair, and replace the specialty material at her/his own expense, even when the maintenance is made necessary because of City work.

d. Permeable pavement may be used where feasible and effective.

C. Bicycle Facility Construction

(1) Separated bicycle path – See requirements for paved path construction. Acceptable surface materials are asphalt and concrete.

(2) Bicycle lane

a. Acceptable surface materials are asphalt and concrete.

b. Permeable pavement may be used where feasible and effective.

c. A bicycle lane on a public roadway shall be a minimum of five feet wide when curb and

Commented [H1]: Driveway concrete shall be Class 4000 as per COB standard drawings

gutter is in place. The distance shall be measured from the face of curb to the center of the bicycle lane marking that designates the bicycle lane. A cement concrete traffic curb and gutter is required. See Design Manual Drawing TE- 10.

d. A bicycle lane on a public roadway shall be a minimum of four feet wide when no curb and gutter is in place. The width shall be measured from the edge of pavement to the center of the bicycle lane marking. A minimum two-foot wide graded shoulder is required adjacent to the paved surface.

(3) Shared roadway

a. Acceptable surface materials are asphalt and concrete. b. The curb lane of a shared roadway shall be a minimum of 14 feet wide for flat or downhill sections and 15 feet wide for uphill sections. The distance shall be measured from the face of curb to the center of the lane marking.

Commented [H2]: Will be updated name.

Low Impact Development Principles Project

Transportation Design Standards-Development Review Drawings

DEV-1 Turnaround Facilities

Notes: 1. Landscaped island with vertical curb at center of circular turnaround is required. Bioretention and stormwater management facilities may be utilized in landscaped islands. Plantings within landscaped islands should utilize native species to the maximum extent feasible.

Commented [JMA1]: "maximum extent feasible" is the commonly used term

DEV-10 Commercial Project Site-Street Frontage Improvements

Notes:
5. Landscaped planter strip requirements (width, landscape type, maintenance, etc.) will be specified by the engineer. Bioretention and vegetation-based stormwater management practices may be utilized within the planter strip. The plantings should incorporate native species to the maximum extent feasible. See Std. Dwg. ROW-9 for asphalt detail adjacent to planter strip.

Commented [H2]: Name will be changed.

Low Impact Development Principles Project

Transportation Design Standards: Appendix B BelRed Area Standards

3. Conceptual Plans and development standards

120th Avenue NE - Stage 2 (CIP No. PW-R-164). Continue street tree theme established in the 120th Avenue NE Stage 1 project. Provide a transition in shrub/groundcover treatments to distinguish Stages 2, 3 and 4 from Stage 1. Native plant species are preferred for shrub/groundcover treatments. Vegetation-based stormwater management facilities such as bioretention may be utilized within the landscape strip.

120th Avenue NE-Stage 3 (CIP No. PW-R-168). Continue street tree theme established in the 120th Avenue NE Stage 1 project. Provide a transition in shrub/groundcover treatments to distinguish Stages 2, 3 and 4 from Stage 1. Native plant species are preferred for shrub/groundcover treatments. Vegetation-based stormwater management facilities such as bioretention may be utilized within the landscape strip.

.

NE 6th Street Extension (CIP NO. XXX). Locate planting strips between sidewalks and vehicular/bicycle lanes rather than at back-of-sidewalk. Planting strips may incorporate vegetation-based stormwater management practices such as bioretention swales. Continue street tree theme established in the 120th Avenue NE Stage 1 Project. Provide distinctive shrub/groundcover treatments to distinguish Stages 3 and 4 from Stage 1. Native plant species are preferred for shrub/groundcover treatments.

Commented [H1]: Does this phrase apply to this project? Or is it left over from another project?

124th Avenue NE (CIP No. PR-R-169)
Provide distinctive built or vegetative gateways into the riparian corridor east of 124th Avenue NE. Vegetation-based stormwater management facilities such as bioretention swales may be utilized in a vegetative gateway. Establish and maintain a consistent street tree theme along the length of 124th Avenue NE. Provide transition in the shrub and groundcover plantings south of BelRed Road. The use of native plant species is preferred for all plantings.

Spring Boulevard Recommendations 116th Ave NE - NE 20th Street
Multi-Purpose Pathway
Planting strip (with stormwater management practices and native plant species)

3 Conceptual Plans and Development Standards-3.4 Local Streets

Low Impact Development Principles Project

Figure 3.4.9
Landscape & Furnishings
Trees spaced at 30' on-center in planting strip, native plant species are preferred.
4'0" planting strip.
Vegetation-based stormwater management facilities (where feasible and effective)

3 Conceptual Plans and Development Standards-3.4 Retail Streets

Because the street trees on Retail Streets will be in tree grates instead of located in large open planters, provisions will need to be made for adequate root and soil volume. A root space protection zone is proposed from the face of adjacent development to the edge of the vehicular travel lane, in which a structural matrix such as Silva Cell will be used to support pavement over a high-quality growing medium. Where bioretention facilities are proposed in conjunction with trees, tree grates shall be removable.

Figure 3.5.10
Landscape & Furnishings
Trees spaced at 30' on center in planting strip. Native plant species are preferred.
5'x10' planters with rain gardens or, if infeasible, tree grates.

Low Impact Development Principles Project

Chapter 20.20 General Development Requirements.

20.20.010 Uses in land use districts dimensional requirements.
Chart 20.20.010

Uses in land use districts Dimensional Requirements

STD LAND USE CODE REF	LAND USE CLASSIFICATION	RESIDENTIAL										
		R-1	R-1.8	R-2.5	R-3.5	R-4	R-5	R-7.5*	R-10	R-15	R-20	R-30
	DIMENSIONS	(43)	(43)	(43)	(43)	(43)	(43)	(43)				
	…											
	Maximum Lot Coverage by Structures (percent) (13) (14) (16) (26) (27) (37) (39)	35	35	35	35	35	40	40	35	35	35	35
	Maximum Impervious Surface (percent) (35) (37) (39) (48)	~~50~~40 (36)	~~50~~40 (36)	~~50~~40 (36)	~~50~~40 (36)	~~50~~40 (36)	~~55~~45 (36)	~~55~~45 (36)	~~80~~60	~~80~~60	~~80~~60	~~80~~60
	Maximum Hard Surface Coverage (percent) (37) (39) (47) (48)	50	50	50	50	50	55	55	80	80	80	80

[…]

DRAFT

Low Impact Development Principles Project

[…]

Uses in land use districts Dimensional Requirements

STD LAND USE CODE REF	LAND USE CLASSIFICATION	Professional Office	Office	Office/Limited Business	Light Industry	General Commercial	Neighborhood Business	Community Business	Factoria Land Use District 1	Factoria Land Use District 2	Factoria Land Use District 3	Downtown Office 1	Downtown Office 2	Downtown Mixed Use District	Downtown Residential District	Downtown Old Bellevue District	Downtown Office and Limited Business District
		PO	O	OLB	LI	GC	NB	CB	F1	F2	F3	DNTN O-1	DNTN O-2	DNTN MU	DNTN R	DNTN OB	DNTN OLB
	DIMENSIONS	(8, 21)	(8, 21)	(8, 21)	(8, 21)	(8, 21)	(8, 21)	(8, 21)	(28)	(21, 31)	(21, 32)	(7)	(7)	(7)	(7)	(7)	(7)
	…																
	Maximum Lot Coverage by Structures (percent) (13) (14) (16)	35	35	35	50		35			35	40						
	Maximum Impervious Surface (percent) (35) (37)	~~80~~60	~~80~~60	~~80~~60	~~85~~65	~~85~~65	~~80~~60	~~85~~65		~~80~~60	~~80~~60						
	Maximum Hard Surface Coverage (37) (47)	80	80	80	85	85	80	85		80	80						

[…]

DRAFT

Low Impact Development Principles Project

[…]

(13) Lot coverage is calculated after subtracting all critical areas and stream critical area buffers; provided, that coal mine hazards (20.25H.130) and habitat associated with species of local importance (20.25H.150) shall not be subtracted.
(14) Maximum lot coverage by structures is determined after public right-of-way and private roads are subtracted from the gross land area.

[…]

(16) Exceptions to Lot Coverage. Although not considered structures for purposes of calculating lot coverage, the following may be considered impervious surfaces subject to the impervious surface limits. See LUC 20.20.460 and 20.50.026.
  (a) Underground buildings as defined in LUC 20.50.050 are not structures for the purpose of calculating lot coverage.
  (b) Buildings constructed partially below grade and not higher than 30 inches above existing or finished grade, whichever is lower, are not structures for the purpose of calculating lot coverage subject to the following conditions:
    (i) The 30-inch height limit must be met at all points along the building excluding those areas necessary to provide reasonable ingress and egress to the underground portions of the building; and
    (ii) The rooftop of the building shall be screened from abutting properties with 10 feet of Type II landscaping as described in LUC 20.20.520.G.2 except that the required trees shall be a minimum of 10 feet in height at planting; or, if a use is proposed for the rooftop, the rooftop may be landscaped consistent with the planting requirements for the specific use that is proposed and for the land use district in which the use is located. All landscaping shall comply with standards set forth in LUC 20.20.520. The provisions of LUC 20.20.520.J (Alternative Landscaping Option) are applicable.

[…]

(26) See LUC 20.20.125 for specific requirements applicable to detached accessory structures.
(27) Lot coverage for schools located in residential land use districts is limited to 35 percent of the site area (refer to LUC 20.20.740).

[…]

(35) See LUC 20.20.460 for exceptions and performance standards relating to impervious surface.
(36) Impervious surface limits for legally established nonconforming nonresidential uses and for new allowed nonresidential uses in these residential land use districts shall be 80 percent.

DRAFT

(37) Maximum hard surface, maximum impervious surface and maximum lot coverage by structures are independent limitations on allowed development. All areas of lot coverage by structures are included in the calculation of total maximum impervious surface, unless such structures are excepted under LUC 20.20.460, and all areas of impervious surface coverage are included in the calculation of total maximum hard surface coverage.

[…]

(47)See LUC 20.20.425 for exceptions and performance standards relating to hard surfaces.

~~(47)~~(48)Where the application of permeable pavement has been determined to be infeasible using the infeasibility criteria in the 2014 Department of Ecology Stormwater Management Manual for Western Washington, now or as hereafter amended, the maximum impervious surface coverage may be exceeded, up to the maximum hard surface coverage allotment.

[…]

20.20.025 Intrusions into required setbacks.

A. Signs, Marquees and Awnings.
   1. See Sign Code, Chapter 22B.10 BCC.
B. Garages/Carports on Slopes.
   1. If the topography of a lot is such that the front building line is eight feet or more above the street grade, and there is no reasonable way to construct a driveway up to the dwelling level, a garage/carport may be built into the bank and set at least five feet back from the front property line, except as set forth in subsection B.4 below.
   2. If the topography of a lot is such that there is no reasonable way to construct a driveway with a slope less than 15 percent to the dwelling level, a garage/carport may be built in the front yard setback, LUC 20.20.010, subject to approval by the Director of the Development Services Department. The garage/carport must be set at least five feet back from the front lot line, and may not exceed 15 feet above street level measured to the peak of a pitched roof or nine feet above street level measured to the top of a flat roof. The garage/carport and its vehicular access must be located and oriented to minimize disturbance of the slope.
   3. A garage/carport must comply with the street intersection sight obstruction requirements of BCC 14.60.240.
   4. Notwithstanding any other provision of this subsection B to the contrary, a garage/carport may not be located within a critical area or critical area buffer unless allowed under Part 20.25H LUC.
C. Minor Building Elements.
   Subject to LUC 20.20.025.C.3, minor building elements including patios, platforms, eaves, trellises, open beams, fireplace chimneys, decks, porches, balconies, lanais, bay windows, greenhouse windows and similar elements of a minor character may intrude into a required setback as follows:
   1. Any portion of a minor building element which equals or exceeds 30 inches above finished grade at its location may intrude into a required setback a distance no greater than 20 percent of the minimum dimension of that setback, or at least 18 inches, whichever is greater.

2. Any portion of a minor building element which is less than 30 inches above finished grade at its location may extend to any lot line.
3. Except for eaves, the combined length of all minor building elements which equal or exceed 30 inches above finished grade on any building facade shall not exceed 25 percent of the length of that facade.
4. Minor building elements may not be used to extend the enclosed building floor area into the required setback, except chimneys and bay windows protruding no more than 18 inches into the setback may extend to the finished grade at their location.
5. A minor building element may extend into a critical area structure setback required by LUC 20.25H.035 only if it is above the ground level and if vegetation will be maintained in a healthy condition. Solar access to vegetation must be maintained at least 50 percent of daylight hours during the normal growing season.
   Note: Heat pumps are not minor building elements. Retaining walls and rockeries 30 inches or greater in height are not minor building elements.

D. Rockeries and Retaining Walls.
On a lot of less than 30,000 gross square feet or on any single-family lot, rockeries and retaining walls 30 inches or greater in height may extend into setbacks established by LUC 20.20.010; provided, that the existing grade change is such that no feasible alternative to location or height exists. In any event, the critical area buffer and structure setbacks of LUC 20.25H.035 apply.

E. Underground Buildings and Buildings Constructed Partially Below Grade.
1. Limitations. This subsection cannot be used to develop any building (including an underground building) which intrudes into critical areas, critical area buffers, or critical area structure setbacks required by Part 20.25H LUC.
2. Subject to the limitations contained in this subsection E, underground buildings may intrude in the required setback.
3. Subject to the limitations contained in this subsection E, buildings constructed partially below grade and not higher than 30 inches above existing or finished grade, whichever is lower, may intrude into required setbacks subject to the following conditions:
   a. The 30-inch height limit must be met at all points along the building except those areas necessary to provide reasonable ingress and egress to the underground portions of the building; and
   b. The rooftop of the building shall be screened from abutting properties with 10 feet of Type II landscaping as described in LUC 20.20.520.G.2 except that the required trees shall be a minimum of 10 feet in height at planting or, if a use is proposed for the rooftop, the rooftop may be landscaped consistent with the planting requirements for the specific use that is proposed and for the land use district in which the use is located. All landscaping shall comply with standards set forth in LUC 20.20.520. The provisions of LUC 20.20.520.J (Alternative Landscaping Option) are applicable. (Ord. 5683, 6-26-06, § 6; Ord. 5232, 7-17-00, § 3; Ord. 5089, 8-3-98, §§ 6, 7; Ord. 4973, 3-3-97, § 889; Ord. 4816, 12-4-95, § 989; Ord. 4654, 6-6-94, § 23; Ord. 3775, 5-26-87, § 8)

F. LID Elements. Where feasible, LID BMPs such as bioretention facilities may be located within setbacks required in LUC 20.20.010, provided they conform to the setback requirements in the City of Bellevue Storm and Surface Water Engineering Standards.

Low Impact Development Principles Project

[…]

20.20.425 Hard surface.

A. Purpose.

Limits on the total amount of hard surfaces associated with site development are desirable to minimize vegetation loss and limit stormwater runoff, which are impacted by the increased level of surface flow generated by hard surfaces. Live plant foliage and groundcover intercept stormwater by retaining or slowing the flow of precipitation to the ground, and their roots protect soil from erosion. Preservation of naturally vegetated areas is a passive stormwater management tool that effectively reduces watershed function deterioration.

B. Applicability.

Hard surfaces are defined in LUC 20.50, and shall include all surfaces considered impervious under 20.20.460, as well as permeable pavement surfaces and vegetated roofs. The hard surface limits contained in LUC 20.20.010 and the standards of this section, shall be imposed any time a permit, approval, or review including land alteration or land development including subdivisions, short subdivisions or planned unit developments, a change in lot coverage, or a change in the area devoted to parking and circulation is required by this Code, or by the International Building Code.

C. Exemptions.

The following are exempted from determining maximum hard surface. These exemptions do not apply to any other Land Use Code requirement, including setbacks and limits on maximum lot coverage by structure, building code, utilities code or other applicable City of Bellevue codes or regulations.

1. Decks/Platforms. Decks and platforms constructed with gaps measuring one-eighth inch or greater between boards, so long as the surface below the deck or platform is pervious;
2. Rockeries/Retaining Walls. Rockeries and retaining walls shall be exempt from the maximum impervious surface limits;
3. Stabilization Measures. Shoreline stabilization measures shall be exempt from the maximum impervious surface limits; and
4. Landscape Features. Fences, arbors with lattice or open roof materials and similar structures, individual stepping stones placed in the ground but not cemented or held together with an impervious material, and organic mulch shall be exempt from the maximum impervious surface limits.

D. Performance Standards.

1. Design shall minimize topographic modification. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed

DRAFT

15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

2. High-value natural areas, which include, but are not limited to retained significant trees and their understory and areas of native vegetation, shall be identified during site development. Locations of buildings, roads and infrastructure shall not impact high-value natural areas. Retained significant trees and their understory, and areas of native vegetation shall be fenced and adequately protected during construction, consistent with the provisions in BCC 23.76. Native plants should be salvaged from areas to be cleared and transplanted to other areas of the site where feasible.

E. Maintenance and Assurance.

1. Pervious pavement and other hard surface techniques designed to mimic shall be designed by a professional engineer licensed by the State of Washington and the plans are approved by the Director. The Director may require a maintenance plan and long-term performance assurance device to ensure the continued function of the pervious pavement or other technique.

[…]

20.20.460 Impervious surface.

A. Purpose.

Limits on the total amount of impervious surfaces associated with site development are desirable to protect critical areas and limit stormwater runoff,~~,~~ which are impacted by the increased levels and rates of surface flow generated by impervious surfaces.

B. Applicability.

The impervious surface limits contained in LUC 20.20.010 and Chapter 20.25 LUC, and the standards of this section, shall be imposed any time a permit, approval, or review including land alteration or land development including subdivisions, short subdivisions or planned unit developments, a change in lot coverage, or a change in the area devoted to parking and circulation is required by this Code, or by the International Building Code.

~~C. Modifications to Impervious Surface Limits.~~

~~The impervious surface limits contained in LUC 20.20.010 and Chapter 20.25 LUC may be modified pursuant to a critical areas report, LUC 20.25H.230, so long as the critical areas report demonstrates that the effective impervious surface on the site does not exceed the limit established in LUC 20.20.010 and Chapter 20.25 LUC.~~

~~1. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B,~~

~~may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and~~

~~2. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.~~

~~D.~~C. Exemptions.

The following are exempted from determining maximum impervious surface. These exemptions do not apply to any other Land Use Code requirement, including setbacks and limits on maximum lot coverage by structure, building code, utilities code or other applicable City of Bellevue codes or regulations.

1. Decks/Platforms. Decks and platforms constructed with gaps measuring one-eighth inch or greater between boards, so long as the surface below the deck or platform is pervious;
2. Rockeries/Retaining Walls. Rockeries and retaining walls shall be exempt from the maximum impervious surface limits;
3. Stabilization Measures. Shoreline stabilization measures shall be exempt from the maximum impervious surface limits; and
4. Landscape Features. Fences, arbors with lattice or open roof materials and similar structures, individual stepping stones placed in the ground but not cemented or held together with an impervious material, and gravel mulch shall be exempt from the maximum impervious surface limits.

~~E.~~D. Performance Standards.

1. Design shall minimize topographic modification. Structures shall conform to the natural contour of the slope. The foundation shall be tiered to conform to the existing topography and step down the slope with earth retention incorporated into the structure where feasible. Standard prepared building pads, i.e., slab on grade, shall be avoided; and
2. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B, may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and

3. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

~~F.~~E. Existing Impervious Surfaces.

Impervious surfaces legally established on a site prior to August 1, 2006, and which exceed the limits set forth in LUC 20.20.010 and Chapter 20.25 LUC shall not be considered nonconforming. Proposals to increase impervious surface on a site shall conform to the limits of LUC 20.20.010 and Chapter 20.25 LUC; where a site already exceeds the allowed amount of impervious surface, the additional impervious surface shall not be approved unless an equal amount of existing impervious surface is removed such that the net amount of impervious surface is unchanged.

~~G.~~F. Innovative Techniques.

Surfaces paved with ~~pervious~~ permeable pavement or other innovative techniques designed to mimic the function of a pervious surface shall not be included in the calculation of impervious surface areas, however, they shall be included in the calculation of maximum hard surface areas, not including the exemptions listed in LUC 20.20.425.D. ~~so long as the technique is designed by a professional engineer licensed by the State of Washington and the plans are approved by the Director. The Director may require a maintenance plan and long-term performance assurance device to ensure the continued function of the pervious pavement or other technique.~~ (Ord. 5876, 5-18-09, § 13; Ord. 5683, 6-26-06, § 9)

[…]

20.20.520 Landscape development.

[…]

B. Applicability.

The requirements of this section shall be imposed any time a permit, approval, or review including land alteration or land development including subdivisions, short subdivisions or planned unit developments, a change in lot coverage or impervious surface, or a change in the area devoted to parking and circulation is required by this Code, or by the International Building Code, as adopted and amended by the City of Bellevue. However, this section does not apply to a permit for a single-family dwelling, unless restrictions on the removal of significant trees on individual single-family lots have been imposed through prior City approval.

Low Impact Development Principles Project

[…]

F. Site Landscaping

[…]

6. Existing Vegetation in Lieu of Landscape Development. If the proposal is located within the Critical Areas Overlay District, the Director shall waive the planting requirements of paragraphs F.1 and F.2 of this section and shall require the use of native vegetation that exists within a critical area or within a critical area buffer in lieu of landscape development if the width of that existing vegetated area equals at least twice the dimension required by paragraph F.1 or F.2 of this section. Supplemental landscaping may be added adjacent to a setback to create the necessary width.

[…]

I. Species Choice. The applicant shall utilize plant materials which complement the natural character of the Pacific Northwest, and which are adaptable to the climatic, topographic, and hydrologic characteristics of the site, and shall include at least 50 percent native species in the required plantings. If the subject property is within the Critical Areas Overlay District, the applicant shall utilize plant species as specified by the Director which enhance that critical area and critical area buffer. In selecting species, the applicant should utilize plant materials which reduce or eliminate the need for fertilizers, herbicides, or other chemical controls, especially for properties within the Critical Areas Overlay District. Plant materials may not include noxious weeds or species, as designated by the Director.

J. Alternative Landscaping Option.

1. The applicant may request a modification of the landscaping requirements set forth in subsections E through I of this section; provided, however, that modification of the provisions of paragraph F.6 of this section may not allow disturbance of a critical area or critical area buffer.
2. The Director may administratively approve a modification of the landscaping requirements of this chapter if:
   a. The proposed landscaping represents an equal or better result than that which could be achieved by strictly following the requirements of this section; and
   b. The proposed landscaping complies with the stated purpose of this section (subsection A), and with the purpose and intent of paragraphs F.1 and G of this section; and
   c. If a modification of any paragraph excluding subsection E of this section is requested, the proposed landscaping either:
      i. Incorporates the increased retention of significant trees and naturally occurring undergrowth; or

ii. Better accommodates or improves the existing physical conditions of the subject property; or
iii. Incorporates elements to provide for wind protection or to maintain solar access; or
iv. Incorporates elements to protect or improve water quality; or
v. Incorporates native species in a design that better buffers a critical area and critical area buffer from uses on the site, including parking.

d. If a modification of subsection E of this section is requested, the proposal either:
i. Incorporates the retention of significant trees equal in number to what would otherwise be required, or
ii. Incorporates the retention of other natural vegetation in consolidated locations which promotes the natural vegetated character of the site.

3. Effect of Approval. Following approval of alternative landscaping by the Director, the applicant may meet the landscaping requirements of this Code by complying with the approved landscape development proposal. A copy of the approved landscape development proposal will be placed in the official file.

[…]

20.20.590 Parking, circulation, and walkway requirements.

[…]

K. Parking Area and Circulation Improvements and Design

[…]

8. Internal Walkways

[…]

c. Design Criteria. Except as otherwise specified in Part 20.25A LUC, internal walkways provided pursuant to this section must be designed and installed in conformance with the following:
i. Surface Materials. Internal walkways must be paved with hard-surfaced material such as concrete, asphalt, stone, brick, tile, pervious pavement, etc. Only nonskid paving may be used in walkways construction.

DRAFT

Low Impact Development Principles Project

20.20.900 Tree retention and replacement.

A. Purpose.

Retention of significant trees as required by this section is necessary to maintain and protect property values, to enhance the visual appearance of the City, to preserve the natural wooded character of the Pacific Northwest, to promote utilization of natural systems, to reduce the impacts of development on the storm drainage system and water resources, and to provide a better transition between the various land uses permitted in the City.

B. Applicability.

The requirements of this section shall be imposed any time a permit, approval, or review including land alteration or land development including subdivisions, short subdivisions or planned unit developments, a change in lot coverage, or a change in the area devoted to parking and circulation is required by the Bellevue City Code or Land Use Code. Subsection F of this section shall apply to permits for new single-family structures and for additions to impervious surface areas that exceed 20 percent when located on a single-family lot developed with a residential use. Subsection E of this section applies to the removal of any significant trees in the R-1 Land Use District located in the Bridle Trails Subarea.

C. Required Review.

The Development Services Department shall review the proposed removal of significant trees with each application within the applicability of this section.

D. Retention of Significant Trees for Subdivisions, Short Subdivisions, Planned Unit Development, Change in Lot Coverage, or Change in the Area Devoted to Parking and Circulation, Excluding Areas Located in the R-1 Land Use District in the Bridle Trails Subarea and for New or Expanding Single-Family Structures.

1. Perimeter Landscaping Area. In the required perimeter landscaping area, as set forth in LUC 20.20.520.F.1, the applicant shall retain all significant trees which will not constitute a safety hazard. For properties located in Bel-Red Land Use Districts, refer to perimeter landscape development at LUC 20.25D.110. Area devoted to access and sight areas as defined in the Transportation Code (Chapter 14.06 BCC) and area to be cleared for required roads, utilities, sidewalks, trails, or storm drainage improvements are exempt from this requirement.
2. Site Interior.
    a. In areas of the site other than the required perimeter landscaping area, the applicant must retain at least 15 percent of the diameter inches of the significant trees existing in this area; provided, that alder and cottonwood trees' diameter inches shall be discounted by a factor of 0.5. In the event of a conflict between this section at and LUC 20.25H "Critical Areas Overlay, section 20.25H

shall prevail. In applying the requirement for retention of significant trees, the Director shall ~~consider~~ require the preservation of the following types of significant trees in the following order of ~~a~~ priority:

i. Landmark trees as defined in LUC 20.50;

~~i.~~ii. ~~Healthy s~~Significant trees over 60 feet in height;

~~ii.~~iii. Significant trees which form a continuous canopy;

iv. Significant trees located within the required rear yard, and the area between the rear line of the rear yard and 15 feet from the nearest building envelope; and~~.~~

~~iii.~~v. Significant trees which ~~contribute to the character of the environment, and~~ do not constitute a safety hazard~~;~~.

~~iv. Significant trees which provide winter wind protection or summer shade;~~

~~v. Groups of significant trees which create a distinctive skyline feature; and~~

~~vi. Significant trees in areas of steep slopes or adjacent to watercourses or wetlands.~~

b. The Director may approve retention of trees which do not meet the definition of significant trees as a contribution toward the sum of the diameter inches required under subsection D.2.a of this section if a group of trees and its associated undergrowth can be preserved.

3. For subdivisions, short subdivisions, and planned unit developments, the applicant shall retain a minimum of 30 percent of the diameter inches of significant trees existing on the total site area of the development; provided, that alder and cottonwood trees' diameter inches shall be discounted by a factor of 0.5. Priority of preservation of the following types of trees shall occur in the same order as specified above for the site interior.

4. Exemption. The provisions of this subsection which require retention of significant trees are not applicable in any Downtown Land Use District.

5. The applicant shall utilize tree protection techniques approved by the Director during land alteration and construction in order to provide for the continual healthy life of retained significant trees. The director may require assurance devices pursuant to 20.40.490 to ensure the continual healthy life of retained significant trees for a period of up to five years.

~~5.~~6. Any property where significant trees are retained to meet the requirements of this chapter shall include notice of the retained trees on the recorded survey, and shall include a reference to this section to ensure their continued retention.

DRAFT

~~6.~~7. Reduced Parking Bonus. If the proposed landscape plan incorporates the retention of significant trees above that required by this section, the Director may approve a reduction of up to 10 percent of the required number of parking spaces if adequate parking will remain on the subject property, and if land area for the required number of spaces remains available for future development on the subject property.

E. Retention of Significant Trees in the R-1 Land Use District in the Bridle Trails Subarea for any Type of Land Alteration or Development.

1. Permit Required. As required by BCC 23.76.035.A.8, a clearing and grading permit must be obtained from the City prior to the removal of any significant tree from any lot in the R-1 Land Use District in the Bridle Trails Subarea. The applicant may request a vegetation management plan to cover all proposed tree removal activities within a three-year period. In addition, for the removal of more than two significant trees within any three-year period, the requirements of subsections E.2 and E.3 of this section apply.
2. Perimeter Tree Retention Requirement. For all lots in the R-1 Land Use District in the Bridle Trails Subarea, all significant trees which do not constitute a safety hazard within the first 20 feet adjacent to all property lines shall be retained. Area devoted to access and sight areas as defined in the Transportation Code (Chapter 14.06 BCC), and area to be cleared for required roads, utilities, sidewalks, trails, or storm drainage improvements is exempt from this requirement. In the event this requirement conflicts with minimum setback requirements for structures (LUC 20.20.010), the Alternative Tree Retention Option (subsection G of this section) may be used to allow development consistent with the setbacks established under LUC 20.20.010.
3. Site Interior Tree Retention Requirement.
   a. In addition to the required perimeter tree retention area, at least 25 percent of the cumulative diameter inches of existing significant trees must be retained; provided, that alder and cottonwood trees' diameter inches shall be discounted by a factor of 0.5.
   b. The Director may approve retention of trees which do not meet the definition of significant trees as a contribution toward the sum of the diameter inches required under subsection E.3.a of this section if a group of trees and its associated undergrowth can be preserved.
4. Tree Replacement Requirement. On any lot with eight or less significant trees, a planting plan showing a one-to-one ratio of replacement trees is required. Trees must be a minimum of six feet in height at planting.

F. Retention of Significant Trees for New or Expanding Single-Family Structures Excluding Single-Family Structures Located in the R-1 Land Use District in the Bridle Trails Subarea.

1. Site Area. For new single-family structures or additions to impervious surface areas that exceed 20 percent when located on a single-family lot developed with a residential use,

the applicant shall retain a minimum of 30 percent of the diameter inches of significant trees existing in the site area; provided, that alder and cottonwood trees' diameter inches shall be discounted by a factor of 0.5. In the event of a conflict between this section at and LUC 20.25H "Critical Areas Overlay, section 20.25H shall prevail. In applying the requirement for retention of significant trees, the Director shall ~~consider~~ require the preservation of the following types of significant trees in the following order of~~a~~ priority:

a. Landmark trees as defined in LUC 20.50;

~~a.~~b. ~~Healthy s~~Significant trees over 60 feet in height;

~~b.~~c. Significant trees which form a continuous canopy;

d. Significant trees located within the required rear yard, and the area between the rear line of the rear yard and 15 feet from the nearest building envelope.

e. Significant trees located within the first 20 feet adjacent to a property line.

f. Significant trees which ~~contribute to the character of the environment, and~~ do not constitute a safety hazard~~;~~.

~~c. Significant trees which provide winter wind protection or summer shade;~~

~~d. Groups of significant trees which create a distinctive skyline feature;~~

~~e. Significant trees in areas of steep slopes or adjacent to watercourses or wetlands; and~~

~~f.a. Significant trees located within the first 20 feet adjacent to a property line.~~

2. The Director may approve retention of trees which do not meet the definition of significant trees as a contribution toward the sum of the diameter inches required under LUC 20.20.900.F.1 if a group of trees and its associated undergrowth can be preserved.
3. The applicant shall utilize tree protection techniques approved by the Director during land alteration and construction in order to provide for the continual healthy life of retained significant trees.

G. Alternative Tree Retention or Replacement Option.

1. An applicant may request a modification of the tree retention requirements set forth in subsections D, E, and F of this section.
2. The Director may administratively approve a modification of the perimeter or interior tree retention requirements if:
   a. The modification is consistent with the stated purpose of this section; and
   b. The modification proposal either:
      i. Incorporates the retention or replacement of significant trees equal in equivalent diameter inches or incorporates the increased retention or replacement of significant trees and naturally occurring undergrowth to what would otherwise be required; or

Low Impact Development Principles Project

ii. Incorporates the retention or replacement of other natural vegetation in consolidated locations which promotes the natural vegetated character of the site and neighborhood including use as pasture land or for agricultural uses.

iii. Where a modification proposal includes supplemental or replacement trees in lieu of retention, the applicant shall utilize plant materials which complement the natural character of the Pacific Northwest, and which are adaptable to the climatic, topographic, and hydrologic characteristics of the site. (Ord. 6197, 11-17-14, § 15; Ord. 5896, 8-3-09, § 3; Ord. 5876, 5-18-09, § 22; Ord. 5791, 12-3-07, § 14; Ord. 5662, 3-20-06, § 2)

DRAFT

Low Impact Development Principles Project

Chapter 20.25 Special and Overlay Districts

Part 20.25A Downtown

[…]

20.25A.060 Walkways and sidewalks.
[…]

B. Street Trees Required – Perimeter.
   1. The property owner shall install street trees and other required vegetation, in addition to any landscaping required by LUC 20.25A.040, according to the requirements of Plate B and this section or as approved by the Director unless, upon the request of the applicant, minor modification is approved by the Director.
   2. Except for the streets listed in paragraph A.2 of this section, the area in which street trees are planted must be at least four feet wide, and located between the street improvement and the walkway or sidewalk unless precluded by existing utilities which cannot reasonably be relocated. Any street tree planting area must be at least four feet by six feet or five feet by five feet or smaller area as approved by the Director, unless upon request of the applicant minor modification of this requirement is approved by the Director, and protected by an approved decorative grate. This grate may intrude into the sidewalk.
   3. Street trees, at least three inches in caliper or as approved by the Director, must be planted at least three feet from the street curb, and a maximum of 25 feet on center, unless upon request of the applicant minor modification of this requirement is approved by the Director, and conforms to the sight distance requirements of BCC 14.60.240. A street tree planting area may also include decorative paving and other plant materials except turf. Where feasible, bioretention swales and planters may be located within the planter strip.
   4. On the streets listed in paragraph A.2 of this section, street trees shall be planted and placed as required in paragraph B.3 of this section. These required street trees together with shrubbery, groundcover and other approved plantings are required in a planter strip along the length of the frontage. Designs should prioritize the selection of native plant species~~The use of native vegetation is strongly preferred~~. The planter strip must be at least four feet wide, unless a smaller width is approved by the Director. Vegetation included in the planter strip shall be urban in character, shall be compatible with other plantings along the same street, and shall reflect the character of the area within which they are planted, as approved by the Director.

DRAFT

Low Impact Development Principles Project

20.25A.090 Perimeter Design District

[...]

D. Development Standards

[...]

4. Landscape Development

[...]

b. Linear Buffers.

i. General. Any development situated within Perimeter Design District – Subdistrict A shall provide a "linear buffer" within the minimum setback adjacent to the Downtown boundary required by paragraph D.2 of this section. The purpose of this feature is to produce a green buffer that will soften the visual impact of the relatively larger buildings. These design standards are minimum requirements for the size and quantity of trees, shrubs and other "linear buffer" elements. The specific design of the "linear buffer" for each project site will be determined through the Design Review Process. Design considerations include but are not limited to the placement of elements and their relationship to adjacent property as well as to the proposed development. Different sets of design standards apply to each of the locational conditions.

ii. Where the Downtown boundary falls within the Main Street, 100th Avenue NE or NE 12th Street right-of-way, the minimum setback from the Downtown boundary shall be landscaped according to the basic requirements and either Alternative A or B of the supplemental requirement.

(1) Basic Requirements (applicable in all cases):

(a) Must have a minimum width of 20 feet;

(b) Must abut and be within three feet in elevation of a sidewalk, so as to be visually and physically accessible;

(c) Must provide at least one sitting space for each 200 square feet of the perimeter setback area;

(d) May not be used for parking; vehicular access drives shall be kept to a minimum;

(e) Must be readily accessible to the public at all times;

(f) Must include seasonal color in an amount of at least 10 percent of the perimeter setback area~~.~~;

~~(f)~~(g) Must utilize native species for at least 50 percent of the plantings located within the perimeter setback area.

(2) Supplemental Requirements:

(a) Alternative A:
  (i) Three deciduous trees, with a minimum caliper of three inches, per each 1,000 square feet of the perimeter setback area; and v) Planting area must either be raised or sloped. If raised, the planting area shall be surrounded by a wall with a minimum height of 18 inches and a maximum height of 24 inches to allow for sitting.

(b) Alternative B:
  (i) Three deciduous trees, with a minimum caliper of three inches, per each 1,000 square feet of the perimeter setback area; and
  (ii) Lawn greater than five feet in width or ground cover on at least 25 percent of the perimeter setback area; and
  (iii) Any paved surfaces shall be no more than 75 percent of the perimeter setback area; and
  (iv) Paved areas shall use pervious pavement, brick, stone or tile in a pattern and texture that is level and slip-resistant; and
  (v) Opportunities for pedestrian flow from the sidewalk shall be frequent and direct. Changes in grade between the linear buffer and sidewalk shall be accommodated by steps or terraces, rather than walls.

iii. Where the Downtown boundary abuts property outside the Downtown other than right-of-way described in paragraph D.4.b.ii of this section, the minimum setback from the Downtown boundary (or perimeter property lines when the setback has been relocated pursuant to Note 10 of subsection 20.25A.090.D.2) shall be landscaped as follows:

(1) The entire setback (20 feet) shall be planted. No portion may be paved except for vehicular entrance drives and required mid-block pedestrian connections.

(2) The setback must incorporate a berm having a minimum height of three and one-half feet.

(3) The setback must be planted with:

(a) Evergreen and deciduous trees, with no more than 30 percent deciduous, a minimum of 10 feet in height, at intervals no greater than 20 feet on center; and

(b) Evergreen shrubs, a minimum of two-gallon in size, at a spacing of three feet on center; and

(c) Living ground cover so that the entire remaining area will be covered in three years.

c. Street Trees. Street trees required by LUC 20.25A.060.C along Main Street, 100th Avenue NE or NE 12th Street must be at least four inches in caliper.

Low Impact Development Principles Project

20.25A.110 Design Review Criteria

B. Downtown Patterns and Context.

[...]

2. Landscape Design

   [...]

   d. ~~Encourage~~ Require retention of significant existing vegetation, where it can be incorporated into efficient site design and maintained in a safe and healthful condition.

Part 20.25B Transition Area Design District

20.25B.040 Development Standards

[...]

C. Landscaping, Open Space and Buffers

1. Landscaping. All landscaping shall comply with standards set forth in LUC 20.20.520. The provisions of LUC 20.20.520.J (Alternative Landscaping Option) are applicable and, in addition, may be used to modify up to 10 feet of required street frontage landscaping.
2. Buffer
   a. A landscaped buffer, at least 20 feet in width, shall be provided along the entire street frontage where any portion of the street frontage is abutting a district receiving transition and along the interior property line abutting the district receiving transition. Where feasible, bioretention swales and planters may be located within landscape buffers.~~This buffer can double as a bioretention planter.~~
   b. All significant trees within 15 feet of the property line shall be retained as required by LUC 20.20.520.E.
   c. The buffer shall be planted with the following, and shall include at least 50 percent native species in the required plantings:
      i. Evergreen and deciduous trees, of which no more than 40 percent can be deciduous. There shall be a minimum of five trees per 1,000 square feet of buffer area, which shall be a minimum of 10 feet high at planting, along with the evergreen shrubs and living groundcover as described in paragraphs C.2.c.ii and iii of this section to effectively buffer development from adjacent residential properties; and
      ii. Evergreen shrubs, a minimum 42 inches in height at planting, at a spacing no greater than three feet on center; and
      iii. Living groundcover planted to cover the ground within three years; and
      iv. Alternatively, where the street frontage landscaping will be planted to buffer a building elevation and not a parking area, driveway or site development other than a building, a lawn no less than five feet in width may be substituted for the shrubs and

groundcover required in paragraphs C.2.c.ii and iii of this section; provided, that the soil in the entire area of lawn is amended in accordance with LUC 20.20.520.F.8. This paragraph does not apply in LI and GC Districts.

d. Where an LI, GC or CB zoned property abuts a residential district on an interior property line, an evergreen hedge a minimum of four feet in height at planting and capable of achieving a continued visual screen with a height of five feet within a three-year period or a combination of shrubs and fence shall be added within the required planting area to achieve the effect of a hedge.

e. Patios and other similar ground level features and trails may be incorporated into the buffer area, except that no more than 20 percent of the area may be used for such features. Patios shall not be located within 10 feet of the property line.

[…]

Part 20.25D Bel-Red

[…]

20.25D.150 Design Guidelines

[…]

A. Character and Site Guidelines.

1. Integrate the Natural Environment.

a. Intent.

Reinforce linkages and orient buildings to the Bel-Red Subarea's natural and landscaped features.

b. Guideline.

Site and building design should capitalize on significant elements of the natural environment, Highland Community Park and planned park and open space, riparian corridors and wetlands. Designs should incorporate open space amenities for residents, employees and visitors. Depending on the location, this may be accomplished through integration of the natural environment with new development or providing a smooth transition between the natural and built environments.

c. Recommended.

i. Active and passive gathering places and walkways oriented toward parks and open, natural spaces.

ii. Clear and convenient public access to open space amenities.

iii. Elements that engage the natural environment where the sight, sound and feel of nature can be directly experienced.

iv. Buildings sited to take maximum advantage of adjacent public amenities.

v. Walkways and plazas paved with high-quality materials (such as brick or stone), and other architectural elements that use materials, colors and forms that are harmonious with the natural surroundings.

d. Not recommended.

i. Buildings that turn their back on open space amenities.

ii. Stands of "native" planting schemes within large, automobile-oriented parking lots.

[…]

4. Protect and Enhance Surface Water Resources.

a. Intent.

Conserve water quality, natural hydrology and habitat, and preserve biodiversity through protection of water bodies and wetlands.

b. Guideline.

Natural water systems regulate water supply, provide biological habitat and may provide recreational opportunities. Undeveloped ecosystems absorb the precipitation and convey only a small portion of rainfall as surface runoff. New and infill development should minimize disturbances to the on-site, adjacent, and regional natural water systems. Use of natural drainage practices are required unless infeasible.

c. Recommended.

i. Grading and plan layout that captures and slows runoff.

ii. Pervious or semi-pervious surfaces that allow water to infiltrate soil.

~~iii. On-site landscape-based water treatment methods that treat rainwater runoff from all surfaces, including parking lots, roofs and sidewalks.~~

d. Not Recommended.

i. Buried, piped or culverted stream channels.

ii. Water quality enhancement projects that detract from the urban character of the area.

[…]

Part 20.25F Evergreen Highlands Design District

20.25F.040 Site and Design Requirements

C. Design Requirements

[…]

2. Landscaping and Vegetation Preservation.

a. The applicant must provide landscaping between structures, as a setting for structures, and within and around parking areas. This landscaping must enhance the coordinated

DRAFT

project design, and provide a pleasing environment between structures. All pervious surface must be landscaped, except those areas specified under other provisions of this Code for natural vegetation, or determined by the Technical Committee as desirable for retention in its natural state.

b. If landscaping is located between uses, the type and intensity of planting must reflect the variation in use category and intensity. The larger the variation, the more the planting must serve as a solid screen.
c. Particular attention must be given to street frontage landscaping which will visually separate the development from the street, and create a soft edge condition.
d. Landscaping shall create a setting which enhances pedestrian use of open space and which provides a sense of place and scale for the proposed development.
e. A significant number of trees at least 12 feet to 14 feet in height or two and one-half inches to three inches in caliper, in conformance with the American Standard for Nursery Stock, and predominantly evergreen, must be included in each planted area. Caliper is measured four feet above existing grade. Shrubs at least three and one-half feet in height along a parking area or site perimeter and at least two feet in height at any other location must be interspersed among the trees, and the majority of the remaining area planted with living ground cover so that the ground will be covered in three years.
f. Wherever practical and consistent with proposed site design, tree line and existing trees at least six inches in caliper must be retained. Caliper is measured four feet above existing grade. Tree protection techniques, approved by the Technical Committee must be utilized during construction. Where changes in grade have occurred, permanent tree preservation methods, approved by the Technical Committee must be utilized.
g. The applicant must install street trees at least three inches in caliper along the street frontage. Caliper is measured four feet above existing grade. The location and species installed are subject to approval of the Technical Committee.
h. The applicant must install interior parking area landscaping equal to at least 10 percent of the area devoted to parking and circulation. Planting areas must be at least 100 square feet and no more than 1,000 square feet. The minimum dimension in any direction is four feet. Each planting area must contain at least one tree combined with shrubs and ground cover which meet the minimum size requirements of paragraph C.2.e of this section.

[...]

4. Drainage

The applicant must submit a drainage plan consistent with the development standards of the City of Redmond and the City of Bellevue which produce the more protective drainage

system as determined by the Redmond Public Works Director and the Bellevue Utilities Director. The use of LID stormwater management techniques ~~are~~is required unless infeasible.

[...]

Part 20.25F1 Factoria 1

20.25F1.070 Sidewalks and Pedestrian Paths

A. Perimeter Sidewalks.

1. Minimum Width. The minimum width of perimeter street sidewalks shall be 12 feet inclusive of the planter strip plus six inches for curb, except as necessary to retain mature trees pursuant to paragraph A.2.e below.
2. Street Trees And Planter Strip Design.
   a. Installation. The property owner shall install street trees and planter strips, in addition to any landscaping required by LUC 20.25F1.050, pursuant to the City of Bellevue Environmental Best Management Practices and Design Standards, now or as hereafter amended. Street tree and planter strips shall be irrigated. Appropriate tree species will be determined through the Master Development Plan process.
   b. Location. The area in which planter strips are installed must be located between the street and the sidewalk unless precluded by existing utilities which cannot reasonably be relocated or as necessary to retain mature trees pursuant to paragraph A.2.e below.
   c. Design. Required street trees should be placed in predominantly continuous planter strips together with shrubbery, ground cover and other plantings approved by the Director. The area in which street trees are planted must be at least four feet wide by six feet wide. Vegetation approved for a planter strip must be compatible with the F1 Design Guidelines for the development area within which the planter strip is located. A street planter strip may also include decorative paving and other plant materials except turf. Where feasible, bioretention swales and planters may be located within the planter strip.
   d. Size and Spacing. Large growing deciduous street trees, at least three inches in caliper or as approved by the Director, shall be planted at least three feet from the street curb, and a maximum of 30 feet on center, and shall conform to the sight distance requirements of BCC 14.60.240.
   e. Mature Tree Retention. The existing mature street trees located on the perimeter street frontages shall be maintained to the extent feasible. Sidewalks and planter strips may be reduced and/or relocated to the back of sidewalk if necessary to accommodate retention of the mature trees.

B. On-Site Sidewalks.
   1. Minimum Width. The minimum width of on-site street sidewalks shall be 12 feet inclusive of the street tree planting wells.
   2. Street Trees and Plantings.
      a. Installation. The property owner shall install street trees and plantings, in addition to any landscaping required by LUC 20.25F1.050, pursuant to the City of Bellevue Environmental Best Management Practices and Design Standards, now or as hereafter amended. Street trees and required landscaping shall be irrigated. Appropriate tree species will be determined through the Master Development Plan process.
      b. Location. Street trees shall be planted in a continuous, rhythmic pattern. Street trees must be located between the street and the sidewalk.
      c. Design. Required street trees shall be planted in tree pits with grates. The area in which street trees are planted must be at least four feet wide by six feet wide. Street grates are not required if street trees are planted as part of a bioretention facility.
      d. Size and Spacing. Small growing pedestrian-scale deciduous street trees, at least three inches in caliper or as approved by the Director, shall be planted at least three feet from the street curb, and a maximum of 25 feet on center, and shall conform to the sight distance requirements of BCC 14.60.240.

C. Pedestrian Paths.
   1. Minimum Width. The minimum width of pedestrian paths shall be 12 feet inclusive of the planter strip. Parking spaces adjacent to pedestrian paths must be designed to ensure that the minimum sidewalk width is maintained free of vehicle encroachments.
   2. Location. Pedestrian path locations and phasing shall be determined through the Master Development Plan process consistent with the site design guidelines.
   3. Landscape Strips.
      a. Installation. The property owner shall install trees and plantings, in addition to any landscaping required by LUC 20.25F1.050, pursuant to the City of Bellevue Environmental Best Management Practices and Design Standards, now or as hereafter amended. Tree and planter strips shall be irrigated.
      b. Design. Appropriate tree species and landscaping shall be determined through the Master Development Plan process. Street trees, shrubbery, ground cover and other plantings approved by the Director shall be provided in continuous planter strips along the length of a pedestrian path. The area in which street trees are planted must be at least four feet wide by six feet wide. Vegetation approved for a planter strip must be compatible with the F1 Design Guidelines for the development area within which the planter strip is located. (Ord. 5726, 3-19-07, § 3)

DRAFT

Low Impact Development Principles Project

Part 20.25H Critical Areas Overlay District

20.25H.080 Performance standards.

A. General.

Development on sites with a type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

[…]

3. Toxic runoff from new impervious area shall be routed away from the stream.
4. Treated water may be allowed to enter the stream critical area buffer.
5. The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use. Preference shall be given to native species.

Part 20.25J Medical Institution District

20.25J.070 Streetscape Design Requirements

[…]

B. Sidewalks

[…]

2. Street Trees and Plantings
   a. The property owner shall install street trees and plantings, in addition to any landscaping required by LUC 20.25J.060. Appropriate tree species will be determined through the Master Development Plan or Design Review where Master Development Plan approval is not required.
   b. The area in which street plantings are installed must be located between the street and the sidewalk unless precluded by existing utilities which cannot reasonably be relocated. Required street trees together with shrubbery, groundcover and other approved plantings must be placed in a planter strip along the length of the frontage. Where feasible, bioretention swales and planters may be located within the planter strip~~Tree and planter strips can double as bioretention planters.~~ The planter strip must be at least four feet wide unless a smaller strip is approved by the Director. Vegetation included in the planter strip shall be urban in character, shall be compatible with other plantings within the property and along the same street, and shall reflect the character of the area in which they are planted. Designs should prioritize the selection of ~~N~~native plant species~~vegetation is strongly preferred~~.
   c. Street trees, at least three inches in caliper or as approved by the Director, must be planted at least three feet from the street curb, and a maximum of 25 feet on center, unless upon request of the applicant minor modification of this requirement is approved

by the Director, and conforms to the sight distance requirements of BCC 14.60.240. A street tree planting area may also include decorative paving and other plant materials except turf.

d. Street trees and plantings shall be irrigated.

DRAFT

Low Impact Development Principles Project

Part 20.30D Planned Unit Development

20.30D.110 Scope.
This Part 20.30D establishes the procedure and criteria that the City will use in making a decision upon an application for a Planned Unit Development.

20.30D.115 Applicability.

A. This part applies to each application for a Planned Unit Development.
B. An applicant may submit an application for a Planned Unit Development for a residential or mixed residential and commercial use project.
C. In no case may a Planned Unit Development include uses which are not permitted by the zoning of the subject property. For purposes of this Part 20.30D, however, a single-family dwelling as defined in LUC 20.50.016 includes dwellings attached by common walls, floors and ceilings. (Ord. 5089, 8-3-98, § 31; Ord. 4972, 3-3-97, § 42; Ord. 4816, 12-4-95, § 141)

20.30D.120 Purpose.
A Planned Unit Development is a mechanism by which the City may permit a variety in type, design, and arrangement of structures; and enable the coordination of project characteristics with features of a particular site in a manner consistent with the public health, safety and welfare. A Planned Unit Development allows for innovations and special features in site development, including the location of structures, conservation of natural land features, protection of critical areas and critical area buffers, the use of low impact development techniques, conservation of energy, and efficient utilization of open space. (Ord. 5682, 6-26-06, § 9)

20.30D.150 Planned Unit Development plan – Decision criteria.
The City may approve or approve with modifications a Planned Unit Development plan if:

A. The Planned Unit Development is consistent with the Comprehensive Plan; and
B. The Planned Unit Development accomplishes, by the use of permitted flexibility and variation in design, a development that is better than that resulting from traditional development. Net benefit to the City may be demonstrated by one or more of the following:
    1. Placement, type or reduced bulk of structures, or
    2. Interconnected usable open space, or
    3. Recreation facilities, or
    4. Other public facilities, or
    5. Conservation of natural features, vegetation and on-site soils, or
    ~~5.~~6. Reduction in hard surfaces, or

Low Impact Development Principles Project

~~6.~~7. Conservation of critical areas and critical area buffers beyond that required under Part 20.25H LUC, or

~~7.~~8. Aesthetic features and harmonious design, or

~~8.~~9. Energy efficient site design or building features, or

~~9.~~10. Use of low impact development techniques; and

C. The Planned Unit Development results in no greater burden on present and projected public utilities and services than would result from traditional development and the Planned Unit Development will be served by adequate public or private facilities including streets, fire protection, and utilities; and

D. The perimeter of the Planned Unit Development is compatible with the existing land use or property that abuts or is directly across the street from the subject property. Compatibility includes but is not limited to size, scale, mass and architectural design of proposed structures; and

E. Landscaping within and along the perimeter of the Planned Unit Development is superior to that required by this code, LUC 20.20.520 and landscaping requirements applicable to specific districts contained in Chapter 20.25 LUC, and enhances the visual compatibility of the development with the surrounding neighborhood; and

F. At least one major circulation point is functionally connected to a public right-of-way; and

G. Open space, where provided to meet the requirements of LUC 20.30D.160.A.1, within the Planned Unit Development is an integrated part of the project rather than an isolated element of the project; and

H. The design is compatible with and responds to the existing or intended character, appearance, quality of development and physical characteristics of the subject property and immediate vicinity; and

I. That part of a Planned Unit Development in a transition area meets the intent of the transition area requirements, Part 20.25B LUC, although the specific dimensional requirements of Part 20.25B LUC may be modified through the Planned Unit Development process; and

J. Roads and streets, whether public or private, within and contiguous to the site comply with Transportation Department guidelines for construction of streets; and

K. Streets and sidewalks, existing and proposed, are suitable and adequate to carry anticipated traffic within the proposed project and in the vicinity of the proposed project; and

L. Each phase of the proposed development, as it is planned to be completed, contains the required parking spaces, open space, recreation space, landscaping and utility area necessary for creating and sustaining a desirable and stable environment. (Ord. 5876, 5-18-09, § 26; Ord. 5682, 6-26-06, § 10; Ord. 4972, 3-3-97, § 48; Ord. 4816, 12-4-95, § 147)

DRAFT

Low Impact Development Principles Project

20.30D.160 Planned Unit Development plan – Conservation feature and recreation space requirement.

A. General.

Within a Planned Unit Development including residential uses:

1. Through the conservation design features included in subsection B of this section, the proposal must earn square footage credit totaling at least 40 percent of the gross land area, which includes any critical area or critical area buffer; and
2. At least 10 percent of the gross land area, which includes any critical area or critical area buffer, of the subject property must be retained or developed as common recreation space as defined by LUC 20.50.044; provided, however, that the requirement for recreation space may be waived if the total of critical area and critical area buffer equals at least 40 percent of the gross land area; and
3. Recreation space as required by subsection A.2 of this section may be included within non-critical area conservation design features required by subsection A.1 of this section if:
    a. The common recreation space does not interfere with the purposes and functions of the conservation design feature; and
    b. At least 20 percent of the gross land area is nonrecreation open space. Provided, however, that recreation space may not occur in a critical area or a critical area buffer; and
4. The area of the site devoted to pedestrian trails shall not be included in the required common recreation space unless public trails are specifically required by the City; and
5. An outdoor children's play area meeting the requirements of LUC 20.20.540 may be included in the above-described common recreation space requirement; and
6. For mixed use projects, the required open and recreation space shall be designed to meet the needs of both the residential and commercial uses.

B. Conservation Design Features.

To satisfy the requirements of subsection A of this section, a proposal shall include any combination of the following factors. The total square footage credit required in subsection A of this section is calculated by multiplying the square footage actually dedicated to the conservation design feature by the conservation factor set forth below. Where noted, certain conservation design features are not eligible to earn square footage credit unless the minimum size requirements are met. After the minimum size requirement is met, each square foot provided may be used to calculate the square footage credit earned by the feature.

Conservation Design Feature	Conservation Factor	Minimum Size of Retained Area Before Credit Earned

Low Impact Development Principles Project

Critical area or areas placed in a tract (connection between isolated critical areas credited as corridor below)	1.0	
Preservation of Westside lowland conifer hardwood forest not already in critical area and/or preservation of recommended forest habitat to protect species of local importance	1.2	20,000 sq. ft.
Designated wildlife corridor, trail or other essential connection set aside in a tract	1.2	
Critical area buffer increased by 15% or more and placed in tract	1.2	
Preservation of native soils and mature trees on required open space or combination of preservation with hydrologic enhancement (soil amendment and tree such that vegetative areas are connected to soil below)	1.1	10,000 sq. ft. canopy cover or amended and planted area
Site area set aside in separate tract to achieve bio-retention and runoff dispersion to natural areas or to soil layer below; e.g., community rain garden, downspout dispersion or similar LID techniques. Must serve more than one residence.	1.1	5,000 sq. ft. reserved for rain garden or dispersion
Landscaped or grass open space in separate tract for active or passive recreation but only partially connected to soil below	1.0	2,500 sq. ft. contiguous area
Paved but pervious open space; e.g., court yards and similar facilities	1.0	1,500 sq. ft.
Impervious paved court yards and similar facilities that meet minimum definition of open space	1.0	2,500 sq. ft.
Built Green certification for green communities	1.0	200 points earned under Built Green's "Site Design Criteria." For sites with critical areas, proposal must achieve all of the available points from the open space and habitat preservation

DRAFT

		sections as part of the total 200 points

C. Maintenance.

In appropriate circumstances the City may require a reasonable performance or maintenance assurance device in conformance with LUC 20.40.490 to assure the retention and continued maintenance of all open and recreation space or conservation design feature in conformance with the Land Use Code and the Planned Unit Development plan approval. (Ord. 5682, 6-26-06, § 11; Ord. 4972, 3-3-97, § 50; Ord. 4816, 12-4-95, § 149; Ord. 3775, 5-26-87, § 20)

20.30D.165 Planned Unit Development plan – Request for modification of zoning requirements.
The applicant may request a modification of the requirements and standards of the Land Use Code as follows:

A. Density and Floor Area Ratio (FAR).
   1. General. The applicant may request a bonus in the number of dwelling units permitted by the underlying land use district or the maximum FAR (see general dimensional requirements contained in LUC 20.20.010, and district-specific requirements contained in Chapter 20.25 LUC.
   2. Bonus Decision Criteria. The City may approve a bonus in the number of dwelling units allowed by no more than 10 percent over the base density for proposals complying with this subsection A.2. Base density shall be determined on sites with critical areas or critical area buffers pursuant to LUC 20.25H.045. Base density on all other sites shall be determined based on the gross land area of the property excluding either that area utilized for traffic circulation roads or 20 percent, whichever is less. The bonus allowed by this section may be approved only if:
      a. The design of the development offsets the impact of the increase in density; and
      b. The increase in density is compatible with existing uses in the immediate vicinity of the subject property.
   3. Senior Citizen Dwelling. An additional 10 percent density bonus may be approved for senior citizen dwellings if the criteria in subsection A.2 of this section are met and if the average dwelling unit size does not exceed 600 square feet.

B. Height.

The applicant may request a modification of height from that allowed by the land use district, provided topography and arrangement of structures does not unreasonably impair primary scenic views (e.g., mountains, lakes, unique skylines) of the surrounding area, as compared to lot-by-lot development. Proposals earning bonus density pursuant to this section or LUC

20.30D.167 may only receive an increase in height if the requirements of subsection A.2 of this section are met, considering the impact of increased height.

C. Zero Lot Line. This is a configuration where the house and/or garage is built up to one of the side lot lines, providing the opportunity for more usable space in the opposing side yard.
   1. General. The applicant may request a reduction in the required side setback from that required by the land use district and district specific requirements. Zero lot line setbacks are not permitted for side yards along the perimeter of the PUD.
   2. Setback Reduction Decision Criteria. The City may approve a reduction in the setback of up to one side setback. The reduction in side setback shall be approved only if:
      a. The opposing side setback shall be at least 10 feet.
      b. In order to maintain privacy, no windows, doors, air conditioning units, or any other types of openings in the walls along the zero lot line wall, except for windows that do not allow for visibility into the side yard of the adjacent lot.

~~C.~~D. Other.

The City may approve a modification of any provision of the Land Use Code, except as provided in LUC 20.30D.170, if the resulting site development complies with the criteria of this part. (Ord. 5876, 5-18-09, § 27; Ord. 5682, 6-26-06, § 12; Ord. 5480, 10-20-03, § 24; Ord. 5089, 8-3-98, § 33; Ord. 4972, 3-3-97, § 51; Ord. 4816, 12-4-95, § 150; Ord. 4065, 10-23-89, § 6; Ord. 3690, 8-4-86, § 19)

20.30D.167 Planned Unit Development – Additional bonus density for large-parcel projects.

A. Purpose.

The City desires to offer incentives to property owners to develop multi-unit residential projects with site features and site designs that minimize impacts to critical area functions and values. Many of these techniques are new, and their effectiveness is uncertain. The City desires additional information about the impact of these design techniques and features, to determine the appropriate amount of density bonus and other incentives to offer for their use, and to determine what, if any, design features are required to offset the impact of the increased density. The projects allowed under this section are mechanisms to allow the City to gather such information prior to making additional density available to all projects.

B. Eligible Sites.

Projects will only be authorized on sites of five acres or more.

C. Applicable Procedure.

A project will be approved as part of the PUD approval for the underlying proposal.

D. Additional Bonus.

The City may authorize additional bonus density, up to 30 percent of the base density, for proposals including additional conservation design features above the amount required in LUC 20.30D.160.A. Base density shall be determined on sites with critical areas or critical area

buffers pursuant to LUC 20.25H.045. Base density on all other sites shall be determined based on the gross land area of the property excluding either that area utilized for traffic circulation roads or 20 percent, whichever is less. Bonus density shall be based on the square footage credit earned divided by the minimum lot size of the underlying land use district. Bonus density may be approved only if the proposal meets the criteria of LUC 20.30D.165.A.2.a and A.2.b. (Ord. 5682, 6-26-06, § 13)

20.30D.170 Planned Unit Development plan – Limitation on authority to modify zoning.
The following provisions of the Land Use Code may not be modified pursuant to LUC 20.30D.165:

A. Any provision of this Part 20.30D, Planned Unit Development; or
B. Any provision of LUC 20.10.440, Land Use Chart, and district-specific requirements contained in Chapter 20.25 LUC, except where district-specific requirements would prohibit Zero Lot-Line development, as provided for in section 20.30D.165.C (Zero Lot-Line); or
C. Any provision of Part 20.25E LUC, the Shoreline Overlay District; however, requests for modifications to the requirements of Part 20.25E LUC, where allowed under the provisions of that part, may be considered together with an application for a Planned Unit Development; or
D. Any provision of the Land Use Code which specifically states that it is not subject to modification; or
E. The procedural, enforcement and administrative provisions of the Land Use Code or any other applicable City Code; or
F. Any provision of Part 20.25H LUC, the Critical Areas Overlay District, except as specifically provided for in that part; however, requests for modifications to the requirements of Part 20.25H LUC, where allowed under the provisions of that part, may be considered together with an application for a Planned Unit Development. (Ord. 5876, 5-18-09, § 28; Ord. 5682, 6-26-06, § 14; Ord. 5089, 8-3-98, § 34; Ord. 4972, 3-3-97, § 52; Ord. 4816, 12-4-95, § 151; Ord. 3775, 5-26-87, § 21)

20.30D.175 Planned Unit Development plan – Authorized activity.
Following approval of the Planned Unit Development plan, the applicant may begin any work that is specifically authorized in the Planned Unit Development approval and is not prohibited by any other applicable regulation. No other work may be done until the final development plan is approved. (Ord. 4972, 3-3-97, § 53; Ord. 4816, 12-4-95, § 152)

20.30D.195 Planned Unit Development plan – Merger with subdivision.

A. General.
The applicant may request that the City process a preliminary plat in conjunction with a Planned Unit Development plan. Platting is required for all projects which involve or contemplate the subdivision of land.

B. Procedure.
The City may review and decide upon a preliminary plat at the same hearing as the preliminary development plan to the extent allowed by such procedures.

C. Plat Requirements.
The preliminary plat must comply with the procedures, standards and criteria of Chapters 20.45A and 20.45B LUC and must conform to the Planned Unit Development plan. (Ord. 5232, 7-17-00, § 12; Ord. 4972, 3-3-97, § 57; Ord. 4816, 12-4-95, § 156)

20.30D.200 Planned Unit Development plan – Effect of approval.

A. Recording Required.
The approval of the Planned Unit Development plan constitutes the City's acceptance of the general project, including its density, intensity, arrangement and design. Upon final Planned Unit Development approval that is not merged with a subdivision, the Development Services Department will forward an approved Planned Unit Development to the King County Department of Records and Elections for recording. No administrative approval of a Planned Unit Development is deemed final until the Planned Unit Development is recorded and proof of recording is received by the Development Services Department. See Chapter 20.45 LUC for recording requirements of Planned Unit Developments merged with subdivisions.

B. Planned Unit Development in the Critical Area Overlay District.
Where a Planned Unit Development within the Critical Area Overlay District is not merged with a subdivision, the Planned Unit Development recorded under this section shall have designated on the face of the final document a Native Growth Protection Easement(s) (NGPE). The NGPE(s) shall contain all critical areas, critical area buffers, and retained significant trees. The final Planned Unit Development shall contain the following restrictions for use, development and disturbance of the NGPE in a format approved by the City Attorney:

1. An assurance that: the NGPE will be kept free from all development and disturbance except where allowed or required for habitat improvement projects, vegetation management, and new or expanded city parks pursuant to LUC 20.25H.055; and that native vegetation, existing topography, and other natural features will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering and protecting plants and animal habitat;
2. The right of the City of Bellevue to enter the property to investigate the condition of the NGPE upon reasonable notice;
3. The right of the City of Bellevue to enforce the terms of the NGPE; and
4. A management plan for the NGPE designating future management responsibility. (Ord. 5682, 6-26-06, § 15; Ord. 5481, 10-20-03, § 6; Ord. 4972, 3-3-97, § 58; Ord. 4816, 12-4-95, § 157)

DRAFT

Low Impact Development Principles Project

20.30D.250 Planned Unit Development plan – Phased development.

If developed in phases, each phase of an approved Planned Unit Development must contain the required number of parking spaces, the required open space, recreation space, landscaping, and utility areas necessary to create a desirable and stable environment pending completion of the total Planned Unit Development as approved. Each phase must also contain any of the approved conservation factor project design features necessary to support bonus density constructed in that phase. (Ord. 5682, 6-26-06, § 16; Ord. 4972, 3-3-97, § 68; Ord. 4816, 12-4-95, § 167)

20.30D.255 Planned Unit Development plan – Map designation.

A. General.
   Upon approval of the development plan the City will place the file number of the Planned Unit Development on the location of the subject property on the City of Bellevue Zoning Map.
B. Effect.
   Redevelopment of property for which a Planned Unit Development has been approved must be consistent with the Planned Unit Development plan and any amendments to that plan. (Ord. 4972, 3-3-97, § 69; Ord. 4816, 12-4-95, § 168)

20.30D.280 Merger with Binding Site Plan.

A. General.
   The applicant may request that the site plan approved with the Planned Unit Development constitute a Binding Site Plan pursuant to Chapter 58.17 RCW.
B. Survey and Recording Required.
   If a site plan is approved as a Binding Site Plan, the applicant shall provide a recorded survey depicting all lot lines and shall record the approved site plan and survey with the King County Department of Records and Elections. No document shall be presented for recording without the signature of each owner of the subject property.
C. Effect of Binding Site Plan.
   Upon the approval and recording of a Binding Site Plan the applicant may develop the subject property in conformance with the approved and recorded Binding Site Plan and without regard to lot lines internal to the subject property. Any sale or lease of lots or parcels within the subject property shall be subject to the approved and recorded Binding Site Plan and the requirements of state law. (Ord. 4972, 3-3-97, § 74; Ord. 4816, 12-4-95, § 173; Ord. 3848, 11-16-88, § 3)

20.30D.285 Amendment of an approved Planned Unit Development.

A. There are three ways to modify or add to an approved Planned Unit Development: process as a new decision, process as a Land Use Exemption, or process as an administrative amendment.
B. Except as provided in subsections C and D of this section, modification of a previously approved Planned Unit Development shall be treated as a new application.
C. Land Use Exemption for a Planned Unit Development.

DRAFT

The Director may determine that a modification to a previously approved Planned Unit Development is exempt from further review under the administrative amendment process or as a new application, provided the following criteria are met:

1. The change is necessary because of natural features of the subject property; and
2. The change will not have the effect of significantly reducing any area of landscaping, open space, natural area or parking; and
3. The change will not have the effect of increasing the density of the Planned Unit Development; and
4. The change will not add square footage that is more than 20 percent of the existing gross square footage of the Planned Unit Development; and
5. If an addition or expansion has been approved within the preceding 24-month period, the combined additions will not add square footage that exceeds 20 percent of existing gross square footage of the Planned Unit Development; and
6. The change will not result in any structure, circulation or parking area being moved significantly in any direction; and
7. The change will not reduce any approved setback by more than 10 percent; and
8. The change will not result in a significant increase in the height of any structure; and
9. The change does not result in any significant adverse impacts beyond the site.

D. Administrative Amendment of Planned Unit Development.

The Director may approve modifications to an approved Planned Unit Development as an administrative amendment subject to the procedures set forth in LUC 20.35.200 et seq., if the following criteria are met:

1. The amendment maintains the design intent or purpose of the original approval; and
2. The amendment maintains the quality of design or product established by the original approval; and
3. The amendment is not materially detrimental to uses or property in the immediate vicinity of the subject property.

E. The Director may impose conditions upon any administrative amendment to ensure the proposal complies with the decision criteria and the purpose and intent of the original approval. (Ord. 6197, 11-17-14, § 23; Ord. 5790, 12-3-07, § 2; Ord. 5481, 10-20-03, § 7; Ord. 4972, 3-3-97, § 75; Ord. 4816, 12-4-95, § 174)

DRAFT

City of Bellevue

Development Services
Handout **L-XX**

Landmark Trees

May 2016

Purpose

The purpose of this handout is to clarify the definition of "landmark tree" pursuant to Bellevue Land Use Code (LUC) Chapter 20.20.900, Tree Retention and Replacement for the purpose of determining thresholds for "rare, uncommon, unique or exceptional" trees on sites undergoing development, in order to establish appropriate tree protection measures.

Background

Bellevue LUC Chapter 20.20.900, Tree Retention and Replacement, provides means for protecting trees in Bellevue. Under this chapter, landmark trees are given priority for retention. Landmark trees are defined in Bellevue LUC 20.50 as:

"Certain significant trees are considered landmark trees based on their size, species, condition, cultural/historic importance or age. The Director shall specify thresholds for trees to be considered for landmark status."

This handout provides clarification for determining trees that should be considered for landmark status as well as the standards and procedures for marking this determination.

Size Thresholds

Trees with a diameter at breast height (dbh), defined in this handout, that is equal to or greater than the threshold diameters listed in Table 1 are considered landmark unless they fail to meet the risk criteria discussed in the following section. For all species not listed in Table 1, the threshold diameter is 30" or 65% of the largest documented diameter for a tree of that species in Washington, whichever is less, as noted in Champion Trees of Washington State by Robert Van Pelt.

Measurement of Tree Diameter

Diameter at breast height (dbh), which means the diameter of a tree trunk measured at 4.5 feet above average grade, is used in determining the diameter of existing trees.

Where a tree has a branch(es) or swelling that interferes with measurement at 4.5 feet above average grade or where a tree tapers below this point, the diameter is measured at the most narrow point below 4.5 feet. For trees located on a slope, the 4.5 feet is measured from the average of the highest and lowest ground points or, on very steep slopes where this is not possible, the lowest practical point on the uphill side. Where a tree splits into several trunks close to ground level, the dbh for the tree is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: $dbh = \sqrt{[(stem1)^2 + (stem2)^2 + (stem3)^2]}$

Risk Assessment

Trees that meet the size threshold discussed above shall be considered landmark trees unless DSD finds that the tree or trees should be removed based on a risk assessment produced by a qualified professional. In making this determination, a qualified professional will consider crown size, structure, disease, past maintenance practice, potential damage to existing or future targets, risk mitigation options, and, when development is proposed, the likelihood of survival after construction.

To undertake tree risk assessment as part of a development application, a qualified professional shall have a minimum of 3 years' experience in tree evaluation and shall have worked directly with the protection of trees during construction, as well as having one of the following credentials:

- Society of American Foresters (SAF) Certified Forester;
- International Society of Arborists (ISA) Certified Arborist with Tree Risk Assessor Qualification.

Sources

Champion Trees of Washington State, 1996, by Robert Van Pelt.

DRAFT

Table 1: Size Thresholds for Common and Naïve Bellevue Trees to be considered for landmark status.

Species	Threshold Diameter
Native Species	
Oregon ASH – *Fraxinus latifolia*	24 in
CASCARA – *Rhamnus purshiana*	8 in
Western Red CEDAR – *Thuja plicata*	30 in
Pacific CRABAPPLE – *Malus fusca*	12 in
Pacific DOGWOOD – *Cornus nuttallii*	8 in
Douglas FIR – *Pseudotsuga menziesii*	30 in
Grand FIR – *Abies grandis*	24 in
Black HAWTHORN – *Crataegus douglasii*	8 in
Western HEMLOCK – *Tsuga heterophylla*	24 in
MADRONA – *Arbutus menziesii*	8 in
Bigleaf MAPLE – *Acer macrophyllum*	30 in
Dwarf or Rocky Mountain MAPLE – *Acer glabrum var. Douglasii*	8 in
Vine MAPLE – *Acer circinatum*	8 in
Oregon White or Garry OAK – *Quercus garryana*	8 in
Lodgepole PINE – *Pinus contorta*	8 in
Shore PINE – *Pinus contorta 'contorta'*	12 in
Western White PINE – *Pinus monticola*	24 in
Western SERVICEBERRY – *Amelanchier alnifolia*	8 in
Sitka SPRUCE – *Picea sitchensis*	8 in
Pacific YEW – *Taxus brevifolia*	8 in
Non-native Species	
Orchard (Common) APPLE – *Malus* sp.	20 in
Atlas CEDAR – *Cedrus atlantica*	30 in
Deodor CEDAR – *Cedrus deodara*	30 in
Incense CEDAR – *Calocedrus decurrens*	30 in
Flowering CHERRY – *Prunus* sp. (*serrula, serrulata, sargentii, subhirtella, yedoensis*)	23 in
Lawson CYPRESS – *Chamaecyparis lawsoniana*	30 in
Kousa DOGWOOD – *Cornus kousa*	12 in
Eastern DOGWOOD – *Cornus florida*	12 in
American ELM – *Ulmus Americana*	30 in
English ELM – *Ulmus procera*	30 in
GINGKO – *Ginkgo biloba*	24 in
Common HAWTHORN – *Crataeus laevigata*	16 in
Washington HAWTHORN – *Crataegus phaenopyrum*	9 in
European HORNBEAM – *Carpinus betulus*	16 in
Common HORSE CHESTNUT – *Aesculus hippocastanum*	30 in
Red HORSE CHESTNUT – *Aesculus x carnea*	30 in
KATSURA – *Cercidiphyllum japonicum*	30 in
Littleleaf LINDEN –*Tilia cordata*	30 in
Honey LOCUST – *Gleditsia triancanthos*	20 in
Southern MAGNOLIA – *Magnolia grandiflora*	16 in
Paperbark MAPLE – *Acer griseum*	12 in
Japanese MAPLE – *Acer palmatum*	12 in
Norway MAPLE – *Acer platanoides*	30 in
Red MAPLE – *Acer rubrum*	25 in
Sugar MAPLE – *Acer saccharum*	30 in
Sycamore MAPLE – *Acer pseudoplatanus*	24 in
MONKEY PUZZLE TREE – *Araucaria araucana*	22 in
Pin OAK – *Quercus palustris*	30 in
Red OAK – *Quercus rubra*	30 in

DRAFT

Austrian Black PINE – *Pinus nigra*	24 in

DRAFT

Ponderosa PINE – *Pinus ponderosa*	30 in
Scot's PINE – *Pinus sylvestris*	24 in
London PLANE – *Platanus acerifolia*	30 in
Flowering PLUM – *Prunus cerasifera*	21 in
Coastal REDWOOD – *Sequoia sempervirens*	30 in
Giant SEQUOIA – *Sequoiadendron giganteum*	30 in
Japanese SNOWBELL – *Styrax japonica*	12 in
American SWEETGUM – *Liquidambar styraciflua*	27 in
TULIP TREE – *Liriodendron tulipifera*	30 in

This document is intended to provide guidance in applying certain Land Use Code regulations and is for informational use only. It cannot be used as a substitute for the Land Use Code or for other city codes, such as the Construction Codes. Additional information is available from Development Services at Bellevue City Hall or on the city website at www.bellevuewa.gov.

For land use regulations that may apply to your project, contact the Land Use Information Desk in Development Services. Phone: 425-452-4188. E-mail: landusereview@bellevuewa.gov. Assistance for the hearing impaired: dial 711.

DRAFT

Low Impact Development Principles Project

Chapter 24.06 STORM AND SURFACE WATER UTILITY CODE

24.06.065 Minimum requirements for new development and redevelopment.

[…]

G. Minimum Requirements. The following contains the minimum requirements for stormwater management at development and redevelopment sites in accordance with the city's Western Washington Phase II Municipal Stormwater Permit, including Appendix 1, Minimum Technical Requirements, the Stormwater Management Manual for Western Washington (2005) and supplemented by engineering standards where applicable:

[…]

5. On-Site Stormwater Management (MR5). On-site stormwater management BMPs to infiltrate, disperse, and retain stormwater runoff on site are required ~~where feasible~~ unless infeasible, without causing flooding or erosion impacts. Roof downspout control BMPs, functionally equivalent to those described in Chapter 3 of Volume III of the Stormwater Management Manual for Western Washington (2005) and dispersion and soil quality BMPs, functionally equivalent to those in Chapter 5 of Volume V of the Stormwater Management Manual for Western Washington (2005), shall be required to reduce the hydrologic disruption of developed sites;

[…]

DRAFT

Low Impact Development Principles Project

CHAPTER D6 – ON-SITE STORMWATER MANAGEMENT D6-01 GENERAL

On-site stormwater management BMPs infiltrate, disperse, and retain stormwater on-site in order to reduce the volume, peak flow rates, and amount of pollutants in stormwater runoff leaving a developed project site. The following on-site stormwater management BMPs are required where site conditions allow without causing erosion or flooding: Roof Downspout Control BMPs functionally equivalent to those described in Chapter 3 of Volume III of the DOE Manual; and Dispersion and Soil Quality BMPs functionally equivalent to those in Chapter 5 of Volume V of the DOE Manual. Natural Drainage Practices (NDPs) are included here as a sub-set of on-site stormwater management BMPs, and include bioretention, pervious pavement, rain recycling, and vegetated roofs. These NDPs are required unless infeasible and should be an integral part of site designs. ~~These NDPs are encouraged as an integral part of site designs.~~ New BMPs that DOE has approved for General Use (GULD) under DOE's emerging technology program, per Chapter 12, Volume V of the DOE Manual, are allowed. Using NDPs in addition to or in place of the required on-site BMPs (where NDP substitution is allowed) can significantly enhance the overall hydrologic performance of the developed site and further reduce downstream flooding, erosion, water quality impacts, and long-term maintenance requirements. NDPs can also enhance site sustainability and aesthetics, and may add points under LEED and Built Green certification programs. This chapter provides detailed guidance on how to use the criteria set forth in Section 24.06.065(G) of the Storm and Surface Water Utility Code and design guidelines in the LID Technical Guidance Manual and Chapter 3 of Volume III and Chapter 5 of Volume V of the DOE Manual, as modified herein, to plan, design and construct on-site stormwater management BMPs and NDPs. The remainder of this section describes how to apply on-site stormwater management BMPs to meet Minimum Requirement 5 (On-Site Stormwater Management), MR6 (Runoff Treatment), and MR7 (Flow Control).

DRAFT

Low Impact Development Principles Project

Chapter 23.76 CLEARING AND GRADING CODE

23.76.030 Definitions

[…]

I. I Definitions

"Impervious surface – A non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for application of minimum requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling."

23.76.035 Permit requirements.

A. A clearing and grading permit is required for a project that involves any of the following described in subsections (A)(1) through (8) of this section, except as provided for in subsection B of this section. In applying this section, the total proposal shall be considered. Any project that requires a permit shall also comply with applicable provisions of Chapter 24.06 BCC, BCC Title 20, and any other applicable city codes.

1. Any clearing, filling, or excavation in a critical area or critical area buffer;
2. Fill and/or excavation totaling over 50 cubic yards. Quantities of fill and excavation are separately calculated and then added together, even if excavated material is used as fill on the same site;
3. Creation or addition of 2,000 square feet, or greater, of new, replaced, or new plus replaced impervious surface area;
4. Over 1,000 square feet of clearing, as measured at the ground level~~. Clearing includes disturbance of over 1,000 square feet at grade due to removal or pruning of trees~~;

5. Rockeries and modular block walls over four feet in height as measured from the bottom of the base rock or block;
6. Removal of more than five significant trees, as defined in LUC 20.50.046;
~~6.~~7. ~~or r~~Removal of more than 25 percent of the live crown of any significant tree, ~~as defined in LUC 20.50.046,~~ that is required to be preserved by a city code, plat condition, or other requirement. The live crown is the crown of the tree containing live foliage;
~~7.~~8. Any regrading or repaving of a parking lot used for stormwater detention; and
~~8.~~9. Removal of any significant tree from any lot in an R-1 land use district in the Bridle Trails subarea, pursuant to the provisions of LUC 20.20.900, now or as hereafter amended.

B. The following activities are exempt from the requirements for a clearing and grading permit even if the criteria in subsection A of this section are exceeded:
   1. Agricultural crop management of existing farmed areas;
   2. Routine landscape maintenance, as described in LUC 20.25H.055(C)(3)(h), now or as hereafter amended;
   3. Work needed to correct an immediate danger to life or property in an emergency situation as declared by the mayor or the city manager or his/her designee;
   4. Cemetery graves involving less than 50 cubic yards of excavation, and related filling, per each cemetery plot;
   5. Routine drainage maintenance of existing, constructed stormwater drainage facilities located outside of a critical area or critical area buffer, including, but not limited to, detention/retention ponds, wetponds, sediment ponds, constructed drainage swales, water quality treatment facilities such as filtration systems, and regional stormwater facilities that are necessary to preserve the water quality treatment and flow control functions of the facility. This exemption does not apply to any expansion and/or modification to already excavated and constructed stormwater drainage facilities; or
   6. Roadway repairs and overlays within public street rights-of-way for the purpose of maintaining the pavement on existing paved roadways, such that asphalt removal or milling does not expose more than 1,000 square feet of gravel base or subgrade. This exemption does not apply to curbs, gutters, sidewalks, utilities, new traffic calming devices, new roadways, or the widening of the paved surface of existing roadways.

C. An exemption from a clearing and grading permit does not exempt the person or property owner doing the work from meeting all applicable city codes, including, but not limited to, the storm and surface water utility code (Chapter 24.06 BCC), which requires that sediment and other pollutants be kept from the drainage system.

D. The director may categorize clearing and grading permits by different types for administrative purposes, and different fees may be charged for different types. A clearing and grading permit may be issued as a component of a building permit, or other permit, rather than as a separate

DRAFT

Low Impact Development Principles Project

permit. The director may require that single-family building permits and clearing and grading permits be combined.

E. The director shall specify what submittal and application materials are required for a complete clearing and grading permit application, including the type of submittals, the required level of detail, the minimum qualifications of preparers of technical documents, and the number of copies. The director may administratively establish different submittal requirements for different types of clearing and grading permits. The director may, as well, administratively waive specific submittal requirements if he/she determines them to be unnecessary, or the director may require additional information if needed for review of an application.

F. A construction stormwater pollution prevention plan, if required, must be submitted with the permit submittal and application materials described in subsection E of this section.

G. As a condition of applying for a permit for a project that includes clearing and grading, the applicant shall allow the city to enter the subject property in order to evaluate the proposed clearing and grading. (Ord. 6196 § 1, 2014; Ord. 5906 § 7, 2009; Ord. 5663 § 1, 2006; Ord. 5452 § 3, 2003; Ord. 4754 § 2, 1995. Formerly 23.76.025.)

[…]

23.76.060 Clearing – Vegetation preservation and replacement.

The applicant/permittee shall:

A. Meet applicable Land Use Code requirements for tree retention and vegetation preservation, disturbance limitation, and new landscaping (including but not limited to LUC 20.20.520, Landscape development; LUC 20.20.900, Tree retention; Part 20.25H LUC, Critical Areas Overlay District; and Part 20.25E LUC, Shoreline Overlay District, now or as hereafter amended).

B. Preserve natural vegetation for erosion and sedimentation control and water quality and quantity control as detailed in the clearing and grading development standards.

C. Follow the methodology in the clearing and grading development standards (or equivalent methodology approved by the director) for preserving/replacing vegetation.

D. Mark clearing limits in the field prior to clearing.

~~D.~~E. A tree preservation plan including information in accordance with LUC 20.20.900 shall be incorporated into the clearing and grading drawings and shall become part of all construction documentation. This information shall define spatial limits for tree protection and include detailed drawings of tree protection measures and all required mitigation plantings. The tree preservation information must be prepared by a certified arborist or a registered landscape architect in conjunction with a registered civil engineer. (Note: In most instances, the tree survey will serve as the basis for the tree preservation information.)

Low Impact Development Principles Project

~~E.~~F. When clearing activity is interrupted or suspended for any reason, the permittee shall stabilize the site(s) and maintain the erosion control BMPs consistent with BCC 23.76.090 and the clearing and grading development standards, now or as hereafter amended. If the city deems a construction site abandoned, the applicant or permittee shall install permanent erosion and sedimentation measures pursuant to BCC 23.76.090(F). (Ord. 5906 § 11, 2009; Ord. 5663 § 2, 2006; Ord. 5452 § 7, 2003; Ord. 4754 § 2, 1995.)

[…]

23.76.090 Erosion and sedimentation control – Minimum requirement 2.

A. Purpose. The purpose of minimum requirement 2 is to prevent erosion and the discharge of sediment and other pollutants into the storm and surface water system and receiving waters using appropriate BMPs and site management techniques.

B. Applicability.

1. Minimum Requirement 2. This section describes requirements for applicants to prepare a construction stormwater pollution prevention plan (CSWPPP) for new development, redevelopment, and land disturbing activities that meet the thresholds set forth in this chapter. Applicants and permittees are responsible for preventing erosion and discharge of sediment and other pollutants into the storm and surface water system and receiving waters. The city does not offer erosivity waivers.
2. Applicants and permittees shall comply with all applicable provisions of the Bellevue City Code, rules, standards, and manuals adopted for this chapter and Chapter 24.06 BCC including, but not limited to, Chapter 24.06 (Storm and Surface Water Code) and corresponding engineering standards, BCC Title 20 (Land Use Code), the clearing and grading development standards, any other applicable codes and standards, and the Washington State Department of Ecology's Stormwater Management Manual for Western Washington (2005), now or as the provisions are hereafter amended.
3. Exemption. The director may exempt the following projects from the requirements of preparing a CSWPPP:
    a. Projects that are covered under the Washington State Department of Ecology's construction stormwater general permit and the permittee is fully implementing and in compliance with the requirements of that permit. To apply for this exemption, the applicant must provide with its permit application materials a copy of the permit coverage letter from the Washington State Department of Ecology, and a copy of the corresponding stormwater pollution prevention plan (SWPPP).

DRAFT

b. Projects that involve clearing of 1,000 square feet or less, and grading of 50 cubic yards or less, but require a clearing and grading permit in accordance with BCC 23.76.035(A).

C. General Requirements.

1. Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. When establishing these permitted clearing and grading areas, significant trees shall be maintained consistent with BCC Title 20, including, but not limited to, LUC 20.20.520 and 20.20.900, now or as hereafter amended. Consideration should be given to minimizing removal of other trees and minimizing disturbance and/or compaction of native soils except as needed for building purposes.
2. Applicants must prepare and submit a construction stormwater pollution prevention plan (CSWPPP) for all projects that meet the permitting thresholds in BCC 23.76.035, except as exempted in BCC 23.76.090(B)(3). The CSWPPP shall be implemented beginning with initial soil disturbance and until final stabilization. The permitted clearing and grading areas and any other areas required to preserve critical areas or critical area buffers, native growth protection areas, retained vegetation areas, or tree retention areas, as the city may require, shall be delineated on the site plans and the development site.
3. For projects with clearing totaling less than 7,000 square feet and grading less than 500 cubic yards, the CSWPPP may consist of a CSWPPP short form and a site plan. A turbidity and pH monitoring plan may also be required depending on site characteristics, such as topography, proximity to receiving waters, or critical areas and critical area buffers.
4. Sediment and erosion control BMPs shall be consistent with the BMPs contained in the clearing and grading development standards.
5. Seasonal Work Limitations. From October 1st through April 30th, clearing and grading activities may only be authorized by the city if silt-laden runoff will be prevented from leaving the site through compliance with applicable provisions of BCC 23.76.093. Based on the information provided and/or local weather conditions, the director may expand or restrict the seasonal limitation on site disturbance.
    a. The following activities are exempt from the seasonal clearing and grading limitations:
        i. Routine maintenance and necessary repair of erosion and sediment control BMPs;

DRAFT

Low Impact Development Principles Project

ii. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil; and

iii. Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

b. Clearing, grading, and hauling are not allowed during periods of heavy rain.

D. Construction Stormwater Pollution Prevention Plan (CSWPPP) Elements. The applicant shall include each of the 12 elements below in the CSWPPP and ensure that they are implemented, unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the CSWPPP. The CSWPPP shall include a narrative, drawings, and a turbidity and pH monitoring plan as described in the clearing and grading development standards. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The CSWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project.

1. Preserve Vegetation/Mark Clearing Limits.

a. Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, critical areas and critical area buffers, and trees that are to be preserved within the construction area.

b. The duff layer, native topsoil, and natural vegetation shall be retained in an undisturbed state to the maximum degree practicable, and, where applicable, meet the requirements of LUC 20.20.520.

2. Establish Construction Access.

a. Construction vehicle access and exit shall be limited to one route, if possible.

b. Access points shall be stabilized with quarry spalls, crushed rock, or other equivalent BMP to minimize the tracking of sediment onto public roads.

c. Wheel wash or tire baths shall be located on site, if the stabilized construction entrance is not effective in preventing sediment from being tracked onto public roads.

d. If sediment is tracked off site, roads shall be cleaned thoroughly as directed by the city or at a minimum at the end of each day, or more frequently during wet weather. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area.

e. Street washing is allowed only after sediment is removed in accordance with subsection (D)(2)(d) of this section. Street wash wastewater shall be controlled by pumping back on site or otherwise be prevented from discharging into the storm and surface water system or receiving waters.

Low Impact Development Principles Project

3. Control Flow Rates.
    a. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.
    b. Where necessary to comply with subsection (D)(3)(a) of this section, stormwater retention or detention facilities shall be constructed as one of the first steps in grading. Detention facilities shall be functional before construction of site improvements (e.g., impervious surfaces).
    c. If permanent infiltration ponds are used for flow control during construction, these facilities should be protected from siltation during the construction phase.
4. Install Sediment Controls.
    a. Stormwater runoff from disturbed areas shall pass through a sediment pond, or other appropriate sediment removal BMP, before leaving a construction site or prior to discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but shall meet the flow control performance standard of subsection (D)(3)(a) of this section.
    b. Sediment control BMPs (sediment ponds, traps, filters, etc.) shall be constructed as one of the first steps in grading. These BMPs shall be functional before other land-disturbing activities take place.
    c. BMPs intended to trap sediment on site shall be located in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
5. Stabilize Soils.
    a. Exposed and unworked soils shall be stabilized by application of effective BMPs described in the clearing and grading development standards that prevent erosion.
    b. To prevent erosion, no soils should remain exposed and unworked for more than the time periods set forth below:
        i. During the dry season (May 1st – September 30th): seven days.
        ii. During the wet season (October 1st – April 30th): one day.
    c. The time period may be adjusted by the city, if the permittee can show that local precipitation data justify a different standard.
    d. Soils shall be stabilized at the end of the shift before a holiday or weekend, if needed, based on the weather forecast.

DRAFT

Low Impact Development Principles Project

e. Soil stockpiles must be stabilized from erosion, protected with sediment trapping measures, and, where possible, be located away from the storm and surface water system and receiving waters.

6. Protect Slopes.
    a. Comply with applicable provisions of BCC 23.76.080.
    b. Design and construct cut and fill slopes to minimize erosion.
    c. Off-site stormwater (run-on) or groundwater shall be diverted away from slopes and undisturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
    d. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains shall handle the expected peak 10-minute flow velocity from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, one-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as “landscaped area.”
    e. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.
    f. Check dams shall be placed at regular intervals within constructed channels that are cut down a slope.
7. Protect Drain Inlets.
    a. Storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
    b. Inlet protection devices shall be cleaned or removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
8. Stabilize Channels and Outlets.
    a. All temporary on-site conveyance channels shall be designed, constructed, and stabilized to prevent erosion from the following expected peak flows. Channels shall handle the expected peak 10-minute flow velocity from a Type 1A, 10-year, 24-hour frequency storm for the developed condition.

DRAFT

Alternatively, the 10-year, one-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as "landscaped area."

b. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches shall be provided at the outlets of all conveyance systems.

9. Control Pollutants.
    a. All pollutants, including waste materials and demolition debris, that occur on site shall be handled and disposed of in a manner that does not cause contamination of stormwater.
    b. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks shall include secondary containment.
    c. Maintenance, fueling, and repair of heavy equipment and vehicles shall be conducted using spill prevention and control measures. Contaminated surfaces shall be cleaned immediately following any spill incident.
    d. Wheel wash or tire bath wastewater shall be discharged to a separate on-site treatment system or to the sanitary sewer upon approval by the King County Wastewater Treatment Division and the city's utilities department.
    e. Application of fertilizers and pesticides shall be conducted in a manner and at application rates that will not result in loss of chemicals to stormwater runoff. Manufacturers' label requirements for application rates and procedures shall be followed.
    f. BMPs shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. These sources include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. Permittees are required to adjust the pH of stormwater if necessary to prevent violations of water quality standards.

DRAFT

g. Permittees are required to obtain written approval from the Washington State Department of Ecology before using chemical treatment other than CO2 or dry ice to adjust pH. Permittees shall provide the city with a copy of Ecology's written approval before commencing treatment.

10. Control Dewatering.
    a. Foundation, vault, and trench de-watering water, which have similar characteristics to stormwater runoff at the site, shall be discharged into a controlled conveyance system prior to discharge to a sediment trap or sediment pond.
    b. Clean, nonturbid water from dewatering activities, such as well-point ground water, can be discharged to the storm and surface water system or directly into receiving waters; provided the dewatering flow does not cause erosion or flooding of receiving waters. Clean dewatering water should not be routed through stormwater sediment ponds.
    c. Other dewatering disposal options may include: (i) infiltration; (ii) transport off site in vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute receiving waters; (iii) on-site chemical treatment or other suitable treatment technologies approved by the city; (iv) sanitary sewer discharge upon approval from the King County Wastewater Treatment Division and the city's utilities department, if there is no other option; or (v) use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized dewatering.
    d. Highly turbid or contaminated de-watering water shall be handled separately from stormwater.
11. Maintain BMPs.
    a. All temporary and permanent erosion and sediment control BMPs shall be inspected, maintained and repaired as needed to assure continued performance of their intended function in accordance with BMP specifications.
    b. All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.
12. Manage the Project.
    a. Development projects shall be phased to the maximum degree practicable and shall take into account seasonal work limitations.
    b. Permittees shall maintain, and repair as needed, all sediment and erosion control BMPs to assure continued performance of their intended function.

DRAFT

c. Permittees are required to periodically inspect their sites. Site inspections shall be conducted by a certified erosion and sediment control lead who shall be identified in the CSWPPP and shall be present on site or on call at all times.
d. Permittees are required to maintain, update and implement their CSWPPP. Permittees are required to modify their CSWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to the storm and surface water system or receiving waters.

E. Additional Erosion and Sedimentation Control Requirements.
1. In addition to the 12 CSWPPP elements listed in subsection D of this section, the director may impose the following extraordinary BMPs or other additional measures, as appropriate for the project:
    a. Funding additional city inspection time, up to a full-time inspector;
    b. Stopping work if necessary to control erosion and sedimentation; or
    c. Constructing additional erosion and sedimentation BMPs.
2. If the initially implemented BMPs do not adequately control pollutants, erosion, and sedimentation, additional BMPs shall be installed, including but not limited to the extraordinary BMPs described in subsection (E)(1) of this section. It is the permittee's responsibility to ensure sediment or other pollutants do not leave the site and enter the storm and surface water system or receiving waters in an amount that would violate the discharge prohibitions set forth in BCC 24.06.125.

F. Permanent Erosion and Sedimentation Control.
1. Permanent erosion and sedimentation control shall be provided per the clearing and grading development standards. Disturbed areas of the site that are not covered by permanent improvements such as buildings, parking lots, and decks shall be mulched or vegetated.
2. The permittee must complete the required permanent erosion control within seven days of completed grading unless the weather is unsuitable for transplanting. In that case, the permittee must maintain temporary erosion control until permanent restoration can be completed. The period between work completion and final planting shall not exceed six months without written authorization from the director. (Ord. 6196 §§ 3 – 6, 2014; Ord. 5906 § 15, 2009; Ord. 5452 § 13, 2003; Ord. 4754 § 2, 1995.)

DRAFT

Low Impact Development Principles Project

Environmental Best Management Practices and Design Standards

Chapter 8 Streetscape Management Design Category 1-Central Business District (CBD)

Planting pits shall be a minimum of 5' x 5' or 4' x 6' and include a tree grate. Bioretention facilities should be utilized where feasible, and where street trees are proposed within bioretention facilities removable tree grates shall be utilizied. ~~Planting strips may double as a bioretention facility if no tree gate is used.~~ Shrub or ground cover plantings should be incorporated where feasible and have a mature height of 30" above the roadway or less where visibility concerns are identified (see “site distance” guidelines). Flowering annual or perennial plants may be incorporated in high visibility areas. Trees and landscaping should include an automated irrigation system (see irrigation design standards).

Chapter 8 Streetscape Management Design Category 2-Retail & Commercial Centers

Trees and landscaping should be planted in the middle of a 4' minimum planting strip. Planting space should be a minimum of 4' x 6' x 4' deep, or 5' x 5' x 4' deep and not have a tree grate. ~~Planting space may double as a bioretention facility.~~Bioretention facilities should be utilized where feasible. Shrub or ground cover plantings should be incorporated where feasible and have a mature height of 30" or less where visibility concerns are identified (See “site distance” guidelines). Flowering annual or perennial plants may be incorporated in high visibility areas. Trees and landscaping should include an automated irrigation system (see irrigation design standards).

Chapter 8 Streetscape Management Streetscape Design Category 3-Buffer/Transition Areas

The minimum planting strip width is 5 feet and linearly continuous, wider is preferred, 8 feet is ideal. The planting strip shall be located between the curb and the sidewalk, and may contain bioretention facilities where feasibile. Planting materials should be comprised primarily of native species.~~The use of native vegetation is preferred, and planter strips can double as bioretention planters.~~

Chapter 8 Streetscape Management Streetscape Design Category 4-Boulevards

Large trees are to be used for boulevard planting. The street shall be characterized by the use of median and planting strips, which ~~can double as bioretention planters~~may contain bioretention facilities where feasibile. A greater variety of tree forms and sizes and other native vegetation.

Chapter 8 Streetscape Management Streetscape Design Category 5 – Natural

These streets are primarily vegetated by native plants that retain the natural character associated with the Puget Sound's native landscape. This concept provides a smooth transition from suburban to rural

Low Impact Development Principles Project

land uses and retains native vegetation in a system of connected wildlife corridors. Native plants are preferred and should be used in irregular spacing and clumped into groups of similar species. Permanent irrigation systems are not generally necessary.

DRAFT

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
1.1	Resident	Details: Site Design: we need education available to homeowners at the time of purchase. Work with realtors to educate them on an ongoing basis, provide brochures to realtors, create a metric and incentive to measure and keep ongoing process.	Site Design	10/1/2015	Website
1.2	Resident	Details: Imperious Surfaces: Allow an extra story of building height for single family residential building if A. No surrounding properties have view recorded on King Country property detail B. A vertical survey shows no substantial change in recorded views. Allow an extra of building height for if the residential footprint 25% less than the max footprint and A. A vertical survey shows 20% or less substantial change in recorded views B. A vertical survey shows extra story height matches the tree canopy average height of the property. Allow an extra story of building height for 25% of residential footprint if A. A vertical survey shows 10% or less substantial change in recorded views B. A vertical survey shows extra story height matches the tree canopy average height of the property. Zoning change by neighborhood and use.	Impervious Surfaces	10/1/2015	Website
1.3	Resident	Details: Imperious Surface: Change quantified residential streets to be one way streets. Extend right of way into street and plant trees on both sides of the street. Provide pervious footpath on one side of the road.	Impervious Surfaces	101/2015	Website
1.4	Resident	Details: Wetlads have diminished in the building of Bellevue before protections were put in place. Purchase suitable land to create new wetlands for stormwater pollution control. http://www.researchgate.net/profile/Tony_Wong4/publication/250140687_A_stochastic_approach_to_designing_wetlands_for_stormwater_pollution_control/links/540db27f0cf2f2b29a39fdc4.pdf	Project Principles	10/3/2015	Website
1.5	Resident	Purchase and restore wetlands so that they do their complete job in the stormwater system.	Project Principles	10/3/2015	Website
1.6	Resident	Create an innovative design for pedestrians that does not require curb/gutter + cement sidewalks in residential neighborhoods. Maybe: Smooth crusher fines trails (accessible) and planting section in higher traffic areas; trails along side streets with proteq surfacing in lower traffic areas http://www.pro-teqsurfacing.com/pathways-collection/	Site Design	10/3/2015	Website
1.7	Resident	Give away 5000 trees, tree watering bags, and tree dedication marker every year for 10years to residents who pledge to care for the tree, water for 3 years, and make a dedication to a loved one for the tree. Start with low income, low canopy areas first.	Tree Retention and Canopy	10/3/2015	Website
1.8	Resident	Create a certification similar to Built Green for tree companies and landscapers that are trained in proper tree retention and always use proper permits.	Tree Retention and Canopy	10/3/2015	Website
1.9	Resident	Close the loophole in tree cutting.	Tree Retention and Canopy	10/3/2015	Website
1.10	Resident	Work with schools to create orchards.	Tree Retention and Canopy	10/3/2015	Website
1.11	Resident	Require tree permit number and project overview sign is clearly posted in right of way for 10 days as notice before tree removal	Tree Retention and Canopy	10/3/2015	Website
1.12	Resident	Offer free tree assessments for all trees every 5 years for single family	Tree Retention and Canopy	10/3/2015	Website
1.13	Resident	Create a health record for every City tree and learn what works best for our trees	Tree Retention and Canopy	10/3/2015	Website
1.14	Resident	Create a campaign to show how precious trees are and that people need to call in when trees are being down without notice and a permit.	Tree Retention and Canopy	10/3/2015	Website
1.15	Resident	Make a permit and notice required for all tree removal over x inches or x feet high, but make a free assessment for trees that owner are not sure need to be removed for health reasons.	Tree Retention and Canopy	10/3/2015	Website
1.16	Resident	Create a Heritage Tree code that requires mitigation that requires multiple and large replacement trees.	Tree Retention and Canopy	10/3/2015	Website
1.17	Resident	Details: Tree Retention - home loan program Add trees to the home repair assistance loan program. Require tree maintenance as part of the other loans. Add new trees additions up the City of Bellevue tree canopy goal. Provide grants for street trees	Tree Retention and Canopy	10/3/2015	Website
1.18	Resident	Require Utilities to get proper permits, provide notice, and use approved tree maintenance methods for trimming trees. That enhance not diminish the health of the tree.	Tree Retention and Canopy	10/3/2015	Website

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
1.19	Resident	Provide free tree watering bags with a coupon in the water bill along with watering instructions. See http://www.bridletrailscommunity.org/announcement.asp?id=112 for watering in a drought. I had contacted both Bellevue Botanical Garden and Seattle Tilth. They agreed that Colorado state has the best information.	Tree Retention and Canopy	10/3/2015	Website
1.20	Resident	Establish an emergency tree fund for trees severely damaged in storms. Homeowners can apply for replacement trees at reduced rates and free street trees.	Tree Retention and Canopy	10/3/2015	Website
1.21	Resident	Determine the difference that trees make to a site by having volunteer bird watchers monitor sites before and after development.	Tree Retention and Canopy	10/3/2015	Website
1.22	Resident	Details: Tree Retention - "social "worker Create a tree "social worker" position that gives families recognition for new trees planted (bumper sticker), is on call for questions, and follows up with the family and their arboreal babies at 1 and 3 years	Tree Retention and Canopy	10/3/2015	Website
1.23	Resident	Require new large development to build in engineered or natural bio filter systems that remove pollutants. Check-ups similar to backflow checks required to show system is working at outlet. See http://www.conteches.com/Products/Stormwater-Management/Biofiltration-Bioretention/Filterra	Site Design	10/3/2015	Website
1.24	Resident	Establish a green wall code that incorporates green as a stormwater filter and runoff minimizer. http://www.filtrexx.com/wp-content/uploads/2015/01/Stormwater-Benefits-%E2%80%93-GRHC-2011-Paper.pdf	Site Design	10/3/2015	Website
1.25	Resident	Educate about the importance of big trees with a treasure hunt to find trees up for Champion trees submissions http://www.americanforests.org/our-programs/bigtree/	Tree Retention and Canopy	10/4/2015	Website
1.26	Resident	Require Sound transit to landscape retaining walls use green walls or stepped plantings	Impervious Surfaces	10/4/2015	Website
1.27	Resident	Details: Pervious Surfaces - Green the rails Create more pervious surfaces through the incorporation of greenery along the corridors on which the trains run http://landscapeandurbanism.blogspot.com/2009/01/greening-rails.html	Impervious Surfaces	10/4/2015	Website
1.28	Resident	Encourage the use of paving grids over more pervious surfaces to make less driveway	Impervious Surfaces	10/4/2015	Website
1.29	Resident	Details: Pervious Surfaces - Less Driveway Encourage people to clean out their garages, park their cars in the garage, and turn parts of the driveway into planting or grid systems with planting	Impervious Surfaces	10/4/2015	website
1.30	Resident	Details: Tree Retention non-profit partnership Free trees: Create a private -public non-profit partnership to plant trees on private land. Stretch dollars by engaging volunteers to plant and take care of trees.	Tree Retention and Canopy	10/4/2015	Website
1.31	Resident	Beat Charlotte's tree canopy of 43% and goal of 50%. Use their best practices and best ordinances. http://charmeck.org/city/charlotte/epm/Services/LandDevelopment/trees/Pages/City%20of%20Charlotte%20Tree%20Ordinance%20and%20Guidelines.aspx	Tree Retention and Canopy	10/4/2015	Website
1.32	Resident	Host large-scale, free tree events involving volunteers from both within and outside the neighborhood. Residents choose from a variety of trees beforehand. The trees are delivered to a central location. Volunteers and master gardeners/arborists answer questions on site and via phone later that day and the next. Residents go through a tree planting and care training session and are asked to sign a stewardship pledge form.	Tree Retention and Canopy	10/4/2015	Website
1.33	Resident	Allow clustering only on major arterials using courtyard type plans.	Clustering	10/4/2015	Website
1.34	Resident	Details: Change areas to positives and focused to meet city goal Impervious Surfaces -> Pervious Surfaces Tree Retention-> Tree Canopy Clustering ->Clustering for Open Space Site Design -> Wastewater Management Planning	Project Principles	10/4/2015	Website
1.35	Resident	Add under-plantings are a requirement for tree replacement so that immature tree + planting make up for mature tree in first 5 years.	Tree Retention and Canopy	10/4/2015	Website
1.36	Resident	Require a free permit for pruning or root pruning of all big trees. Permit should include restrictions on not topping trees.	Tree Retention and Canopy	10/6/2015	Website
1.37	Resident	Establish a code for species of trees that are determined to be not appropriate for this area. Require a free planting permit in the right away so these trees are not allowed there.	Tree Retention and Canopy	10/6/2015	Website
1.38	Resident	Require a permit for pruning root pruning, permanently attaching items, and chemical applications for all street trees and heritage trees.	Tree Retention and Canopy	10/6/2015	Website

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
1.39	Resident	Create a program to infill large street trees with smaller street trees that will be mature enough to take over when the older ones get too old or damaged. Older trees are not replaceable with 1 to 1. There needs to be a steady line of newcomers at different stages planned to take their place.	Tree Retention and Canopy	10/7/2015	Website
1.40	Resident	Work with all Eastside cities to issue a tree care and cutting manual/website so that all tree services have one place to go to determine if they are doing the work to code.	Tree Retention and Canopy	10/6/2015	Website
1.41	Resident	Work with all Eastside cities to see where codes could be changed to have uniformity	Tree Retention and Canopy	10/6/2015	Website
1.42	Resident	Fine tree services if they did not verify that a permit was issued	Tree Retention and Canopy	10/6/2015	Website
1.43	Resident	Add special protections for tree groves.	Tree Retention and Canopy	10/6/2015	Website
1.44	Resident	Make tree permitting process transparent and predictable. Make the rules easy to understand and follow. Don't make it difficult to know if you are following the rules.	Tree Retention and Canopy	10/6/2015	Website
1.45	Resident	Allow photographic evidence for tree health inspection to all tree removal. Photos must also show relationship to street and buildings or gps location!	Tree Retention and Canopy	10/6/2015	Website
1.46	Resident	Supply grants to organizations providing tree education for citizens and professionals	Tree Retention and Canopy	10/6/2015	Website
1.47	Resident	When there is a historic tree that can't be saved, create a memorial for it. Maybe even replacing city hall tables in the common areas (like Urbanardwoods).	Tree Retention and Canopy	10/7/2015	Website
1.48	Resident	Give free check-ups for accessing the health of trees over 12 inches round	Tree Retention and Canopy	10/7/2015	Website
1.49	Resident	Create a set of tips or referrers for care of unhealthy trees. Refers could be from a built green type certification or at least a list of questions to ask to verify a good tree service.	Tree Retention and Canopy	10/7/2015	Website
1.50	Resident	Details: Tree Retention - Require new development to have a tree inspection for health of trees (not just numbers an how to rotect them during construction). Require replacement of large unhealthy tress.	Tree Retention	10/7/2015	Website
1.51	Resident	Yes - heigher building height to increase permeable surfaces. Compare/tie building height to normal tree height	Impervious Surfaces	9/30/2015	Workshop
1.52	Resident	#4 Impervious Surfaces - Not on snow routes, use extra for rain garden and tree canopy	Impervious Surfaces	9/30/2015	Workshop
1.53	Resident	Bridal Trails R1 Bellevue permit cost ~$350, Redmond $0 (waves for residential) Code - good (should explore for all R-1) Expense - bad	Tree Retention and Canopy	9/30/2015	Workshop
1.54	Resident	FYI Study on differences in tree regulations in s Portland, Vancouver, BC, Bellevue, Olympia, Kirkland, Shoreline, Redmond, Issaquah, Lake Forest, Beaux Arts, Woodinville http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd016733.pdf List of NW regulations links http://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=ECA%20Report%20Final_1553cd36-c1a6-4468-8528-df4952140f50.pdf	Tree Retention and Canopy	10/7/2015	Website
1.55	Resident	Details: Plans for increasing tree canopy need to support a healthy forest1. a full spectrum of young, mature, and ancient trees to prevent age related death spikes 2. a diverse set of species to prevent disease related epidemics from taking the whole forest (too much diversity in the canopy is not helpful) 3. tree companion species that give support to young trees as they grow and the understory to support them as they age.	Tree Retention and Canopy	1/11/2016	Website

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
1.56	Resident	Details: Right of way- Roight-of-ways that are safe and respect the rural and equestrian nature of Bridle Trails is important. Standard sidewalks and bike lanes are not often compatible.	Right of Way	1/17/2016	Website
1.57	Resident	Details: Tree Retention-Adhere to the Bridle Trails Subarea Plan Polices such as: POLICY S-BT-3. Preserve the wooded, natural, rural, and equestrian character of the Subarea and encourage horse keeping in low density residential areas. POLICY S-BT-7. Where natural vegetation is removed, placement with similar plant materials should be required. POLICY S-BT-19. Acquire equestrian/pedestrian easements through the development review process on new development and redevelopment. POLICY S-BT-20. Work with utility companies to gain public nonmotorized trail easements along power line corridors to complete the equestrian trail facilities plan. POLICY S-BT-25. Encourage the City to make nonmotorized interim improvements where major capital projects are not imminent. POLICY S-BT-26. Ensure that public nonmotorized easements remain open for public access. POLICY S-BT-39. Encourage low density lots and short platted subdivisions to be configured to accept and accommodate a horse paddock(s). POLICY S-BT-40. Natural vegetation should be protected and reserved to provide buffers between land uses. POLICY S-BT-42. ncourage retention of vegetation on the lower slopes of the bluff adjacent to SR 520 at approximately 136th Avenue N.E. to provide a visual separator between residential areas and the freeway.	Tree Retention	1/17/2016	Website
1.58	Resident	Details: Right of Way Adhere to the Bridle Trails Subarea Plan Polices such as: POLICY S-BT-11. The retention and protection of open drainage courses and de facto storm water detention areas should be promoted through land acquisition, acquisition of easements, or the encouragement, through incentives, of their incorporation into the design of private development. POLICY S-BT-27. Develop a safe, balanced circulation system that accommodates both motorized and nonmotorized users in the planning, design, and implementation of transportation projects. Discussion: Wide streets create a barrier to pedestrian movement. The needs of pedes trians should be balanced with the needs of the automobile. POLICY S-BT-28. Develop meandering sidewalks and/or trails where needed to preserve existing significant trees. POLICY S-BT-29. Develop and implement a systems plan to provide safe nonmotorized circulation within superblocks. POLICY S-BT-38. Encourage the adoption of development standards which will maintain the existing character of the area. For instance, encourage developers of small land divisions (short plats) to: 1. Maintain as much vegetation and topsoil on each building site as possible; 2. Design access drives to retain vegetation; 3. Minimize the visibility of the subdivision as seen from arterials; and 4. Allow variation in street standards, curbs, and gutters so that they can be informal. POLICY S-BT-43. Maintain and enhance the existing character of the Subarea by retaining elements associated with equestrian use. Improve roadsides to create a unified visual appearance.	Right of Way	1/17/2016	Website
1.59	Resident	Details: Tree Canopy within Transportation Facilities Adhere to the Bridle Trails Subarea Plan Polices such as: POLICY S-BT-38. Encourage the adoption of development standards which will maintain the existing character of the area. For instance, encourage developers of small land divisions (short plats) to: 1. Maintain as much vegetation and topsoil on each building site as possible; 2. Design access drives to retain vegetation; 3. Minimize the visibility of the subdivision as seen from arterials; and 4. Allow variation in street standards, curbs, and gutters so that they can be informal.	Tree Canopy	1/17/2016	Website
2.1	Resident	Will any consideration be given to reducing the semi-monthly stormwater charges for properties that maintain heavy canopy and natural vegetation? For example, I have a 2.6 acre parcel on Cougar Mountain that is primarily native vegetation and large trees. The only impervious components are the roofs of the house and garage. A large parcel that retains vegetation should get some kind of break in how stormwater charges are assessed. Right now our charges are about $1,800 a year, a not insignificant amount. Thanks for your consideration.	Project Principles	10/20/2015	Email
3.1	Engineer/Designer	Keep allowing small test for rain gardens and infiltration on single family homes	Site Design	9/30/2015	Workshop

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
3.2	Engineer/Designer	- When coming up with ways to do infiltration tests, please allow septic designers to do this testing - Eliminating the ability to use permeable surfaces is a bad thing - Allowing LID in the setbacks - Hard surface eliminates the incentive to make overflow parking "green" - Some jurisdictions give incentives for permeable pavement not 100%, only 50% that way the whole lot is not covered - Allow a permittee to get permit and give a time frame for when trees are counted, don't make contractor look at tree again if permit takes a while to get. Same with wetlands, once agreed upon, it should	Impervious Surfaces	9/30/2015	Workshop
4.1	Resident	1. Establish some specific quantitative criteria to allow residents to evaluate the expected benefits from implementation of LID 'principles' 2. For each 'principle', identify the life cycle costs and expected benefits resulting from implementation of the LID 'principles'	Impervious Surfaces	9/30/2015	Workshop
4.2	Resident	1. Could you email me a copy of the City's LID Work Plan that was approved by the City Council on 6 July 2015? If necessary to submit a PRR to obtain a copy, could you please advise the correct title and date of the plan? 2. Have the September 2015 public workshops mentioned on page 3 of the LID Principles Project draft public participation plan been scheduled (or occurred); if so when and where did they take place; if not, what are the dates/locations for these meeting?	Project Principles	9/15/2015	Email
5.1	Resident	Wanted to check and see what impact this would have on the Vuecrest neighborhood. We have had rules limiting the height of vegetation in our neighborhood for almost 70 years (predating the the City of Bellevue itself), and we'd be concerned if there were conflicts with our covenants.	Tree Retention and Canopy	9/30/2015	Website
6.1	Resident	We built a house as a 5-Star rated BuiltGreen home. We used Eco Pavers for the drive, front and rear walks and patios…this type of product acts as a water retention and filtration system, and handles massive amounts of water, but the city of Bellevue, Clyde Hill and Medina would not recognize is as a substitute for their water detention tanks! This house is at/near the bottom corner of the neighborhood and a lot of water used to flow across this property and down the alley way next door, and homes below used to flood periodically. Between the Kelsey Creek strom drainage system just north of NE 8th, and our system (also included french drains at the bottom and sides along driveway, we were able to eliminate 100% of runoff from this property, AND handle much of the water coming from uphill, and to my knowledge the homes below have not flooded since. These paver systems have over 19 inches of various rocks and gravel supporting them and the loads are commercially rated (20,000PSI) Here are some links of similar syastem: http://www.uni-groupusa.org/green-LID.html http://commercial.unilock.com/products/permeable-pavement/?region=1 - I believe ALL commercial parking lots in this city should be required to be built with this type of system and drainage from buildings should be run to them for filtration and retention.	Project Principles		
7.1	Resident	I really wish the City of Bellevue would take a hard look at this information regarding street runoff and damage to salmon (e.g. fish and wildlife)! Instead of spending hundreds of hours hassling homeowners over putting in mitigation to offset small remodels along the local lakes, much could be done to improve this road runoff problem. There are countless pipes that empty directing into our lakes and stream with NO filtering! This where the true danger to fish and water quality lies as noted in this article from today's Seattle Times. http://www.seattletimes.com/seattle-news/environment/whats-killing-coho-study-points-to-urban-road-runoff/ . I'd be happy to show you the four foot culvert that dumps directly into Lake Sammamish near my home with no filtering- it's very depressing to see on a rainy day.	Project Principles		
8.1	Resident	I missed the first meetings but I am very interested and would like to get on any email listing for information. 1. Does the City of Bellevue have a tree planting day and trees to plant to help slow down drainage heading towards our creeks and lakes? 2. Have you collaborated with other nearby communities to see what they have been working on? Some neighborhoods in Seattle are being very progressive and are able to give rebates for all sorts of things like rain garden installation and permeable drives and sidewalks, ect. This may be cit5y movies or even stat monies. 3. I know that Seattle has had to create huge retention ponds to hold back water otherwise sewage leakage would occure into Lake Washington. Does Bellevue have such a situation like this? 4. If there is a power point or outline that was covered at the meeting I would like to see it if you can forwar it to me.	Project Principles	10/7/2015	Email

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
9.1	Engineer/Designer	Re: Proposal to modify the Transportation Code to allow narrower street (i.e. less impervious surface). I believe that street widht should not be reduced as the importance of "ingress & egress" can not be overlooked (particularly regarding fire & life safety). Also one must consider the "parking" issue. THe narrow street can easily create congestion and confusion, all "unsafe" conditions!	Impervious Surfaces	10/6/2015	Workshop
10.1	Resident	Transportation - suggest expanding use of swales, interrupted curbs *let water through) and tree lawns between sidewalks and streets, medians	Tree Retention and Canopy	10/6/2015	Workshop
11.1	on Neighborhood Ass	Concern with maintaining existing swales to funciton properly, vs. curb and gutter. Who maintains over time? Clear defined edge (people park on it), protecting the functions.	Clustering	10/6/2015	Workshop
12.1	Resident/Engineer	Preserving our natural soil conditions/quality (infiltrating capacity) is vital to minimizing stormwater runoff, and is difficult, if not impossible, "recapture" if destroyed with traditional construction approaches. For this reason, LID considerations (and site design) must be evaluated at projec initiation.	Site Design	10/6/2015	Workshop
13.1	Resident	Eastgate's definition of its character is really big yards with lots of large, mature trees. So clustering in any redevelopment in Eastgate would be destroying the neighborhoods character. Please don't! Need to have enough of a yard that Mom can send kids out ot play while she continues doing chore and watches them. Allows our busy families to multi-task.	Clustering	9/30/2015	Workshop
13.2	Resident	Retain contiguous tree corridor for wildlife. Eastgates character is: really big yards with lots of large trees. These trees need to be retained in redevelopment and existing development Create a list of preferred trees and/or define situations where certain trees are not recommended. Ex: Don't put willows near water lines, but good for areas with drainage problems.	Tree Retention and Canopy	10/6/2015	Workshop
13.2	Resident	Manju, thaks for the video link. The video said this product "would be infeasible in cold weather locations because as freezing water expands, it will damage the concrete." But at an earlier LID presentation, the wall posters mentioned porous concrete & taked with a city staff person about it's use. I wondr if they don't know this or if there is another product that doesn't have this problem. If someone attends this event, it would be great if you could ask this & report back to us.	Project Principles		NextDoor
14.1	N/A	Re: Permeable/impervious surfaces vs. hard surfaces 1. Vegetation is greatly preferable. Why not provide some financial incentive to use the LID-friendly surface and have greater vegetation?	Impervious Surfaces	10/6/2015	Workshop
15.1	Resident	I would like to see a city-sponsored, rebate program for installing rain gardens (similar to the Rainwise program of Seattle.) I think Bellevue needs more education about LID for its citizens. I have talked to several gardeners who promote sustainability but don't know anything about LID.	Tree Retention and Canopy	10/15/2015	Workshop
16.1	Resident	Details: It's wonderful - and crucial - that you're doing this, but to some extent it's closing the barn door after the horse has fled. In the last three years, Bellevue has seen a massive amount of development, both civic and private, that shows no concern for "niceties" like LID. One end of town has turned into an unmitigated mass of concrete. Our green space is disappearing daily. We need: -Planted freeway toppers (think Mercer Island) -More green space and wetland between the street and development, not less -If there must be gigantic walls, top them with planters and include permeable pavers at the bottom -Create incentives for green roofs, green space, planted setbacks, permeable paving - or simply don't give permits without them. -Cluster development is fine, but encouraging non-lawn permaculture principles- including water retention on personal property - throughout the community mitigates the need. -Tighter regulations about tree removal and clearing. Obviously people want to control their property, but we need to attain minimal standards of flora retention. -Street trees that actually grow and create a canopy. -If we're to mitigate some of the effects of climate change and subsequent droughts, we must maintain a diverse bioculture that captures and retains water...but I think you probably know this. :-) thank you for making these efforts. It's a great stride forward.	Project Principles	10/6/2015	Website
17.1	Resident	This should have been done 25 years ago?????	Project Principles		NextDoor

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
18.1	Resident	Not so boring! It will have huge influences on how our neighborhoods develop-zero lot lines, cluster housing? Maybe it would be like this link (link not available)…or maybe something different. Input is important, as is listening and attending Board and Commission meetings-Transportation, Planning, Parks, Environmental Services. For examples that work, look at the sidewalk on 145 POL SE tween SE 18 and 24, as well as the Kelsey Creek Shopping Center Parking Lot	Project Principles		NextDoor
18.2	Resident	What are the current principles?	Project Principles		
19.1	Resident	I will be there. There are simple ways to accomplish this without adding to development costs.	Project Principles		NextDoor
20.1	Resident	Finally! When I built my house 25 years ago they forced me connect my downspouts to the street drains instead of letting it soak in on site. Of course this washes stuff right into the creek and causes large fluctuations in creek flow when it rains which can wash out spawning beds.	Project Principles		NextDoor
21.1	Resident	How does this tie in with lake inflow rates? Water pollution from surface runoff? Lake level and outflow control i.e. Willowmoor Project? (Link unavailable)	Project Principles		Nextdoor
22.1	Resident	Will this also apply to WSDOT and the construction they will do thru Bellevue on I405?	Project Principles		NextDoor
23.1	Resident	In Sherwood Forest we don't have street drainage in most of our streets, rain water goes into the yard…how does that work for us? We've been paying our share of the storm water drainage.	Project Principles		NextDoor
24.1	Resident	We had to comply with WA Ecology standards for storm water which Bellevue and in theory all cities need to enforce when developing a property. Rain garden in my case and ironically it actually works :)	Project Principles		NextDoor
25.1	Engineer	One of the best posts I've seen! I am a contaminant chemist and Water Engineer, so slightly biased. Thx. Very appropriate endeavor!	Project Principles		NextDoor
26.1	Resident	Not boring for me! Every time it rains hard my back yard floods as the storm drains pour out at my property line into the green belt. This has been a huge problem for years. I hope to hear some good solutions and glad to see there are meetings to attend.	Project Principles		NextDoor
27.1	Resident	Rain gardens and lots of organic matter in your soil. If you're able, burying trees, shrubs, prunings, lawn clipping makes the soil retain the water gracefully. A pond helped us, too. I don't really want water to run into the street, as I think we'll be needing it going forward, so I'm actually trying to find ways to keep water that hits our property from going into the street drainage that we do have here.	Project Principles		NextDoor
28.1	Resident	Hi Mike or anyone, Just curious about the picture in the post. Is that at the Mercer Environmental Center or where? Thanks! =)	Project Principles		NextDoor
29.1	Resident	LID in itself is a good idea. If we can reduce the amount of storm water entering our drainageways, all the better. But, as Lsake Samm. Yacht Club points out, there are cascading effects that must be looked at. Simply directing storm water from downspouts and driveways into rain gardens needs to be done carefully. Where does the excess go when the capacity of the garden is exceeded? For years the approach to storm water was to simply dump it into streams , rivers, and lakes. This approach had major impacts. Then detention and retention systems were in vogue, which can be thought of as large rain gardens. These have fallen out of favor because they are costly to maintain and have other associatied problems. Low Impact Development has potential, by dispersing and delaying the accumulation of mother nature's gift, but, as many of the commentssuggest, LID will not solve the problems we have today with our downspout systems going directly to the street. From there many roads drain into the piped network and dump accumulated pollutants into our waterways. In other instances, the flow becomes a problem for homeowners when it runs onto their property. Consultants to the City have rported some 70% of pollutants entering Lake Sammamish, for example, come from our road system. The LID approach has merit, but we still need to find solutions to deal with the impacts of existing development, including our road runoff. And, how we handle that runoff must "fit" into a well thought out, updated approach which avoids "downstream" impacts such as flooding - whether to your neighbor or to our lakes.	Project Principles		Nextdoor
30.1	Resident	Anything but boring! Will definitely be at one of these meetings - thanks for the post! :->	Project Principles		NextDoor

Comment Number	Stakeholder Type	Comment	Area of Focus	Date Received	Format Received
31.1	Resident	Good job Mike. City needs more of this. Just reading this post educated me to the point that I'm interested enough as a citizen to get involved. Bravo.	Project Principles		NextDoor
32.1	Resident	UNTREATED STORM WATER RUNOFF ARE KILLING COHO SALMONS WITHIN HOURS! This is EXTREMELY IMPORTANT for our Coho Salmon Habitat! I just heard on the radio and red this Seattle Times article titled, "Toxic road runoff kills adult coho salmon within hours, latest scientific study finds". Please READ: http://seattletimes.com/seattle-news.	Project Principles		NextDoor
33.1	Resident	I have no clue about the cost. But it looks fantastic. Hope it helps. https://www.facebook.com/techinsider/videos/419013808296981/	Impervious Surfaces		NextDoor
34.1	Residents	Do other communities have effective strategies for managing runoff? We have been looking for grey water applications (potty flushing, gardens, etc.). Don't see why the city couldn't provide some encouragement/incentive for developers to incorporate similar strategies.	Project Principles		NextDoor
34.2	Residents	Or perhaps something like this (on a larger scale for larger buildings . . .) http://extension.psu.edu/natural-resources/water/drinking-water/cisterns-and-springs/rainwater-cisterns-design-construction-and-water-treatment	Project Principles		NextDoor