

AGENDA

PLANNING COMMISSION

DINNER & REGULAR MEETING



Thursday, August 19, 2010
6:00 p.m.

Shoreline City Hall
Council Chamber
17500 Midvale Ave. N

	<u>Estimated Time</u>
DINNER MEETING	
1. STUDY SESSION: Town Center Design Guidelines	6:00 p.m.
REGULAR MEETING	
1. CALL TO ORDER	7:15 p.m.
2. ROLL CALL	7:16 p.m.
3. APPROVAL OF AGENDA	7:17 p.m.
4. DIRECTOR'S COMMENTS	7:18 p.m.
5. APPROVAL OF MINUTES	7:23 p.m.
a. July 15, 2010 Regular Meeting	
6. GENERAL PUBLIC COMMENT	7:25 p.m.
<i>During the General Public Comment period, the Planning Commission will take public comment on any subject which is not of a quasi-judicial nature or specifically scheduled later on the agenda. Each member of the public may comment for up to two minutes. However, the General Public Comment period will generally be limited to twenty minutes. The Chair has discretion to limit or extend time limitations and the number of people permitted to speak. Speakers are asked to come to the front of the room to have their comments recorded and must clearly state their first and last name, and city of residence. The rules for procedure for Public Hearings before the Planning Commission are further defined in Resolution No. 182.</i>	
7. PUBLIC HEARING <i>Quasi-Judicial Public Hearing</i>	7:30 p.m.
a. Public Health Laboratories Comprehensive Plan Amendment & Rezone and Master Development Plan	
1. Staff Overview and Presentation of Preliminary Staff Recommendation	
2. Applicant Testimony	
3. Questions by the Commission to Staff and Applicant	
4. Public Testimony	
5. Final Questions by the Commission	
6. Deliberations	
7. Vote by Commission to Recommend Approval or Denial or Modification	
8. Closure of Public Hearing	
8. DIRECTOR'S REPORT	9:15 p.m.
9. UNFINISHED BUSINESS	9:20 p.m.
10. NEW BUSINESS	9:23 p.m.
11. REPORTS OF COMMITTEES & COMMISSIONERS/ANNOUNCEMENTS	9:26 p.m.
12. AGENDA FOR September 2	9:29 p.m.
13. ADJOURNMENT	9:30 p.m.

The Planning Commission meeting is wheelchair accessible. Any person requiring a disability accommodation should contact the City Clerk's Office at 801-2230 in advance for more information. For TTY telephone service call 546-0457. For up-to-date information on future agendas call 801-2236.

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CITY OF SHORELINE

SHORELINE PLANNING COMMISSION MINUTES OF REGULAR MEETING

July 15, 2010
7:00 P.M.

Shoreline City Hall
Council Chamber

Commissioners Present

Vice Chair Perkowski
Commissioner Behrens
Commissioner Broili
Commissioner Esselman

Staff Present

Joe Tovar, Director, Planning & Development Services (arrived at 8:19)
Steve Cohn, Senior Planner, Planning & Development Services
Kirk McKinley, Transportation Services Manager, Public Works
Alicia McIntire, Senior Transportation Planner, Public Works
Jessica Simulcik Smith, Planning Commission Clerk

Commissioners Absent

Chair Wagner
Commissioner Moss
Commissioner Kaje

CALL TO ORDER

Vice Chair Perkowski called the regular meeting of the Shoreline Planning Commission to order at 7:02 p.m.

ROLL CALL

Upon roll call by the Commission Clerk the following Commissioners were present: Vice Chair Perkowski and Commissioner Behrens, Broili and Esselman. Chair Wagner and Commissioners Moss and Kaje were absent.

APPROVAL OF AGENDA

The agenda was accepted as presented.

DIRECTOR'S COMMENTS

Mr. Cohn reported that Mr. Tovar was attending another meeting and would arrive at the Commission meeting as soon as possible.

APPROVAL OF MINUTES

The minutes of June 17, 2010 and July 1, 2010 were approved as presented.

GENERAL PUBLIC COMMENT

No one in the audience indicated a desire to comment during this portion of the meeting.

STAFF REPORTS

TMP Update

Ms. McIntire referred to the memorandum prepared by staff to provide an overview of the purpose and intent of the Transportation Master Plan (TMP), as well as a basic summary of the elements that would be covered in the update (see Staff Report for a list of the various elements). She reported that a public open house was conducted in July of 2009 where residents were invited to provide feedback regarding bicycle, pedestrian and transit as modes of transportation. A Bicycle and Pedestrian Advisory Committee (12 residents) was formed to help staff develop a draft bicycle system plan to identify where routes should be and how they should be developed. They also helped develop criteria and scoring for evaluating and prioritizing projects. In addition, they assisted the staff in developing policy and framework language. She further reported that staff met with the City Council to discuss specific topics such as sidewalk maintenance and design, transit, and bicycle facilities, and they will meet jointly with the City Council and Planning Commission on August 2nd to talk about concurrency and funding. She advised that Randy Young, a consultant from Henderson, Young and Company, would be present at the joint meeting to describe the City's current concurrency program, as well as other options. They will also talk about potential options to fund transportation improvements.

Ms. McIntire advised that the City also contracted with a consultant to create traffic models through the year 2030. Growth targets form the basis of the estimate used in the model, and the consultant would identify how the City's transportation network would be impacted if growth were to occur in various locations. It is important to recognize that traffic within the City will be influenced by what is going on outside of the City's boundaries, as well as the future bus rapid transit program and light rail alignment. Mr. McKinley added that the update will also include a Master Street Plan that identifies the cross-section and right-of-way needs for all the City's arterials. It will be used as a guide as the City plans for future right-of-way improvements and will give good direction to developers.

Commissioner Esselman observed that they have little control over the major traffic that moves through the City (freeway, light-rail, etc.) She emphasized the importance of the City participating in future planning efforts to ensure that surrounding neighborhoods are connected to the major transit opportunities. Ms. McIntire explained that all of the various transit agencies have their own processes for public outreach, and the City is already involved in a variety of formats. The TMP would provide policy direction to City representatives who participate in the various committees and forums. It would also support the City's Comprehensive Plan.

Commissioner Behrens asked if it would be possible for staff to provide a synopsis of the meetings that were conducted with the neighborhoods to identify specific traffic action plans. Ms. McIntire answered that reports were prepared for each of the neighborhoods to identify requested improvements and project priorities. The Bicycle and Pedestrian Advisory Committee did not prepare a final report. However, the guidance they provided to staff would become part of the bicycle and pedestrian elements of the TMP. Mr. McKinley added that staff worked with the committee to prepare a draft Bicycle System Plan, which could be posted on the website for public comment. Ms. McIntire added that staff would also provide information about the criteria the committee used to develop the plan. Commissioner Behrens agreed this type of information would be helpful to the Commission.

Mr. McKinley explained that staff inventoried the unused rights-of-way in the City to look for opportunities to formalize connections between neighborhoods, and this information will be part of the Bicycle System Plan. In addition, the plan would identify a short-range implementation strategy. Many of the current bike system routes are located on arterials that have curbs and sidewalks in place. In these situations, accommodating safe bicycle paths may require the elimination of some on-street parking. Ms. McIntire said that in addition to a short-range implementation strategy, the plan will identify long-term projects. For example, in some locations bicycle lanes cannot be added to a street at this time, but they can be provided as part of a major street rebuild in the next 10 to 20 years.

Mr. McKinley explained that the intent of the planning process is to make every street a “complete street,” which would require the City to accommodate or address all modes of transportation within the street. The idea is that bicycles and transit should be able to operate fairly comfortably and safely on every street in the City.

Commissioner Broili observed that one concept of walkable cities is being able to walk from residential to commercial areas. He asked if staff is anticipating where the commercial nodes may end up as the City redevelops. Ms. McIntire said one of staff’s goals is to have a TMP that is integrated with land use. When developing the traffic model, they worked with Planning and Development Services (PDS) staff to review the current Comprehensive Plan and identify where future growth would be located, how to address anticipated traffic problems, and what kinds of pedestrian and bicycle facilities could be constructed. If the City has a “complete street” ordinance in place, they could require the types of improvements that would accommodate all modes of transportations.

Commissioner Broili inquired if City staff has participated in any of the work being done by Dan Burden regarding “complete streets.” Mr. McKinley answered that staff met with Mr. Burden to discuss opportunities that exist in the Town Center Subarea, as well as at Point Wells and the Richmond Beach Corridor study area. He summarized that Mr. Burden is a great resource, and he recommended Commissioners visit his website to learn more about how to develop a city that is walkable and secure and minimizes the number of automobile trips.

Vice Chair Perkowski asked staff to summarize the primary and secondary assumptions that were factored into the traffic models. He also asked if these assumptions would be allowed to change over time or if the City would be locked into one scenario. Ms. McIntire said they worked with PDS staff to develop three generalized land-use scenarios: growth that is dispersed evenly throughout the City in

accordance with existing land use and the Comprehensive Plan; growth that is highly concentrated on Aurora Avenue North and the Town Center Subarea; and growth that is concentrated at the 192nd Street Park and Ride, 185th and Interstate 5, or 145th and Interstate 5. She emphasized that none of the assumptions would be locked in. The TMP is intended to be a guiding document to help with changes to the Comprehensive Plan and establish policy framework, but it also identifies the types of projects that will be needed in the long-term. She summarized that regardless of how development occurs in the City, it appears many of the problems show up in the same locations. The modeling has given them a good idea of the types of traffic impacts that will occur and the places where the level of service will decline severely. Staff will continue to work with the consultant to identify solutions. Mr. McKinley said all of this information will be shared with the Commission and City Council as they review the draft plan.

Vice Chair Perkowski asked if the scenarios take into account the changes that are anticipated regionally. Ms. McIntire said they used the growth traffic model prepared by the Puget Sound Regional Council (PSRC), so regional growth was incorporated into the traffic model. She emphasized that, to date, there have been numerous policy discussions, but no final report or plan has been prepared for the Commission's review. She suggested the plan may be prepared and presented to the Commission and City Council in segments.

Commissioner Behrens asked if staff has considered any solutions or suggestions to address 145th Street between Aurora Avenue North and Lake City Way. Ms. McIntire said addressing issues related to 145th Street would require inter-jurisdictional coordination with the City of Seattle, King County and the Washington State Department of Transportation. While the City is heavily influenced by what takes place on this roadway, they have no control at this time. Staff has had discussions with the PSRC about how the City can become part of the process for developing a solution. She suggested a corridor study for the roadway would be necessary to identify the needs of all the various agencies and jurisdictions. McKinley added that the City cares a lot about this corridor, but at this time, it is not a priority with any of the other agencies. He suggested the City's best opportunity might be to work with Sound Transit if a light rail station is proposed on 145th Street at some point in the future.

Commissioner Esselman asked if there are plans to improve public transit within the City to connect to local neighborhoods. Ms. McIntire said there has been significant discussion about improving east/west connections. While there are some good opportunities, there are also some difficult challenges. Much of the western portion of the City is not geographically conducive to transit, and maneuvering on the existing roadways can be challenging for buses. She summarized that it will be important to work with transit agencies to provide east/west connections to the future bus rapid transit (BRT) on the Aurora Corridor and State Route 522 and light rail on Interstate 5. However, in the short term, money is a problem and there will be no expansion of transit service in the near future. Councilmember Eggen sits on a regional task force that is talking about this issue. They are hoping to retain as much transit service in the community as possible, but cuts will have to be made. Now is the time to plan for what the system should look like when funding returns.

Commissioner Behrens asked if any thought has been given to creating a transit system that operates within and serves the citizens of Shoreline. This would be one option for improving the east/west

connections and perhaps it could be supported by the local businesses. Ms. McIntire said a circulator bus is one option to consider. In the short term, staff will be looking for opportunities to improve the existing routes to connect with the high-capacity transit opportunities. Mr. McKinley said staff would consider different scenarios for how the City could fund its own circulator system, but it would likely be very costly.

Study Session: Development Code Amendments #301650

Mr. Cohn advised that this Development Code Amendment would formalize the process for creating the annual Comprehensive Plan Amendment Docket. He explained that while the Growth Management Act (GMA) does not require the City to formalize the docket process, it is staff's experience that having a formal docket process would save time and effort. As proposed, staff is suggesting that amendments be accepted throughout the year until the last business day in December. This would allow staff a head start in preparing the amendment docket as early as possible. He noted that, as per GMA, the City Council can only amend their Comprehensive Plan once a year, unless an amendment falls within one of the exceptions. He noted that the proposed amendment is consistent with the process the City has used over the past several years. He reviewed the proposal as outlined in the Staff Report and invited the Commissioners to share their comments regarding the proposed amendment. He advised that staff anticipates a public hearing in September or October.

Vice Chair Perkowski suggested that an additional bullet be added to the proposed amendment to describe how and when the process would generally be announced. Mr. Cohn said this announcement could be made a permanent part of the website. The important thing is to remind people of the deadline.

Vice Chair Perkowski referred to Item F and asked how much ability the Commission would have to change a proposed amendment before it is placed on the docket. Mr. Cohn said he would seek guidance from the City Attorney regarding this issue. He noted that GMA is silent on the matter, and planning commissions and councils in some cities have been given great discretion. He explained that privately-initiated amendments should be considered "suggestions" until they are accepted on the docket by the City Council. Vice Chair Perkowski said the permanent announcement in the website should make it clear that privately-initiated amendments could be changed before they are placed on the docket.

Vice Chair Perkowski referred to Items D, F and G and suggested language be added to identify a timeline for when each event must occur. Mr. Cohn said staff anticipates the draft docket would be posted and available for public review in January, and the Commission would review the draft docket and forward a recommendation to the City Council in February or March. He explained that the amendment proposals would be presented to the Commission as a group rather than when they are individually submitted.

Commissioner Behrens observed that Item C would allow a private individual to submit a site-specific Comprehensive Plan amendment just three weeks prior to the deadline. However, he questioned if it would actually be possible for an applicant to prepare all of the information required in Item I in just three weeks. Mr. Cohn said the intent of the amendment is that applicants can submit amendments throughout the year until the final deadline. An applicant would not be required to submit the

information identified in Item I until the draft docket is presented to the City Council. This would give the staff and proponent more time to provide the detailed information required in Item I. Commissioner Behrens suggested there should be a separate process for site-specific amendments. He also suggested the language in Item I should provide clearer information about what information must be provided as part of the application.

PUBLIC COMMENT

Boni Biery, Shoreline, said that when timing becomes an issue or when there is a complicated process, words alone do not provide explanation. She would like the City's policies to include process/flow diagrams so it is easier for lay people to follow.

Kathy Hall, Shoreline, said she was a member of the Bicycle and Pedestrian Advisory Committee, which was a good and open process. They met for two to three hours once a month from September through April, and there was a very active exchange between the committee members and staff. They provided helpful input that will show up in the TMP.

UNFINISHED BUSINESS

Follow-Up Discussion on Condensing Planning Commission Minutes

Mr. Cohn reminded the Commission of their previous discussion about condensing the minutes for study sessions, while maintaining full minutes of public hearings. As requested by the Commission, staff provided examples of condensed minutes. He also noted that the minutes of July 1st were condensed, as well. While there are some differences, he felt the condensed minutes flowed better. He said it would be simple for the minute writer to provide a time stamp to identify when each item was discussed. He recommended the Commission authorize staff to prepare condensed minutes of study sessions for a trial period of six months.

Commissioner Esselman expressed her belief that it would be appropriate to have written minutes that summarize the meetings, as well as audio recordings that could be reviewed by the public at any time. Time stamps would make it easy to identify when each discussion takes place. Commissioner Broili agreed the time stamp would make it easy for a person to locate a specific discussion in the audio recording. That being the case, he would support summary minutes.

Commissioner Behrens suggested it would be appropriate to solicit the City Council's opinion on what they would find to be a good system of minutes. He said he likes the idea of a time stamp to help people locate a specific discussion on the audio recording. Mr. Cohn suggested this subject could be discussed at the joint meeting on August 2nd, or staff could solicit feedback from the City Council to pass on to the Commission.

Ms. Simulcik Smith said the minute taker attempted to make the minutes slightly more condensed and was able to shave off two hours of her time, and a few pages of text. Yet, all the pertinent discussion is still in the minutes.

THE COMMISSION RECESSED AT 8:13 P.M. THE MEETING RECONVENED AT 8:20 P.M.

Study Session: Town Center Subarea Plan

Mr. Tovar referred the Commission to the draft Shoreline Town Center Subarea Plan and provided a brief overview of the process to date. He explained that staff used the draft Town Center Vision Statement, the Framework Policies, and prior public and Commission comments to prepare a list of draft goals and policy statements. The purpose of the study session is to familiarize the Commission with the proposed format, sequence and substance of the draft subarea plan and give them an opportunity to ask clarifying questions and request additional information. He emphasized that the draft Vision Statement crafted by the Commission is a work in progress. They will review it again and again as they work through the subarea plan. He reminded them that the public has not formally commented on the draft document before the Commission. Staff is seeking feedback from the Commission about whether or not they are comfortable with the scope and focus of the working draft before they invest a lot of time creating draft implementing zoning.

Mr. Tovar recalled the Commission previously suggested that other pieces of information could be reflected in graphic format (See Figure 6 in the draft subarea plan) to tie back to the Vision Statement. However, this suggestion has not yet been incorporated into the draft. He advised that staff would begin work over the summer to refine the draft subarea plan and research and provide answers to Commission questions. They will bring an updated subarea plan, along with a proposal for implementing zoning, to the Commission again in the fall in preparation for an anticipated public hearing in October. He noted that the Environmental Impact Statement (EIS) would accompany the draft subarea plan through the public hearing process. Staff is hopeful the Commission can forward a recommendation to the City Council before the end of the year and that the Council could take final action late this year or in early 2011.

Commissioner Broili recalled that the “living building” concept received a lot of support in previous workshops, but none of the policies speak to buildings that embody environmental services (i.e. buildings that manage water on site, reduce energy demands, etc.) Mr. Tovar agreed that additional policy statements could be created to capture the intent of the environmental quality language contained in the Vision Statement.

Commissioner Esselman suggested that Policies TC-3 and TC-7 should be enhanced to talk more about diverse housing to meet the needs of a variety of ages and cultural backgrounds. Mr. Tovar agreed that Policy TC-3 could be enhanced to talk about different populations and not just different types of housing.

Vice Chair Perkowski expressed concern that while Policy TC-11 talks about identifying Town Center architectural patterns, it does not provide any specific actions to implement the concept. Mr. Tovar suggested that Policy TC-11 could be moved closer to Policy TC-20, since both provide policy direction to consider when developing regulations that deal with standards, the design review process, etc. Vice Chair Perkowski agreed that moving Policy TC-11 would be helpful, but the language also gives the impression that many of the design standard decisions would be made after the subarea plan rather than

as part of the subarea plan. Mr. Tovar said the intent of the policy is to identify specific features to inform what the standards should be.

Commissioner Behrens observed that Policy TC-11 is intended to identify current Town Center architectural patterns, and Policy TC-20 talks about the architectural patterns that would exist as a result of future development. He suggested that Policy TC-11 be changed by inserting “current” before “Town Center patterns.” Commissioner Esselman suggested that the words “architectural patterns” should replace with the word “context.” Mr. Tovar suggested that rather than define a citywide architectural pattern or context, the smaller the area you are dealing with the less challenging it becomes. The intent is to look for some commonality that suggests a place-specific pattern, which is not the same as a theme. They will be looking for human scale, visual interest, diversity of uses, etc.

Mr. Tovar invited the Commissioners to submit additional comments and suggestions for the draft Vision Statement and policies via email. He said staff would like to bring an updated draft subarea plan and draft zoning regulations to the Commission for a public hearing in October, but the environmental document will not likely be finished until November.

Jan Stewart, Shoreline, said she appreciates that the draft Vision Statement talks about the integration of economic development, historical context, vision of a cultural heart in the City, and citizens who are proud of an inviting place that exemplifies the best of Shoreline’s past, present and future. However, she expressed concern that the Vision Statement may end up being nothing more than fantasy given that the school district once again plans to eliminate the museum. This would undermine and diminish the potential for the Town Center. She expressed her belief that it would be an unbelievably bad idea to allow the building’s interior to be disfigured, essentially leaving a façade in order for the school to use it. She observed that experiencing the building fully preserved as the historical museum for the City and region is what gives it such value to the Town Center. She urged the Commission to think about heritage and tourism opportunities (see exhibit she submitted).

Ms. Stewart stated her belief that the Planning Commission needs to be clear as to whether they still support the vision given the current circumstances. If they do not, they should strike out the feel good language in the Vision Statement related to historical context and eliminate any reference to historical landmarks in Policy TC-19. She emphasized that as part of their responsibility in establishing priorities for the Town Center Subarea, the Commission has the power to hold a public hearing on the museum issue as they deem necessary. She urged them to speak out forcefully to help save the museum in the Ronald School Building and direct staff to look for any and all solutions. Otherwise, they will have lost the most valuable link to their past and some important opportunities for future economic growth.

Vicki Westberg, Shoreline, said she was also present to express support for the Shoreline Historical Museum as an essential component of the Town Center Subarea Plan. She stated that the Ronald School House and the functions of the museum provide a connection to the history of the City of Shoreline. She questioned how much more pertinent the museum could be to a central location. She suggested the City should maximum the museum’s potential as a tourist destination. The fate of the museum should not be left in the hands of the school district. It is up to the Commission and others who can see ahead to the inherent possibilities of the situation. Within the Town Center Subarea there is the museum,

which represents the past; the beautiful City Hall, which represents the now; and the new Shoreline High School, which represents the future. This type of triangle would result in a strong and unique cornerstone of a tourism business. In one stop, people could visit the past, the present and the future.

Victoria Stiles, Shoreline, said she works at the Shoreline Historical Museum, which has been at the center of the community for 35 years. The building is nearly 100 years old. She said it is very gratifying now, as a touchstone for the community's history, to be a part of the general sense of community pride they see growing in the 15-year-old City of Shoreline. She observed that the bullet points that outline the plan for Town Center appear to come from the many exhibits and historical documents the museum has produced to emphasize the City's place and purpose. She said she is proud of the Commission and the City of Shoreline for keeping a clear vision of where the City is going by using a map of where it has been. She expressed her belief that the museum should continue to be a part of the vision, a part of the City's growth and development, and a part of the sense of place and community heritage that keeps everyone grounded.

Ms. Stiles said that besides the museum's attraction as a non-traditional educational resource, it has long been a destination for tourism. It is a well-known fact that heritage and tourism in the United States has grown significantly over the last ten years, and Shoreline does not have to be an exception to this growth. They can expect the museum to help make the community even more attractive to visitors and newcomers. They are already at the forefront of tourism in the City, and the museum is firmly committed to doing their part. As a major component of the Town Center and a purveyor of heritage tourism, the museum will help bring aspect of the area's history (car culture, interurban, and cultural diversity) front and center.

Commissioner Broili invited Ms. Stiles to explain what the City Council and Planning Commission can do to support the museum and its continuation as a historic site and museum since the property belongs to the school district. Ms. Stiles explained that the museum owns and holds a quick claim deed to the building. The challenge will be convincing the major players that there are numerous creative solutions to address the problem. She volunteered to discuss some of the solutions that have been suggested.

Commissioner Behrens commented that if the City loses the museum, they will lose something that is really a part of what the whole City is. He said he is hopeful the museum's approach of looking for creative solutions is successful. Ms. Stiles said the museum board is working hard to come up with a solution.

Jack Carney, Shoreline, complimented the work done by staff thus far. The documents have improved as they have evolved. He referred to the 5th paragraph of the Vision Statement, which talks about transition and observed that density was not addressed. He recalled that at the neighborhood meetings, it was discussed that the proposed heights are okay, but concern was expressed that three story, edge-to-edge development is not what people think of as a transition area. He stated that tree cover within the Town Center is also an important issue since there are bald eagles living in the area. View and light corridors must also be protected.

Mr. Carney said the Vision Statement talks about the Town Center being pedestrian-oriented for people who live in the surrounding neighborhoods. For this to be successful, there must be pedestrian access across 175th Street, as well as Aurora Avenue North. Hopefully, as the school is redeveloped, the design will be pedestrian oriented so that students can walk instead of drive to school. He concluded that a major piece of the project should be a pedestrian crossing on Aurora Avenue North at the north boundary of the school district property. This would help improve car traffic through neighborhoods.

Commissioner Behrens recalled the Vision Statement speaks to the Town Center's extensive tree canopy and native vegetation. However, neither the current tree code nor the proposed tree code amendments would require tree retention in commercial zones. He questioned if it is possible for the City to require tree retention within the subarea. Mr. Tovar pointed out that the Commission has the ability to address tree retention for the subarea independent of the tree regulations for the remainder of the City. He invited the Commission and public to share their thoughts about potential policies and regulations related to trees and vegetation. He noted that much of the existing development is parking lot and building intensive, so perhaps the discussion should include both tree retention and tree restoration. He advised that staff would come up with a range of ideas for the Commission to consider when they come back with draft regulations.

Lisa Surowiec, Shoreline, said she is co-chair of the Richmond Highlands Neighborhood Association. She said the whole Town Center process has been fun, especially the charette that allowed the neighbors to share their ideas. She noted there are three projects in Richmond Highlands that are interconnected (museum, Shorewood High School, and Sunset Park). She commented that if the school district needs to have the land under the museum and is willing to move the building, perhaps the Commission could provide ideas for where the building could be located elsewhere in the Town Center Subarea so that all the integrated plans could move forward.

Janet Way, Shoreline, said she was particularly pleased to see that pictures of the museum and red brick road were included in the draft policy statements since they are mentioned in the existing citywide Vision Statement. She pointed out that the communities of Shoreline and Lake Forest Park, not the school district, own the museum. She stressed that it will be important for the Commission and City Council to clearly state their intent related to the museum in the Town Center Subarea Plan. She referred to Policy TC-2, which speaks to creating a sense of place and suggested a sense of place is envisioned in the museum. She recalled that the creation of the Shoreline area coincided with the development of the automobile. The automobile created Aurora Avenue North and brought all the parts of Shoreline together. This part of the City's culture is well represented at the museum. She summarized that the City's economic development strategy should include the museum.

DIRECTOR'S REPORT

Mr. Tovar reported that the City has put out a Request for Qualifications for consultants to help staff design the green space that will be temporarily known as the park at Town Center. They have interviewed a number of consultants and anticipate a contract will be finalized in the near future. The goal is to initiate a design process with a lot of public outreach and involvement, as well as input from

the Planning Commission and Park Board. It is anticipated this process would take place on a parallel track with the Commission's work on the Town Center Subarea Plan.

Mr. Tovar announced that the City Council would have a motion before them on July 19th to file a lawsuit against Snohomish County related to Point Wells. He reminded the Commission the City has already submitted an appeal of Snohomish County's comprehensive plan designation of "urban center," so the lawsuit would be a companion appeal related to zoning. In the meantime, the zoning language adopted by Snohomish County included an invitation for interested cities to enter into an interlocal agreement with them to specify how the different urban centers could or should be developed. City staff has been meeting with Town of Woodway staff for a number of months to discuss what the interlocal agreement might look like, and they just received a letter from Snohomish County formally inviting them to initiate discussions regarding the issue. Depending on how effectively the interlocal agreement addresses the City's concerns, it may provide an avenue for the City to settle the lawsuit and appeals.

Mr. Tovar advised that two community meetings have been scheduled by the Point Wells property owner, Blue Square Real Estate, which is an arm of Paramount Northwest. A community open house would be held in Shoreline on September 23rd at the Shoreline Center. The meeting would be advertised in *CURRENTS*, on the City's website, and on their public television station.

Mr. Tovar announced that Shoreline has been identified in *MONEY MAGAZINE* as one of the top 100 places to live in the United States. Of the top 100 places listed, Shoreline is the youngest city. They specifically looked at the efficiency of the government to provide local services.

NEW BUSINESS

Commissioner Behrens said he shares Commissioner Broili's question about exactly what the Commission can do to address the museum situation. Mr. Tovar pointed out that while the Subarea Plan would address the Ronald Building and the history of Shoreline, the final proposal would not be presented to the City Council for adoption for some months. He recalled Ms. Way's point that the citywide Vision Statement already mentions that history is important to the community. While the Commission has no direct control over the issue, they certainly have the ability to express an opinion by motion.

REPORTS OF COMMITTEES AND COMMISSIONERS/ANNOUNCEMENTS

None of the Commissioners provided reports during this portion of the meeting.

AGENDA FOR NEXT MEETING

Mr. Cohn announced that the Commission's next meeting would be a joint meeting with the City Council on August 2nd. Concurrency would be the main topic of discussion, but they would also discuss types of zoning ideas that would be appropriate for the Southeast Shoreline Subarea Plan and perhaps other parts of the City, as well. If time permits, the Commission could also solicit the Council's thoughts on the Commission using summary minutes for study sessions.

Mr. Cohn advised that on August 9th, staff would talk to the City Council about the Commission's work program. There has been some discussion about doing extra work at Aldercrest, which would cause other items on the work program to slide. Mr. Tovar added that staff would talk to the Chair and Vice Chair regarding the Commission's future work program prior to meeting with the City Council.

Mr. Cohn said a hearing on the public health lab proposal has been scheduled on the Commission's August 19th agenda. He reminded them that the application is quasi-judicial, so the Commissioners should avoid *ex parte* communications regarding the proposal.

ADJOURNMENT

The meeting was adjourned at 9:22 P.M.

Ben Perkowski
Vice Chair, Planning Commission

Jessica Simulcik Smith
Clerk, Planning Commission



Memorandum

DATE: August 19, 2010

TO: Shoreline Planning Commission

FROM: Joseph W. Tovar, FACIP, Director
Paul Cohen, Senior Planner

RE: Draft Town Center Design Standards

In July, the staff reviewed with the Planning Commission the draft Town Center Subarea Plan, which was built upon the Commission's draft Town Center Vision Statement, and a variety of earlier public workshops, charrettes, and online surveys. At the Planning Commission's August 19, dinner meeting, staff will provide a first look at the draft Town Center regulations, zoning map, and design standards that would implement the Subarea Plan.

We have kept in mind two key over-arching objectives: (1) to make the City's development permit process more timely, fair and predictable; and (2) to prepare a code that focuses more on regulating the form and character of development and less on land uses and densities. Consequently, this preliminary draft does not include the lengthy use tables that are found in most conventional zoning codes. Instead, we propose to identify a short list of prohibited uses and leave it to the market to determine the amount, timing and specific type of retail, office, residential or other uses.

Because this approach elevates the importance of design, form and character, it makes much greater use of photographs, line drawings, and diagrams than most narrative-based codes. This approach makes the design standards portion of the proposed code somewhat lengthy, but we think overall it will do a better job of clearly conveying what is desired or allowed.

We will provide an overview of these materials, including an outline of the draft code, the simplified use zone chart, and a draft zoning map of Town Center zoning districts. We hope to hear questions of clarifications from the Commission before we proceed further with this draft. We will schedule additional discussion at study meetings this fall. After those sessions, we will schedule public hearings for both the Town Center Subarea Plan and implementing Town Center Zoning.

Highlights

The organization of the design standards is to first address the purpose, land uses and dimensional standards. These have been divided into 5 districts to further distinguish the land uses and development dimensions.

TC-1. Firlands/Midvale – Emphasizes residential with some commercial development and pedestrian activity primarily with the slower streets.

TC-2. Aurora – Emphasizes commercial development with some residential uses and pedestrian activity internal to the blocks with faster streets.

TC-3. Aurora Southwest – Reserved so that vehicle sales are permitted where they now exist but not in other districts of Town Center.

TC-4. Linden Transition – Mostly medium density residential with live/work units and very limited commercial and access to the large block.

TC-5. Stone Residential – Exclusively medium density residential and allowing single family.

The design standards are articulated into 5 adjoining elements that must work together in order to build Town Center which functions well and is attractive.

Neighborhood Protection – addresses upfront the protections and amenities for those adjacent neighborhoods.

Streetscape Design – the dimensional and design standards for streets, sidewalks, way-finding signs that are appropriate to the movement of different modes of transportation and appropriate to the adjoining land uses.

Street Frontage – the site and building design as it complements the streetscape and connects activity internal to sites.

Commercial and Residential Development – remaining site and building design that provides a livable and attractive community.

Signage – part of development to be visible without detracting from the district.

The proposed standards cover a number of ideas, many of which the Commission has dealt with in the past and some of which are new to Shoreline. However, most of the design standards have been implemented successfully in other jurisdictions. In proposing them, staff is relying on their previous use in other places and staff's past experience implementing design standards.

Follow-Up Work

Administrative Design Review will be a companion amendment that will add this to the City's Type B approval process that involves the usual public noticing requirements. The ADR process will be triggered by developments over a certain size or any proposed departures from the design standards.

At this point, it is the staff recommendation to limit the design standards to Town Center. However, staff expects that the base standards may be desirable and eventually extend into other commercial centers in the City such as the remainder of Aurora, Ballinger Way, Richmond Highlands, and SE Shoreline after the Town Center Plan is adopted.

Next Steps

Staff will return in the fall for a more detail discussion of the design standards prior to a public hearing.

Attachment

1. August 19 Draft Town Center Design Standards

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Shoreline Town Center Code: Proposed SMC Chapter 20.92

DRAFT – August 19, 2010

Chapter 20.92 Town Center Planned Area 3

Subchapter 1: Town Center Development Code

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20.92.280 Projecting and banner sign standards

- 20.92.290 Marquee or awning sign standards**
- 20.92.300 Under canopy sign standards**
- 20.92.310 Window sign standards**
- 20.92.320 A-frame and standing sign standards**
- 20.92.330 Service station sign standards**
- Subchapter 4: Definitions
- 20.92.340 Definitions**

20.92.010 Purpose and applicability**A. Purpose.**

1. To establish standards for the Town Center (TC) zone.
2. To implement the City of Shoreline Comprehensive Plan and Town Center Plan and its policies through land use regulations.
2. To promote sustainable development techniques in the Town Center.

B. Applicability.

1. New uses and development. The use and design requirements within this chapter shall apply to all uses and development proposals within the Town Center zone, as delineated in Figure 20.92.010 below, unless otherwise noted. Some standards within this chapter often apply only to specific types of development (such as commercial or multifamily development) and are thus clearly noted.
2. Additions & remodels. For additions and remodels, three different thresholds have been established to gauge how the standards herein are applied to such projects:
 - a. *Level I Additions/Remodels* include all exterior remodels commenced within a three year period that affect the exterior appearance of the building and/or increase the building's footprint by up to 50 percent. The requirement for such remodels is only that the proposed improvements meet the standards and do not lead to further nonconformance with the standards. For example, if a property owner decides to replace a building façade's siding, then the siding shall meet the applicable exterior building material and color standards, but elements such as building articulation would not be required.
 - b. *Level II Additions/Remodels* include all remodels commenced within a three year period that increase the building's footprint by more than 50 percent, but not greater than 100 percent. All standards that do not involve repositioning the building or reconfiguring site development, as determined by the Director, shall apply to Level II Additions/Remodels.
 - c. *Level III Additions/Remodels* include all remodels commenced within a three year period that increase the building's footprint by more than 100 percent. Such remodels shall conform to ALL standards.

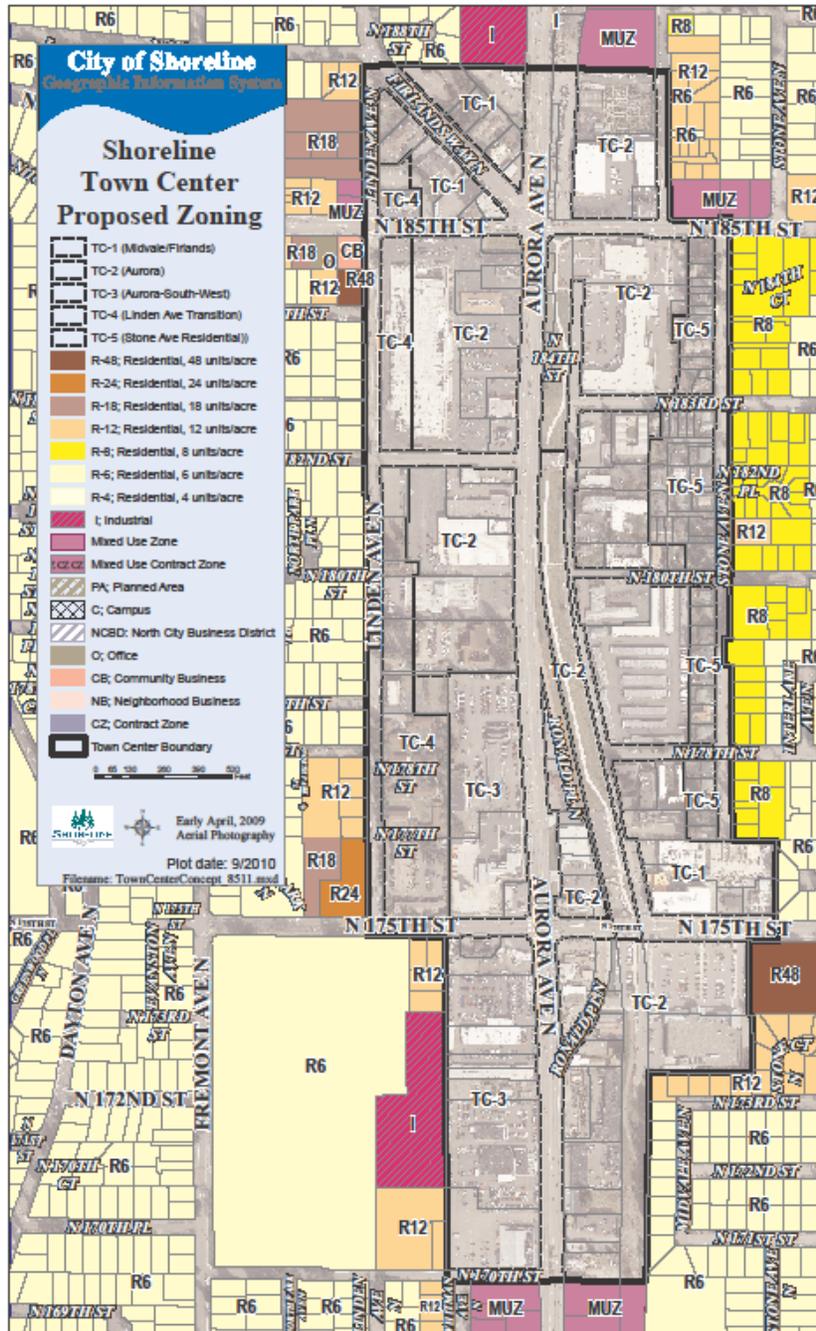


Figure 20.92.010. Town Center zone.

C. Relationship to other Title 20 provisions.

In the event of a conflict between standards, the standards of this chapter shall prevail.

20.92.020 Administrative design review & departures**A. Purpose.**

To promote timely public participation for large projects and projects seeking departures in the Town Center planning area.

B. Review procedures/administrative design review.

SMC Chapter 20.30 sets forth the procedures, decision criteria, public notification, and timing for all development decisions. *Administrative design review exceptions:* The following development applications shall be subject to a Type B decision per SMC 20.30.050 (except for permit applications that already require a Type C or D decision):

1. Any permit involving the construction of a new building or an addition equaling at least 10,000 square feet in floor area.
2. Development applications seeking a design departure specifically provided for in this chapter.

C. Design Departures. Specific design departure opportunities are provided to select standards within this Chapter. A design departure will be approved if it is consistent with the purpose of each subsection and it meets or exceeds the standard design objective. The director's decision may be appealed to the hearing examiner with substantial weight given to the director's decision.

20.92.030 Town Center Zone and uses**A. Town Center Zone establishment**

In order to implement the vision of the Comprehensive Plan: Town Center Subarea, there is hereby established the Town Center (TC) zone as shown in Figure 20.92.010 and on the official zoning map.

B. Town Center Concept Plan

To meet the land use objective of the Town Center Subarea Plan for creation of a vibrant and walkable city center, the Town Center Concept Plan has been established [see Figure 20.92.030(B)]. This plan delineates distinct sub-districts, street type designations (which dictate the design of development frontages), planned internal connections, highly visible street corners, and a focal open space. These components are described in greater detail in sub-section C below.

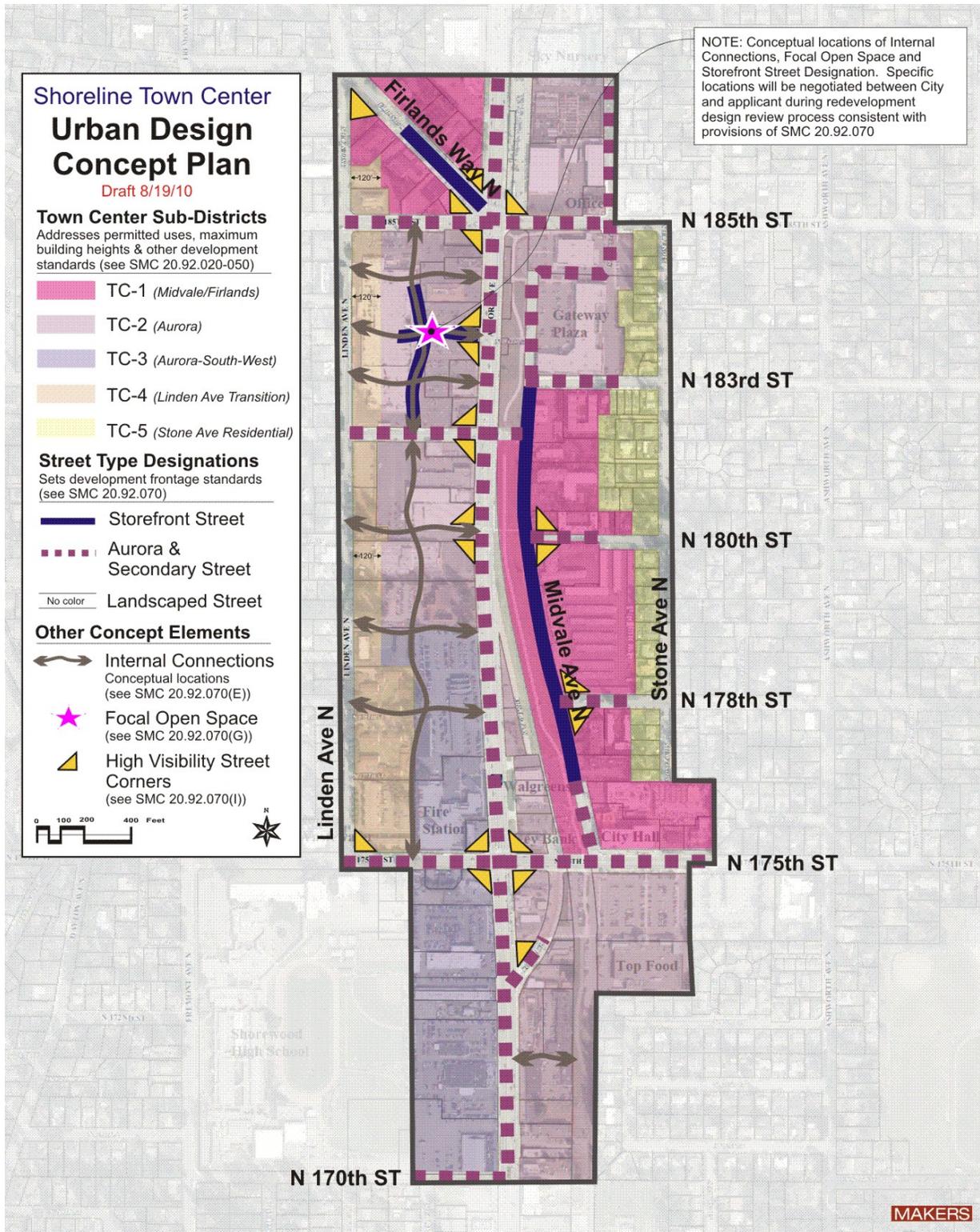


Figure 20.92.030. Town Center Concept Plan Map.

C. Components of the Town Center Concept Plan

Figure 20.92.030 above illustrates the Town Center Concept Plan. The components of the plan are provided below.

1. Street types. There are three different street type designations – each with their own site planning/frontage design standards and options:
 - a. *Storefront Streets*, which emphasize storefronts directly on sidewalks. [see SMC 21.92.070(C)(1)]
 - b. *Aurora and Secondary Streets*, which allow for both storefronts and landscaped frontages. [see SMC 21.92.070(C)(2)]
 - c. *Landscaped Streets*, which emphasize landscaped frontages. [see SMC 21.92.070(C)(3)]
2. Sub-districts. This refers to the four districts within the Town Center that warrant special land use and design provisions. See figure 20.92.030 below for the delineation of each district. District descriptions and purpose statements:
 - a. *Town Center District 1 (Midvale/ Firlands)*. The purpose of this district is to provide for pedestrian-oriented retail and personal service uses along Midvale Avenue North and Firlands Way North frontages with residential and/or office uses above and/or behind.
 - b. *Town Center District 2 (Aurora)*. The purpose of this district is to encourage the development of vertical and/or horizontal mixed-use buildings or developments in a pedestrian-friendly configuration along the Aurora Avenue North corridor within Town Center.
 - c. *Town Center District 3 (Aurora SW)*. The purpose of this district is to allow for a broad range of uses including vertical and/or horizontal mix of retail, office, and/or residential and automobile sales uses in a pedestrian-friendly configuration along the west side of Aurora Avenue North corridor in the southern half of the Town Center.
 - d. *Town Center District 4 (Linden Avenue Transition)*. The purpose of this district is to provide for an attractive and compatible transition between more intensive Town Center uses and less intensive single family neighborhoods. This includes an emphasis on low-rise multifamily uses with the flexibility for some commercial and mixed-uses on corner lots and lots with through access to Aurora Avenue North provided negative impacts to adjacent residential uses can be minimized.
 - e. *Town Center District 5 (Stone Avenue Residential)*. The purpose of this district is to provide for single family and low-rise multifamily uses that function as a transitional area between more intensive Town Center uses and less intensive single family neighborhoods.
3. High visibility street corners. Refer to highly visible street corners that warrant special design treatment. See SMC 21.92.080 for applicable standards.
4. Internal connections. Refer to generalized mid-block areas where pedestrian connections (and vehicular connections, if possible) will be required when sites redevelop in the future. See SMC 21.92.090 for applicable standards.

5. Focal open space. Refer to generalized areas where a focal open space shall be created in conjunction with future redevelopment. See SMC 21.92.100 for applicable standards.

D. Town Center use table.

Table 20.92.030(D) below provides a list of prohibited uses for each of the Town Center districts. The district designations are located on the top of each column and the land use is located on the horizontal rows. Descriptions for letters and symbols in the chart:

1. If no symbol appears in the box at the intersection of the column and the row, the use is permitted in that zone.
2. If the letter “**X**” appears in the box at the intersection of the column and the row, the use is **prohibited** in that zone.
3. If the letter “**T**” appears in the box at the intersection of the column and the row, the use is subject to special limitations associated with **transitional areas** as described in SMC 20.92.050.
4. If an “**f**” appears in the box at the intersection of the column and the row, the use, except for lobbies, is prohibited only along ground level **frontages** of designated Storefront Streets as defined in figure 20.92.030. Frontages shall refer to ground level floor areas at least 20 feet in width with minimum floor to ceiling heights of 15 feet.

Since the uses listed in the table cover broad categories of uses, the Director shall make the final determination as to whether a proposed use fits within one of the categories here. Where the Director determines that the proposed use does not fit into one of the use categories below, the use shall be permitted unless the Director determines that the use is inconsistent with the purpose of the sub-district and the Town Center Subarea Plan.

Table 20.92.030(D). Town Center use table. See sub-section D above for a description of symbols in the table below.

LAND USE	Town Center Sub-districts (see figure 20.92.030)				
	TC-1 Midvale/ Firlands	TC-2 Aurora	TC-3 Aurora SW	TC-4 Linden Ave Transition	TC-5 Stone Ave Res
Detached single family residential	X	X	X	X	
Duplex, apartment, single family attached	f	f	f	f	X
Group residences	f	f	f	f	X
Hotel/Motel				X	X
Retail, eating and drinking places				X	X
Personal and business services				T	X

LAND USE	Town Center Sub-districts (see figure 20.92.030)				
	TC-1 <i>Midvale/ Firlands</i>	TC-2 <i>Aurora</i>	TC-3 <i>Aurora SW</i>	TC-4 <i>Linden Ave Transition</i>	TC-5 <i>Stone Ave Res</i>
Gasoline and vehicular service stations	X			X	X
Vehicle sales	X	X		X	X
Government facility				X	X
Health facility				X	X
Adult use facilities	X	X	X	X	X
Gambling uses	X	X	X	X	X
Wrecking yards	X	X	X	X	X
Shipping containers	X	X	X	X	X
Industrial	X	X	X	X	X

20.92.040 Town Center dimensional standards

A. Dimensional standards.

Table 20.92.040(A) specifies densities and dimensional standards for permitted development applicable in the Town Center districts.

Note: Exceptions to the numerical standards in this table are noted in parentheses and described below.

Table 20.92.040(A). Town Center dimensional standards.

STANDARDS	Town Center Sub-districts (see figure 20.92.030)				
	TC-1 <i>Midvale/ Firlands</i>	TC-2 <i>Aurora</i>	TC-3 <i>Aurora SW</i>	TC-4 <i>Linden Ave Transition</i>	TC-5 <i>Stone Ave Res</i>
Maximum Density: Dwelling Units/Acre	NA	NA	NA	NA	Options: a) 18 du/acre b) 12 du/acre c) No max d) Keep current

STANDARDS	Town Center Sub-districts (see figure 20.92.030)				
	TC-1 <i>Midvale/ Firlands</i>	TC-2 <i>Aurora</i>	TC-3 <i>Aurora SW</i>	TC-4 <i>Linden Ave Transition</i>	TC-5 <i>Stone Ave Res</i>
					density limit
Min. Density	NA	NA	NA	NA	
Min. Lot Width	NA	NA	NA	NA	
Min. Lot Area	NA	NA	NA	NA	
Minimum Front Yard Setback (1)(2)(3)	0-10 ft (5)	0-10 ft (5)	0-10 ft (5)	10 ft (4)	10 ft
Minimum Side Yard Setback from Nonresidential Zones (6)	0 ft	0 ft	0 ft	5 ft (6)	5 ft (6)
Minimum Rear Yard Setback from Nonresidential Zones (6)	0 ft	0 ft	0 ft	0 ft	5 ft
Minimum Side & Rear Yard (Interior) Setback from R-4 & R-6	NA	NA	NA	NA	5 ft
Minimum Side & Rear Yard Set- back from R-8 through R-48 (6)	15 ft	15 ft	15 ft	5 ft	5 ft
Base Height (8)	35 ft	35 ft	35 ft	35 ft	35 ft
Maximum Height	45-70 ft (8)	70 ft (8)	70 ft (8)	35-70 ft (8)	35 ft
Maximum Hardscape Area (9)	95%	95%	95%	75%	75%

Exceptions to Table 20.92.040(A).

- (1) Unenclosed porches and covered entry features may project into the front yard setback by up to 6 feet. Balconies may project into the front yard setback by up to 2 feet. For permitted projections into a public right-of-way, see Storefront standards set forth in SMC 21.92.070(C)(1).
- (2) For individual garage or carport units, at least 20 linear feet of driveway shall be provided between any garage, carport entrance and the property line abutting the street, measured along the centerline of the driveway.
- (3) Additional building setbacks may be required to provide necessary right-of-way and/or utility improvements.
- (4) Front yard setbacks may be reduced to zero for corner properties meeting storefront requirements per SMC 20.92.070(A)(2).
- (5) Front yard setbacks are based on the applicable street type designation. See figure 20.92.030 the applicable designation and SMC 20.92.070(A) for applicable front yard setback provisions.
- (6) See SMC 20.92.070(D) for standards, options, and exceptions on side and rear yard setbacks and design.
- (7) These standards may be modified to allow zero lot line developments. Setback variations apply to internal lot lines only.
- (8) See sub-section B below for base and maximum height provisions for Town Center properties.
- (9) Green roofs, as defined in SMC 20.92.340, shall not be considered as a “hardscape” area.

B. Maximum building heights.

1. TC-1 Sub-district (Midvale/Firlands). For properties within the designated Midvale/Firlands District per the Town Center Concept Plan in figure 20.92.030:
 - a. The maximum building height shall be 45 feet with the following exceptions:
 - i. For portions of properties within 50 feet of Linden Avenue North, the maximum height shall be 35 feet.
 - ii. For properties and portions thereof south of N 183rd Street and at least 40 feet from the Stone Avenue Residential Sub-district, the maximum building height shall be 55 feet.
 - b. Buildings exceeding 35 feet are subject to the height bonus conditions in paragraph (4) below.
2. TC-3 and 4 Sub-districts (Aurora and Aurora SW). For properties within the designated Aurora District per the Town Center Concept Plan in figure 20.92.030:
 - a. The maximum building height shall be 70 feet with the following exceptions:
 - i. For properties and portions thereof within 40 feet of the Stone Avenue Residential District, the maximum building height shall be 45 feet.
 - ii. For properties and portions thereof between 40 and 80 feet of the Stone Avenue Residential District, the maximum building height shall be 55 feet.
 - b. Buildings exceeding 35 feet are subject to the height bonus conditions in paragraphs (4) and (5) below.
3. TC-4 Sub-district (Linden Avenue Transition). Properties within the designated Linden Avenue Transition Sub-district per the Town Center Concept Plan in figure 20.92.030 are subject to the following maximum building height provisions:
 - a. The maximum height shall be 35 feet along the Linden Avenue North street frontage.
 - b. For portions of the Linden Avenue Transition properties at least 50 feet from the Linden Avenue North right-of-way, the maximum height shall be 45 feet. Buildings exceeding 35 feet are subject to the height bonus conditions in paragraph (4) below.
 - c. For portions of the Linden Transition properties at least 90 feet from the Linden Avenue North right-of-way, the maximum height shall be 55 feet. Buildings exceeding 35 feet are subject to the height bonus conditions in paragraph (4) below.

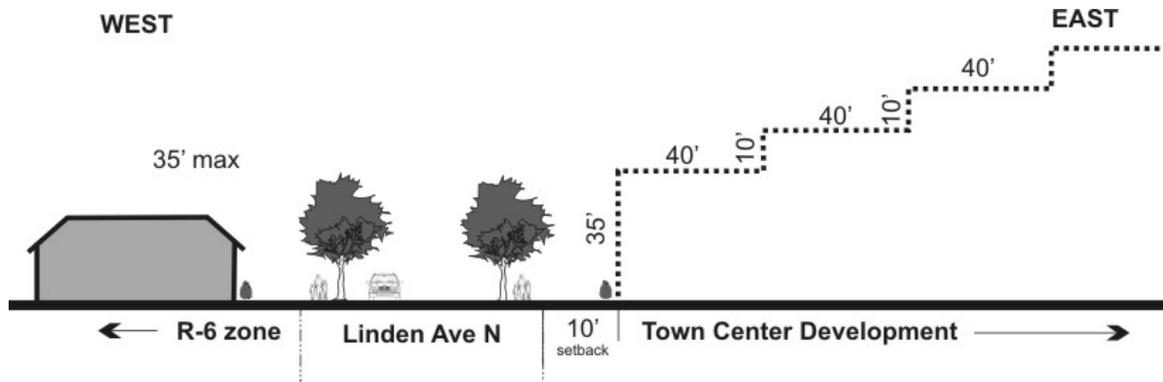


Figure 20.92.040(B)(1)(a). Maximum building height envelope on the east side of Linden Avenue N.

4. Height bonus conditions up to 55 feet. The following conditions apply for permitted buildings between the height of 35 feet and 55 feet.
 - a. The development includes infrastructure for electric vehicle recharging. The Director is authorized to adopt guidelines for this requirement; and
 - b. 4-star” construction standards under King County Built Green Standards as amended, or equivalent standard approved by the Director.
5. Height bonus conditions up to 70 feet. The following conditions apply for permitted buildings between the height of 55 feet and 70 feet.
 - a. The development includes infrastructure for electric vehicle recharging. The Director is authorized to adopt guidelines for this requirement;
 - b. 5-star” construction standards under King County Built Green Standards as amended, or equivalent standard approved by the Director; and
 - c. Fifteen percent of the units are affordable to households in the 75 percent King County median income category for a minimum of 30 years. The average number of bedrooms for affordable units shall be similar to the number of bedrooms for market rate units. The affordable housing units shall be distributed throughout the building or development.

20.92.050 Neighborhood protections**A. Purpose.**

The purpose of this section is to minimize negative impacts of Town Center uses on adjacent single family neighborhoods and to enhance the visual character of transitional areas along Linden and Stone Avenues. Along Linden Avenue North, the intent is to promote landscaped setbacks and predominately residential character on both sides of the street. Along Stone Avenue North, the intent is to maintain the existing small scale residential character. It is also the intent to minimize visual and privacy impacts of Town Center developments on residential uses that front on Stone Avenue North.

B. Applicability.

Unless specifically noted, the provisions herein apply to properties within the Stone Avenue Residential and Linden Transition Districts identified in the Town Center Concept Plan in figure 20.92.030 and other Town Center properties that are directly adjacent to those districts.

C. Setbacks and buffers.

1. Linden Avenue North setbacks. Developments fronting Linden Avenue North are subject to 10-foot minimum landscaped front yard setbacks per Table 20.92.040(A). Exception: Storefronts with zero front setback are allowed on street corner properties.
2. Stone Avenue North setbacks. Developments fronting Stone Avenue North are subject to 10-foot minimum landscaped setbacks per Table 20.92.040(A).
3. Rear yard setbacks and buffer standards for properties in the TC-1 and 2 Sub-districts (Aurora and Midvale/Firlands) that are directly adjacent to the TC-5 Sub-district (Stone Avenue Residential), per the Town Center Concept Plan in figure 20.92.030:
 - a. 15-foot minimum setback per Table 20.92.040(A).
 - b. A 10-foot landscaping buffer with Type I or II landscaping is required along the rear property line in the following circumstances:
 - i. To separate a surface parking lot and/or common service area from the rear property line.
 - ii. Where buildings taller than 3 stories are within 30 feet of the rear property line.
 - iii. To provide visual and physical separation of common open space or other use/feature along the rear property line that will impact privacy of adjacent residential uses as determined by the Director.

D. Maximum building heights.

1. TC-4 Sub-district (Linden Avenue Transition). See Table 20.92.040(A) and SMC 20.92.040(B)(1) for height step-back provisions that will minimize shade/shadow and visual impacts of Town Center buildings on the adjacent single family neighborhood.
2. TC-1, TC-2, and TC-4 Sub-districts (Stone Avenue Residential and adjacent Town Center Sub-districts). See Table 20.92.040(A) and SMC 20.92.040(B)(2) and (3) for height step-back provisions that will minimize shade/shadow and visual impacts of Town Center buildings on the Stone Avenue Residential District and adjacent single family neighborhood.

E. Permitted uses.

1. See SMC 20.92.030(D) for permitted uses in Town Center Sub-districts.
2. TC-4 Sub-district (Linden Avenue Transition). Permitted non-residential uses within TC-4 that contain the “transition” designation are subject to the following limitations:
 - a. Subject use is permitted only on through lots that have access to both Linden and Aurora Avenue North;
 - b. The primary vehicular access to the site shall not be off of Linden Avenue North unless no other option is feasible as determined by the City. One or more secondary access may be permitted by the City provided the design and conditions minimize impacts to adjacent residential uses and meet the intent of applicable standards in this chapter;
 - c. For applicable properties with more than 200 feet of lineal frontage on Linden Avenue North, at least 50 percent of the Linden Avenue North street frontage shall be occupied by residential uses, as determined by the Director; and
 - d. Service access and elements from or facing Linden Avenue North are prohibited unless no other reasonable alternative exists, as determined by the Director, and design elements are employed to minimize the negative impacts on the Linden Avenue North streetscape and adjacent residential uses.

20.92.060 Streetscape design

A. Intent.

1. To provide clear direction for the improvement of sidewalks within the Town Center.
2. To promote walking, bicycling, and transit use within the Town Center.
3. To provide for pedestrian amenities along public sidewalks that encourage walking and enhance the character and identity of the Town Center.
4. To promote the use of trees and other landscaping elements that enhance the character of the Town Center, provide a buffer between pedestrians and vehicular traffic, and provide environmental benefits to the Town Center.

B. Applicability.

The standards in this section apply only to the sidewalks and the amenity zone (including planting strips between the curb and the sidewalk) of public streets unless otherwise noted.

C. Streetscape design standards & guidelines.

All street improvements (where required) are subject to the requirements of the Transportation Master Plan. However, the provisions below shall supplement the Transportation Master Plan. Where there is a conflict, the Director shall determine which standard applies.

1. Curb bulb-outs. Construction of curb bulb-outs is required with new construction or re-development where on-street parking is provided, truck traffic will be minimal and it is practical and safe to construct a complete crosswalk.
2. Sidewalks and amenity zones: Sidewalks separated by planting strips or street trees within grates are required for all new and redeveloped streets in the Town Center. Table 20.92.060(C) and figures 20.92.060(C)(2)(a)-(c) below illustrate minimum standards.

Table 20.92.060(C). Town Center sidewalk and planting strip standards.

	Sidewalk Widths		
Street Type	Unobstructed width/ Total width	Amenity Zone Standards	Pedestrian-Oriented Lighting? ¹
Storefront Streets ²	8'/14' ³	Trees every 30' average in grates or minimum 6' x 6' planting squares ⁴	Required

Sidewalk Widths			
Street Type	Unobstructed width/ Total width	Amenity Zone Standards	Pedestrian-Oriented Lighting?¹
Aurora	Sidewalk and amenity improvements for Aurora are either completed or set in place. Where new development is proposed in areas where sub-standard streetscape improvements were installed, sidewalk and amenity zone improvements shall be completed consistent with City approved design plans for Aurora.		
Secondary Streets₂	6'	Trees every 30' average in 6' wide minimum planting strips, minimum 6' x 6' planting squares, or within grates ₄	Encouraged
Landscaped Streets₂	6'	6' wide minimum planting strip between roadway and sidewalk ₄	Encouraged

Table conditions:

- (1) Light fixtures placed no taller than 14 feet above the surface. Fixtures and intervals shall be determined by the City. Pedestrian-oriented lighting shall be provided at all transit stops within the Town Center.
- (2) Proposed standards/improvements listed herein shall be minimum required provisions. Where the Transportation Master Plan (TMP) provides for wider sidewalks for the applicable street, the wider sidewalk shall be provided. Where the amenity zone standards herein conflict with the TMP, the Director shall determine which standards apply. With regards to minimum lighting standards, the more restrictive standard shall apply.
- (3) City may allow 9-foot minimum sidewalks on the north side of the street as needed due to rights-of-way limitations. Building setbacks are encouraged in these areas to provide for the full 12-foot sidewalk widths.
- (4) Breaks in the planting strip/tree distribution are allowed for driveways.

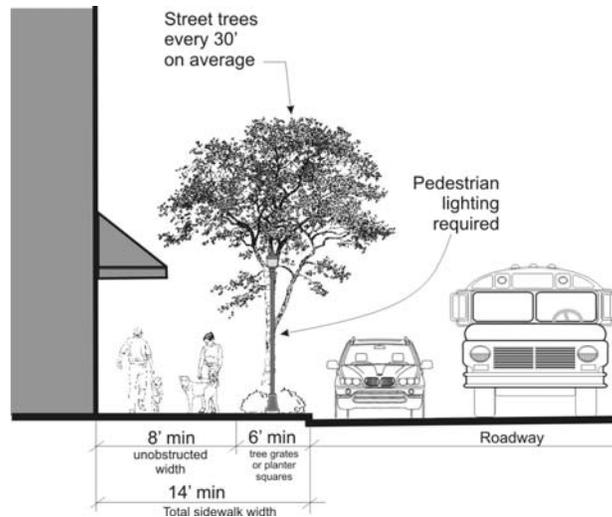


Figure 20.92.060(C)(2)(a). Storefront Street sidewalk/planting strip standards.

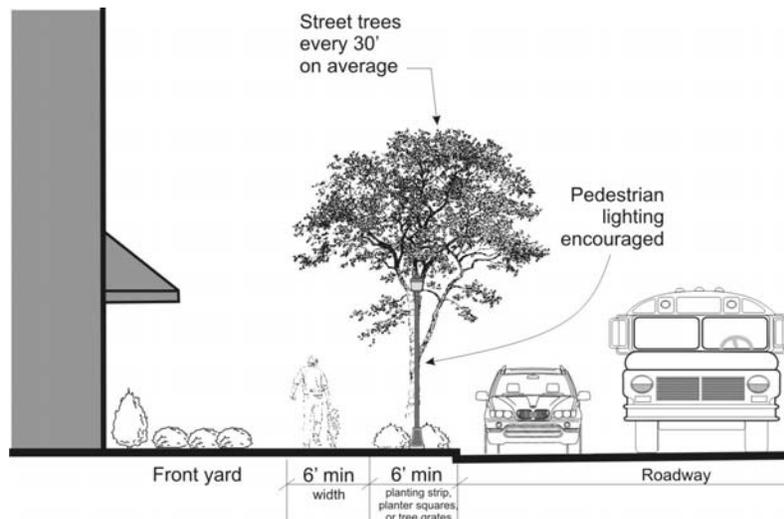


Figure 20.92.060(C)(2)(b). Secondary and Landscaped Street sidewalk/planting strip standards.

3. Right-of-way. If necessary, additional right-of-way shall be provided to accommodate the minimum sidewalk and planter strip widths, even if this exceeds the normal right-of-way standards for the street classification. A sidewalk easement may be provided as an alternative to right-of-way dedication beyond the standard width.
4. Landscaped medians, roundabouts, traffic circles and mid-block crosswalks may be required where appropriate as determined by the Director. These features help to reduce vehicle speeds, reduce accidents, increase pedestrian safety and contribute to the area's identity and character.
5. Woonerf street designs will be considered for private internal streets where appropriate as determined by the Director. On these streets, pedestrians and cyclists have priority and travel speeds are very slow. Woonerfs generally do not have traditional curb and gutters and can be designed for commercial, mixed-use, or residential areas.

7. Low impact development techniques are encouraged in the design of new streets and improvements of existing streets. Most notably, this includes the use of rain gardens and swales to accommodate stormwater within any planting strips within the public right-of-way, where soil types are conducive. Pervious pavements should be considered, particularly for sidewalks.

D. Streetscape amenities.

1. Durable Pedestrian Furniture. Pedestrian furniture provided in public spaces shall be made of durable, vandal- and weather-resistant materials that do not retain rainwater and can be reasonably maintained over an extended period of time.
2. Streetscape Amenities. Streetscape amenities must be integrated into the design of sidewalks and amenity zones in conjunction with new construction along all designated Storefront and Secondary Streets. Level I and II Additions/Remodels and project sites adjacent to sidewalks that were recently constructed or upgraded by the City (as determined by the Director) shall be exempt from these standards. For each 100 cumulative lineal feet of Storefront Street frontage, at least two of the desired amenity elements listed below shall be included. Along designated Secondary Streets, at least one amenity elements shall be included. The type, location, and design of chosen amenities shall contribute to a well-balanced mix of features on the street, as determined by the Director. Desired amenities include:
 - a. Seating. Each 6 feet of seating area or four individual seats count as one amenity element. Seating areas should generally be located in areas that provide views of pedestrian activity. Seating ledges must be at least 12 inches wide to qualify.
 - b. Trash Receptacles. To qualify as an amenity, at least one trash receptacle is needed per 100 linear feet of sidewalk. For designated pedestrian-oriented streets, this shall be required.
 - c. Permanent landscaping elements including extra planting beds and other landscaping elements that go beyond minimum code requirements and add visual interest to the sidewalk as determined by the Director.
 - d. Special pavement patterns and/or tree grates.
 - e. Bicycle racks.
 - f. Informational kiosks (may count as two amenity elements at the discretion of the Director) designed consistent with adopted way-finding plan.
 - g. Decorative clocks (may count as two amenity elements at the discretion of the Director).
 - h. Artwork as approved by the City (may count as two amenity elements at the discretion of the City).
 - i. Other amenities that meet the intent as determined by the Director.

Features above that are publicly funded, already required by code, and/or obstruct pedestrian movement shall not qualify as an amenity to meet this standard.

All features are subject to City approval.



Figure 20.92.060(D)(2)(a). Desirable streetscape amenity examples. Image 1 includes a decorative tree grate; image 2 includes decorative artwork/paving related to the character and identity of the area; image 3 is a decorative bicycle rack; image 4 includes a rain garden planting strip; image 5 is a decorative bench; image 6 includes a sitting ledge incorporating student artwork.



Figure 20.92.060(D)(2)(b). More desirable streetscape amenity examples. Image 1 includes a decorative railing and landscaping; image 2 includes decorative paving and planting beds; image 3 is a decorative kiosk; images 4 and 5 are streetscape art examples; and image 6 shows artwork inlaid with the sidewalk.

20.92.070 Street frontage standards

Standards herein involve the design of building facades and/or front yards along public streets.

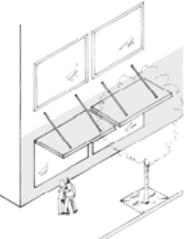
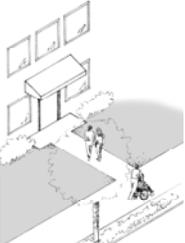
A. Intent.

1. To establish a framework of development frontage standards for different streets in the Town Center in a way that reinforces desired development patterns.
2. To enhance the walkability of Town Center by creating a variety of attractive development frontages.
3. To enhance the visual character of streets within the Town Center.
4. To improve the transition between Town Center uses and surrounding residential neighborhoods.

B. Street frontage standards.

This sub-section defines the street frontage standards for private development based on the particular street type designation the property fronts onto within the Town Center per figure 20.92.030.

Table 20.92.070(A). Summary of development frontage standards by street type. For further details, see paragraphs (1) – (3) below.

Street Type	Permitted ground floor uses <i>(see SMC 20.92.030 for details)</i>	Development frontage options <i>[see paragraph (C) below for details]</i>	Parking and vehicular access location
Storefront Streets	Ground level residential uses, except for lobbies, are prohibited along frontages	 <p>Storefronts <i>[see paragraph (C)(1) below for details]</i></p>	Side or rear, no more than 60' of street frontage <i>[see paragraph (B)(1) below for details]</i>
Aurora and Secondary Streets	All applicable permitted uses	All development frontage types <i>[see paragraphs (C) (1)-(3) below for details]</i>	Side or rear, no more than 50% of street frontage <i>[see paragraph (B)(2) below for details]</i>
Landscaped Streets	Residential, with some exceptions along Linden	 <p>Landscaped Yards <i>[see paragraph (C) (3) below for details]</i></p>	Side or rear, no more than 50% of street frontage <i>[see paragraph (B)(2) below for details]</i>

1. Storefront Street standards. Buildings shall be placed at the back edge of the sidewalk and meet the following standards:
 - a. *Permitted development frontage types:* Storefronts [see paragraph (C)(1) and figure figure 20.92.070(B)(2)(a) below for standards and examples].
 - b. *Parking and vehicular access location:* No more than 60 feet of lineal frontage may be occupied by parking and vehicular access. See figure 20.92.070(B)(2)(b) for acceptable and unacceptable parking configuration examples.
 - c. *Other.* If the building occupies a corner site, then the standards apply to both streets, unless the Director finds such orientation not feasible.

Buildings may be set back from the sidewalk where public gathering space (as defined in SMC 20.92.140) is included between the sidewalk and the building. No parking or vehicular circulation is allowed between the street right-of-way and the building.

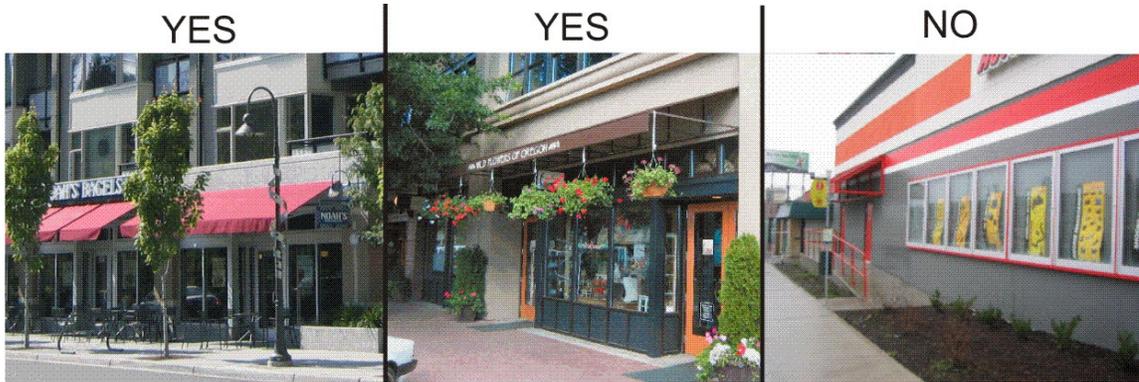


Figure 20.92.070(B)(2)(a). Good and bad storefront examples.

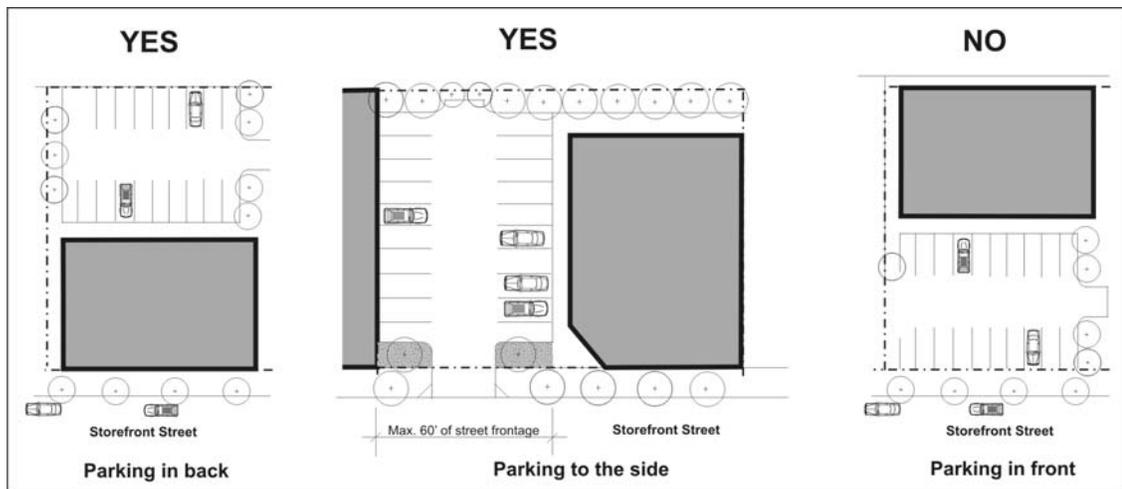


Figure 20.92.070(B)(2)(b). Parking lot location standards along Storefront Streets.

2. Aurora and Secondary Street standards:

a. *Permitted development frontage types:*

- i. Storefronts [see figure 20.92.070(B)(2)(a) above and paragraph (C)(1) below for standards and examples].
- ii. Stoops and Lightcourts [see paragraph (C)(2) below for standards and examples].
- iii. Landscaped Yard [see paragraph (C)(3) below for standards and examples].
- iv. A combination of above development frontage types.

b. *Parking and vehicular access location:* Parking shall be located to the side, rear, under, or above buildings. Specifically, no more than 50 percent of the frontage shall be occupied by parking and vehicular access uses, regardless of the frontage type used. See figure 20.92.070(B)(3) below for acceptable and unacceptable examples.

Departures will be considered by the Director per the following criteria:

- i. Configuration allows for a more desirable site layout with that meet the intent of the standards in this Chapter; and
- ii. The design treatment along the street effectively mitigates negative impacts of the parking lot on the streetscape.

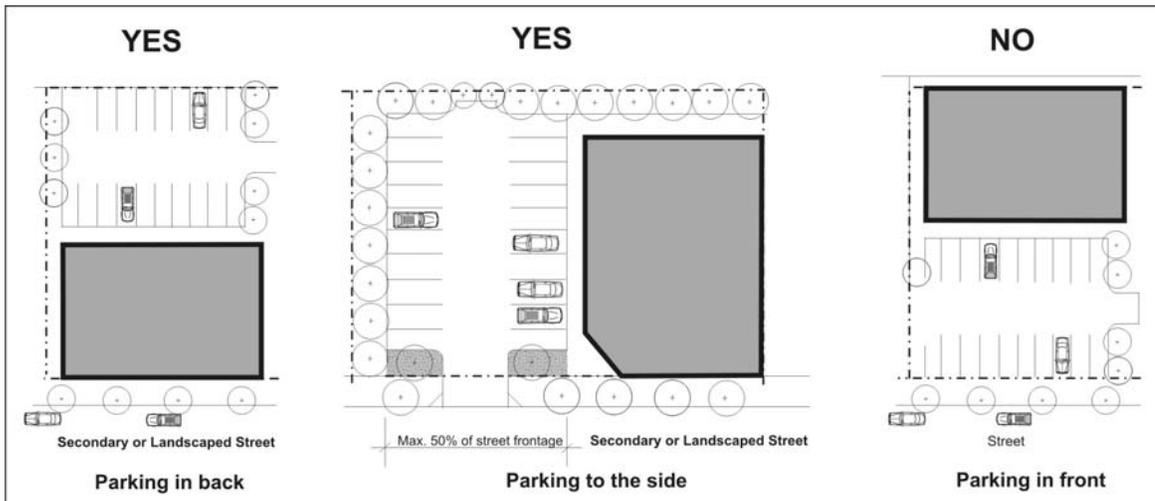


Figure 20.92.070(B)(3). *Parking lot location standards along Secondary and Landscaped Streets.*

3. Landscaped Street standards:

a. *Permitted development frontage type:*

- i. Landscaped Yard [see paragraph (C)(3) below for standards and examples].
- ii. For corner lots where intersecting street is a Storefront Street, Storefronts per paragraph (C)(1) below are permitted. For corner lots where intersecting street is a designated Secondary Street, all frontage types are permitted [see paragraphs (C)(1) through (3)].

b. *Parking and vehicular access location:* Parking shall be located to the side, rear, under, or above buildings. Specifically, no more than 50 percent of the frontage shall be occupied by parking and vehicular access uses, regardless of the frontage type used. See figure 20.92.070(B)(3) above for acceptable and unacceptable examples.

Departures will be considered by the Director per the following criteria:

- i. Configuration allows for a more desirable site layout with that meet the intent of the standards in this Chapter; and
- ii. The design treatment along the street effectively mitigates negative impacts of the parking lot on the streetscape.



Figure 20.92.070(B)(4). Landscaped frontage examples.

C. Development frontage types.

The following provisions describe standards for the various development frontage types that are addressed in subsection B above.

1. Storefront standards.

- a. *Permitted ground level uses:* Non-residential uses are required on the ground floor to a minimum horizontal depth of 20 feet [see SMC 20.92.030(D) for permitted use details]. Exception: lobbies for residential uses are permitted along ground level street frontages.
- b. *Minimum ground level floor to ceiling height:* 15 feet to a minimum horizontal depth of 20 feet.
- c. *Minimum transparent window area:* 60 percent of the ground floor facade between a height of 30 inches to eight feet above the ground;
- d. *Pedestrian entry requirements:* The primary building entry shall be on this facade;
- e. *Weather protection requirements:* Weather protection averaging at least five feet in depth (measured perpendicular to the building front) along at least 75 percent of the facade width.

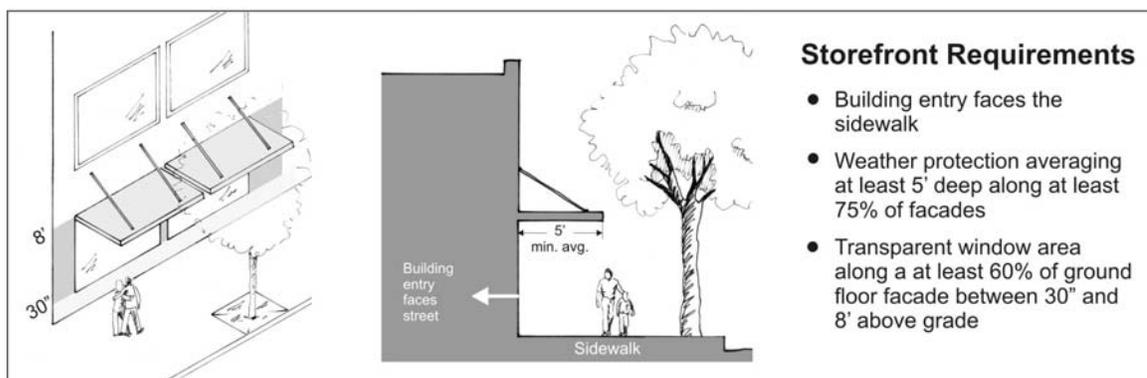


Figure 20.92.070(C)(1). Key Storefront requirements.

2. Stoop and Lightcourt standards.

- a. *Definitions/descriptions:*
 - i. Stoop: Elevated platform entryways situated close to sidewalks.
 - ii. Lightcourt: Sunken courts recessed below the sidewalk. Lightcourts are often designed in tandem with stoops, allowing two floors with street access.
- b. *Permitted ground floor uses:* Commercial and residential uses. See figure 20.92.030 for the applicable district and SMC 20.92.030(D) for permitted use details;
- c. *Minimum setback:* 6 feet. Weather protection elements may project into the required setback area;
- d. *Minimum transparent window area:* 15 percent of the façade for structures 10 feet or more from the sidewalk and 20 percent of the façade for structures less than 10 feet from the sidewalk. For the purpose of this requirement, the façade is all vertical

surfaces of the structure generally facing the street. Where a portion or portions of the structure are setback 15 feet or more from the front façade, such areas shall not be included in the transparency calculations;

- e. *Pedestrian entry requirements:* Building entries shall be visible and accessible from the sidewalk;
- f. *Weather protection requirements:* Weather protection at least 3-feet deep is required at building entries;
- g. *Stoop height/design:* Preferred heights are between 2 and 4 feet, which allow for increased privacy for ground floor residential uses. Stoop heights of up to 6 feet will be permitted on sloping sites. Where stoops are taller than 3 feet and/or where opaque railings are used, design features to mitigate the impacts of a blank wall on the sidewalk environment are required. Mitigation may be accomplished by landscaping features between the sidewalk and stoop (planting strip with or without trellis) and/or through the design/use of materials that add interest to the pedestrian as determined by the Director;
- h. *Lightcourt design:* Lightcourts may be recessed vertically up to 6 feet below the level of the sidewalk; and
- g. *Accessibility:* Ramps may be integrated into stoop or lightcourt design.

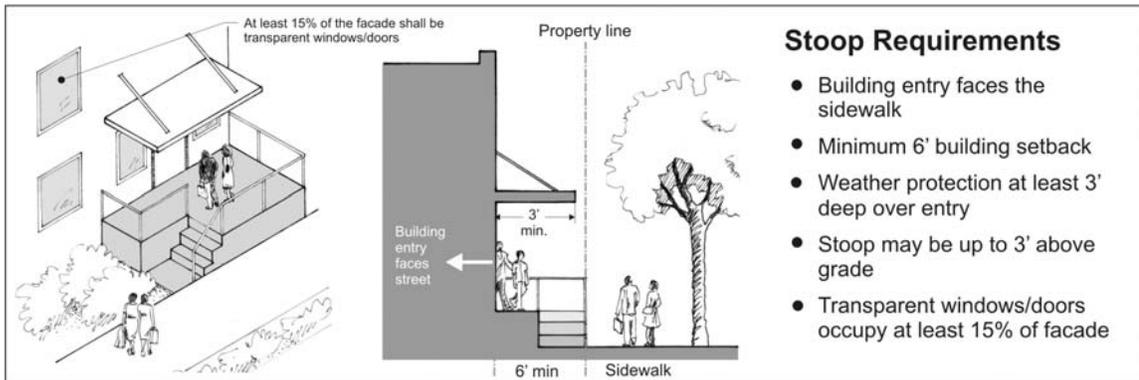


Figure 20.92.070(C)(2)(a). Stoop standards and examples.

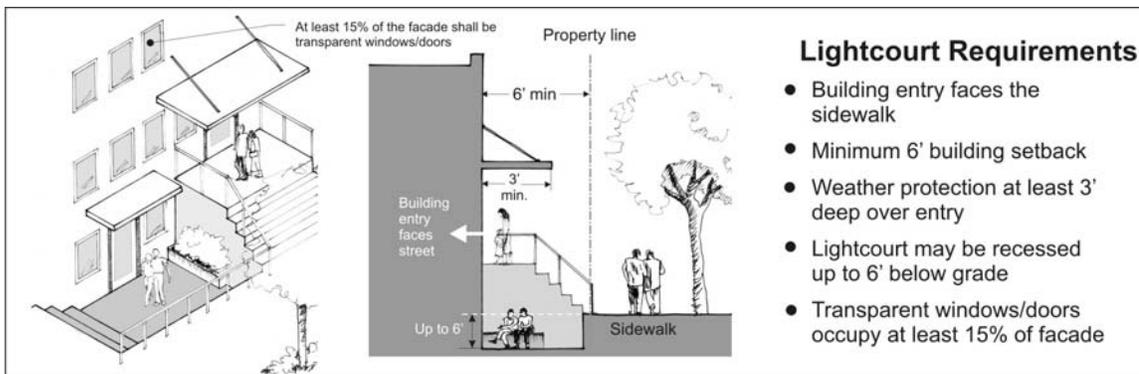


Figure 20.92.070(C)(2)(b). Lightcourt standards and examples.



Figure 20.92.070(C)(2)(b). Stoop (left and center images) and lightcourt (right image) examples.

3. Landscaped Yard standards.

- a. *Permitted ground floor uses:* Predominately residential uses. See figure 20.92.030 for the applicable district and SMC 20.92.030(D) for permitted use details;
- b. *Minimum setback:* 10 feet. Unenclosed porches and covered entry features may project into the front yard setback by up to 6 feet;
- c. *Minimum transparent window area:* 15 percent of the façade. Where a portion or portions of the structure are setback 15 feet or more from the front façade, such areas shall not be included in the transparency calculations;
- d. *Pedestrian entry requirements:* Building entries shall be visible and accessible from the sidewalk;
- e. *Weather protection requirements:* Weather protection at least 3-feet deep is required at building entries; and
- f. *Design:* Landscaped frontages may be sloped or terraced above or below the slope as needed for topography or desired design of the frontage provided retaining walls taller than 3 feet must be terraced to provide landscaping elements to mitigate the impact of blank walls on the streetscape.

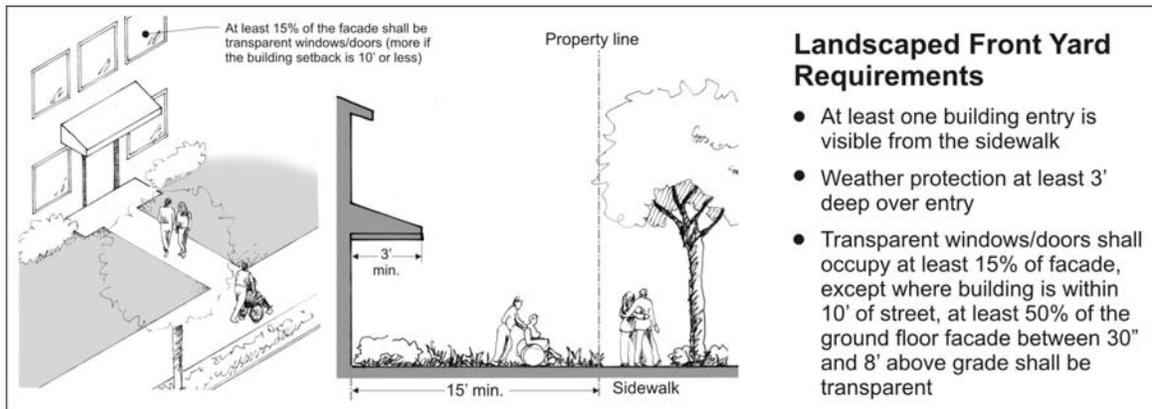


Figure 20.92.070(C)(3). Landscaped yard standards and examples.

20.92.080 High visibility street corners

The standards herein apply to designated High visibility street corners per the Town Center Concept Plan (see figure 20.92.030).

1. Intent:
 - a. To accentuate highly visible street corners.
 - b. To promote distinctive building design features at high visibility street corners
2. Site design options: All development proposals located at designated High Visibility Street Corner (see figure 20.92.030) sites shall include at least one of the design treatments described below (in order of preference):
 - a. Locate a building towards the street corner (within 15 feet of the corner property line). All such buildings shall comply with Building Corner standards in paragraph (3) below.
 - b. Provide public gathering space, as defined in SMC 20.92.140 at the corner leading directly to a building entry or entries.

If a or b are not feasible or desirable per the Director, consider the following options:

- c. Install substantial landscaping (at least 30 feet by 30 feet or 900 square feet of ground surface area with trees, shrubs, and or ground cover). In addition to the landscaping, the space shall include a special architectural or artistic element, such as a *trellis*, decorative monument sign, or clock-tower, to add identity or demarcation of the area. Such an architectural element may have a sign incorporated into it (as long as such sign does not identify an individual business or businesses).
- d. Other treatments will be considered, provided they meet the intent of the standards and guidelines as determined by the Director.

Site design proposals shall not conflict with existing or planned street improvements, as determined by the Director.

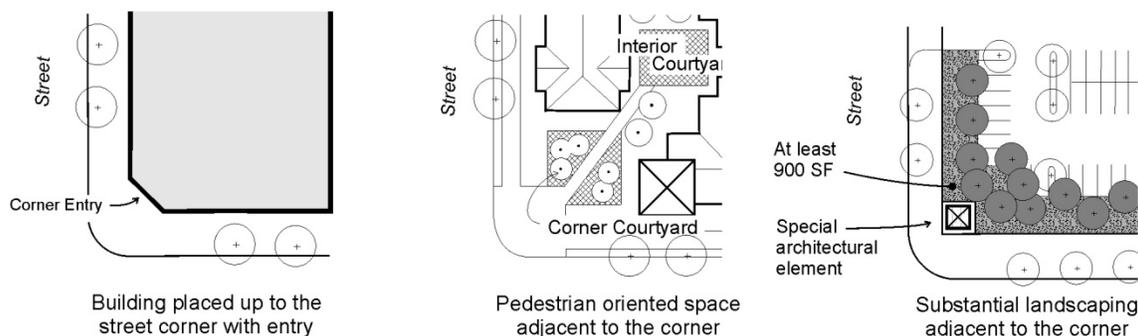


Figure 20.92.080(B). Acceptable street corner examples.

3. High Visibility Street Corner Building Design Options: Applicable street corner buildings shall provide one or more of the elements listed below on both sides of an axis running diagonally through the corner of the building and bisecting the angle formed by the two building facades:
- A cropped building corner with corner pedestrian entry.
 - A bay window or turret.
 - Balconies above the ground floor.
 - Sculpture or artwork element; Must be a one-of-a-kind design element.
 - Distinctive use of facade materials.
 - Other special or unique corner building treatment, other than the use of fabric or vinyl awnings, for pedestrian weather protection at the corner of the building as determined by the Director.

All corner building design elements must be sized to be proportional to the building and the size of the applicable intersection, as determined by the Director (for example, larger intersections warrant more substantial design treatments).



Figure 20.92.080(C). Desirable building corner examples.

20.92.090 Internal connections

The provisions herein apply to sites where internal connections are required per the Town Center Concept Plan (see figure 20.92.030).

1. Intent:
 - a. To enhance pedestrian and vehicular circulation within the Town Center.
 - b. To promote walking and transit use within the Town Center.
2. On sites where internal connections are required per Figure 20.92.030, all Level III additions/remodels and new construction shall provide for such internal connections by including one or more of the following:
 - a. Providing an internal roadway with adjacent sidewalk(s). Specifically:
 - i. The roadway dimensions and design shall meet the minimum requirements per (INSERT LINK TO EXISTING PUBLIC WORKS/STREET/ROADWAY STANDARDS).
 - ii. Parallel on-street parking on one or both sides is encouraged, to make the connection function more like a public street.
 - iii. The sidewalk(s) and trees/planting strips shall meet the Secondary Street standards set forth in SMC 20.92.140. DEPARTURES will be considered by the Director where unique site constraints prevent conformance and where the proposed design meets the intent of the standards of this Chapter.
 - b. Providing an internal walkway, where a vehicular connection is not practical or necessary, as determined by the City. Specifically:
 - i. The sidewalk shall be 8 feet wide, minimum. Where sidewalks are adjacent to storefronts, the sidewalk shall meet Storefront Street standards per SMC 20.92.060(C).
 - ii. Planting strips with trees every 30 feet on average shall be placed on both sides of the sidewalk, except where the sidewalk is adjacent to a storefront or pedestrian-oriented space. Such planting strips shall be at least 6 feet. Planting squares (minimum 6 feet by 6 feet) or trees within grates may be used as an alternative to continuous planting strips. Alternative landscaping schemes may be permitted by the Director provided they meet the intent of the standards.

The location of internal connections shown in Figure 20.92.030 are generalized and intended to allow for flexibility in the siting of the connection depending on unique on-site conditions and per proposed mix of uses. The actual connection location must meet the intent of the standards herein as determined by the Director.

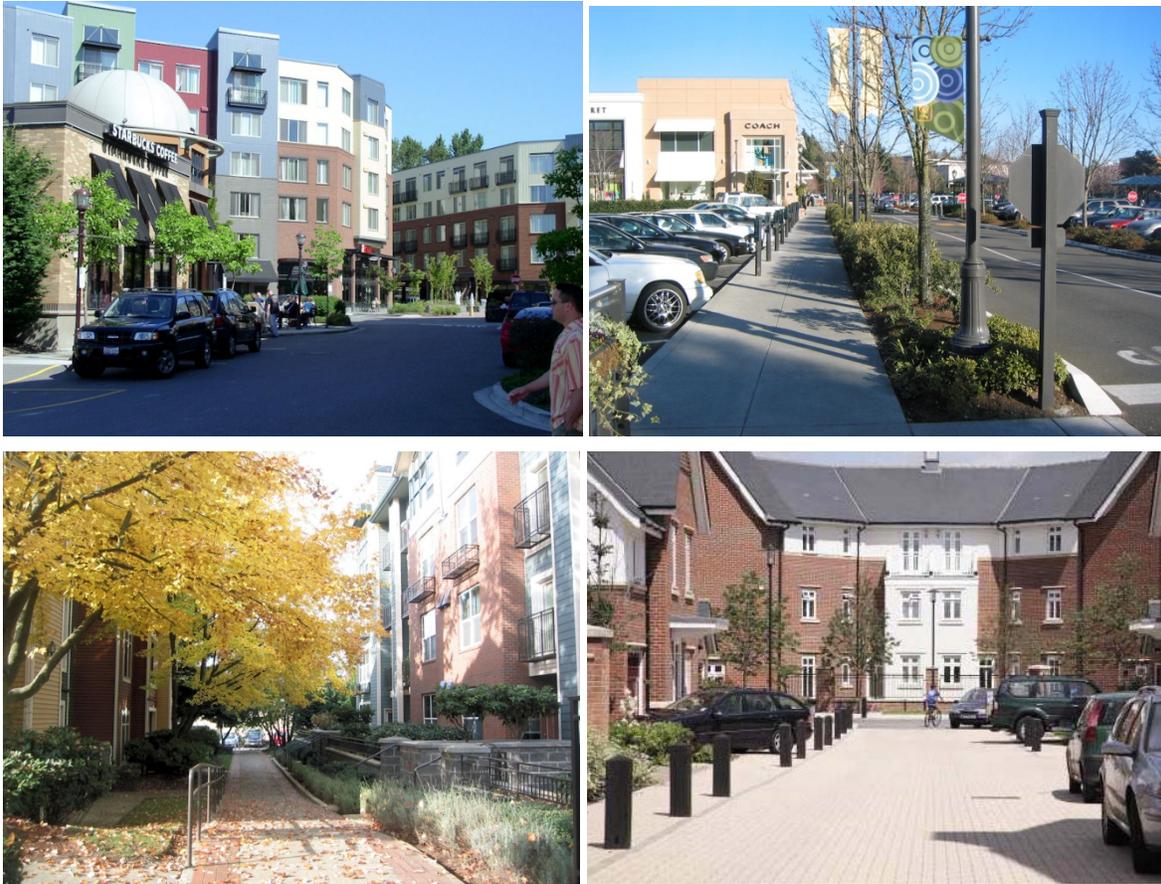


Figure 20.92.090. Examples of internal connections. The upper left image shows a pedestrian-friendly street with mixed-use development parallel parking, pedestrian lighting, and curb extensions and intersections. The upper right image shows a roadway connection through a parking lot with a pathway separated by landscaping and streetscape elements. The lower right image shows a low speed auto/pedestrian connection on a curb-less street. The lower left image shows a pedestrian pathway between multifamily buildings.

20.92.100 Focal open space

The provisions herein apply to the site designated as a Focal Open Space per the Town Center Concept Plan (see figure 20.92.030).

1. Intent:
 - a. To enhance pedestrian and vehicular circulation within the Town Center.
 - b. To promote walking and transit use within the Town Center.
2. Focal open space. Whereas SMC 20.92.140(B) requires public gathering spaces in conjunction with non-residential development, sites designated in the Town Center Concept Plan in Figure 20.92.030 as “Focal Open Space” shall concentrate their required public gathering space in a centralized and accessible location meeting the following criteria:
 - a. Location. The focal open space shall be centrally located....
 - b. Active edges. Storefronts border at least two sides of the focal open space.
 - c. Size: At minimum, the space shall be at least 5,000 square feet with no dimension less than 50 feet.
 - d. The space shall include an open area available for public assembly, large enough to hold at least 1,000 standing adults. Activities could include outdoor concerts, speeches, festivals, or other public events.
 - e. The design of the space must also meet the standards of public gathering spaces set forth in paragraph (3) above.



Figure 20.92.100. Examples of a focal open space.

20.92.110 Parking, access, and circulation

The following provisions shall supplement the parking, access, pedestrian and vehicular circulation, and bicycle facilities standards set forth in Subchapter 6 of SMC 20.50. Where there is a conflict, the standards herein shall apply.

A. Minimum off-street parking requirements.

See SMC 20.50.390 for applicable standards.

B. Vehicular access and circulation - Standards.

Interior vehicular connections between streets may be required as indicated in Figure 20.92.030.

1. Intent.

- a. To create a safe, convenient, and efficient network for vehicle circulation and parking.
- b. To mitigate traffic impacts and to conform to the county's objectives for better traffic circulation.
- c. To enhance the visual character of interior access roads.
- d. To minimize conflicts with pedestrian circulation and activity.

2. Connected vehicular circulation. Developments shall provide a safe and convenient network of vehicular circulation that connects to the surrounding road/access network and provides the opportunity for future connections to adjacent parcels, where applicable.

3. Driveways.

- a. Type I Driveways (ADD REFERENCE) shall be required where feasible, as determined by the Director..
- b. Where driveways cross sidewalks and pathways, the paving pattern of the sidewalk/pathway shall extend through the driveway.



Figure 20.92.110(B). Extend sidewalk pavement pattern across driveways.

C. Non-motorized access and circulation.1. Intent.

- a. To provide safe and direct pedestrian access within the Town Center.
- b. To minimize conflicts between pedestrians, bicyclist and vehicular traffic.
- c. To enhance pedestrian connections to adjacent neighborhoods.
- d. To provide safe routes for the pedestrian and disabled person across parking, to entries, and between buildings.
- e. To provide attractive internal pedestrian routes that promote walking/bicycling and enhance the character of the area.
- f. To provide a network of pedestrian walkways that can be expanded over time.
- g. To encourage pedestrian amenities along walkways, such as artwork, landscaping elements, and architectural details.

2. Integrated pedestrian circulation system. Project applicants shall be prepared to demonstrate that the proposal includes an integrated pedestrian circulation system that connects buildings, open space, and parking areas with the adjacent street sidewalk system, trail network, and adjacent properties. Specific standards:a. *Access to sidewalk.*

All buildings shall have clear pedestrian access to a public sidewalk. Where a use fronts onto two streets, access shall be provided from the road closest to the main entrance, but preferably from both streets. The walkway shall be at least five feet wide. The Director may require wider pathways where significant pedestrian activity is expected. Exceptions will be granted for sites with existing physical constraints that prevent conformance with the standard, as determined by the Director.

b. *Entrances.*

Developments shall adapt building access to site conditions for level, convenient, clearly identified pedestrian entry.

c. *On-site connections.*

Pedestrian paths or walkways connecting all businesses and the entries of multiple commercial buildings frequented by the public on the same development site shall be provided.

d. *Future connectivity.*

For sites abutting vacant or underdeveloped land, the Director may require new development to provide for the opportunity for future connection to its interior pathway system through the use of pathway stub-outs, building configuration, and/or parking lot layout. For example, a grid of pedestrian connections at intervals of 200-300 feet would meet the intent statements above and be scaled consistent with the Town Center's vision.

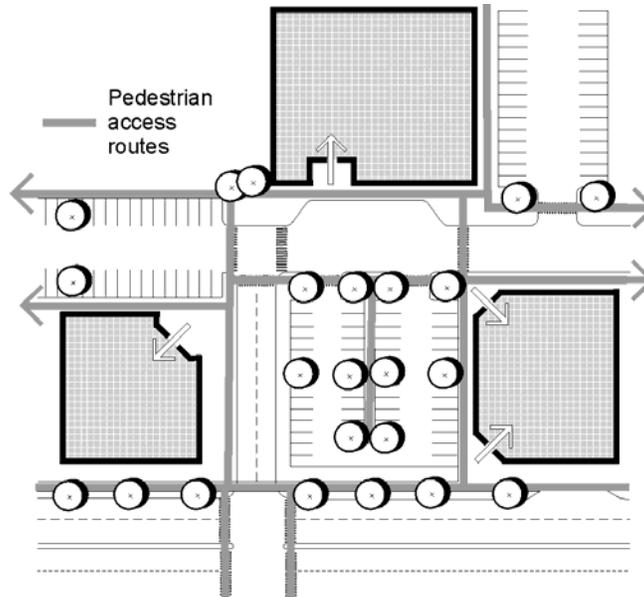


Figure 20.92.110(C)(2)(c). An example of a well-connected pathway network.

e. *Parking lot pathways.*

Paved walkways at least 8 feet in width shall be provided for every three parking aisles or a distance of less than 200 feet shall be maintained between paths (whichever is more restrictive).

Canopy trees shall be provided every 30 feet on average on both sides of the walkway. Such trees may be provided in planting strips (minimum 6 feet wide), planting squares (minimum 6 feet by 6 feet), or within tree grates.

Such access routes through parking areas shall be separated from vehicular parking and travel lanes by use of contrasting paving material which may be raised above the vehicular pavement. Speed bumps may not be used to satisfy this requirement.

f. *Americans with Disabilities Act.*

All pathways shall conform to the Americans with Disabilities Act (ADA).

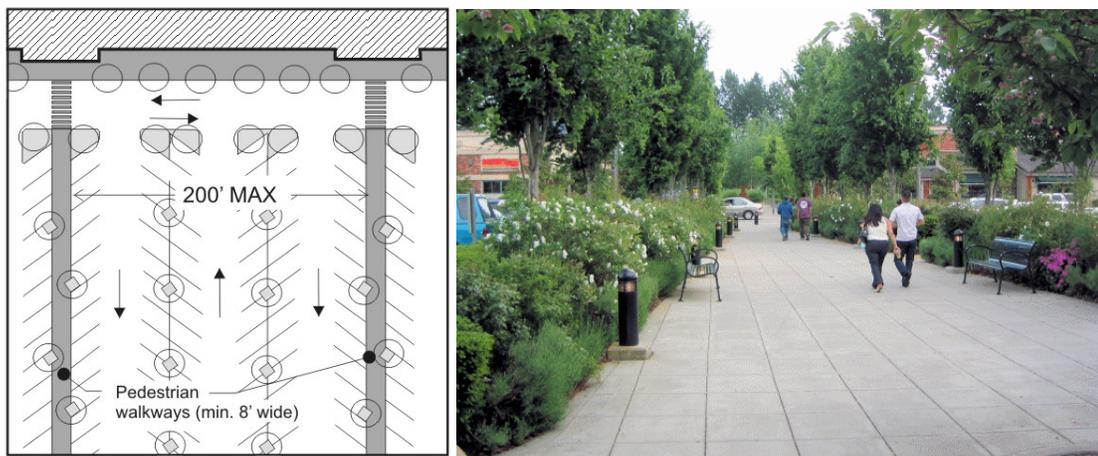


Figure 20.92.110(C)(2)(e). Parking lot pathway standards and good example.

3. Internal pathway width and design.

- a. Internal pathways along the facade of mixed-use and retail buildings 100 feet or more in length (measured along the facade) that are not located adjacent to a street must meet Storefront Street standards set forth in SMC 20.92.070(B)(1).



Figure 20.92.110(C)(3)(a). Internal walkways adjacent to storefronts should be designed to look and function like public sidewalks, including generous walkway widths and street trees.

- b. Landscaping along internal pathways

- i. Internal pedestrian walks shall be separated from structures at least 3 feet by landscaping, except where the adjacent building features a storefront or other treatment, such as the use of a trellis with vine plants on wall or sculptural, mosaic, bas-relief artwork. Other decorative wall treatments will be considered by the Director, provided they add visual interest at a pedestrian scale.

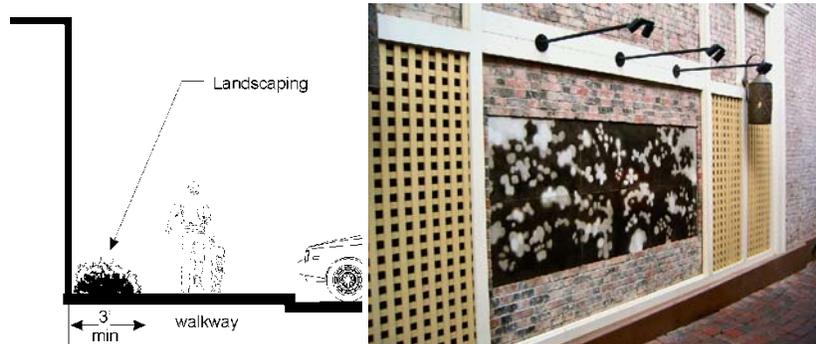


Figure 20.92.110(C)(3)(b). Walkways should be separated from buildings by landscaping, except when adjacent to a storefront or when wall treatments are included that add visual interest to the pedestrians (right image).

- ii. All internal walkways shall feature at least one tree for every 30 feet of walkway on average, provided the total number of trees meets the minimum requirements.
- iii. As an alternative to some of the required street trees, developments may provide pedestrian-scaled light fixtures (as approved by the Director) at the same spacing. However, no less than one tree per 60 lineal feet of the required walkway shall be required.

20.92.120 Landscaping

The following provisions shall supplement the landscaping standards set forth in Subchapter 7 of SMC 20.50. Where there is a conflict, the standards herein shall apply.

A. Street frontage landscaping standards adjacent to surface parking lots.

1. Intent.

- a. To mitigate the visual impact of parking lots on the Town Center's streetscape environment and adjacent residential uses.
- b. To provide landscaping elements in parking lots for shading and other environmental benefits.

2. Parking lot and vehicular access screening standards – where adjacent to streets.

All parking lots and vehicular access areas adjacent to the street shall be screened by one or more of the following design options:

- a. *Option 1:* Provide a 5-foot wide planting bed that incorporates a continuous low wall (approximately 3 feet tall). The planting bed shall be in front of the wall and feature Type II landscaping (see SMC 20.50.460 for details). Alternative landscaping schemes will be considered by the Director provided they meet the intent of the standards. The wall shall be constructed of brick, stone, decorative concrete or concrete block, or other permanent material that provides visual interest and helps to define the street edge as determined by the Director.

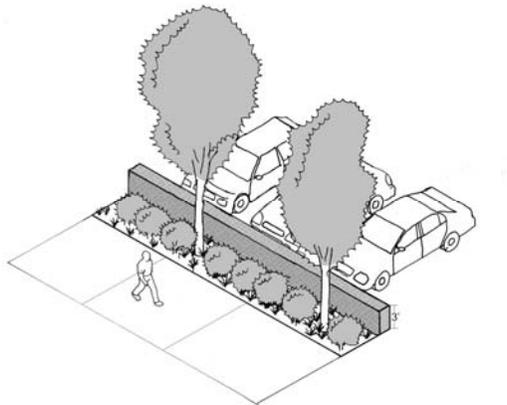


Figure 20.92.120 (A)(2)(a). Parking lot planting buffer with low wall.

- b. *Option 2:* Provide an elevated planter which is a minimum of 5 feet wide and between 2 and 3 feet in height. Ledges that are approximately 12 inches in width are encouraged as they can double as a seating area. The planter must be constructed of masonry, concrete or other permanent material that effectively contrasts with the color of the sidewalk and combines groundcover and annuals, perennials, ornamental grasses, low shrubs, and/or small trees that provide seasonal interest and meets the installation standards set forth in SMC 20.50.520 as determined by the Director.

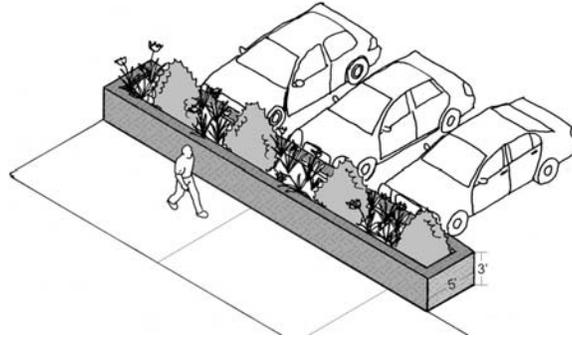


Figure 20.92.120 (A)(2)(b). Elevated parking lot planting buffer.

- c. Option 3: Provide at least 10 feet of Type II landscaping (see SMC 20.50.460 for details).

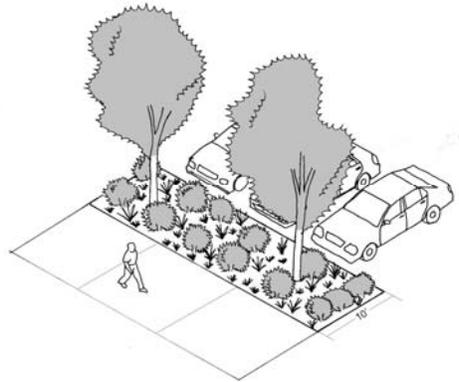


Figure 20.92.120 (A)(2)(c). 10-foot parking lot buffer with Type II landscaping.

All options above should choose and maintain plantings to maintain eye level visibility between the street/sidewalk and parking area for safety. This means that shrubs and other low plantings shall be maintained below 3 feet in height while trees (once they achieve taller heights) shall generally be trimmed to up to the 8-foot level.

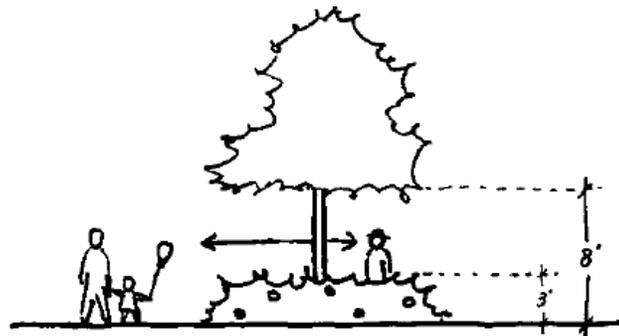


Figure 20.92.120 (A)(2)(d). Parking lot planting buffers shall emphasize the 3:8 rule for visibility and safety.

SUBCHAPTER 2: COMMERCIAL, MIXED-USE, AND MULTIFAMILY DESIGN STANDARDS FOR TOWN CENTER

20.92.130 Side and rear yard compatibility.

Considering the wide range of permitted uses and a desire for compact and coordinated development, it's impossible to develop an effective "one-size fits all" standards for side and rear design. In the long run, there's a desire along the Highway 99 corridor to use the side and rear yards to enhance internal pedestrian and/or vehicular circulation. Rather than fenced and isolated commercial properties, each with their own private parking lots, a configuration with a shared internal drive along the property line with a walkway would be much more desirable. Likewise, a shared walkway between multifamily developments rather than impenetrable landscape buffers is preferred.

However, there will likely be situations where a buffer will be desired between current and proposed uses due to potential conflicts and compatibility issues. Thus the design options included here provide provisions for buffer fencing and/or landscaping screening to allow for flexibility in resolving conflicts (but not as the first design option). Prospective developers need to consider that adjacent uses may redevelop into something completely different over time. The ultimate design of the side and rear yards should take into account this possibility.

A. Intent.

1. To provide side and rear yard design options that enhance the area's pedestrian environment and the setting for development.
2. To provide flexible standards that allow property owners to maximize on-site development opportunities while meeting community design goals.
3. To provide compatibility between conflicting uses.

B. Side and rear yard design options for non-residential and multifamily development.

The standards herein shall supplement setback provisions set forth in table 20.92.040(A). Where there is a conflict, the most specific standard shall apply as determined by the Director. Project applicants shall incorporate one or more of the following design options into the site's design:

1. Provide a zero-lot line fire wall unless minimum setbacks are required for the particular property;
2. Provide a shared internal roadway along the property line;
3. Provide a trail or other shared internal pathway along the property line;
4. Retain existing native or desirable mature vegetation along the side or back property line;
5. Provide Type I or II landscaping at least 7 feet deep along side and rear property lines. A fence may be included with the landscaping. This option may be used only where options (a), (b), or (c) above are not viable as determined by the Director based on the applicable uses involved; and/or

6. Other treatments that meet the intent of the standards as approved by the Director. Factors that shall be considered in determining the appropriate treatment include views, applicable uses, connectivity, environmental conditions, and desired level of privacy.
7. A rain garden or other low impact development measure may be incorporated as part of the treatments above.

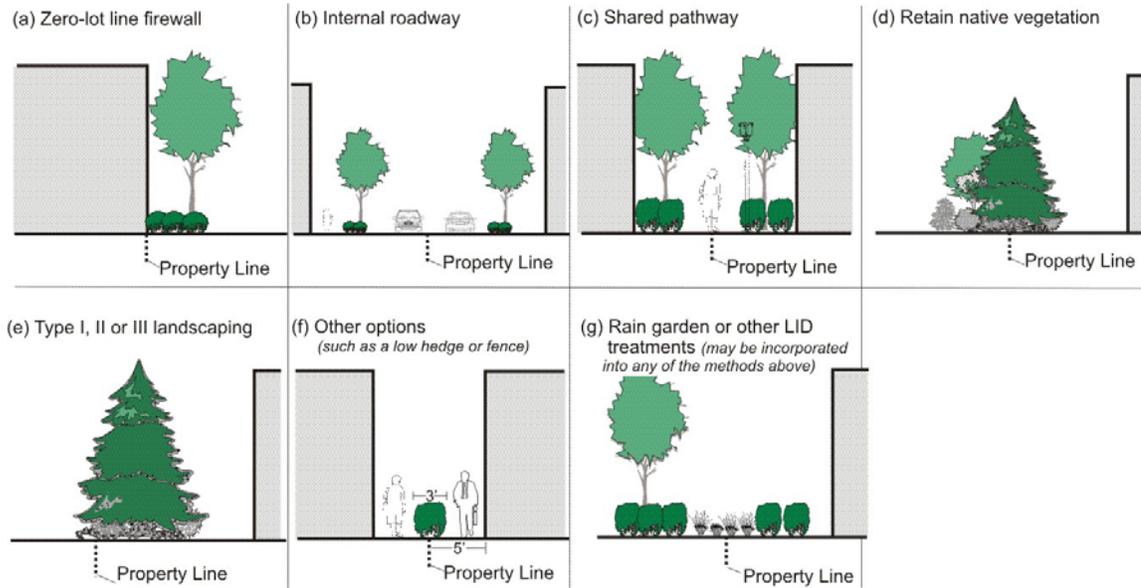


Figure 20.92.130(B). Side and back yard design options for non-residential and multifamily development.

C. Solar access and privacy for multifamily dwelling units along side and rear yards.

- a. Buildings or portions thereof containing dwelling units whose only solar access is from the applicable side of the building (facing towards the side property line) shall be set back from the applicable side or back property lines at least 15 feet; and
- b. Balconies shall be set back at least 10 feet from side or back yard property lines separating adjacent residential or mixed-use properties. Balconies or rooftop decks within 15 horizontal feet of a side or back property line shall utilize opaque guard rails to minimize impacts to privacy on adjacent properties.

The Director may relax or waive these requirements where he or she finds that it achieves no practical increase in privacy. Consideration shall be given to the physical and development conditions on-site and any applicable recorded agreements between property owners.

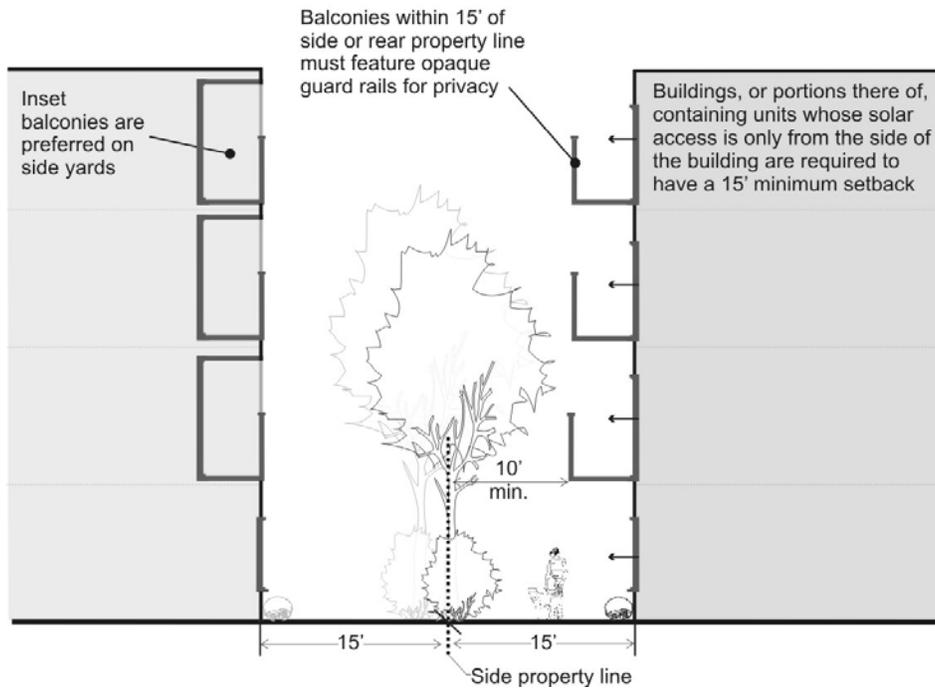


Figure 20.92.130(C). Side yard and setbacks for solar access.

20.92.140 Internal open space standards**A. Intent:**

1. To provide a variety of pedestrian areas within the Town Center.
2. To provide safe, attractive, and usable open spaces that promote pedestrian activity.
3. To create usable space that is suitable for leisure or recreational activities for residents.
4. To create open space that contributes to the residential setting.
5. To promote the use of a variety of types of open spaces for multifamily uses.

B. Public gathering spaces for non-residential uses.

All non-residential development, including commercial portions of mixed use development, shall provide public gathering space (described below) at a rate of 1,000 square feet per one acre of site. These spaces are intended to be publicly accessible spaces that enliven the pedestrian environment by providing (1) opportunities for outdoor dining, socializing, relaxing and (2) visual amenities that contribute to the character of the Town Center.

Design criteria for pedestrian open space:

1. Widened sidewalks. Sidewalk area, where widened beyond minimum requirements, shall count as pedestrian-oriented open space. The additional sidewalk area may be used for outdoor dining and temporary display of retail goods. The standards in paragraphs (b) through (c) below shall not apply to sidewalks, where used as usable open space;
2. Required elements. The following design elements are required for public gathering space:
 - a. Spaces shall be positioned in areas with significant pedestrian traffic to provide interest and security – such as adjacent to a building entry; and
 - b. Pedestrian access to the abutting structures from the street, private drive, or a non-vehicular courtyard;
 - c. Paved walking surfaces of either concrete or approved unit paving;
 - d. Pedestrian-scaled lighting (no more than 14 feet in height) at a level averaging at least 2-foot candles throughout the space. Lighting may be on-site or building-mounted lighting;
 - e. At least three feet of seating area (bench, ledge, etc.) or one individual seat per 60 square feet of plaza area or open space. This provision may be relaxed or waived where there are provisions for movable seating that meet the intent of the standard as determined by the Director;
 - f. Landscaping that adds visual or seasonal interest to the space;

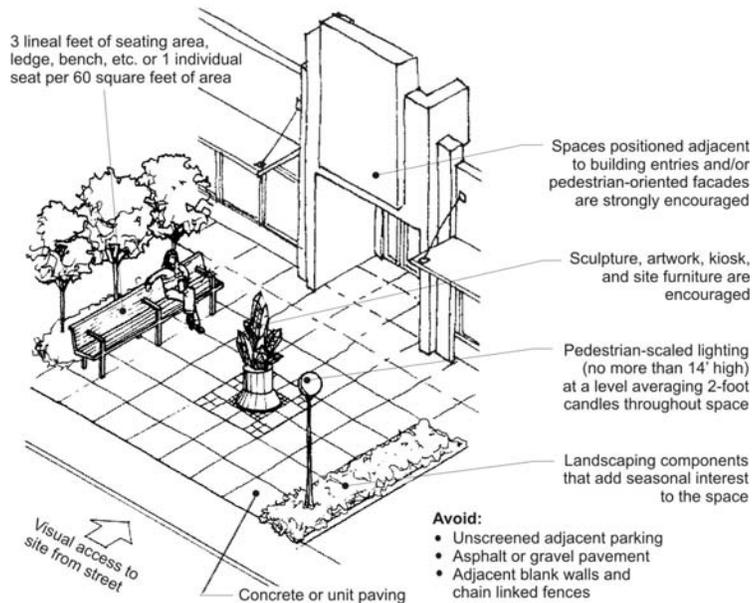


Figure 20.92.140(B)(2). Illustration of key public gathering space standards.

3. Encouraged elements: The following features are encouraged in public gathering space:
 - a. Pedestrian amenities such as a water feature, drinking fountain, and/or distinctive paving or artwork;
 - b. Provide pedestrian-oriented facades on some or all buildings facing the space;
 - c. Consideration of the sun angle at noon and the wind pattern in the design of the space;
 - d. Transitional zones along building edges to allow for outdoor eating areas and a planted buffer;
 - e. Movable seating;
 - f. Incorporation of water treatment features such as rain gardens or the use of an area over a vault as a pedestrian-oriented space; and
 - g. Weather protection, especially weather protection that can be moved or altered to accommodate conditions; and
4. Prohibited elements: The following features are prohibited within public gathering space:
 - a. Asphalt or gravel pavement, except where continuous gravel or asphalt paths intersect with the space;
 - b. Adjacent chain link fences;
 - c. Adjacent blank walls; and
 - d. Adjacent dumpsters or service areas.

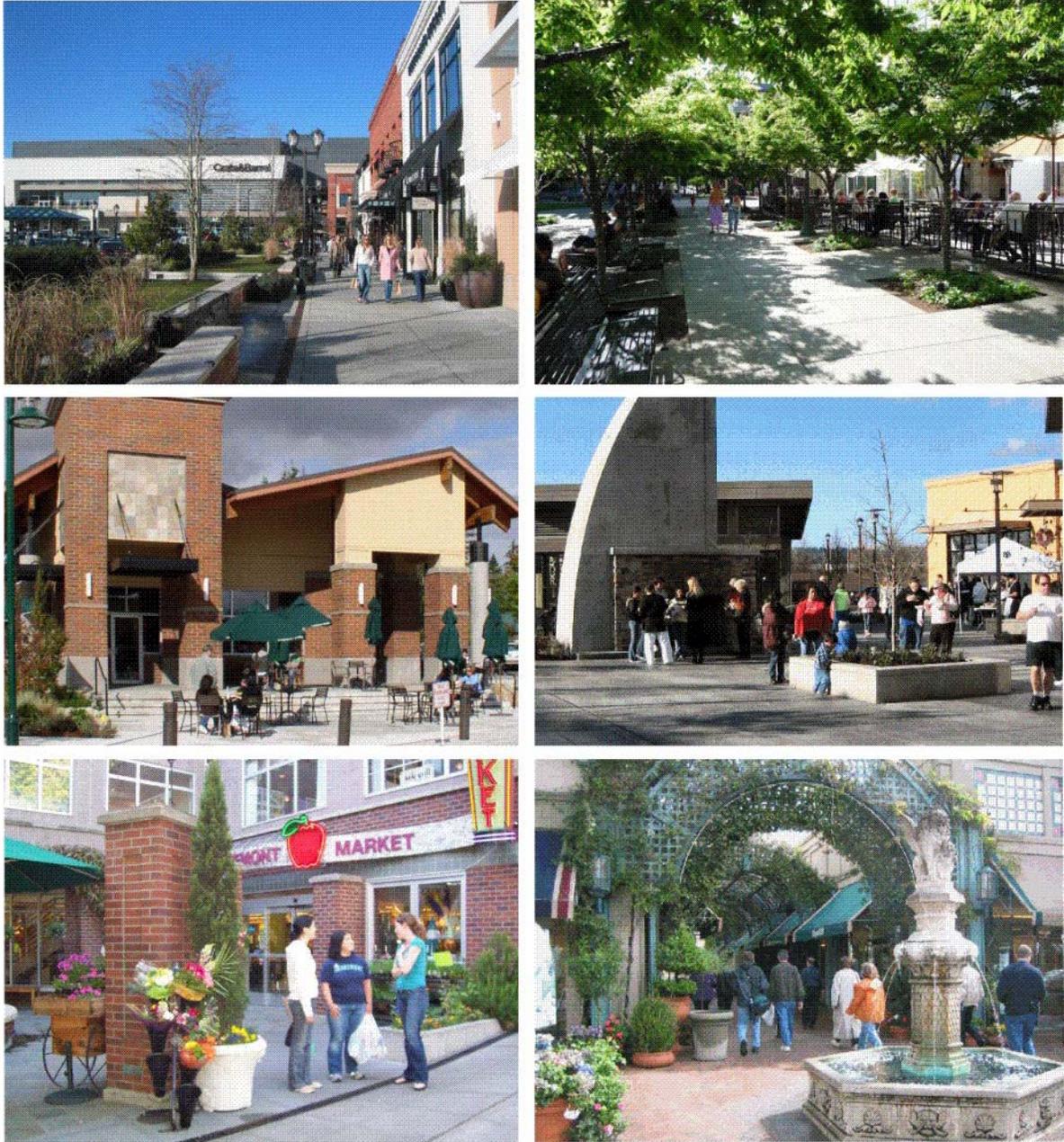


Figure 20.92.140(B)(3). Examples of public gathering space. Clockwise from upper left: University Village (Seattle, WA), Pearl District (Portland, OR), Kent Station (Kent, WA), Walnut Creek (CA), Fremont (Seattle, WA), and Mill Creek Town Center (Mill Creek, WA).

C. Open Space requirements for multifamily uses.

All multifamily development, including multifamily portions of mixed use development, shall provide open space at least equal to 10 percent of the building living space, not counting corridors, lobbies, etc. The required open space may be provided in a combination of the following ways.

Table 20.92.140(C). Types of open spaces that can be used to meet multifamily open space requirements.

Type of open space	Maximum % of requirement
Common open space (a)	Up to 100% of requirement
Private balconies, yards or decks (b)	Up to 50% of requirement (up to 100% for townhouses)
Shared roof decks (c)	Up to 50% of requirement
P-patch space (d)	Up to 50% of requirement
Common indoor recreational space (e)	Up to 25% of requirement

1. Common open space. 100 percent of the required open space may be in the form or common open space available to all residents. Common open space may be in the form of courtyards, front porches, patios, play areas gardens or similar spaces. Special requirements and recommendations for common open spaces include the following:
 - a. Required setback areas shall not count towards the open space requirement unless they are portions of a space that meets the dimensional and design requirements and guidelines herein as determined by the Director;
 - b. Space shall be large enough to provide functional leisure or recreational activity. To meet this requirement, no dimension shall be less than 15 feet in width (except for front porches);
 - c. Spaces (particularly children’s play areas) shall be visible from at least some dwelling units and positioned near pedestrian activity;
 - d. Spaces shall feature paths, landscaping, seating, lighting and other pedestrian amenities to make the area more functional and enjoyable;
 - e. Individual entries may be provided onto common open space from adjacent ground floor residential units, where applicable. Small, semi-private open spaces for adjacent ground floor units that maintain visual access to the common area are strongly encouraged to enliven the space. Low walls or hedges (less than three feet in height) are encouraged to provide clear definition of semi-private and common spaces;
 - f. Separate common space from ground floor windows, automobile circulation, service areas and parking lots with landscaping, low-level fencing, and/or other treatments as approved by the Director that enhance safety and privacy (both for common open space and dwelling units);

- g. Space should be oriented to receive sunlight, facing east, west, or (preferably) south, when possible;
- h. Stairways, stair landings, above grade walkways, balconies and decks shall not encroach into the common open space. An atrium roof covering may be built over a courtyard to provide weather protection provided it does not obstruct natural light inside the courtyard. Front porches are an exception; and
- i. Common front porches qualify as common open space provided they are accessible to all residents and no dimension is less than eight feet.
- j. Stormwater runoff tracts may be credited for as common open space provided the space meets applicable common open space standards herein and exception criteria in SMC 20.50.160(A)(3).

Common open space associated with a mixed-use building may also be used to meet public gathering space requirements for non-residential uses provided the space also meets the standards set forth in sub-section B above. (Same area may be used to meet two different requirements.)



Figure 20.92.140(C)(1)(a). The courtyard associated with this mixed-use building may be counted towards non-residential open space requirements (sub-section B above) and multifamily open space requirements.



Figure 20.92.140(C)(1)(b). Good examples of common open space. Clockwise from upper left: Vancouver (WA), Redmond (WA), unknown, and Redmond (WA)



Figure 20.92.140(C)(1)(c). This courtyard is too narrow to function as usable open space, particularly given the height of the building.

2. Private balconies, yards, or decks. Up to 50 percent of the required open space may be provided by private balconies (up to 100% of required open space for townhouses and other ground-based multifamily units);

3. Shared rooftop decks. Up to 50 percent of the required open space may be provided by shared roof decks located on the top of buildings which are available to all residents and meet the following requirements:
 - i. Space shall be ADA accessible to all dwelling units;
 - ii. Space shall provide amenities such as seating areas, landscaping, and/or other features that encourage use as determined by the Director;
 - iii. Space shall feature hard surfacing appropriate to encourage resident use; and
 - iv. Space shall incorporate features that provide for the safety of residents, such as enclosures and appropriate lighting levels.
4. P-patch space. Up to 50 percent of the required open space may be provided by P-patch space meeting the following requirements:



Figure 20.92.140(C)(4). Rooftop P-patch example.

5. Common indoor recreational areas. Up to 25 percent of the required open space may be provided by common indoor recreation areas. Standards:
 - a. The space shall meet ADA standards and shall be located in a visible area, such as near an entrance, lobby, or high traffic corridors;
 - b. Space shall be designed specifically to serve interior recreational functions and not merely be leftover unrentable space used to meet the open space requirement. Such space shall include amenities and design elements that will encourage use by residents as determined by the Director; and
 - c. Senior and special needs housing may include social areas, game and craft rooms, and other multipurpose entertainment and educational areas as part of their required recreational space.

20.92.150 Lighting standards.

A. Intent.

1. To encourage the judicious use of lighting in conjunction with other security methods to increase site safety.
2. To encourage the use of lighting as an integral design component to enhance buildings, landscaping, or other site features.
3. To reduce the horizontal glare and vertical light trespass from a development onto adjacent parcels and natural features.

B. Site lighting levels.

1. All publicly accessible areas shall be lighted with average minimum and maximum levels as follows:
 - a. Minimum (for low or non-pedestrian and vehicular traffic areas) of one-half foot candles;
 - b. Moderate (for moderate or high volume pedestrian areas) of one to two foot candles; and
 - c. Maximum (for high volume pedestrian areas and building entries) of four foot candles;
2. Lighting shall be provided at consistent levels, with gradual transitions between maximum and minimum levels of lighting and between lit areas and unlit areas. Highly contrasting pools of light and dark areas shall be avoided; and
3. Site lighting shall be metal halide or LED unless an alternative is approved by the Director.

C. Light quality and shielding.

1. All fixtures in the Town Center shall be full cut-off, dark sky rated and mounted no more than 25 feet above the ground, with lower fixtures preferable so as to maintain a human scale. Requests for higher lighting fixtures may be considered with the approval of the Director;

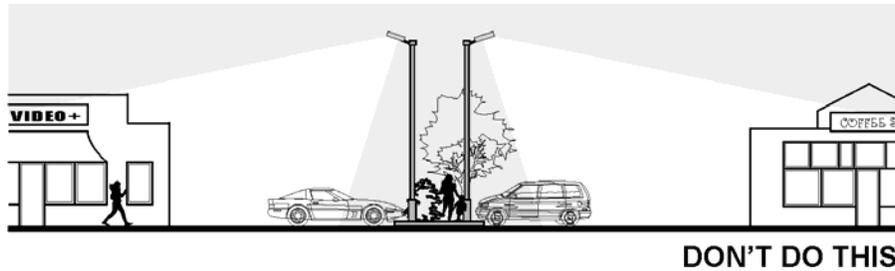
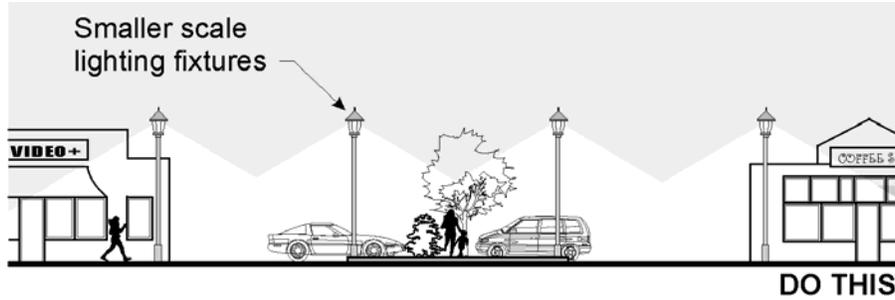


Figure 20.92.150. Acceptable and unacceptable parking lot lighting.

2. Pedestrian-scaled lighting (light fixtures no taller than 15 feet) is required in areas of pedestrian activity, including “pedestrian-oriented open spaces” and “collective open spaces.” Lighting shall enable pedestrians to identify a face 45 feet away in order to promote safety;
3. Lighting should be designed to minimize trespass onto adjacent private parcels, except for shared use facilities such as a pathway, parking lot, or common service area. All building lights shall be directed onto the building itself and/or the ground immediately adjacent to it.
4. Solar-powered and high-energy-efficient lighting is encouraged. The Director may allow a modest lowering of light level standards for solar –powered lights.

20.92.160 Service areas and mechanical equipment.**A. Intent.**

1. To minimize the negative visual, noise, odor, and physical impacts of service elements on adjacent land uses and the pedestrian environment.
2. To screen the potential negative impacts of visible service and storage elements.
3. To encourage thoughtful siting of service and storage elements that balance functional needs with the desire to screen its negative impacts.

B. Multifamily uses

Multifamily uses are subject to service element provisions set forth in SMC 20.50.150 and provisions below. Where there is a conflict with provisions herein, the provisions in this section shall apply.

C. Service element location and design.

All developments shall provide a designated spot for service elements (trash and recycling). Such elements shall meet the following requirements:

1. Service element location. Service areas shall be located to minimize the negative visual, noise, odor, and physical impacts to the street environment, adjacent (on and off-site) residents or other uses, and pedestrian areas.

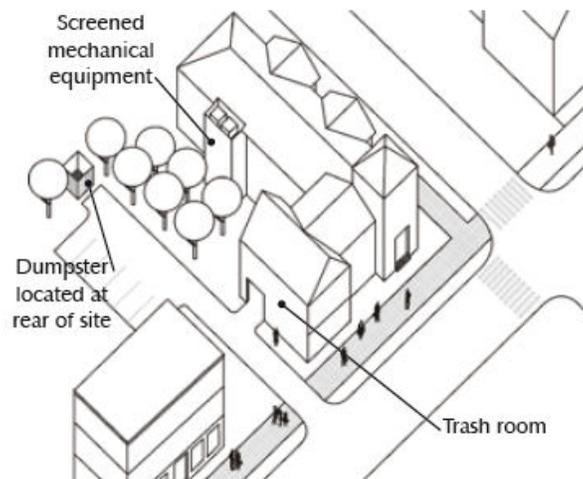


Figure 20.92.160(C)(1). Locate service areas and mechanical equipment to minimize impacts on the pedestrian environment.

2. Service area paving. The designated spot for service elements shall be paved with concrete.

3. Trash/recycling enclosure. Appropriate enclosure of the common trash and recycling elements shall be required, as determined by the Director. Requirements and considerations:
 - a. Preferably, service enclosures are integrated into the building itself.
 - b. Service areas visible from the street, pathway, pedestrian-oriented space or public parking area (alleys are exempt) shall be enclosed and screened around their perimeter by a wall or fence at least six feet high. Developments shall use materials and detailing consistent with primary structures on-site. Acceptable materials include brick, concrete block or stone.
 - c. The sides and rear of visible enclosure walls must be screened with 3 feet of Type I, II or other landscaping that effectively soften the views of the screening element and add visual interest, as determined by the Director.
 - d. Collection points shall be located and configured so that the enclosure gate swing does not obstruct pedestrian or vehicle traffic, or does not require that a hauling truck project into any public right-of-way.
 - e. Weather protection of recyclables shall be ensured by using weather-proof containers or by providing a roof over the storage area.
 - f. Proximity to adjacent residential units will be a key factor in determining appropriate service element treatment.



Figure 20.92.160(C)(3). Trash/recycling closure example with consistent use of materials (note stonework) and landscape screening.

D. Utility meters and other service utility apparatus.

These elements shall be located and/or designed to minimize their visibility to the public. Preferred locations are off alleys, service drives, within or under buildings or other locations away from the street. Project designers are strongly encouraged to coordinate with applicable service providers early in the design process to determine the best approach in meeting these standards. If such elements are mounted in a location visible from the street, pedestrian pathway, common open space, or shared auto courtyards, they shall be screened with vegetation or by architectural features to the satisfaction of the Director.

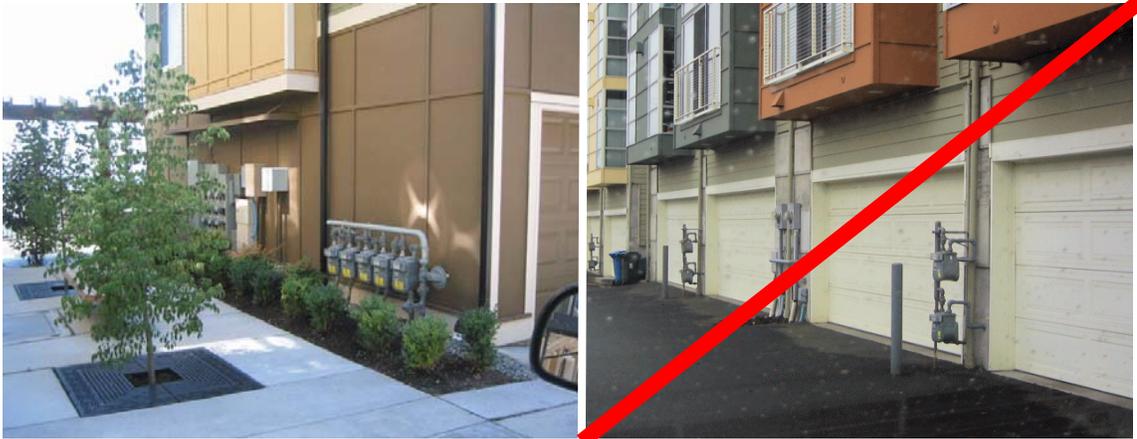


Figure 20.92.160(D). Good and bad utility meter configurations. The examples on the left are consolidated and somewhat screened by landscaping elements, whereas the right examples are exposed and degrade the character of these townhomes.

E. Rooftop mechanical equipment.

All rooftop mechanical equipment shall be organized, proportioned, detailed, screened, landscaped (with decks or terraces) and/or colored to be an integral element of the building and minimize visual impacts from the ground level of adjacent streets and properties. For example, screening features should utilize similar building materials and forms to blend with the architectural character of the building.

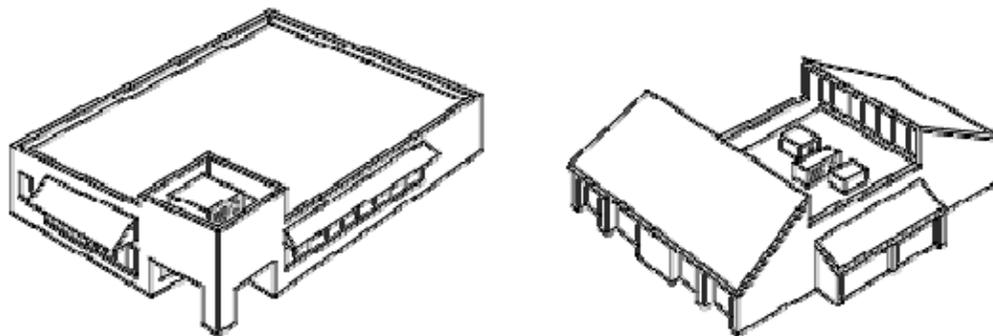


Figure 20.92.160(E). Screening examples of rooftop mechanical equipment.

20.92.170 Building Design - Architectural character.

A. Intent.

1. To emphasize a high quality building articulation, detailing, and materials rather than a single specific architectural style in the Town Center.
2. To avoid generic corporate architectural styles that are difficult to adapt to new uses and degrade the character and identity of the Town Center.

B. Allow for a diversity of architectural styles.

The focus is to promote architecture with a strong sense of human scale, fine detailing, quality materials, sensitive to the environment, oriented to pedestrians, and designed appropriate to each site's unique context. This approach is intended to allow for a diversity of architectural styles provided they meet the design standards of this chapter.

C. No corporate architecture.

Architecture that is defined predominately by corporate identity features (and difficult to adapt to other uses) is prohibited. For example, some fast food franchises have very specific architectural features that reinforce their identity. Buildings that act as signs are prohibited.



Figure 20.92.170(C). The red mansard roofs commonly used by franchise Pizza Huts and McDonalds are examples of corporate architecture that are difficult to adopt to new uses without major costs or they will always be associated with the original franchise business. The McDonalds example on the right is an example of a design that has been adapted to meet local design guidelines.

20.92.180 Building Design - Architectural scale.

A. Intent.

1. To reduce the scale of large buildings and add visual interest.
2. To enhance the visual character of Shoreline.

B. Building articulation – storefronts.

All buildings adjacent to designated Storefront Streets per Figure 20.92.030 or featuring a storefront built up to the sidewalk edge: Buildings must include articulation features no more than every 40 feet to create a pattern of small storefronts. Buildings less than 60 feet wide are exempt from this standard. At least two of the following methods must be employed:

1. Use of window and/or entries that reinforce the pattern of 40-foot storefront spaces.
2. Use of weather protection features that reinforce 40-foot storefronts. For example, for a business that occupies 120 feet of frontage, use three separate awnings to break down the scale of the storefronts. Alternating colors of the awnings may be useful as well.
3. Change of roofline per subsection E below.
4. Use of vertical piers that reinforce storefront pattern.
5. Change in building material or siding style.
6. Other methods that meet the intent of the standards as approved by the Director.



Figure 20.92.180(B). Good and bad storefront articulation examples.

DEPARTURES will be considered by the City provided the design meets the intent of the standards. For example, the proposed articulation may be longer, but if the building features attractive detailing, materials, interesting roofline treatments, and interesting storefront design helps the design fit into the site's context and contributes to the pedestrian environment and existing/desired character, then perhaps it should be an approved departure.

C. Building articulation – other non-residential /mixed-use buildings.

All other buildings featuring non-residential uses on the ground floor [not covered in paragraph (2) above] shall include at least three of the following articulation features along all facades containing the public building entries (alley facades are exempt) at intervals of no more than 60 feet.

1. Providing vertical building modulation of at least 2 feet in depth and 4 feet in width if combined with a change in siding materials and/or roofline modulation per subsection E below. Otherwise, the vertical modulation shall be at least 10 feet deep and 15 feet wide, to qualify.
2. Providing horizontal modulation (upper level stepbacks). To qualify for this measure, the minimum upper level stepback shall be at least 5 feet and the treatment shall be used consistently with other articulation elements or utilized along at least 75 percent of the façade.
3. Repeating distinctive window patterns at intervals less than the articulation interval.
4. Providing a covered entry or separate weather protection feature for each articulation interval.
5. Use of vertical piers that reinforce storefront pattern. To qualify for this measure, the piers must project at least 2 inches from the façade and extend from the ground to the roofline.
6. Change of roofline per subsection E below.
7. Changing materials and/or color with a change in building plane.
8. Providing lighting fixtures, trellis, tree, or other landscape feature within each interval.
9. Other methods that meet the intent of the standards as approved by the Director.

DEPARTURES will be considered by the City provide the design meets the intent of the standards. Elements to consider are the level of detailing, quality of building materials, design of storefronts, and integration with/or enhancement of, the surrounding context.

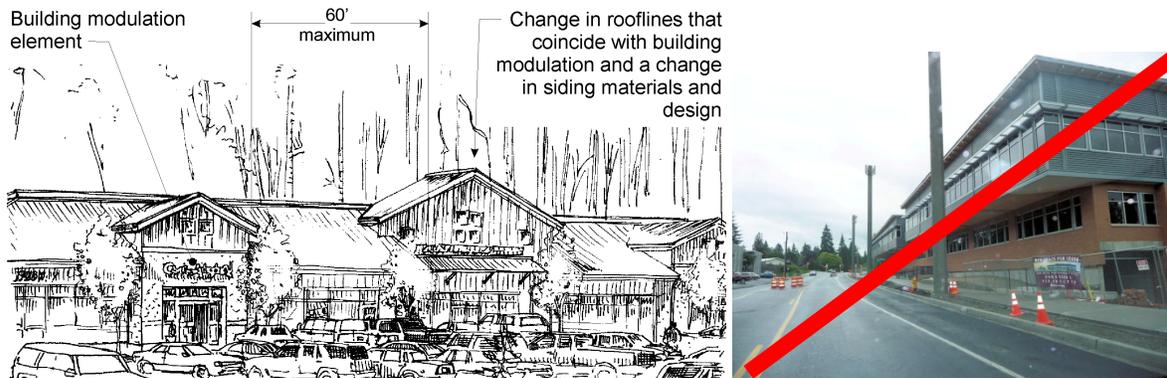


Figure 20.92.180(C). Building articulation example for other non-storefront commercial facades (left image). The right image does not include acceptable articulation techniques.

D. Building articulation – multifamily buildings.

All multifamily buildings and residential portions of mixed-use buildings shall include at least three of the following articulation features at intervals of no more than 35 feet along all facades facing a street, park, common open space, and common parking areas:

1. Repeating distinctive window patterns at intervals less than the required interval.
2. Providing vertical building modulation. Minimum depth and width of modulation is 18 inches and 4 feet (respectively) if tied to a change in color or building material and/or roofline modulation as defined in subsection E below. Otherwise, minimum depth of modulation is 10 feet and minimum width for each modulation is 15 feet. Balconies may not be used to meet modulation option unless they are recessed or projected from the façade and integrated with the building's architecture as determined by the Director. For example, "cave" balconies or other balconies that appear to be "tacked on" to the façade will not qualify for this option.
3. Change of roofline per subsection E below.
4. Providing horizontal modulation (upper level step-backs). To qualify for this measure, the minimum upper level stepback shall be at least 5 feet and the treatment shall be used consistently with other articulation elements or utilized along at least 50 percent of the façade.
5. Articulation of the building's top, middle, and bottom. This typically includes a distinctive ground floor or lower floor design, consistent articulation of middle floors, and a distinctive roofline. The maximum articulation interval does not apply to this method;
6. Horizontal modulation (upper level step-backs). To qualify for this measure, the minimum horizontal modulation (setback) shall be five feet;
7. Other methods that effectively reduce the perceived scale of the building and add visual interest as determined by the Director; and/or

DEPARTURES will be considered by the City provide the design meets the intent of the standards. Elements to consider are the level of detailing, quality of building materials, types of articulated features, and integration with/or enhancement of, the surrounding context.



Figure 20.92.180(D)(1). Residential building articulation.



Figure 20.92.180(D)(2). Acceptable and unacceptable examples of residential building articulation.

E. Roofline modulation.

1. In order to qualify as an articulation feature in subsections B, C, or D above, rooflines shall be varied by emphasizing dormers, chimneys, stepped roofs, gables, prominent cornice or wall, or a broke or articulated roofline.
2. The width of any continuous flat roofline should extend no more than 120 feet without modulation. Modulation shall consist of one of the following:
 - a. A change in elevation of the visible roofline of at least four feet if the particular roof segment is less than 50 feet wide and at least eight feet if the particular roof segment is greater than 50 feet in length;
 - b. A sloped or gabled roofline segment of at least 20 feet in width and no less than four feet vertical in 12 feet horizontal;
 - c. A combination of the above; or
 - d. Other modulation measures approved by the Director.

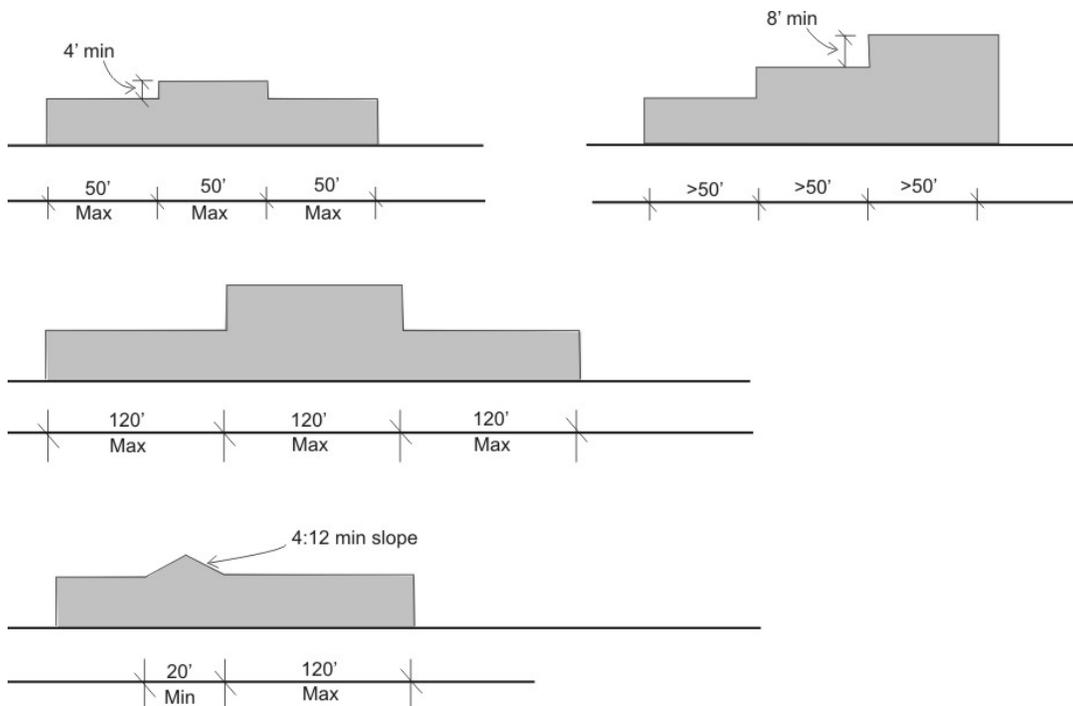


Figure 20.92.180(E). Roofline modulation standards.

F. Maximum façade width.

The maximum façade width (the façade includes the apparent width of the structure facing the street and includes required modulation) is 120 feet. Buildings exceeding 120 feet in width along the street front shall be divided by a minimum 30-foot wide modulation of the exterior wall, so that the maximum length of a particular façade is 120 feet. Such modulation shall be at least 20 feet or deeper and extend through all floors. Other design features will be considered by the Director that effectively break up the scale of the building and add visual interest. The Director may waive this provision for special conditions, such as a parking garage or institutional building if the structure is screened from view or located in a visually obscure location. In order to grant such a waiver, the Director shall find that the building's use and purpose warrant a continuous building perimeter.

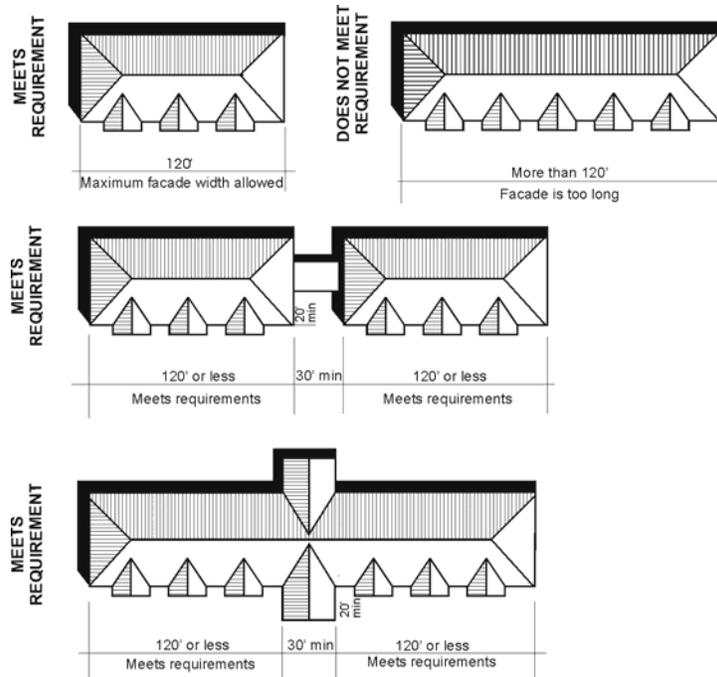


Figure 20.92.180(F)(1). Maximum façade width standards.



Figure 20.92.180(F)(2). Acceptable and unacceptable examples of meeting maximum façade width standards. The left and center images use a combination of substantial façade modulation and changing façade articulation and window fenestration techniques, while the repetitive smaller scale articulation techniques in the right image aren't successful in reducing the perceived bulk of the building and adding visual interest.

20.92.190 Building Design - Façade details.**A. Intent:**

To encourage the incorporation of design details and small scale elements into building facades that are attractive on a pedestrian scale.

B. Details toolbox.

All non-residential and mixed-use buildings shall be enhanced with appropriate details. All new buildings shall employ at least one detail element from each of the three categories below for each façade facing a street or public space. For example, a large building with multiple storefronts will likely need more than one decorative sign, one transom window, and one decorative kick-plate to meet the intent of the standards.

1. Window and/or entry treatment:

- a. Display windows divided into a grid of multiple panes;
- b. Transom windows;
- c. Roll-up windows/doors;
- d. Other distinctive window treatment that meets the intent of the standards;
- e. Recessed entry;
- f. Decorative door;
- g. Arcade;
- h. Landscaped trellises or other decorative element that incorporates landscaping near the building entry; and/or
- i. Other decorative or specially designed entry treatment that meets the intent of the standards.

2. Building elements and façade details:

- a. Custom-designed weather protection element such as a steel canopy, or cloth awning;
- b. Decorative, custom hanging sign(s);
- c. Decorative building-mounted light fixtures;
- d. Bay windows, trellises, towers, and similar elements; and/or
- e. Other details or elements that meet the intent of these standards, as determined by the Director.

3. Building materials and other facade elements:

- a. Decorative building materials/use of building materials. Examples include decorative use of brick, tile, or stonework;
- b. Artwork on building (such as a mural) or bas-relief sculpture;
- c. Decorative kick-plate, pier, beltcourse, or other similar feature;

- d. Hand-crafted material, such as special wrought iron or carved wood; and/or
- e. Other details that meet the intent of the standards as determined by the Director.

“Custom,” “decorative,” or “hand-crafted” elements referenced above shall be distinctive or “one-of-a-kind” elements or unusual designs that require a high level of craftsmanship as determined by the Director.

The Director shall maintain a library of approved detail features to be used as examples for future proposals and to provide a level of consistency in applying these standards.



Figure 20.92.190(B). Façade detailing examples. The left image uses decorative brick columns, retractable awnings, and a decorative steel canopy. The center images uses decorative stonework, lighting, and windows (curved). The right image uses retractable storefront windows, a glass/steel canopy, decorative lights, and decorative columns.

C. Window design.

Buildings shall employ techniques to recess or project individual windows above the ground floor at least two inches from the façade or incorporate window trim at least four inches in width that features color that contrasts with the base building color. Exceptions will be considered by the Director where buildings employ other distinctive window or façade treatment that adds a sense of depth to the façade and/or visual interest to the building.



Figure 20.92.190(C). Acceptable and unacceptable window design examples.

D. Secondary public access for commercial buildings.

Whereas these standards require or encourage businesses to front on streets rather than parking lots, a large number of customers will likely use the “secondary” entry off of a parking lot. Such businesses that have secondary public access shall comply with the following measures to enhance secondary public access (applies only to entries used by the public):

1. Weather protection at least three feet deep is required over each secondary entry;
2. There shall be at least two foot-candles illumination on the ground surface; and
3. One or more of the design elements noted in sub-section B above shall be incorporated within or adjacent to the secondary entry.



Figure 20.92.190(D). Acceptable and unacceptable examples of secondary public access (no weather protection in right image).

20.92.200 Building Design - Materials & colors.

A. Intent.

1. To encourage high-quality building materials that enhance the character of the area.
2. To discourage poor materials with high life-cycle costs.
3. To encourage the use of materials that reduce the visual bulk of large buildings.

B. Metal siding standards.

If metal siding is used, it shall have visible corner moldings and trim and shall not extend lower than two feet above grade. Masonry, concrete, or other durable material shall be incorporated between the siding and the ground plane. Metal siding shall be factory finished, with a matt, non-reflective surface.



Figure 20.92.200(B). Proper (left and center images) and improper (right image) use of metal siding. The left and center images use masonry or concrete near the ground and proper trimming around windows and corners. The orange metal siding in the right image extends to the ground level.

C. Concrete block standards.

1. When used for the primary façade (containing the primary pedestrian entrance), buildings are encouraged to incorporate a combination of textures and/or colors to add visual interest. For example, combining split or rock-façade units with smooth blocks can create distinctive patterns;

Specifically, a singular style and texture of concrete block may comprise no more than 50 percent of a façade facing a street or open space; and
2. Concrete block use on the side of fire walls/zero-lot line walls (when visible from a public street, pedestrian plaza, or parking area) shall include changes in textures and shapes, colors, and/or other masonry materials to add visual interest as determined by the Director.



Figure 20.92.200(C). Acceptable use of concrete block on facades. The left image uses smooth gray blocks on the vertical columns and beige split-faced blocks above the awnings. The storefront in the right image uses gray split face (but less than 50 percent of the façade) and some lighter, square, smooth-faced blocks below the storefront windows.

D. Standards for synthetic stucco.

1. Proper trimming. Synthetic stucco (Exterior Insulation and Finish system or “EIFS”) must be trimmed in wood, masonry, or other material and must be sheltered from extreme weather by roof overhangs or other methods and are limited to no more than 50 percent of façades containing a customer or resident entry;
2. Minimize weather exposure. Horizontal surfaces exposed to the weather must be avoided; and
3. Treatment near ground level. Synthetic stucco shall not extend below 2 feet above the ground plane. Concrete, masonry, or other durable material must be used below the 2-foot-above-grade line to provide a durable surface where damage is most likely.



Figure 20.92.200(D). Acceptable (left) and unacceptable (right) use of synthetic stucco. The left image employs concrete near the ground level and a variety of other surface materials on the façade. The right image uses synthetic stucco for more than 50 percent of the façade and some surfaces extend to the ground level.

E. Wood products standards.

1. Use only exterior-grade wood products;
2. Plywood sheathing, “T-111,” and other sheet wood products shall not be used for exterior cladding, except as authorized by the Director. Architectural-grade panels, such as “Hardy Plank,” specifically fabricated and detailed for exterior cladding are generally acceptable;
3. Finish wood with exterior-grade sealer, stain, or paint; and
4. Exposed wood member edges shall be detailed to prevent weathering and deterioration.

F. Roof color – solar reflectance.

The Solar Reflectance Index (SRI) for flat roofs should be a minimum of 78. The SRI for sloped roofs should be a minimum of 29.

G. Prohibited materials.

The following materials are prohibited (in addition to any prohibited materials noted above):

1. Mirrored glass, where used for more than 10 percent of the façade area;
2. Chain-link fencing (except for temporary fencing and for parks);
3. Fiberglass products and similar sheet products; and
4. Back-lit vinyl awnings used as signs.

20.92.210 Building Design - Blank wall treatment.

A. Intent.

To encourage high-quality building materials that enhance the character of the area.

B. Blank wall definition:

A wall (including building façades and retaining walls) is considered a blank wall if:

1. A ground floor wall or portion of a ground floor wall over six feet in height has a horizontal length greater than 15 feet and does not include a transparent window or door with glazing; or
2. Any portion of a ground floor wall having a surface area of 400 square feet or greater does not include a transparent window or door with glazing.

C. Blank wall treatments:

Untreated blank walls visible from a public street, park or pedestrian pathway are prohibited. Methods to treat blank walls can include:

1. Display windows at least 18 inches deep and integrated into the façade (tack on display cases don't qualify);
2. Landscape planting bed at least five feet wide or a raised planter bed at least two feet high and three feet wide in front of the wall with planting materials that are sufficient to obscure or screen at least 75 percent of the wall's surface within three years;
3. Installing a vertical trellis in front of the wall with climbing vines or plant materials; and/or
4. Special building detailing that adds visual interest at a pedestrian scale as determined by the Director. Such detailing shall use a variety of surfaces; monotonous designs will not meet the intent of the standards.

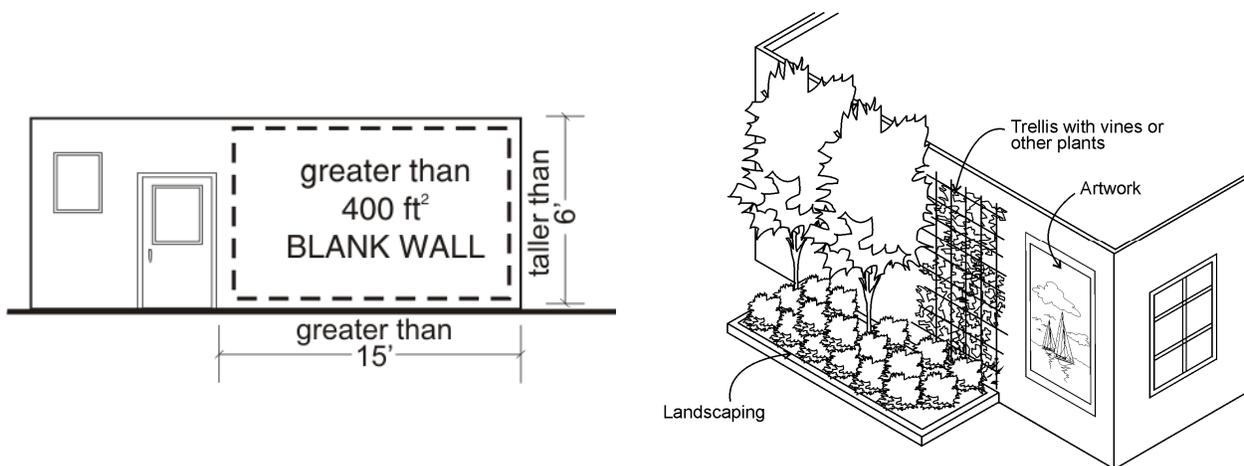


Figure 20.92.210(C)(1). Blank wall definition and examples of acceptable treatments.



Figure 20.92.210(C)(1). Acceptable (left and center) and unacceptable (right) blank wall treatments. The left wall uses colorful artwork. The center image uses a combination of façade materials, colors, and landscaping elements. The concrete wall on the right image creates a harsh and unwelcoming streetscape environment.

20.92.220 Fences.

A. Intent:

1. To mitigate the visual impact of fences on the streetscape environment.
2. To allow for low fences in front yards, which delineate public space from semi-private space, while maintaining eye-level visibility for safety.
3. To provide an opportunity for screen fencing to mitigate impacts between uses, where desirable.

B. Fences within the Town Center shall comply with the provisions of SMC 20.52.210, except:

1. Fences between a public street and a building shall be a maximum of three feet, six inches high.
2. Solid fences taller than three feet, six inches, visible from a public street, park, pedestrian pathway, or customer parking lot shall be screened with at least 5 feet of Type I or II landscaping per SMC 20.50.460 or other blank wall treatments set forth in SMC 20.92.210 that meet the intent of the standards as determined by the Director.
3. Fences along side and rear property lines are subject to the side and rear yard compatibility provisions in SMC 20.92.130.

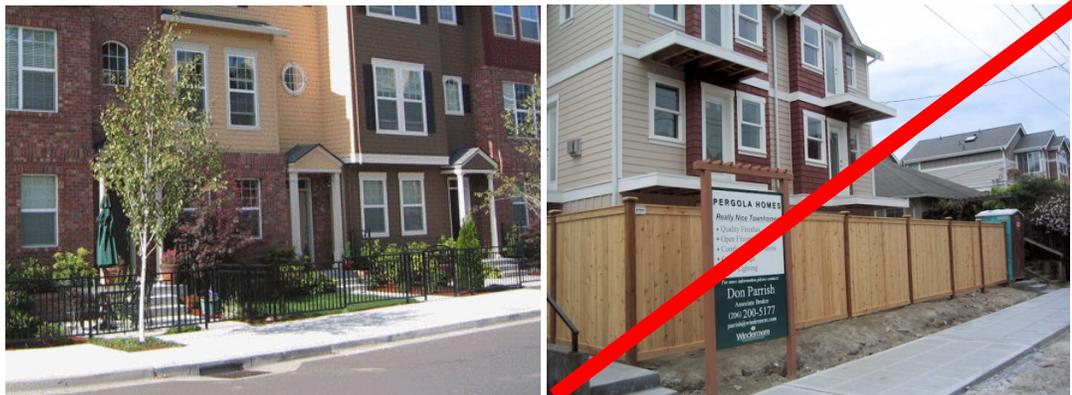


Figure 20.92.070(O). Acceptable and unacceptable fences in front yards.

SUBCHAPTER 3: SIGNAGE

20.92.230 Signage standards - Intent

- A. To encourage signage that is both clear and of appropriate scale for the project.
- B. To enhance the visual qualities of signage through the use of complementary sizes, shapes, colors, and methods of illumination.
- C. To encourage quality signage that contributes to the character of Shoreline's Town Center.

20.92.235 Signage standards - Applicability

The sign standards herein shall supplement the provisions of SMC 20.50.540. Where there is a conflict, the provisions herein shall apply.

20.92.240 Signage standards – Permitted sign illumination

- A. Signs with individual back-lit letters. Such signs may consist of individual letters mounted on a wall (containing necessary wiring through the wall) or individual letters placed on a raceway, where only light shines through the letters.
- B. Opaque signs where light only shines through letter openings. Box or “can” signs where light shines through the background and individual letters are prohibited.
- C. Shadow lighting, where letters are backlit, but light only shines through the edges of the letters.
- D. Neon signs (letters and accessory graphics).
- E. Externally lit signs. Lighting shall not create a glare problem or be directed towards the sky.
- F. Service Stations. Electronic digital gas prices are permitted within monument signs.

Other types of sign lighting not mentioned above are prohibited.



Figure 20.92.240. Permitted sign illumination techniques including individual backlit letters (left image), opaque signs where only the light shines through the letters (center image), and neon signs (right image).

20.92.250 Monument sign standards

- A. Permitted number of signs:** One sign is permitted per frontage, per property. Additional monument signs are permitted on a property with multiple driveways provided signs are at least 150 feet apart.
- B. Minimum lettering.**
 - 1. A minimum of lettering height of 6 inches for the primary business name and 3 inches for secondary business names is required for readability.
 - 2. Monument signs for individual businesses are encouraged to include the street address number.
- C. Materials and design:** Monument signs shall utilize materials and architectural design elements that are consistent with the architecture of the buildings. The materials and design features must be a prominent visual element of the overall sign. See the figures below for good and bad examples.
- D. Maximum size – individual businesses and multi-tenant development less than 50,000 gross square feet:**
 - 1. Maximum sign height: 6 feet.
 - 2. Maximum size limit: 30 square feet per sign face, up to two faces.
- E. Maximum size – developments larger than 50,000 gross square feet, but less than 100,000 gross square feet.**
 - 1. Maximum sign height: 8 feet.
 - 2. Maximum size limit: 50 square feet per sign face, up to two faces.
- F. Maximum size – developments larger than 100,000 gross square feet.**
 - 1. Maximum sign height: 12 feet.
 - 2. Maximum size limit: 100 square feet per sign face, up to two faces.

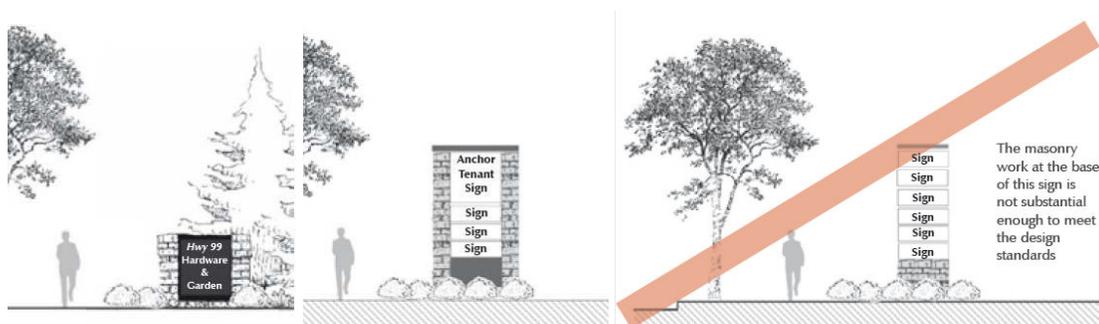


Figure 20.92.250. Acceptable and unacceptable monument sign examples (subject to applicable height and design standards herein).

20.92.260 Wall sign standards**A. Permitted number of signs.**

1. Tenants are allowed a maximum of one wall sign per facade that is visible from a street or customer parking lot.
2. Businesses may include additional smaller signs describing the types of products and/or services that the business offers, provided the sign areas collectively comply with maximum size requirements.
3. Commercial tenants on upper levels may include window signs or wall signs placed on façade above the business provided the permitted sign area shall be shared with tenant below.

B. Location and design.

1. Wall signs shall be centered, proportional, and shaped to the architectural features of the buildings;
2. Wall signs shall not cover windows, building trim, or ornamentation. Appropriate locations include blank areas above canopies, areas between vertical piers or columns, blank areas on a gabled roof, or upper reaches of a false fronted building. Photo examples on this page show acceptable and unacceptable examples; and
3. Wall signs may not extend above the building parapet, soffit, the eave line or the roof of the building.

C. Maximum size – all wall signs.

1. Sign area shall not exceed 1.5 square feet for each lineal foot of the facade (the facade facing the street or as identified by the Director). Signs without internal lighting may contain a sign area of up to 2 square feet for each lineal foot of the facade. These standards apply to the façade as a whole (including those with multiple tenants) and individual retailers. For example, for a multitenant building with a façade 200 feet long, a maximum of up to 300 square feet of internally illuminated sign types are allowed, total. This includes signs for individual retailers and a sign identifying the building or center. The standard shall also apply to individual retailers. For example, if a store occupies 30 feet of frontage, its wall sign can be up to 45 feet if internally illuminated and 60 feet if without internal illumination.
2. Signage not to exceed 2/3 of overall horizontal storefront dimension.
3. Stacked signage is permitted.

D. Mounting:

1. Building signs should be mounted plumb with the building, with a maximum protrusion of 1-foot unless the sign incorporates sculptural elements or architectural devices as determined by the Director.
2. The sign frame shall be concealed or integrated into the building's architectural character in terms of form, color, and materials.

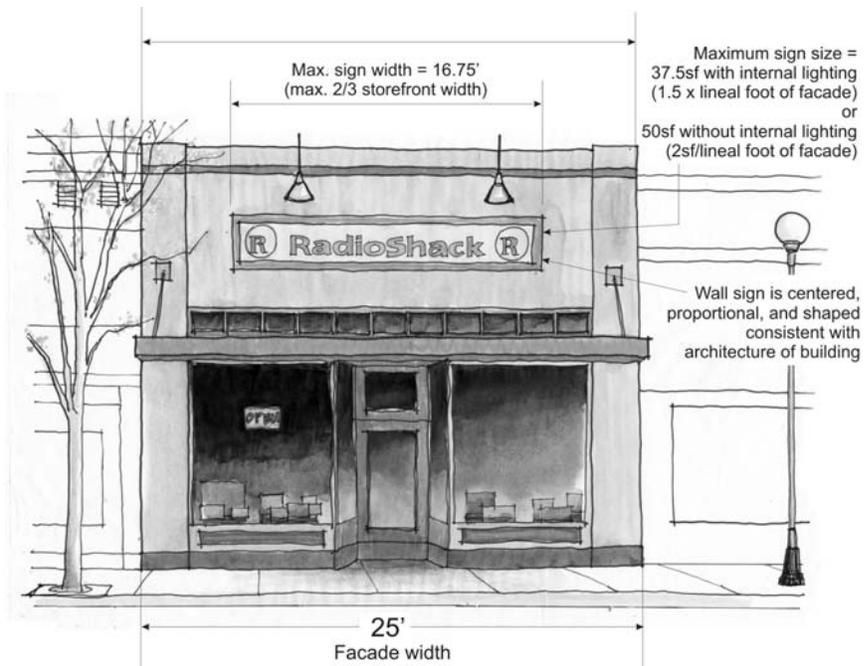


Figure 20.92.260(1). Wall sign standards.

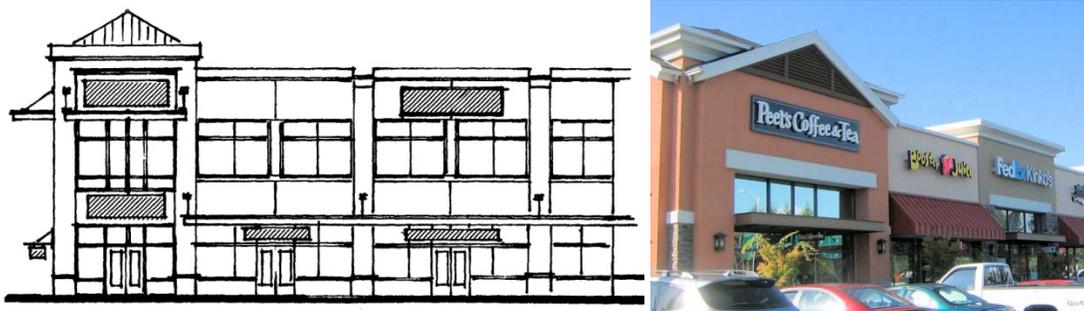


Figure 20.92.260(2). Good wall sign examples. Note how signs are centered on architectural features of the building.



Figure 20.92.260(3). All of these signs are way too big for the storefronts they're located on.

20.92.270 Projecting and banner sign standards

Projecting signs meeting the following conditions are allowed for commercial uses adjacent to and facing a street.

A. Vertical clearance: Shall clear sidewalk by 9 feet.

B. Projection.

1. Horizontal oriented signs: No more than 8 feet.
2. Vertically oriented signs: No more than 3 feet.
3. Banner signs: No more than 4 feet.
4. Signs may project into public rights-of-way for storefront buildings, subject to a street permit.

C. Number of signs: One primary sign advertising business on each frontage. Exceptions:

1. Additional smaller secondary projecting signs may be included on each frontage provided the combined signage meets applicable size limits below.
2. Multiple banner signs may be included provided they utilize consistent mounting brackets and are placed consistent with articulation intervals of the façade (for example, signs mounted on vertical columns).

D. Size: Individual signs shall not exceed an area of 2 square feet per each 10 lineal feet of applicable building frontage.

E. Height: Shall not extend above the building parapet, soffit, the eave line or the roof of the building, except for theaters.

F. Location: Projecting signs shall not be located directly over windows or in conflict with other signs or architectural features of the building as determined by the Director.

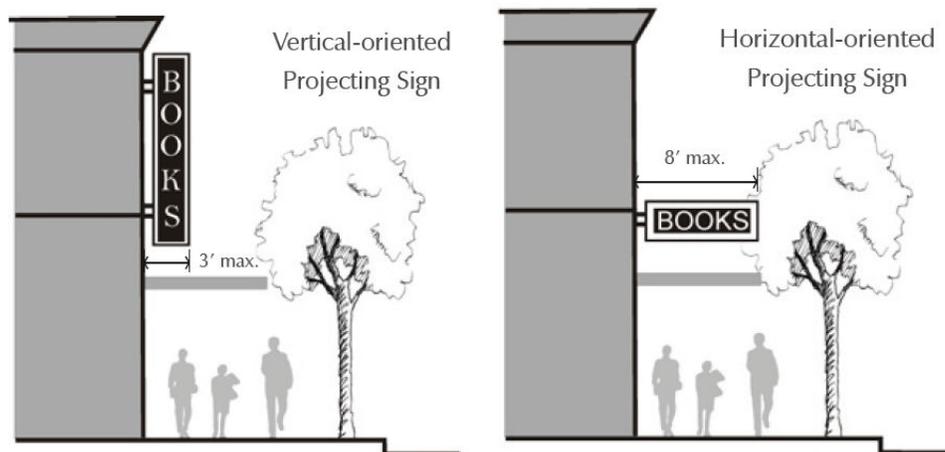


Figure 20.92.270(1). Projecting sign standards.



Figure 20.92.270(2). Projecting sign examples.



Figure 20.92.270(3). Banner sign examples.

20.92.280 Marquee or awning sign standards

Marquee or awning signs may be used in place of permitted wall signs, provided they meet the following conditions:

- A. Maximum size:** Signs shall not exceed 2 feet in height and extend no more than 2/3 of the width of the applicable storefront marquee or awning.
- B. Location:** Marquee signs may be placed on the front, above, or below the marquee/canopy.
- C. Vertical clearance:** Signs shall be placed a minimum of 9 feet above the sidewalk or walkway.



Figure 20.92.280(1). Examples of signs placed in front and on top of marquees.



Figure 20.92.280(2). Awning sign standards and an example.

20.92.290 Under canopy sign standards

Signs placed under canopies meeting the following conditions are allowed for commercial uses:

- A. Projection:** Under canopy shall have 1-foot minimum between the sign and the outer edge of the marquee, awning, or canopy and between the sign and the building facade.
- B. Vertical clearance:** Under canopy signs shall maintain a minimum clearance of 9 feet between the walkway and the bottom of the sign.
- C. Dimensions:** Under canopy signs shall not exceed 2 feet in height.

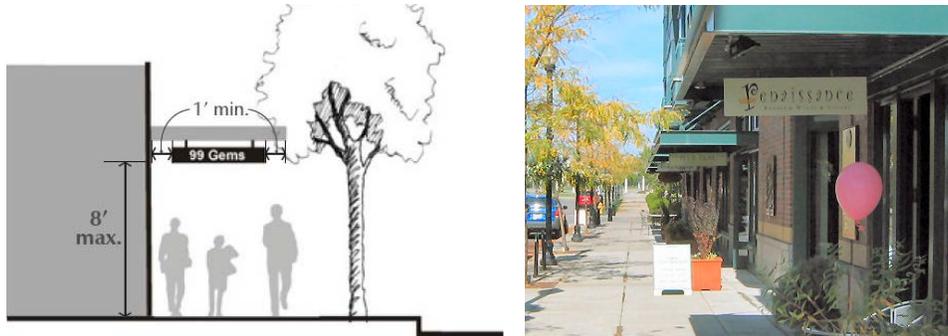


Figure 20.92.290. Under canopy sign standards and an example.

20.92.300 Window sign standards

Window signs meeting the following conditions are allowed for commercial uses:

- A. Maximum size:** Permanent and temporary window signs are limited to a maximum of 25 percent of the window area. Every effort should be made to integrate window signs with window display.
- B. Materials:** Window signs constructed of neon, stained glass, gold leaf, cut vinyl, and etched glass are allowed. Painted signs shall display the highest level of quality and permanence as determined by the Director.
- C. Internally lit neon or stained glass window signs** are allowed provided they meet the above sign standards and there are no more than one sign for each 15 feet of building frontage.



Figure 20.92.300. Window sign standards and an example.

20.92.310 A-Frame and standing sign standards

A-frame and standing signs meeting the following conditions are allowed for commercial uses:

- A. Signs must be within 20 feet of the applicable building entrance;
- B. Signs must be located to maintain at least 8 feet of horizontal clearance on the sidewalk for pedestrian movement on designated Storefront Street and 5 feet on all other sidewalks and internal walkways;
- C. Each business shall not have more than one A-frame sign or standing sign;
- D. Signs shall be removed during non-business hours;
- E. The area of an A-frame sign shall not exceed 10 square feet; the area of a standing sign shall not exceed 4 square feet; and
- F. No lighting of A-frame or standing signs is permitted.

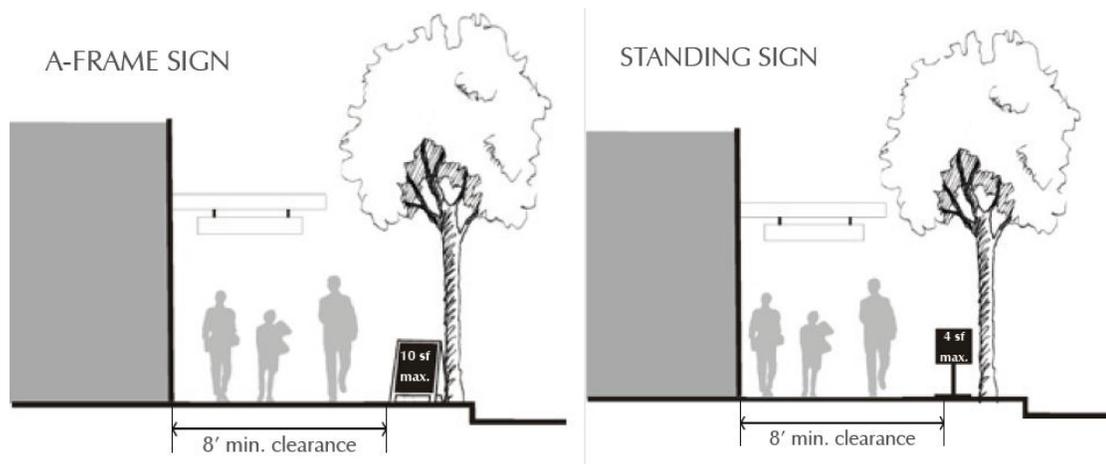


Figure 20.92.310. A-Frame and standing sign standards.

20.92.320 Service station sign standards

The following standards apply to signage associated with vehicular service stations:

A. Monument signs:

1. Permitted number of signs: One per frontage;
2. Maximum sign height: 6 feet;
3. Maximum size limit: 30 square feet per face, up to two faces;
4. See monument sign standards set forth in paragraph (3) above for provisions related to sign lettering, materials and design, and landscaping; and
5. For illumination standards, see paragraph (2) above.

B. Wall signs mounted on service station canopies:

1. Permitted number of signs: One per canopy façade;
2. Maximum letter height: 2 feet;
3. Maximum size limit: Up to 10 percent of the canopy; and
4. For illumination standards, see paragraph (2) above.

C. Wall signs mounted on fuel dispensing islands: One sign up to six square feet is permitted on each side of every dispensing island displaying only the service station emblem or trademark.

D. Other permitted signs: Other signs may be permitted at service stations (i.e. wall sign and/or window signs on the service station building) and are thus subject to applicable sign standards in this sub-section.



Figure 20.92.320. An acceptable monument sign size on the left. Tall pole signs (right image) are not permitted.

20.92.330 Prohibited signs

- A. Pole signs.
- B. Other signs set forth in SMC 20.50.550.

20.92.340 Definitions

The following definitions apply to Chapter 20.92.

Arcade	A series of arches supported on piers or columns.
Articulation Interval	The measure of articulation, the distance before architectural elements repeat.
Blank wall	See SMC 20.92.210 for the definition and acceptable treatments of a “blank wall” within the Town Center.
Building articulation	The giving of emphasis to architectural elements (like windows, balconies, entries, etc.) that create a complementary pattern or rhythm, dividing large buildings into smaller identifiable pieces. See SMC 20.92.180 for applicable standards.
Balcony	An outdoor space built as an above-ground platform projecting from the wall of a building and enclosed by a parapet or railing.
Banner sign	A sign constructed of cloth, canvas, or other similar light weight material that can easily be folded or rolled, but does not include paper or cardboard.
Bay Window	A window protruding from the main exterior wall. Typically, the bay contains a surface that lies parallel to the exterior wall and two surfaces that extend perpendicularly or diagonally out from the exterior wall. To qualify as a bay, the bay must contain a window pane that extends at least 60 percent of the length and 35 percent of the height of the surface of the bay lying parallel to the exterior wall. There need not be windows in the surfaces extending out from the exterior wall.
Cornice	A horizontal molding projecting along the top of a wall, building, etc.
Fenestration	The design, proportioning, and disposition of windows and other exterior openings of a building.
Frontages	The design of yards and/or building facades adjacent to streets. For the purpose of permitted uses, frontages also refers to uses within the first 30 feet of the building measured perpendicular to the street.
Green roof	An engineered roofing system that allows for the propagation of rooftop vegetation and the retention of storm water while maintaining the integrity of the underlying roof structure and membrane.
Landscaped Street	Refers to a street and/or segment of a street envisioned to have or maintain landscaped building setbacks along the street.

	See Figure 20.92.030 for the location of designated Landscaped Streets and SMC 20.92.070(B)(3) for the description and applicable standards for properties fronting on designated Landscaped Streets.
Landscaped Yard	Landscaped frontages. See SMC 20.92.070(C)(3).
Lightcourt	Sunken platforms in tandem with stoops, or raised platforms. See SMC 20.92.070(C)(2).
Low-Impact Development (LID):	A term used to describe a land planning and engineering design approach to managing stormwater runoff that emphasizes conservation and use of on-site natural features to protect water quality.
Modulation	A stepping back or projecting forward of portions of a building face, within specified intervals of building width and depth, as a means of breaking up the apparent bulk of a structure's continuous exterior walls.
Public gathering space	See SMC 20.92.140 for the description, standards, and guidelines for public gathering space.
Roofline modulation	Refers to a variation in roof form. See SMC 20.92.180 for provisions.
Secondary Street	Refers to a street and/or segment of a street where there's an option for commercial storefronts or landscaped setbacks along the street with the option of ground floor residential or commercial uses. See figure 20.92.030 for the location of designated Secondary Streets and SMC 20.92.070(B)(2) for the description and applicable standards for properties fronting on designated Secondary Streets. Also, Aurora Avenue North is classified as a type of Secondary Street, for the purpose of frontage uses and design standards.
Solar access	The availability of (or access to) unobstructed, direct sunlight.
Solar Reflectance Index (SRI)	The measure of the roof's ability to reject solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. For example, the standard black has a temperature rise of 90 deg. F (50 deg. C) in full sun, and the standard white has a temperature rise of 14.6 deg. F (8.1 deg. C). Once the maximum temperature rise of a given material has been computed, the SRI can be computed by interpolating between the values for white and black. Materials with the highest SRI values are the coolest choices for roofing. Due to the way SRI is defined, particularly hot materials can even take slightly negative values, and particularly cool materials can even exceed 100.

Storefront	A pedestrian-oriented façade placed up to the edge of a public sidewalk. See SMC 20.92.070(C)(1).
Storefront Street	Refers to a street or segment of a street where envisioned to have storefronts placed up to the edge of the sidewalk. See figure 20.92.030 for the location of designated Storefront Streets and SMC 20.92.070(B)(1) for the description and applicable standards for properties fronting on designated Storefront Streets.
Stoop	Elevated platform entryways. See SMC 20.92.070(C)(2).
Transparent window	A window that is capable of transmitting light so that objects or images can be seen as if there were no intervening material variation in roof form.
Trellis	A frame supporting open latticework used as a screen or a support for growing vines or plants.
Turret	A small tower projecting vertically from a building.

PLANNING COMMISSION AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Public Health Laboratory Comprehensive Plan Amendment, Rezone, and Master Development Plan Permit Public Hearings, File #201792
DEPARTMENT: Planning and Development Services (PDS)
PRESENTED BY: Joseph W. Tovar, FAICP, Director, PDS Steven M. Cohn, Senior Planner Steven Szafran, AICP, Associate Planner

SUMMARY

The State Public Health Laboratory (PHL) is proposing to expand its facilities over the next 20 years. To accomplish this, the following steps must be taken:

1. *Modification of Shoreline's Comprehensive Plan Policy LU-32* which limits the Public Health Lab to its existing 7.6 acre site. The PHL Master Plan encompasses 12.6 acres, so the Comprehensive Plan must be changed to permit the 5-acre expansion.
2. *A Rezone of 5 acres currently zoned as Fircrest Campus Zone*, to Public Health Laboratory Zone. This will permit the Master Plan to encompass a 12.6 acre site.
3. *Approval of a Master Plan Permit.* This permit requires approval of the City Council adopts the Plan (including the mitigations or conditions that might be imposed by the permit).

A Binding Site Plan permit is required in order to clarify the boundaries of the PHL site. The permit was issued in early August, 2010.

The Planning Commission will conduct one public hearing on August 19. At the hearing the public will be able to comment on any or all of the proposed actions. If testimony or deliberations are not concluded that evening, the Commission may choose to continue the hearing to a future date. If this happens, the date will be established and announced at the August 19 hearing.

Following the completion of the public hearing, the Planning Commission will formulate its recommendations to the City Council on: the Comprehensive Plan Amendment, the Rezone, and the Master Development Plan.

BACKGROUND

PDS staff reviewed the application materials, written comments from the public, and prepared a SEPA threshold determination. The SEPA determination is that the proposal to expand the PHL will have no significant adverse impacts, and that the road network can handle the increased traffic impacts from the added workforce at the site which will occur over a 20-year period. Therefore it is not necessary to require additional analysis from an EIS or expanded SEPA checklist.

Staff analyzed the application materials to ascertain whether the application is in compliance with the criteria for the Comprehensive Plan Amendment, Rezone, and Master Development Plan Permit. Staff concluded that the application complies with the criteria and recommends approval. Staff's analysis and initial findings, conclusions, and recommendations are attached. The Planning Commission may add, delete or modify findings following the hearings and deliberations on the proposal.

Written testimony can be submitted prior to the public hearing or provided at the hearing, and will be incorporated into the project file. The file will be available for Council review prior to its decision.

Written materials can be submitted to Steve Szafran prior to the hearing. If you have questions about items in the staff report or about the hearing process, contact Mr. Szafran at 206-801-2512 or email him at sszafran@shorelinewa.gov.

**CITY OF SHORELINE
STAFF REPORT TO PLANNING COMMISSION**

INITIAL FINDINGS, CONCLUSIONS AND RECOMMENDATION

PROJECT INFORMATION SUMMARY

Project Description: (1) Comprehensive Plan Amendment to modify Comprehensive Plan Policy LU 43(2) and (3) to reflect the increase of the Washington Public Health Lab Campus from 7.6 acres to 12.6 acres and decrease of the Fircrest Campus from 83 acres to 78 acres; (2) change in zoning of the 5 acres from Fircrest Campus Zone to Public Health Lab Campus Zone ; and (3) Master Development Plan Permit to guide the future of the Public Health Lab's Campus over the next 20 years.

Project File Number: 201792

Project Address: 1610 NE 150th Street, Shoreline, WA 98155

Property Owner: Washington State Public Health Lab

Staff Recommendation: Approval with conditions

FINDINGS OF FACT

Current Development

1. The subject parcel is located at 1610 NE 150th Street.
2. The Public Health Lab Campus is approximately 7.6 acres and is developed with the Public Health Lab (PHL), owned by the State of Washington. The site is zoned Public Health Lab Zone (PHZ) and has a Comprehensive Plan Land Use designation of Campus. See Attachment 1- Vicinity Map.
3. The PHL was established to provide a wide range of diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, chronic diseases and environmental health concerns, for the citizens of the State of Washington.
4. The site is surrounded by the Fircrest Campus to the north, east, and west. Low-density single-family homes zoned R-6 exist to the south, across NE 150th Street. Fircrest is also owned by the State of Washington.
5. Access to the PHL Campus is from primarily from NE 150th Street with secondary access from 15th Avenue NE.
6. There are existing sidewalks on 15th Ave NE, and portions of sidewalk on the north side of NE 150th Street.

7. The original public health laboratory building was constructed in 1985. The original building was single-story and 51,000 square feet.
8. In 2000 a 12,000 square foot addition for an office of newborn screening was completed.
9. In 2009, a 5,800 square foot addition for additional laboratory space was completed.
10. Current total building area is 72,500 gross square feet.
11. The PHL currently employs 140 full-time people.
12. There are 142 parking spaces on site.

History

13. The Public Health Lab was originally located in the Alaska Building in downtown Seattle then later relocated to the Smith Tower also in downtown Seattle.
14. In 1985, the Public Health Lab moved to the Fircrest Campus which was then unincorporated King County.
15. In 2006, the Department of Social and Health Services (DSHS) began a master plan process for the portions of the Fircrest Campus that are outside the Public Health Lab site boundaries.

Proposals

COMPREHENSIVE PLAN AMENDMENT

16. In order to have sufficient space to develop under the Master Development Plan, the Public Health Lab is proposing a Comprehensive Plan Amendment to modify LU 43 to read in part:
 - 2. The Fircrest Campus is an approximately ~~83~~ 78 acre site...
 - 3. Public Health Laboratory Campus: An approximately ~~7~~ 12.6 acre site
17. The Comprehensive Plan designation itself does not have to change; the five acres are already designated Campus.

REZONE

18. In conjunction with the Comprehensive Plan Amendment, the PHL is also proposing to rezone those same 5 acres from FCZ to PHZ,

MASTER DEVELOPMENT PLAN

19. The PHL has submitted a Master Development Plan (MDP or Plan) to guide the future growth of the campus for the next 15-20 years. See ***Attachment 2 (Master Plan)***. The MDP plans for future growth on 12.6 acres. Plan is divided into 5 phases which includes:

Phase 1 - N-Wing West Addition = 2,800 square feet
N- Wing East Addition = 4,250 square feet

Phase 2 – Mechanical Addition = 3,750 square feet
Loading Addition = 2,800 square feet

Phase 3 – Administration Building = 27,000 square feet

Phase 4 – New West Wing = 14,600
New East Wing = 14,600
Demo existing Q, A, and S Wings = 15,700 square feet

Phase 5 – New Office Building = 38,000 square feet
Remodel E and C Wings
New Parking Garage = 200 spaces

20. Also included in the proposed master plan are new parking areas, revised loading area for the Food Lifeline building, open space and amenities for PHL Staff, landscaping, public art, and new pedestrian and vehicular circulation layout.
21. The Public Health Lab is proposing to add 190 employees to their current 140 employees for a total of 330 employees over the 20-year life of the Master Plan.
22. Parking would increase to 400 spaces from the current 142 spaces, an increase of 258 spaces over 20 years.
23. Total building area would increase to 164,500 gross square feet from the current 72,500 gross square feet.

Noticing and Procedures

24. Representatives from The Public Health Lab held a series of community meetings to guide the design process and listen to feedback from the community. Participating organizations included Briarcrest and Ridgecrest Neighborhood Associations, Fircrest School, Friends of Fircrest, Shoreline Fire Department, Shorecrest High School, King County Sheriffs' Office and the City of Shoreline. Five meetings were held (not including early community input meeting and neighborhood meeting) to discuss design options for the Public Health Lab. Those meetings were held on February 13, February 27, March 13, April 3, and May 21, 2009.
25. Staff analysis of the proposed Comprehensive Plan Amendment, rezone and Master Development Plan Permit considered information gathered from a pre-application meeting on February 5, 2009, an Early Community Input Meeting on March 5, 2009, a neighborhood meeting conducted on April 14, 2009, public comment letters, traffic reports, site visits, and meeting minutes from the Community Liaison Panel meetings.
26. A Public Notice of Application for the proposals was posted on site, mailed to all residents within 1000 feet, and advertised in the Seattle Times on May 27, 2010.
27. A Public Notice of Hearing for the proposals was also posted, mailed and advertised in the same way as above on July 26, 2010.
28. 2 comments were received during the required SEPA comment period. See *Attachment 3 (Public Comments)*.
29. After reviewing the information in the submittal and comments, the Planning Department concluded that the impacts of the Comprehensive Plan Amendment, the rezone and the MDP did not warrant additional analysis through an Environmental Impact Statement and issued a DNS on July 21, 2010.
30. An open record public hearing for the Comprehensive Plan Amendment, rezone and the MDP is being held by the Planning Commission on August 19, 2010.

Comprehensive Plan Land Use Designations.

31. The site is designated Campus in the Comprehensive Plan. The adjacent parcel to the west, north and east have a Comprehensive Plan Land Use designation of Campus as well. Most parcels to the south, across NE 150th Street, have a Comprehensive Designation of Low Density Residential. There are High-Density Residential designated parcels on the south side of NE 150th Street adjacent to 15th Avenue NE. The Public Health Lab is proposing to increase its campus by 5 acres, thereby increasing the acreage from 7.6 acres to 12.6 acres. As noted

above, that Comprehensive Plan amendment is being considered by the Commission concurrently with the rezone and MDP. See *Attachment 4 (Comprehensive Plan Map)*.

Current Zoning and Uses

32. As part of Ordinance 507, the Public Health Lab Campus was rezoned to Public Health Lab Campus Zone (PHZ). The adjacent parcel to the west, north and east is zoned Fircrest Campus Zone (FCZ) and is developed with the Fircrest School, a home to developmentally disabled residents. Most parcels to the south are zoned R-6 and developed with single-family homes. Directly across NE 150th Street are parcels zoned R-18, and to the west of these are parcels zoned R-48 and Neighborhood Business (NB). In conjunction with the Comprehensive Plan Amendment and the MDP, the Public Health Lab is proposing to rezone 5 acres of the FCZ to PHZ, thereby increasing the PHZ from 7.6 acres to 12.6 acres. The portion proposed for rezone is currently undeveloped. See *Attachment 5 (Zoning Vicinity Map, and Attachment 6- Proposed Zoning Maps)*.
33. The Public Health Lab was established to provide a wide range of diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, chronic diseases and environmental health concerns, for the citizens of Washington State. The Lab also serves to coordinate and promote quality assurance programs for private clinical and environmental laboratories through training, consultation, certification and quality assurance sample programs. In addition the Lab has expanded their role in providing scientific and managerial leadership for the development of public health policy.

Impacts of the Master Development Plan Permit

34. The following table outlines the development standards for the Campus (all Campus Zones have the same standards) and the proposed Public Health Lab Master Development Plan:

	Max allowed by Ord. 507	PHZ (proposed by applicant)
Front, side and rear yard setback from right-of-way	None specified; City Council can determine	40'
Front, side and rear yard setbacks from R-6 Zones	20-foot setback at 35' building height. Above 35', a building setback ratio of 2:1.	20' side setback from the Fircrest Campus. The PHL is not adjacent to any R-6 parcels
Max. Building Coverage	None specified; City Council can determine	50%
Max. Impervious Surface	None specified; City Council can determine	75%
Height	65'	65' (15' additional height for roof top equipment)
Density (residential development)	None (see footnote)	None proposed
Total Units (potential)	None	None

Footnote: Ordinance 507 limits height to a maximum of 65' buildings and limits density to 48 dwelling units per acre for all sites designated Campus. The Comprehensive Plan does not allow residential as a use on the Public Health Lab Campus so density requirements are not applicable.

35. Traffic Impacts

The applicant has submitted a traffic report to the City. The City Traffic Engineer has determined that the 190 new employees on the site after the completion of the Public Health Lab's Master Development Plan will not overburden Shoreline's transportation system. The traffic report shows that the added employees will result in modest traffic impacts over the next 15-20 years and will not require any traffic mitigation imposed by the City.

36. Safety Impacts

A biological risk assessment was conducted in accordance with the methods and standards provided in the *Biosafety in Microbiological and Biomedical Laboratories* (BMBL) 5th Edition publication by the Centers for Disease Control (CDC) and the National Institute of Health (NIH). Among the guidelines, the BMBL provides a classification system called biosafety levels (BSLs) that are

based on risk assessments which evaluate at which BSL level the laboratory work should be conducted (BSL 1, 2, 3, or 4, indicating lowest to highest risk levels). The Public Health Lab is a BSL-3.

According to the Risk and Safety Assessment for the Washington State Public Health Laboratory, the Lab is in compliance with applicable regulations that protect laboratory workers and the community in which the laboratory operates. The Public Health Lab will continue to operate at a BSL-3 under the proposed Master Development Plan. (*See Attachment 7-Risk and Safety Assessment*).

37. Air Quality Impacts

An air quality assessment for the Washington State Public Health Laboratory was conducted during the last addition to the health lab in December 2008. The objective of the study was to obtain accurate concentration estimates at building air intakes and other sensitive locations due to emissions from various exhaust sources located on or around the lab addition.

The air quality study found that exhaust meets or exceeds design criterion for all locations tested. (*See Attachment 8-Air Quality Assessment for the Washington State Public Health Lab Addition*).

38. Employment Impacts

The Public Health Lab proposes to add 50 Public Health Lab employees to the existing 140 staff and relocate 140 DOH Epidemiology staff from the Kent, WA facility. This will bring an additional 190 jobs to Shoreline.

39. Stormwater Impacts

The applicant submitted a Master Drainage Plan for the Public Health Lab Master Plan. The Master Drainage Plan provides a general and preliminary framework for future development on the campus. Additional geotechnical investigations and other studies will be required during the actual design and permitting of each phase of the project. The City's Drainage Review Engineer reviewed and approved the Master Drainage Plan on July 19, 2010.

ANALYSIS OF PROPOSAL CRITERIA

40. The purpose of a Comprehensive Plan Amendment and rezone is to provide a mechanism to make changes to a land use designation and zoning classification. The purpose of the Master Development Plan is to define the development of property zoned campus or essential public facilities in order to serve its users, promote compatibility with neighboring areas and benefit the community with flexibility and innovation.

41. The notice and meeting requirements for the Type C actions and the Type L action have all been met in this case.

COMPREHENSIVE PLAN AMENDMENT ANALYSIS (SMC 20.30.340)

Comprehensive Plan Amendment Criteria 1: *Is the amendment is consistent with the Growth Management Act and not inconsistent with the Countywide Planning Policies, and the other provisions of the Comprehensive Plan and City policies?*

42. The amendment is consistent with the Growth Management Act; this amendment will provide more employment opportunities to meet the economic development goals of the City. The amendment will encourage development in an urban area where adequate public facilities exist.

Comprehensive Plan Amendment Criteria 2: *Does the amendment address changing circumstances, changing community values, incorporate a subarea plan consistent with the Comprehensive Plan vision or corrects information contained in the Comprehensive Plan?*

43. The amendment addresses changing circumstances. At one time, it was thought that a Fircrest-related use might expand onto this property. Now the State has concluded that Fircrest-related activities will not require use of this property which frees it to be used by another State facility.

Comprehensive Plan Amendment Criteria 3: *Will the amendment benefit the community as a whole and not adversely affect community facilities, the public health, safety or general welfare?*

44. The community will benefit if the PHL expands in order to fulfill its mission as a BSL-3 facility. The Comprehensive Plan limits development of the site to those uses required at a BSL-3 facility, which, according to the State's analysis, will not adversely affect the nearby Fircrest facilities or public health, safety or general welfare.

REZONE ANALYSIS (SMC 20.30.320)

Rezone Criteria 1: *Is the rezone consistent with the Comprehensive Plan?*

45. The rezone would implement the Comprehensive Plan text change by increasing the size of the PHL site and its associated zoning by 5 acres.

Rezone Criteria 2: *Will the rezone adversely affect the public health, safety or general welfare?*

46. By permitting uses that support the function of the PHL, the rezone will promote public health, safety and welfare.

Rezone Criteria 3: *Is the rezone warranted in order to achieve consistency with the Comprehensive Plan?*

47. The rezone would implement the Plan change.

Rezone Criteria 4: *Will the rezone be materially detrimental to uses or property in the immediate vicinity of the subject rezone?*

48. The proposed rezone will have minimal negative impacts to the properties in the immediate vicinity. It would allow uses currently permitted on the 7.6 acre PHL site. New development would likely result in more jobs; however, parking would need to be provided on site and the number of new trips would not overburden the existing street network.

Rezone Criteria 5: *Will the rezone have merit and value for the community?*

49. New jobs might provide employment opportunities for residents of Shoreline. In addition, new employees are likely to do some shopping in the immediate vicinity which would provide demand for other businesses to expand.

MASTER DEVELOPMENT PLAN ANALYSIS (SMC 20.30.353)

MDP Criteria 1: *The project is designated as either campus or essential public facility in the Comprehensive Plan and Development Code and is consistent with goals and policies of the Comprehensive Plan.*

50. The current Washington State Public Health Lab site is designated as Public Health Laboratory Campus Zone (PHZ). The Public Health Lab has applied for a Comprehensive Plan Amendment to modify policy LU-43 to expand the size of the campus from 7.6 to 12.6 acres. Assuming that change to LU-43 is approved, the plans reflected through this master development plan are consistent with the goals and the policies of the Comprehensive Plan.

MDP Criteria 2: *The master development plan includes a general phasing timeline of development and associated mitigation.*

51. The Public Health Lab has developed their plan to occur over a 20 year period. The project is outlined in 5 phases.

52. The chart below outlines the 20-year plan:

	2011-2013	2013-2015	2015-2017	2017-2019	2019-2021	2021-2023	2023-2025	2025-2027	2027-2029
Phase 1									
N-wing addition and remodel									
New sanitary sewer connection									
Phase 2									
R-wing addition									
Mechanical wing addition									
Disconnected from steam tunnel									
Phase 3									
Admin building									
New parking and entry									
Fircrest boulevard									
New power, gas and water service									
Phase 4									
Demo A and Q wings									
New South Lab wing									
New lunch and meeting rooms									
Phase 5									
Remodel E and C wings									
New office building									
New parking garage									

MDP Criteria 3: *The master development plan meets or exceeds the current regulations for critical areas if critical areas are present.*

53. There are no critical areas present on the Public Health Lab Campus.

MDP Criteria 4: *The proposed development uses innovative, aesthetic, energy efficient and environmentally sustainable architecture and site design (including low impact development stormwater systems and substantial tree retention) to mitigate impacts to the surrounding neighborhoods.*

54. Via the MDP, future development on the Public Health Lab Campus will be guided by sustainable design and construction practices. The state of

Washington requires LEED construction for all structures over 5 million dollars. The Public Health Lab intends to employ sustainable practices to steer design, construction, and site development toward not only energy efficiency, but also community interaction. See Decision Criteria item #7 for further elaboration on architectural and site design.

55. The City of Shoreline requires all stormwater improvements to be in accordance with the 2005 Department of Ecology Stormwater Manual for Western Washington. In addition, the SMC 13.10 requires an emphasis on using Low Impact Design (LID) Best Management Practices (BMP's) to convey and treat stormwater runoff.
56. The Public Health Lab proposes to install bioretention and rain garden facilities. Other LID measures may include rainwater harvesting, bioretention with full infiltration, green roofs, and the use of pervious pavers (page 3 of the Master Drainage Report) to treat onsite stormwater and runoff treatment.
57. The proposed onsite stormwater management improvements call for landscaping and open drainage areas (bioretention and rain gardens) to treat stormwater and reduce overall site paving. Each phase of the master plan will be required to provide updated survey information, geotechnical review and additional studies as needed to evaluate existing conditions and to complete the design.
58. The proposal retains 62% of the significant trees on the Campus. Retention of significant trees adds to LID measures to mitigate stormwater runoff and meets the intent of decision criteria #4.
59. In order to more fully meet criteria 4, the Planning Commission finds the following condition shall be added to the MDP:

An updated air quality study shall be submitted and approved with each successive permit for addition to the laboratory building.

MDP Criteria 5: There is either sufficient capacity or infrastructure (e.g., roads, sidewalks, bike lanes) in the transportation system (motorized and nonmotorized) to safely support the development proposed in all future phases or there will be adequate capacity and infrastructure by the time each phase of development is completed. If capacity or infrastructure must be increased to support the proposed master development plan, then the applicant must identify a plan for funding their proportionate share of the improvements.

60. The Transportation Impacts Analysis submitted by Heffron Transportation, Inc. indicates no major impact to the surrounding transportation system. The Master Plan will increase site traffic by 750 vehicle trips per day with 104

new vehicle trips during the PM peak hour (25 in, 79 out). The Level of Service (LOS) for the intersections surrounding the site will be unchanged from 2019 without project to 2019 with project.

61. Part of the proposal, as set forth in the traffic report, is to install missing sidewalk sections along the north side of NE 150th Street between 15th Avenue NE and 20th Avenue NE.

MDP Criteria 6: There is either sufficient capacity within public services such as water, sewer and stormwater to adequately serve the development proposal in all future phases, or there will be adequate capacity available by the time each phase of development is completed. If capacity must be increased to support the proposed master development plan, then the applicant must identify a plan for funding their proportionate share of the improvements.

62. The applicant indicates that there will be sufficient capacity within public services to adequately serve the development proposal in all future phases. When the applicant submits for permits on any new or remodeled building, a water availability certificate, sewer availability certificate, and fire flow availability must accompany the application materials.

MDP Criteria 7: The master development plan proposal contains architectural design (including but not limited to building setbacks, insets, facade breaks, roofline variations) and site design standards, landscaping, provisions for open space and/or recreation areas, retention of significant trees, parking/traffic management and multimodal transportation standards that minimize conflicts and create transitions between the proposal site and adjacent neighborhoods and between institutional uses and residential uses.

63. The Public Health Lab has proposed various architectural and site design standards. Standards for setbacks, building mass, hardscape, parking, and site lighting can be found in **Attachment 9 (Development and Design Standards)**.
64. Proposed design standards include tree retention, new plantings, campus site design, drainage, pavement, building materials and building design. .
65. The Public Health Lab Campus has 319 significant trees. 119 significant trees are proposed to be removed over a 20-year time period. 200 significant trees will be retained. This is 62% significant tree retention. The Shoreline Municipal Code requires 20% significant tree retention (The code allows up to 255 trees to be removed and the Lab is proposing to cut 119). As the Campus redevelops, there will be additional landscaping planted.
66. The proposed Master Plan provides a pedestrian link from NE 150th Street through the Public Health Lab Campus to the Fircrest Campus. Open space is

provided around each of the new buildings/additions with courtyards for the Lab Staff.

67. The plan will relocate the main vehicular access to the east. The new access is named “Fircrest Boulevard” and creates better vehicular access to the Lab, the Food Lifeline warehouse and the proposed parking garage.
68. Proposed setbacks combined with landscaping provide meaningful separation from the street and proposed buildings/parking lot. The Lab is proposing a 40-foot setback from NE 150th Street and a 20-foot setback from the proposed “Fircrest Boulevard”. Within those setbacks are retained significant trees, landscaping, and a pedestrian link to the Fircrest Campus.

MDP Criteria 8: The applicant shall demonstrate that proposed industrial, commercial or laboratory uses will be safe for the surrounding neighborhood and for other uses on the campus.

69. The Public Health Lab is not introducing any changes in use on the campus and is consistent with the PHZ zoning land use matrix. Further, the Risk and Safety Assessment completed for the PHL indicates the Lab is in compliance with applicable regulations that protect laboratory workers and the community in which the laboratory operates.

CONCLUSIONS

The Applicant has met all procedural requirements in the Development Code for all three proposals.

COMPREHENSIVE PLAN AMENDMENT

As set forth in findings of fact #42-44, the Applicant’s proposed Comprehensive Plan Amendment meets the criteria set forth in SMC 20.30.340

REZONE

As set forth in finding of fact #45- 49, the Applicant’s proposed rezone meets the criteria set forth in SMC 20.30.320.

MASTER DEVELOPMENT PLAN

The Applicant’s proposed Master Development Plan, as conditioned by the Planning Commission, meets the criteria set forth in SMC 20.30.353.

- Criteria 1:** As set forth in finding of fact #50, The Public Health Lab’s proposed MDP meets Criteria 1.
- Criteria 2:** As set forth in findings of fact #51 and #52, The Public Health Lab’s proposed MDP meets Criteria 2.
- Criteria 3:** As set forth in finding of fact #53, The Public Health Lab’s proposed MDP meets Criteria 3.
- Criteria 4:** As set forth in findings of fact #54-59, The Public Health Lab’s proposed MDP requires future development be guided by sustainable design and construction practices, includes analysis that shows low impact development stormwater systems, and retains 60% of significant trees. The Commission concludes that, with the additional condition recommended in findings of fact #59 added to the MDP, The Public Health Lab’s proposed MDP, as conditioned, meets Criteria 4.
- Criteria 5:** As set forth in findings of fact #60-61, The Public Health Lab’s proposed MDP meets Criteria 5.
- Criteria 6:** As set forth in findings of fact #62, The Public Health Lab’s proposed MDP meets Criteria 6.
- Criteria 7:** As set forth in findings of fact #63-68, The Public Health Lab’s proposed MDP meets Criteria 7.
- Criteria 8:** As set forth in finding of fact #69, The Public Health Lab’s proposed MDP meets Criteria 8.

CONDITIONS

The following are added conditions based on staff analysis, and public comment.

- 70. An updated air quality study shall be submitted and approved with each additional permit for addition to the laboratory building.

RECOMMENDATION

The Planning Commission recommends that the City Council approve the Comprehensive Plan Amendment, the rezone, and the Master Development Plan, as conditioned, for the Washington State Public Health Lab Campus located at 1610 NE 150th Street.

Date: _____

By: _____
Planning Commission Chair

ATTACHMENTS

Attachment 1- Vicinity Map

Attachment 2- Master Plan

Attachment 3- Public Comment Letters

Attachment 4- Vicinity Map of Comprehensive Plan Land Use Designations

Attachment 5- Vicinity Map of Zoning Designations

Attachment 6- Proposed Zoning Maps

Attachment 7- Risk and Safety Assessment

Attachment 8- Air Quality Assessment for the Washington State Public Health Lab
Addition

Attachment 9- Development and Design Standards

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CURRENT
PHL CAMPUS
PROPERTY

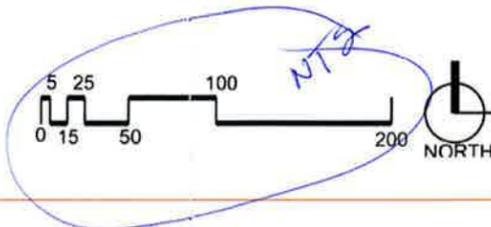
PROPOSED
ADDITIONAL
CAMPUS
PROPERTY

VICINITY
AERIAL MAP
NTS

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- Fircrest Campus Connection
- Bike Parking
- Detention Landscape Feature
- Employee Entrance
- Interior Courtyard Raingardens
- Pedestrian Walking Path
- Exterior Plaza with tables and benches
- Employee exterior Plaza (controlled access)
- Public Art Walk
- Bermed Campus Edge
- Pedestrian Campus Entry (Possible transit stop)

- Two story parking garage
- Solar Panel Shading over Parking Garage
- Alternative Fueling Station for Fleet Parking
- Controlled access
- Green Roof at three story Office building
- Third Floor Roof Deck
- Public Meeting Room
- Bike Parking
- Main Entry Plaza
- Native Plant Health Garden
- Alternative Fueling Station
- Connection to South Woods



WASHINGTON STATE
PUBLIC HEALTH
LABORATORIES
CONCEPT
MASTER PLAN

April 2010

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Steve Szafran

From: GARY LARSON [fastsilver43@msn.com]
Sent: Monday, May 31, 2010 5:39 PM
To: Steve Szafran
Subject: Rezone of 1610 NE 150th St.

Hello,

I am wondering if the recent proposal to rezone 1610 NE 150th St will cause more of the forested area above the lot where the state public lab is to be destroyed, and if so how much? I hope that this will not be the case at all. Please advise, thank you.

concerned,
Gary L.

Steve Szafran

From: Ken Winnick [kbwinnick@gmail.com]
Sent: Sunday, June 20, 2010 3:53 PM
To: Brian Lee; Steve Szafran
Cc: CECILY KAPLAN; janetway
Subject: Re: public health lab @ fircrest

Hi,

I recently noticed the info board at the public health lab. The comment period appears to be over, but I think it was only open for 1 or 2 weeks based on the dates of the announcements on the board.

I understand the project is seeking a finding of "non-significance" (sorry if I get some of the terminology wrong).

I quickly looked up a few documents on the web about the project.

I was not able to find is any reference to any type of air-quality and/or traffic impacts studies.

Air quality impacts seem especially important, given the fact that this lab handles (or, could handle) very toxic materials, and also that it uses ventilation hoods and other air isolation techniques.

Has there been any studies to see what would happen if there was an accidental contaminated air emission from the facility? Unless I'm misunderstanding something, I would think that an air study would be an absolute requirement for any new expansions on the site.

Has there been an air study and/or traffic study for the proposed development? If so, can you point me in the right direction?

Thanks,
Ken Winnick

PS--I live directly across the street from the lab, so naturally this is of great interest to me.

Steve Szafran

From: Ken Winnick [kbwinnick@gmail.com]
Sent: Monday, June 21, 2010 9:57 AM
To: Steve Szafran
Subject: Re: public health lab @ fircrest

Hi Steve,

One last additional question for now: You mentioned below that the risk assessment looked at "uses at the Health Lab." Does that include uses where bio-terrorism and/or other highly toxic agents are held or processed at the lab?

I've heard conflicting reports as to whether or not the lab would be used to handle highly toxic and deadly agents, but I would have to assume that it *would* in fact be used in for these materials if an emergency situation were to arise. Is that your assessment as well?

thanks again,
Ken Winnick
15307 15th Ave NE #6

On Mon, Jun 21, 2010 at 9:48 AM, Steve Szafran <sszafran@shorelinewa.gov> wrote:

Yes, the risk assessment looked at the uses at the Health Lab and how those uses would be contained if an emergency occurred. Air was one of the primary studies that occurred in that report.

I haven't issued any SEPA Determination yet. I'm still evaluating three things: traffic, safety and stormwater. The City's traffic engineer, Rich Meredith, has indicated traffic impacts from the master plan are minimal over the next 20 years and I have a meeting with the City's stormwater engineer to go over some other issues with the site. The only reason I would require an EIS is if there is an impact that cannot be mitigated through SEPA or by adding additional conditions to the master plan.

-----Original Message-----

From: Ken Winnick [mailto:kbwinnick@gmail.com]
Sent: Monday, June 21, 2010 9:41 AM
To: Steve Szafran
Subject: Re: public health lab @ fircrest

Hi Steve,

Thanks for the report, I'll have a look. By the "risk/hazard" study, are you referring to an air study?

Is the development proceeding without an EIS?

Thanks,

Ken Winnick

On Mon, Jun 21, 2010 at 9:16 AM, Steve Szafran <sszafran@shorelinewa.gov> wrote:

Thanks for your email.

Yes, air and traffic studies have been completed. Although it is too late to submit comments on the SEPA determination, it is not too late to submit comments about the Health Lab's Master Plan. Please take a look at the traffic report and send me a response. In the meantime, I will track down the risk/hazard study that was completed and send you that as well.

-----Original Message-----

From: Ken Winnick [<mailto:kbwinnick@gmail.com>]

Sent: Sunday, June 20, 2010 3:53 PM

To:

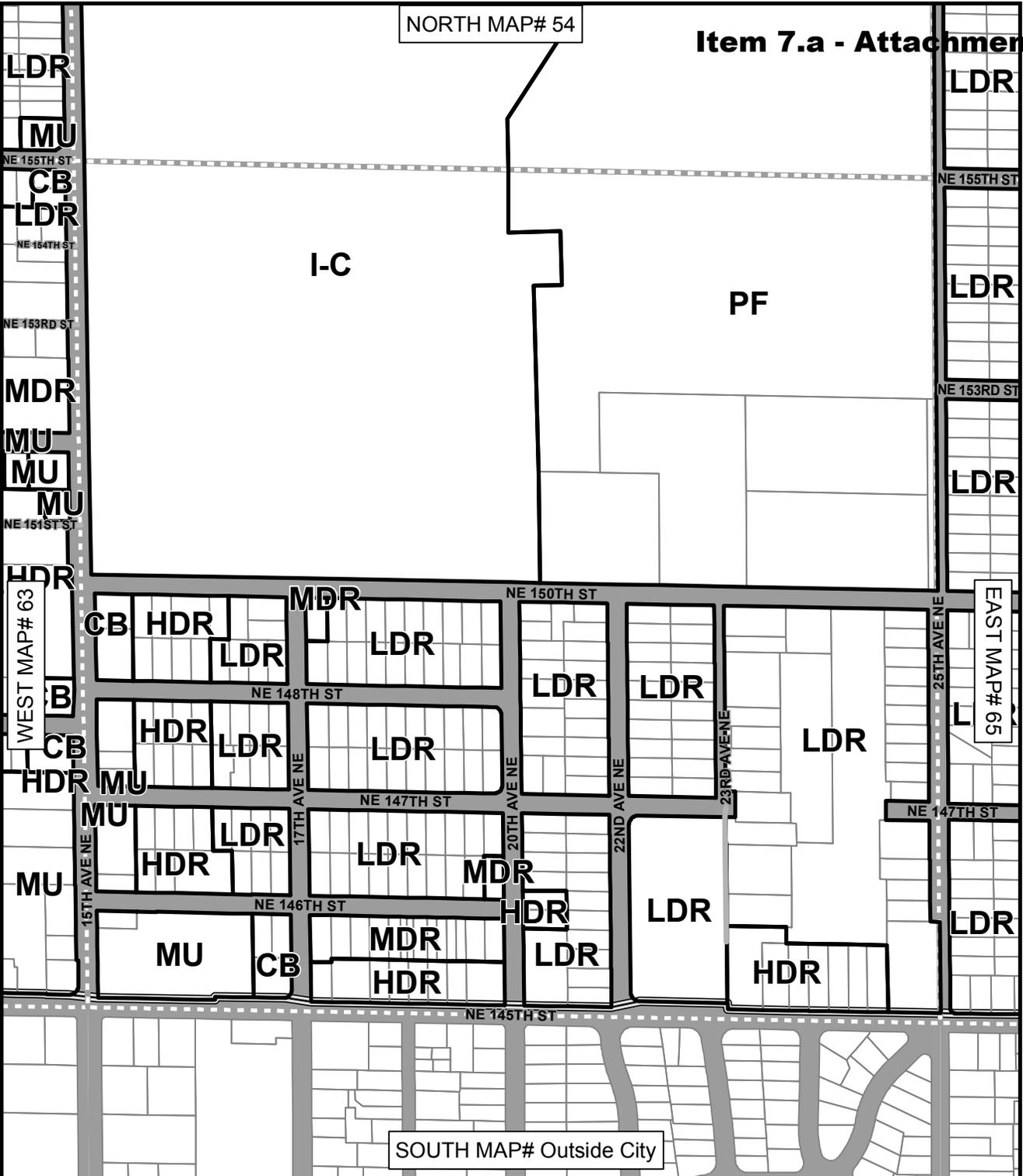
Brian Lee; Steve Szafran

Cc: CECILY KAPLAN; janetway

Subject: Re: public health lab @ fircrest

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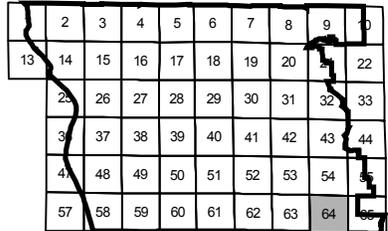


**CITY OF SHORELINE COMPREHENSIVE PLAN
LAND USE MAP**

Plot Date: 5/27/2010

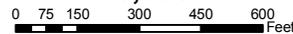
Land Use Designation Legend

- | | |
|--|--|
| BaSSA Ballinager Special Study Area | NCBD North City Business District |
| CB Community Business | PF Public Facility |
| HDR High Density Residential | PrOS Private Open Space |
| LDR Low Density Residential | PubOS Public Open Space |
| MDR Medium Density Residential | RB Regional Business |
| I-C Institution/Campus | SSA Special Study Area |
| MU Mixed Use | |



MAP # 64

1:3,600



Feature Legend

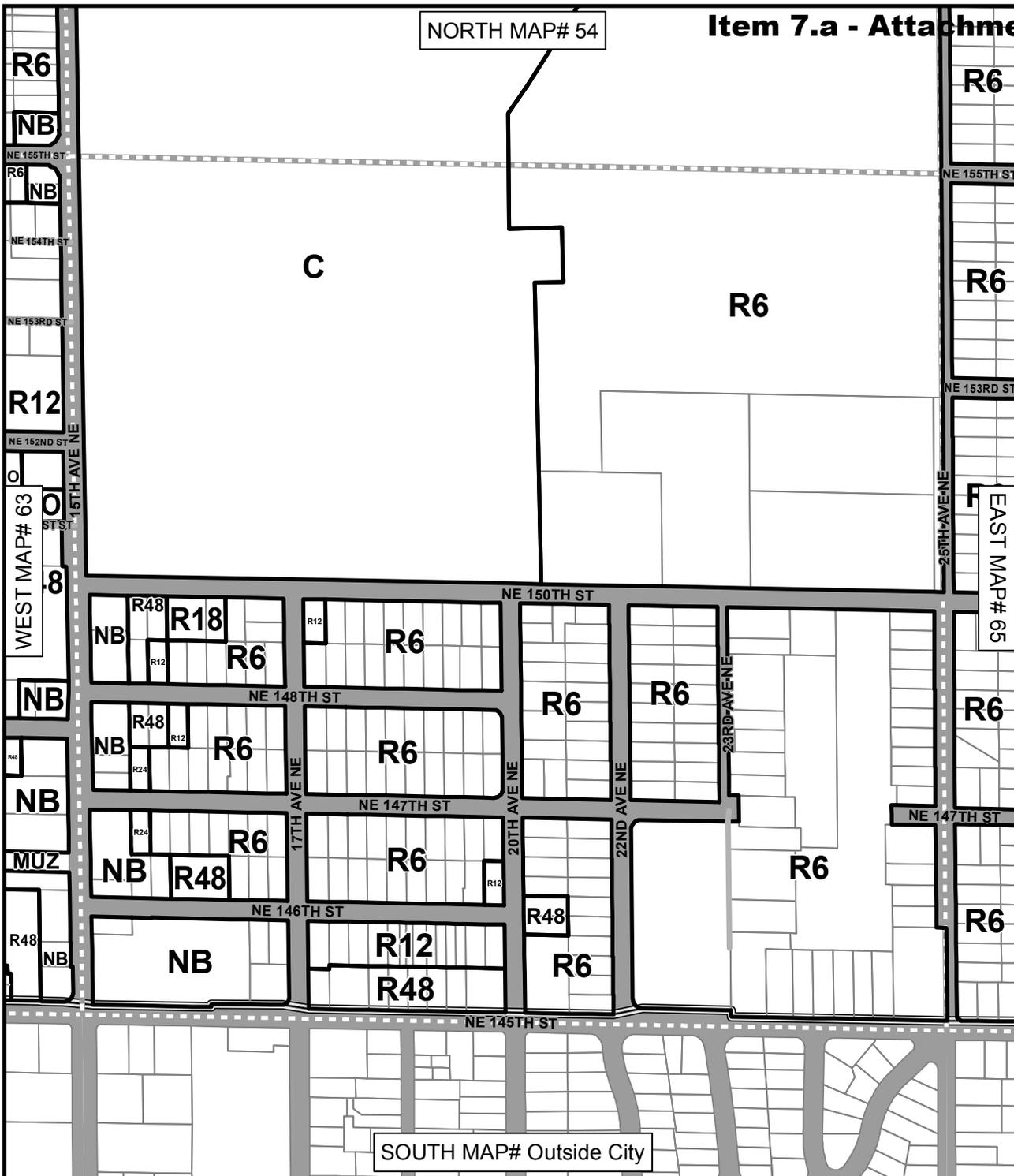
- | | |
|------------------|--------------------|
| - Map Tile Lines | - Unclassified ROW |
| - City Boundary | - Parcel Line |

No warranties of any sort, including accuracy, fitness, or merchantability, accompany this product.

Representation of official Comprehensive Plan land use map adopted by City Ordinance No. 292. Shows amendments through May 31, 2010.



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CITY OF SHORELINE ZONING MAP

Plot Date: 7/29/2010

Zoning Legend

- R4 Residential, 4 units/acre
- R6 Residential, 6 units/acre
- R8 Residential, 8 units/acre
- R12 Residential, 12 units/acre
- R18 Residential, 18 units/acre
- R24 Residential, 24 units/acre
- R48 Residential, 48 units/acre
- CZ Contract Zone
- C Campus
- MUZ Mixed Use Zone
- MUZ-CZ Mixed Use Zone/Contract Zone
- NB Neighborhood Business
- NCBD North City Business District
- CB Community Business
- O Office
- I Industrial
- PA Planned Area

Feature Legend

- Map Tile Lines
- Unclassified ROW
- City Boundary
- Parcel Line

1	2	3	4	5	6	7	8	9	10
13	14	15	16	17	18	19	20	21	22
25	26	27	28	29	30	31	32	33	
36	37	38	39	40	41	42	43	44	
47	48	49	50	51	52	53	54	55	
57	58	59	60	61	62	63	64	65	

MAP # 64

1:3,600

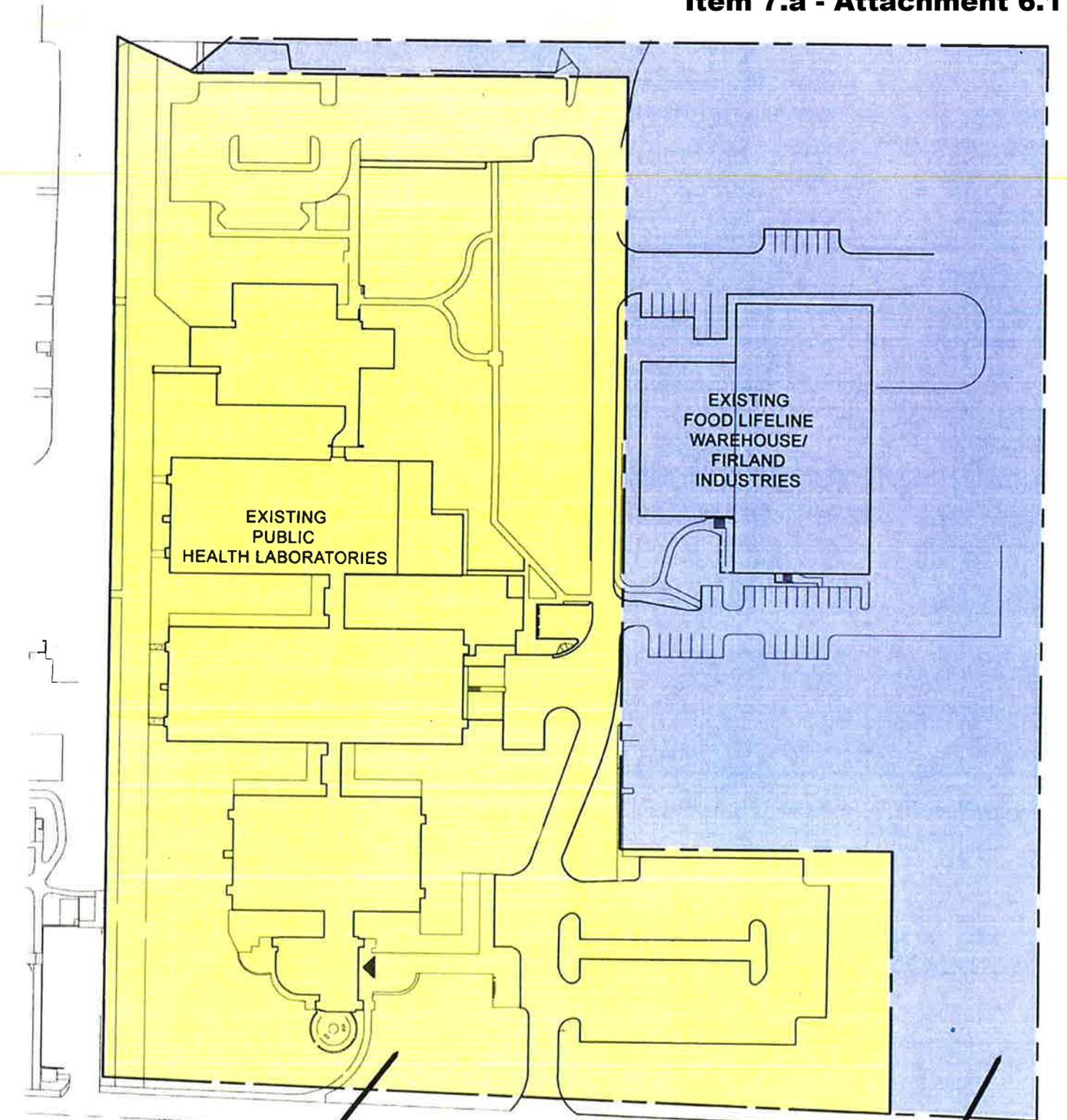


No warranties of any sort, including accuracy, fitness, or merchantability, accompany this product.

Representation of official zoning map adopted by City Ordinance No. 292. Shows amendments through March 16, 2010.



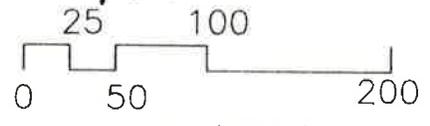
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EXISTING
PHL PROPERTY
CURRENT PH2 ZONE

NE 150TH

PROPOSED
PROPERTY
EXPANSION
Proposed PH2 Zone



SCALE (FEET) April 2010

15TH AVENUE N.E.

FIRCREST
CAMPUS

PHL
CAMPUS

N.E. 150TH ST.

CURRENT PHZ ZONE

PROPOSED PHZ ZONE



LOCATION
MAP
NTS



NORTH

April 2010



Prepared for:
Washington State Department of Health
Olympia, Washington

FINAL
Risk and Safety Assessment
Washington State Public Health Laboratory
1610 150th Street NE
Shoreline WA 98155

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November 21, 2008
Kleinfelder Project Number 96783

EXECUTIVE SUMMARY

This Risk and Safety Assessment was conducted to provide a comprehensive evaluation of potential hazards to the community posed by the presence of the Washington State Department of Health's (DOH) Public Health Laboratory (WA-PHL) located in Shoreline, Washington. Kleinfelder prepared this assessment report in accordance with the Statement of Work (SOW) under DOH Work Order #1, Contract # GA 32206, DOH #N17187. This assessment report provides information on potential hazards from biological, chemical, and radiological materials that may arise from the laboratory, as well as risks of illness, injury, or other harm to the general public who may be exposed directly or indirectly to consequences of the presence and activities of the WA-PHL.

Intro

This assessment includes both quantitative and qualitative methodologies to evaluate hazard and was performed according to accepted professional and academic industry standards by a team of professionals in the fields of laboratory biosafety, laboratory chemical hygiene, laboratory radiological safety, and laboratory risk analysis.

qualifications

Based on the risk and safety assessment described in this report, the WA-PHL is in compliance with applicable regulations that protect laboratory workers and the community in which the laboratory operates. Under normal operating conditions, the most-probable risks that may be associated with the laboratory can be efficiently mitigated by existing programs, policies, and procedures and are unlikely to pose a hazard to the surrounding community.

BACKGROUND

The WA-PHL provides a wide range of diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, chronic diseases and environmental health concerns, for the citizens of the State of Washington. The laboratories also serve to coordinate and promote quality assurance programs for private clinical and environmental laboratories through training, consultation, certification and quality assurance sample programs. In addition, over the last decade, the Public Health Laboratories have expanded their role in providing scientific and managerial leadership for the development of public health policy.

What for lead cases

The laboratory is currently a 70,000 square-foot facility, which has operated since 1985, and contains several laboratories, (including microbiology, environmental, and newborn

Size date

Project

No new impacts

Expansion specifics

screening), shipping and receiving areas, maintenance areas, storage, and office space. To facilitate program growth and changes in laboratory design standards since 1985, the DOH is planning to enlarge the existing laboratory to provide additional biosafety level 3 (BSL-3) space and replace and enlarge the existing specimen receiving area. Based on a review of the design plans and interviews of laboratory staff involved in the design, the laboratory expansion is not expected to introduce hazards different or of greater magnitude than those evaluated in this risk and safety assessment report.

Recently, concerns have arisen regarding potential hazards to communities surrounding public health laboratories. Therefore, the DOH prepared an SOW to conduct a risk and safety assessment for the activities at the WA-PHL as they might affect the surrounding community. In addition, the DOH requested that recommendations be provided for risk management measures as they apply to any risks identified during the assessment.

Per the SOW, the following assessments were conducted:

- Evaluation of the location of the WA-PHL compared to other public health laboratories in the United States
- Biological Hazards Assessment
- Chemical Hazards Assessment
- Radiological Hazards Assessment
- Physical Hazards Assessment
- Security Vulnerability Assessment
- Earthquake Hazards
- Emergency Response Program Assessment

Summaries of these assessments are provided below.

WASHINGTON PUBLIC HEALTH LABORATORY LOCATION ANALYSIS

For comparison of the WA-PHL location to the locations of other PHLs across the country, an initial list of 56 PHLs was obtained from the Association of Public Health Laboratories (APHL) State Public Health Laboratories Emergency Contact List, August 2006. To reduce this extensive list to a size manageable under this task, a subset of 12 PHLs was identified based on two criteria: size of surrounding population and similarity of mission as compared to the WA-PHL.

Population estimates were obtained from the United States Census Bureau. According to the Census Bureau, the population of the Seattle area is 594,210. For this evaluation, areas with populations ranging from 500,000 to 800,000 were assumed to be comparable to the population surrounding the WA-PHL. Cities with populations in this range (per the Census Bureau estimates) were then compared to the APHL list of 56 public health laboratories. Cities with populations and PHL locations similar to the WA-PHL were selected for this evaluation. From this list of cities with PHLs, 12 with PHL missions similar to that of the WA-PHL were identified for the location comparison. To assess the similarity of mission, websites for each of the PHLs were accessed to obtain each PHLs individual mission.

The WA-PHL is located immediately north of the City of Seattle limits, approximately eight miles from downtown Seattle. Four other laboratories were also located just outside the major metropolitan area they are serving, ranging in distance from three to 20 miles. These outlying locations also range from small rural residential communities to areas of a more industrial nature. Eight laboratories are located in downtown/metropolitan areas of the cities served. Four are located on or near universities and have a combination of residents, students, and research facilities (including hospitals). Others are located in major downtown areas surrounded by government buildings and residential neighborhoods. Based on the comparison of the 12 labs selected for evaluation, the Shoreline lab is located in areas similar to other public health laboratories around the country.

Of the 12 laboratories selected for this evaluation, eight responded to inquiries regarding "best practices" to reduce risk and enhance community safety. None of the labs indicated that they had "best practices" to reduce risk and/or enhance community safety outside of any mandated state and/or federal regulations and/or requirements. They also did not have active community groups in the area with an interest in the operation of their local PHL.

BIOLOGICAL HAZARDS EVALUATION

Per Work Order #1, the biological risk assessment was conducted in accordance with the methods and standards provided in the *Biosafety in Microbiological and Biomedical Laboratories* (BMBL) 5th Edition publication by the Centers for Disease Control (CDC) and the National Institute of Health (NIH). Among the guidelines, the BMBL provides a classification system called biosafety levels (BSLs) that are based on risk assessments which evaluate at which BSL level the laboratory work should be conducted (BSL-1, -2,

-3, or -4, indicating lowest to highest risk levels). The BMBL guidelines provide information to architects and engineers designing and constructing laboratories for biohazards; information to scientists working with hazardous microorganisms; and information to biosafety officers on how to conduct risk assessments.

Results of the evaluation of the appropriateness of the WA-PHL BSL classification indicated that the BSLs currently in place are appropriate for the microorganisms worked with at the WA-PHL, according to the select agent classification (BMBL) and the Material Safety Data Sheets. Through direct observation, discussion with laboratory staff, and review of training materials the worker practices and procedures implemented at the WAOPHL meet the CDC/NIH published standards. In addition, the BSL-3 select agent laboratory meets or exceeds the safety requirements for a BSL-3 laboratory.

The potential for biological hazards to the community from the WA-PHL is difficult to assess because of the various protective measures in place at the WA-PHL. These include:

- Extensive training for employees as to the proper way to handle infectious microorganisms;
- Biological safety cabinets used throughout the WA-PHL to contain microorganisms worked with;
- Procedures for decontamination of infectious waste materials;
- Procedures for decontaminating equipment to be removed from a laboratory room;
- Procedures for decontamination of laboratory clothing;
- High efficiency particulate air (HEPA) exhaust filters for the BSL-3 laboratory;
- Spill response protocols;
- Controlled storage for potentially infectious waste material before pick-up by a licensed contractor.

A review of the many security programs in place at the WA-PHL indicates that access to the microorganisms stored in the BSL-3 containment laboratory would be difficult for a laboratory "outsider" to achieve. There are several checks and balances in place to reduce this type of risk. For example, only a few people have the clearances needed to work in the BSL-3 laboratory and access requires two individuals with unique keys for unlocking the laboratory doors. Card key access to the wing housing the BSL-3 laboratory is also in place.

Furthermore, due to the small quantity of select agents stored at the WA-PHL, theft of these materials is unlikely to be attractive to any group looking for potential microorganisms that could be used for terrorist actions. In addition, threat analyses conducted by federal, state, and local law enforcement concluded that there were no known criminal or terrorism threats to the WA-PHL. These agencies have also concluded that the existing security systems are adequate for this facility.

CHEMICAL HAZARD ASSESSMENT

The WA-PHL maintains an extensive inventory of liquid and solid chemicals and compressed gasses consistent with its mission and with the maintenance and repair of equipment, instruments, and the physical plant. Although the chemical inventory is extensive, the laboratory work performed generally requires only small amounts of any given chemical.

The Chemical Hygiene Plan (CHP) prepared by the WA-PHL describes the hazards of the chemicals maintained in the laboratory and procedures and programs for minimizing those hazards during the normal course of operations. The CHP forms the basis for establishing safe work practices that protect WA-PHL staff and the community. The chemical hazard assessment focused on the programs, policies, and procedures for chemical management that have been implemented by the WA-PHL and largely documented in the CHP. The chemical hazard assessment also included a risk assessment of potential releases of chemicals from the WA-PHL under various accidental or intentional hazard scenarios.

EVALUATION OF CHEMICAL MANAGEMENT PLAN

Procedures for chemical inventory, ordering, receipt, storage, distribution, use, and disposal, as identified in the CHP, were evaluated by conducting visits to the facility and staff interviews. Results of this evaluation indicated that controlled procedures are in place and are followed for these tasks. In addition, the CHP outlines the training necessary for staff that is or will be using chemicals in their work. These training programs are also followed at the WA-PHL.

The overall effectiveness of the CHP was then evaluated based on reports of incidents within the laboratory and on fire department reports documenting responses to calls from the WA-PHL. Incident reports were available for the years 2002 through 2007. Of the 47 total incidents reported, only four involved chemical exposure and only one

resulted in days away from work (Two missed work days were recorded in 2002 for an employee who received a chemical splash to the eye). In general, the number of reportable injuries each year (less than eight) has been low based on the average number of employees (144) and hours worked by all employees (between 250,000 and 300,000 hours each year). The Shoreline Fire Department provided documentation of the responses to calls from the WA-PHL since 2001. Only two fire department calls to the WA-PHL involved chemicals: in 2001, "a potentially hazardous package was not triple bagged," and in 2005, the fire department responded to an inhalation exposure to "gas and smoke." No reports of chemical releases or injuries that required aid from the fire department have been recorded. The fire department has not been called to any incidents involving releases of chemicals to the community. Results of the CHP evaluation indicate that it appears to be generally effective and adequate for the safe operation of the laboratory and protection of the community.

Based on the review of the CHP, facility visits and interviews, the following list provides recommendations for enhancing or updating the procedures already in place at the WA-PHL:

- Update the CHP to ensure that procedures, facility assets, and staff are correctly discussed and identified
- Regularly audit the chemical lifecycle across the laboratory to ensure adherence to the CHP
- Implement a computer-based chemical inventory tracking system
- Maintain appropriate chemical handling and safety training to ensure staff are proficient in the storage, use, disposal, and hazards of chemicals
- Review storage locations of chemicals to ensure that:
 - Incompatible chemicals are not stored together;
 - Storage locations are appropriately identified with signage;
 - Storage locations are secured to prevent toppling in case of an earthquake;
- Ensure chemical storage cabinets and shelves are secured to building walls to prevent toppling in an earthquake;
- Ensure liquid chemical storage areas have spill containment trays;
- Update the air dispersion modeling study performed in 1992 and prepare a report that addresses current configurations; and
- Develop a tracking system for training.

Under current programs, policies, and procedures, the WA-PHL safely manages the entire lifecycle of the chemical inventory necessary to its mission. The recommendations made here, as noted above, are enhancements and updates to a system that is already protective of worker health and safety, and the surrounding community.

Rec's to
Changes

RISK AND SAFETY ASSESSMENT FOR CHEMICALS

Under "most-probable" conditions, chemical releases at the WA-PHL will remain completely within the building and will be effectively mitigated under existing programs, policies, and procedures. Therefore, the chemical hazards assessment addressed the consequences of potential chemical releases from the laboratory under reasonable worst-case scenarios. Such chemical release scenarios are unlikely to occur under normal operating conditions.

Eight chemicals from the WA-PHL inventory were modeled to provide a screening-level evaluation of hazards to the public. These eight chemicals were selected based on an evaluation of:

- Relative toxicity in humans or other animals;
- Volume maintained at the WA-PHL;
- Commercial availability;
- Environmental mobility; and
- Reactivity/Stability

Chemicals evaluated were: acetonitrile, benzene, hydrochloric acid, hydrofluoric acid, nitric acid, perchloric acid, potassium cyanide, and sodium cyanide.

Three exposure scenarios were considered for chemical releases from the WA-PHL:

1. Environmental release – instantaneous release of a gas, liquid, or solid to the atmosphere that is then carried into the community by the wind.
2. Theft of a chemical and intentional release of that chemical in a nearby school
3. Theft of a chemical and intentional release of that chemical in the neighboring Fircrest swimming pool

The results of the risk assessment for the three scenarios are provided below.

Environmental Release

For the environmental release scenario under worst-case conditions, an explosion or some other event was assumed to cause the release of the entire inventory of a given chemical from the WA-PHL into the atmosphere. An air dispersion model was then used to estimate the concentrations of that chemical that might occur in the surrounding community. Such a scenario is possible, although highly improbable for reasons discussed below. Nonetheless, the modeled concentrations were then compared to health-based screening concentrations for airborne chemicals: Emergency Response Planning Guidelines (ERPGs) and Temporary Emergency Exposure Limits (TEELs). These screening levels are generally used to plan for and manage large-scale commercial or industrial accidents and large volume releases, not the small scale, small volume releases from a laboratory such as the WA-PHL. ERPGs and TEELs are further explained in the following table.

ERPGs	TEELs
ERPG-1: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for <u>up to one hour</u> without experiencing other than mild transient adverse health effects or perceiving a clearly defined, objectionable odor.	TEEL-1: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed without experiencing other than mild transient adverse health effects or perceiving a clearly defined, objectionable odor.
ERPG-2: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for <u>up to one hour</u> without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.	TEEL-2: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.
ERPG-3: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for <u>up to one hour</u> without experiencing or developing life-threatening health effects.	TEEL-3: The maximum airborne concentration below which it is believed that nearly all individuals could be exposed without experiencing or developing life-threatening health effects.

Based on the worst-case atmospheric chemical release scenario, none of the schools or nursing homes was located within the ERPG/TEEL-3 hazardous radius for any of the chemicals evaluated. This result indicates that the school and nursing home populations are unlikely to encounter airborne concentrations of chemicals, released in an explosion at the WA-PHL that could cause life-threatening health effects.

Hydrochloric acid and nitric acid might reach ERPG/TEEL-2 levels at three schools and one nursing home. Hydrochloric acid and nitric acid might reach ERPG/TEEL-1 (mild health concerns that do not last or odor issues) levels at all schools and nursing homes within the vicinity of the WA-PHL.

The closest facility to the WA-PHL is Fircrest. The closest building on the Fircrest campus is 250 feet from the north end of the WA-PHL. Based on the worst-case atmospheric chemical release scenario, acetonitrile, hydrochloric acid, nitric acid, and perchloric acid might exceed ERPG/TEEL-3 levels on the Fircrest campus.

As noted above, the chemical release scenarios evaluated in this report are worst-case and are unlikely to occur under normal operating conditions at the WA-PHL. Furthermore, the release of the entire inventory of a given chemical to the atmosphere is unlikely because chemicals are stored in more than one location, which significantly reduces or eliminates the possibility of a complete inventory release. The probability of this and other release scenarios is discussed in more detail below.

Theft of Chemical/Intentional Release in a Nearby School

Acute Exposure Guideline Levels (AEGLs) were used to describe the risk to humans resulting from once-in-a-lifetime, or rare, exposure to airborne chemicals such as an intentional release in a school. AEGLs were used for the classroom scenario because these guideline levels are developed for various exposure durations from ten minutes to eight hours. The following definitions are provided by U.S. EPA:

- AEGL-1 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.
- AEGL-2 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
- AEGL-3 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

To evaluate the intentional classroom spill scenario, the modeled concentrations that could be reached within 10 minutes of a spill were compared to the AEGL-1, -2, and -3 concentrations. Model results indicated that hydrochloric acid, hydrofluoric acid, and nitric acid could reach airborne concentrations within 10 minutes of a spill in a classroom that might cause long-lasting effects or might be life-threatening.

Theft of Chemical/Intentional release in Neighboring Fircrest Swimming Pool

Cyanide in the form of sodium or potassium cyanide was evaluated under this scenario. Assuming the total inventory of cyanide at the WA-PHL was dissolved in the Fircrest swimming pool, the dose a child swimmer might receive was estimated to be about 0.09 milligrams of cyanide per kilogram of body weight. For comparison, the estimated dose of cyanide was compared to the U.S. EPA Reference Dose (RfD) for cyanide. The RfD is considered to be an estimate of the daily dose over a lifetime of exposure at which no harmful effects would be expected in an exposed individual. The reference dose for cyanide is 0.02 mg/kg per day over a lifetime. Therefore, dissolving the entire WA-PHL inventory of cyanide into the Fircrest swimming pool may produce harmful health effects in swimmers.

Probability of the Chemical Release Scenarios Evaluated

The risk and safety assessment scope of work directed the evaluation of "most-probable" chemical release scenarios from the WA-PHL. However, the most-probable chemical release scenarios are unlikely to result in chemical releases outside the WA-PHL. Most releases are accidental spills of small volumes that are quickly managed based on spill response procedures outlined in the WA-PHL Spill Response Guide. Vapors generated from spills of volatile chemicals would either dissipate within the building indoor air space or be captured in the building exhaust system and diluted to levels below health concern. Therefore, worst-case chemical release scenarios were evaluated based on the unlikely occurrence of an explosion, either accidental or intentional, or the theft of chemicals from the laboratory and intentional release in a school classroom, or the Fircrest swimming pool.

Although not impossible, accidental or intentional explosions that could cause an atmospheric release of chemicals are low probability events for the following reasons:

- Laboratory personnel are generally trained in science and the management of chemical implemented in the WA-PHL CHP and Laboratory Safety Manual;

- The WA-PHL and DOH require chemical safety training courses for laboratory personnel and training is monitored by supervisory staff;
- The WA-PHL work spaces are designed for safe handling of chemicals;
- Based on law enforcement agency reviews, the WA-PHL has implemented appropriate levels of security to reduce the likelihood of a malevolent act by an outsider that could result in a release to the community;
- The WA-PHL does not present an attractive target based on law enforcement agency review of the laboratory and on monitoring of terrorist information exchange and communication at the Washington Joint Analytical Center; and
- Based on the security vulnerability assessment developed as part of this risk and safety assessment (Section 7); an attack on the WA-PHL is not likely because damage to or destruction of the laboratory would not result in large numbers of casualties; disruption of the local, regional, or national economy; damage to the reputation or operations of a global brand; collateral damage to a regional or national landmark; or other consequence generally associated with targets attractive to terrorist organizations.

For some of the same reasons, theft of chemicals with the intent to release them in a public place, such as a school, is a low probability event. For example, a level of security appropriate for the mission and operations performed at the WA-PHL is already in place and has been reviewed by local and federal law enforcement agencies. Furthermore, although the laboratory maintains an extensive chemical inventory, the number of the chemicals that are highly toxic is low; stocks of a given chemical are generally spread among more than one location; and many of the chemicals that would be attractive to someone with malevolent intent are available from commercial or other sources that are more accessible than those stored at the WA-PHL. Each of the chemicals evaluated in the screening level assessment can be ordered from on-line vendors or is available at hardware and home improvement stores, including hydrochloric acid, hydrofluoric acid, nitric acid, and sodium cyanide. Most of these chemicals can also be found in use at schools and businesses in Shoreline.

RADIOLOGICAL HAZARDS EVALUATION

The WA-PHL uses radionuclides for qualitatively determining the presence of disease, as components of certain instruments, as calibration tools for equipment used to quantitatively determine levels of radioactivity in environmental samples, and for training. The three primary places at which radionuclides are used are in the

tuberculosis (Tb) laboratory, in the environmental chemistry laboratory, and in the radiation laboratory.

The WA- PHL is required to follow a number of state and federal regulations as well as internal radiation safety procedures for the storage and use of radionuclides. Pursuant to these laws and regulations, the Washington State Department of Health, Office of Radiation Protection, has issued a radioactive materials license (hereinafter, the License) to the WA-PHL (State of Washington, 2003). The License specifies maximum quantities of radionuclides that can be present at any given time. The License also specifies various requirements including training of employees, monitoring exposure to radiation, securing radionuclide samples, maintaining records, and disposing of radioactive waste.

The WA-PHL also abides by the procedures outlined in its *Radiation Safety Manual*. This manual provides guidelines for limiting exposure to radionuclides; for ordering, storing, and disposing of radionuclides; and for reporting and record-keeping. The *Radiation Safety Manual* outlines the laboratory's policy of ALARA, meaning that the goal is to keep exposure to radiation by employees, visitors, and the community "As Low As Reasonably Achievable." Furthermore, the manual serves as a source of general information about the multiple uses of radiation at the laboratory and outlines the Radiation Safety Officer's training course for employees working with radionuclides.

To assess the probability, magnitude, and consequences of accidental radionuclide releases, the radionuclide inventory for the laboratory was reviewed and compliance with appropriate regulatory requirements was evaluated. In addition, procedures for storing, using, and handling radionuclides were evaluated. Potential health implications associated with accidental or malicious, intentional, releases of radionuclides were then modeled.

Based on the inventory review performed, the laboratory is in compliance with the requirements of the License; however, revisions to the inventory system should be made. Specifically, the units in which radionuclide activities are recorded should be updated to the International System of Units (SI) and more detailed records of minor and infrequently used materials should be maintained. It was also recommended that an accurate, complete, and consistent computerized radioactive materials inventory system be developed in place of the current system. After analysis of the WA-PHL's rules, procedures, and documentation for radioactive materials, it was determined that

the WA-HL is in compliance with relevant laws and guidelines governing radioactive material.

RADIOLOGICAL RISK AND SAFETY ASSESSMENT

For the radiological risk assessment, potential health effects from accidental or deliberate releases of radioactive materials were evaluated. The risk and safety assessment scope of work directed the evaluation of "most-probable" release scenarios from the WA-PHL. However, the most-probable release scenarios are unlikely to result in radiological releases outside the WA-PHL. Therefore, worst-case release scenarios were evaluated based on the unlikely occurrence of an atmospheric release, or the theft of chemicals from the laboratory and intentional release in a school classroom or to the Fircrest swimming pool.

Four exposure scenarios were considered for radiological releases from the WA-PHL:

- Theft of radioactive material and entire inventory is dissolved and mixed into the classroom's water cooler
- Theft of one of the sealed sources used in an instrument at the WA-PHL transported to a classroom, where the seal is broken and radioactive material is released into the airspace of the classroom.
- Theft of radiological material and intentional release in the neighboring Fircrest swimming pool
- Atmospheric release of the entire radioactive inventory

The results of the risk assessment for the four scenarios are provided below.

Theft of Radioactive Material/Entire Inventory Dissolved into Classroom's Water Cooler

The classroom water cooler scenario resulted in the highest modeled dose to the exposed individuals, with a dose in the first year, close to 9 times larger than the federally mandated benchmark for licensed facilities annually to the public due to routine facility operations. However, these doses would not cause any acute effect, and the long term effect (average annual increased exposure after 50 years has passed since the event) is smaller than the effect on radiation exposures of living in Denver rather than Seattle (due to the difference in altitude and resultant higher exposure from cosmic rays), or moving to the northeast corner of Washington State from Seattle (due to the higher radon emissions from bedrock in the northeast part of the state).

***Theft of Sealed Source/Transported to Classroom and Released into Classroom
Airspace***

This scenario resulted in exposures under (by about 10 percent) the Nuclear Regulatory Commission (NRC) annual dose limit for the public due to nuclear facility operations. Even after 50 years of remaining in the body and causing continued radiation exposure, the total dose would be less than 1/2 the dose from a single abdominal CT scan.

Theft of Radiological Material/Intentional Release in Fircrest Swimming Pool

The swimming pool scenario resulted in the lowest dose of the scenarios evaluated. External exposure from water immersion is low when the material is diluted by the volume of the pool.

Atmospheric Release of Entire Radioactive Inventory

The atmospheric release scenario resulted in a dose less than 1/10 the dose that one would receive by flying round-trip from Washington, D.C. to Los Angeles (due to cosmic radiation at high altitudes in the atmosphere).

SUMMARY OF RADIOLOGICAL HAZARDS ASSESSMENT

After analysis of the WA-PHL's rules, procedures, and documentation regarding radioactive materials handling and disposal, worker training, and contamination testing, as well as checking the final inventory summary against radioactive material possession limits, the WA-PHL has been determined to be in compliance with relevant laws and guidelines governing radioactive material. Revisions to the inventory system, however, should be made. Specifically, the units in which radionuclide activities are recorded should be updated to the International System of Units (SI) and more detailed records of minor and infrequently used materials should be maintained. Thus, it is recommended that the WA-PHL improve existing radiation inventory methods.

Public health risks were assessed by calculating the radiation doses that would result from worst-case release scenarios. The scenarios evaluated resulted in doses well below background radiation doses when averaged over a lifetime, and only one resulted in doses exceeding the NRC's annual dose limit for the public due to routine nuclear facility operations. The scenarios are sufficiently conservative to demonstrate that even in a worst case event; radiation health risks to the public would have no measurable consequence.

PHYSICAL HAZARDS EVALUATION

Physical hazards, for the purposes of the risk and safety assessment, refer to work place hazards that can adversely affect worker health and well being, and that could result in hazardous conditions that could, in turn, affect the surrounding community. The physical hazards evaluation provides a discussion of the physical hazards that are associated with operating a diagnostic microbiology laboratory based on the equipment, chemicals, and other materials necessary to the public health laboratory mission. Several sources of work place hazards were identified including biological, chemical, radiological hazards, laboratory equipment hazards, and hazards associated with the use of laboratory animals.

The WA-PHL and DOH have prepared extensive programs, policies, and procedures to protect worker health and to manage the hazards of the work place. Written documentation of these efforts is available in the laboratory safety manual, biosafety manual, chemical hygiene plan, radiation safety plan, and other written materials.

The effectiveness of worker health and safety plans was evaluated through interviews of the laboratory safety officer, training officer, risk manager, and administrative staff. OSHA reportable injuries documented on Forms 300 were also reviewed.

Overall, the WA-PHL promotes and maintains a safety culture throughout their operation. Based on document reviews and interviews, the WA-PHL is generally a safe place to work and issues that could affect worker safety are addressed quickly and effectively through formal reporting, review, and interview activities. The risk and safety assessment report offered three recommendations to enhance the safety program at the WA-PHL, including improved organization of the various safety efforts and documents, better tracking of safety training, and the establishment of a recognition program for safety performance.

SECURITY VULNERABILITY EVALUATION

The objectives of the security vulnerability assessment (SVA) were to:

1. Identify security weaknesses and vulnerabilities that could result in a release of biological material or chemicals that might impact the surrounding community following terrorist and/or sabotage activities, and
2. Evaluate countermeasures that provide protection from these potential releases.

The SVA for the WA-PHL followed four basic steps, using information obtained from interviews, site visits, and WA-PHL documents:

- Characterizing the facility by identifying assets and existing countermeasures;
- Assessing the threat by identifying potential threats that could lead to an attack on the facility assets;
- Assessing the vulnerabilities by analyzing the ability of countermeasures to detect, deter, or delay an attack, or to limit the consequences of a successful attack. This was done by considering the existing countermeasures and consequences for four security scenarios:
 1. External attack on the facility with a truck bomb and all microorganisms and chemicals are emitted to the atmosphere.
 2. Intruder removes agent or chemical from the laboratory during the night and material is introduced into a different environment.
 3. Criminal removes agent or chemical from the laboratory during the delivery of a sample and material is introduced into a different environment.
 4. Disgruntled employee removes agent or chemical from the laboratory and material is introduced into a different environment.
- Assessing additional countermeasures, by examining new or improved countermeasures that may reduce the likelihood and/or consequences of an attack.

The level of, and actions involved in, agent and chemical security should be consistent with the likelihood and potential consequences of a threat. Overall, the WA-PHL does not appear to be a high profile target nor very attractive to individuals or groups with malevolent intent. It does not have a large number of employees and does not maintain large quantities of microorganisms, chemicals, or radioactive materials. Mass casualties or extensive damage to critical infrastructure, monuments, or other structures of public value are unlikely in the event of a release, fire, or explosion. Police and counterintelligence reports indicate a low level of concern.

Several additional countermeasures that the WA-PHL could take to improve its security position were identified and are prioritized as presented on Table ES-1. Several were given a low priority because they do not appear warranted given the low potential magnitude of the consequences of a security breach. Others were identified as either medium or high priority based on the results of the consequence analysis.

EARTHQUAKE HAZARDS

A limited evaluation of the seismic design and expected seismic performance of the WA-PHL building was performed to address the risk of biological, chemical, or radiological material release to the environment as a result of an earthquake.

The objective of this evaluation was to compare the seismic design strength (or capacity) of the building to the anticipated load (or demand) that would be applied to the building in a seismic event (earthquake). Five different levels of seismic events were considered. The seismic events included the Maximum Considered Earthquake (MCE) with a return period of 2475 years; the design earthquake, which is two-thirds of the MCE; and seismic ground motions corresponding with return periods of 475, 224 and 72 years, respectively. The design earthquake corresponds to the minimum design load level required by the current building code, the 2006 International Building Code (IBC) at the subject site. Although the buildings were originally designed to older building codes (1982 Uniform Building Code for example), the design strength of each building considered was determined in accordance with the provisions of the 2006 IBC. Evaluation of the building response subjected to a wide range of ground motions was made using current code provisions.

The limited evaluation of seismic design and performance conducted for the risk and safety assessment report indicates good seismic performance with very low probability of collapse at all levels of seismic ground motions considered. Furthermore, the WA-PHL buildings present positive attributes for good seismic performance:

- Buildings are light-weight resulting in better seismic performance;
- The lateral force resisting system (LFRS) appears to have been over-designed (significantly exceeds minimum requirements), therefore, the WA-PHL building may have been designed as an essential facility;
- The buildings are symmetric and regularly shaped; and
- Stucco cladding on exterior walls and gypsum wall board finishes add to initial stiffness of the structure and enhance performance in an earthquake.

Based on the seismic performance evaluation and the conclusion that immediate occupancy is likely to be possible, the laboratory buildings are not expected to collapse up to an earthquake with a mean return period of 1,650 years (2/3 of the MCE). Although the buildings would not collapse, breaches in the building wall and roof may occur through which a release of material could occur if breaches are located near

areas where biological, chemical, or radiological materials are stored or used. A breach in a laboratory wall or roof does not necessarily mean, however, that a release will occur.

Interior storage systems (racks, shelving, cupboards, lockers, etc.) were not evaluated for seismic performance. The storage systems, however, are generally secured to interior walls, have restraint systems to limit the likelihood of materials sliding off shelves due to ground motion, and have spill containment pans for storage of liquids. These features should limit the release of hazardous materials inside the WA-PHL building. As long as the building envelope is not compromised, for example, as long as an exterior wall does not collapse or break open, releases of hazardous materials should remain inside the building and not be released to the surrounding community. Finally, based on the Chemical Hazards Assessment, the volume of chemicals maintained in the WA-PHL inventory is not likely to pose a significant hazard in the event of a Design Level earthquake. Other consequences of such an earthquake are likely to be more serious, such as widespread damage to critical infrastructure in the metropolitan Seattle area.

EMERGENCY RESPONSE PLAN EVALUATION

The objective of the emergency response plan (ERP) evaluation was to assess the WA-PHL ERP for completeness and implementation.

The WA-PHL is subject to federal rules on the possession, use and transfer of select agents and toxins promulgated in the Code of Federal Regulations (42 CFR 73). Subpart 14 specifies incident response plan requirements, and Subpart 15 provides training requirements. The WA-PHL is also subject to state rules for emergency response because of the requirement to protect the health and safety of employees during a response to the release of hazardous substances as promulgated in the Washington Administrative Code (WAC 296-824).

The September 2008 WA-PHL ERP draft, which is the most recent but admittedly incomplete version, was compared to these requirements. The draft WA-PHL ERP is scheduled to be completed by the end of 2008. Additional information for the assessment was obtained by interviews, site visits, and other WA-PHL documents.

The current version of the WA-PHL ERP has several missing, incomplete, or inconsistent sections. In its current state, the written WA-PHL ERP does not provide

adequate protection. An optimal ERP will provide the procedures to minimize the impacts to the employees, visitors, community, environment, and structures from an incident when it is fully developed, exercised, and tested.

The process used to develop the WA-PHL ERP should be modified in the following ways:

- The WA-PHL ERP should be promptly completed and a schedule established for its annual review and updating, if needed. Additional reviews may be needed when conditions change (e.g., laboratory modifications, operating procedures, or personnel responsibilities), or experience is gained through an incident or an exercise.
- The responsible manager for the WA-PHL ERP should be clarified. A single manager needs to be given clear authority and resources to complete this plan on schedule.
- Stakeholders, including first responders, nearby facilities, and the community, should be involved early in the preparation of the ERP. Understanding stakeholder input early in the process will typically reduce the overall time and budget requirements for plan completion.
- The range of facilities addressed should be expanded to include nearby facilities, the community, and the environment. Facilities are near each other and therefore may impact each other.
- The range of covered incidents should be determined in a systematic process, such as a risk assessment. This will reduce the likelihood of missing incidents that may have significant probabilities or consequences.
- Similar procedures discussed in multiple WA-PHL health and safety documents should be modified to maintain consistency. The WA-PHL may want to consider whether the same procedures need to be described in multiple documents.
- Training should be broadened to cover a larger range of potential incidents. Training and exercises are important to understand and test the plan. Exercises should include first responders (fire and police) to facilitate common understanding and communications during an actual incident.

**AIR QUALITY ASSESSMENT FOR THE
WASHINGTON STATE PUBLIC HEALTH
LAB ADDITION**

CPP Project 4535

December 2008

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EXECUTIVE SUMMARY

This report documents the wind-tunnel study conducted by CPP, Inc. on behalf of The Miller Hull Partnership, LLP (Miller Hull) for the proposed Washington State Public Health Lab Addition (Lab Addition) in Shoreline, Washington. The objective of the study was to obtain accurate concentration estimates at building air intakes and other sensitive locations due to emissions from various exhaust sources located on and around the Lab Addition. The various exhaust sources may periodically emit chemicals or other contaminants that may enter nearby buildings through air intakes, or be present at other sensitive locations, and impact staff or the general public. If adverse impacts were found, mitigation measures were evaluated.

To meet the objectives of the study, a 1:120 scale model of the Lab Addition and nearby surroundings within a 680 ft radius was constructed and placed in CPP's boundary-layer wind tunnel. Concentration measurements were obtained in the wind tunnel to define the impact of emissions from the various exhaust sources at building air intake and other sensitive locations. The conclusions of the study are listed in the following tables. Table ES-1 lists the results for planned exhaust sources on the Lab Addition, while Table ES-2 lists results for the existing exhaust sources. Mitigation measures are discussed as necessary.

Table ES-1
Public Health Lab Addition Exhaust Sources

Source Type (ID)	Stack Base Height (ft) (description)	Stack Height Above Base (ft)	Volume Flow Rate and Exit Velocity cfm (fpm)	Comment
<i>BSL-3 Exhaust</i> (EF-1a,1b)	15.0 (Main Roof)	13.3	7610 (4756)	Meets design criterion. ¹ The highest concentration was measured at a Public Health Laboratory air intake.
<i>BSL-2 Exhaust</i> (EF-2a,2b)	15.0 Main Roof	5.7	3500 (3220)	Meets design criterion. ¹ The highest concentration was measured at at Public Health Laboratory air intake.
<i>BSL-2 Space Chemical Fume Hood Exhaust</i> (EF-3a,3b)	15.0 (Main Roof)	9.7	4965 (5226)	Meets design criterion. ² The highest concentration was measured at at Public Health Laboratory air intake.
<i>Chemical Fume Hood Exhaust</i> (EF-5a, 5b)	15.0 Main Roof	10.8	2000 (4651)	Meets design criterion. ² The highest concentration was measured at at Public Health Laboratory air intake.
<i>BSL-3 Exhaust</i> (EF-6a,6b)	15.0 Main Roof	10.9	4600 (4842)	Meets design criterion. ¹ The highest concentration was measured at at Public Health Laboratory air intake.
<i>200hp Diesel Truck idling at the Loading Dock</i> (DT)	0.0 (Local Grade)	10.0	Per Specs	Meets health/odor criteria for up to two diesel trucks idling simultaneously.

¹ The 2000 $\mu\text{g}/\text{m}^3$ per g/s design criterion assumes limited chemical use in an BSL hood.

² The 1500 $\mu\text{g}/\text{m}^3$ per g/s design criterion corresponds to the ANSI Z9.5-2003 "as installed" fume hood containment requirement and assumes chlorine and hydrogen fluoride are limited to 0.02 L.

**Table ES-2
Surrounding Exhaust Sources**

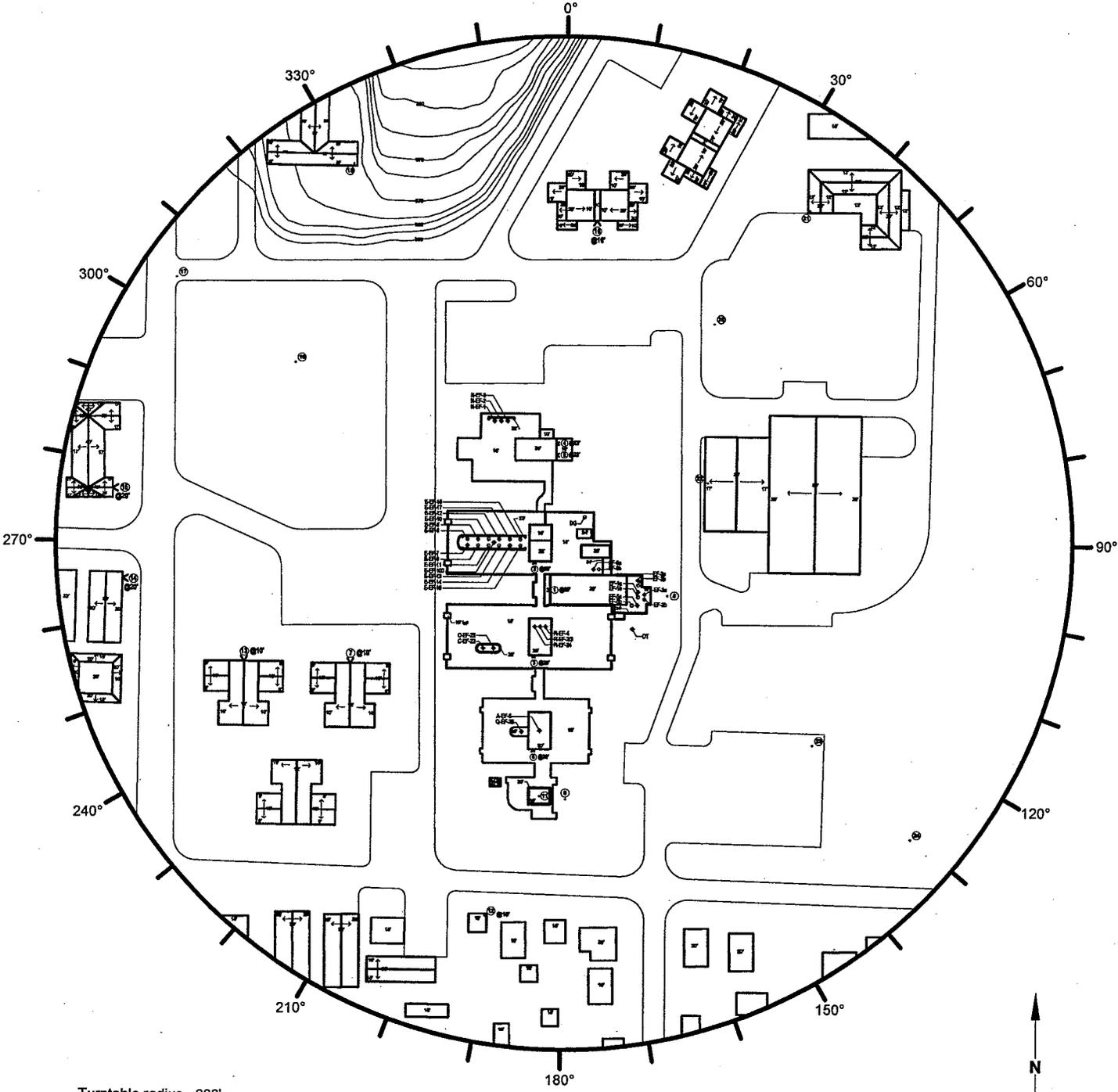
Source Type (ID)	Stack Base Height (ft) (description)	Stack Height Above Base (ft)	Volume Flow Rate and Exit Velocity cfm (fpm)	Comment
1250 KW Diesel Generator (DG)	15.0 (Main Roof)	9.0	Per specs	Health criterion is met. Odor criterion exceeded 5% of operating hours at the Lab Addition intake (20% at an existing intake). Filtered odor criterion met. ³
All E-Wing Lab Exhausts (Based on E-EF-7; and E-EF-14)	15.0 (Main Roof)	9.0	E-EF-7 802 (3000) E-EF-14 1980 (3000)	Exceeds design criterion ² at: PHL intake: 4% of the time; Surrounding receptors: met Mitigation: 1) Limit stored quantities; ⁴ or 2) Manifold stacks into to meet: 9 ft stack; 15,000 cfm volume flow 3000 fpm exit velocity.
All N-Wing West Lab Exhausts (Based on N-EF-1; and N-EF-3)	16.0 (Main Roof)	9.0	N-EF-1 2000 (3000) N-EF-3 1200 (3000)	Meets design criterion ² at all locations evaluated.
All C-Wing Lab Exhausts (Based on C-EF-22; and C-EF-23)	15.0 (Main Roof)	7.0	C-EF-22 500 (917) C-EF-23 800 (1467)	Exceeds design criterion ² at: PHL intake: 1% of the time; Surrounding receptor: < 0.5% of the time. Mitigation: Limit stored quantities. ⁴
A-Wing Exhausts (Based on A-EF-5)	30.0 (Penthouse)	7.0	9500 (1510)	Meets design criterion ² at all locations evaluated.

³ This criterion assumes an 80% efficient exhaust oxidizing filter is installed at the generator.

⁴ Chlorine gas – 9.26 g; hydrogen fluoride liquid: - 27 ml; hydrogen fluoride gas: 5.3 g. See Table C-1 in Appendix C.

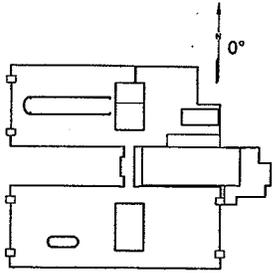
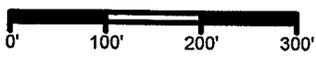
**Table ES-2
Surrounding Exhaust Sources**

Source Type (ID)	Stack Base Height (ft) (description)	Stack Height Above Base (ft)	Volume Flow Rate and Exit Velocity cfm (fpm)	Comment
<i>Q-Wing Lab Exhausts</i> (Based on Q-EF-25)	20.0 (Step Above Main Roof)	7.0	800 (1467)	Exceeds design criterion ² at: PHL intake: met; Surrounding receptor: < 0.5% of the time. Mitigation: Limit stored quantities. ⁴
<i>All R-Wing Lab Exhausts</i> (Based on R-EF-2/3) R-EF-4 and R-EF-24)	29.0 (Penthouse)	7.0	R-EF-2/3 23,450 (1870) R-EF-4 2450 (1170) R-EF-24 1650 (1543)	Meets design criterion ² at all locations evaluated.



-Turntable radius - 680'
 -Bldg. heights-in feet above local
 (maximum) ground elevation.
 -Architectural elevation datum = 345'

- ⊗ = Receptor
- ⊕ = Stack
- ⊙ = Deciduous Tree 30' (3")



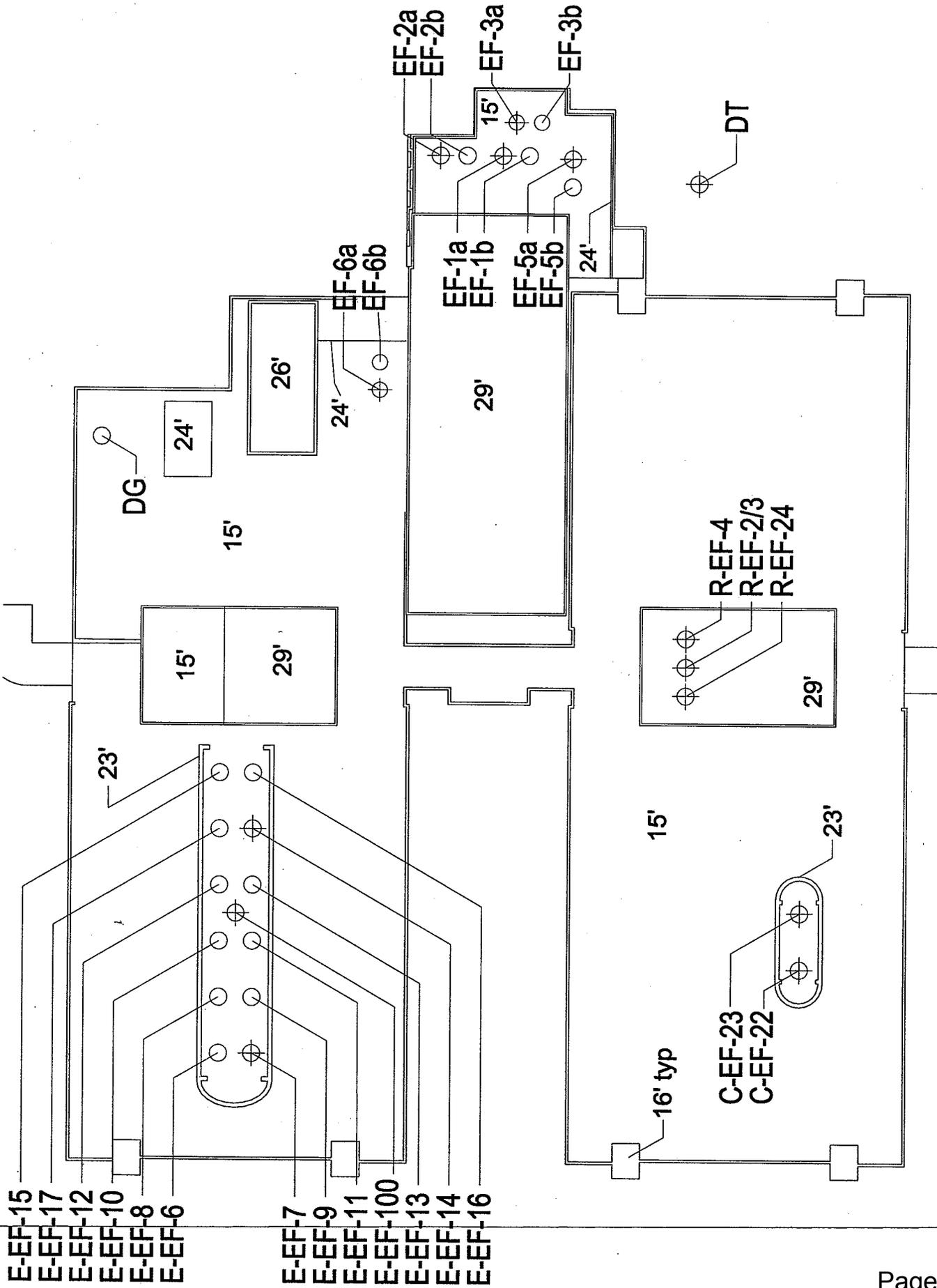


Table 2
Full-scale Exhaust and Modeling Information

Source Letter	Source Description	Source ID	Initial Source Height Above Base (ft)	Exit Diameter (in)	Exit Temp. (°F)	Mass Flow (lb/hr)	Volume Flow Rate (cfm)	Exit Velocity (fpm)	Source Orientation	Source Base Height Above Grade (ft)	Source Comment	
												Source Base Height Above Grade (ft)
Lab Addition												
AA	BSL-3 Exhaust 1a	EF-1a	13.3	17.1	70.0	34,722	7,610	4,756	Vertical	15.0	Main Roof	
AB	BSL-3 Exhaust 1b	EF-1b	13.3	17.1	70.0	34,722	7,610	4,756	Vertical	15.0	Main Roof	
AC	BSL-3 Exhaust 2a	EF-2a	5.7	14.1	70.0	15,969	3,500	3,220	Vertical	15.0	Main Roof	
AD	BSL-3 Exhaust 2b	EF-2b	5.7	14.1	70.0	15,969	3,500	3,220	Vertical	15.0	Main Roof	
AE	BSL-2 Space (chemical exhaust)	EF-3a	9.7	13.2	70.0	22,654	4,965	5,226	Vertical	15.0	Main Roof	
AF	BSL-2 Space (chemical exhaust)	EF-3b	9.7	13.2	70.0	22,654	4,965	5,226	Vertical	15.0	Main Roof	
AH	Loading Dock - 200hp Diesel Truck	DT	10.0	3.0	300.0	318	100	2,037	Vertical	0.0	Loading Area, Grade Level	
AJ	Fume Hood Exhaust 5a	EF-5a	10.8	8.9	70.0	9,125	2,000	4,651	Vertical	15.0	Main Roof	
AJ	Fume Hood Exhaust 5b	EF-5b	10.8	8.9	70.0	9,125	2,000	4,651	Vertical	15.0	Main Roof	
AK	BSL-3 Exhaust 6a	EF-6a	10.9	13.2	70.0	20,988	4,600	4,842	Vertical	30.0	Main Roof	
AL	BSL-3 Exhaust 6b	EF-6b	10.9	13.2	70.0	20,988	4,600	4,842	Vertical	30.0	Main Roof	
Existing Sources												
BA	1250 KW Diesel Generator	DG	9.0	16.0	300.0	16,861	5,300	3,783	Vertical	15.0	Main Roof	
BB	E-Wing Fume Hood EF-7	E-EF-7	9.0	7.0	70.0	3,659	802	3,000	Vertical	15.0	Main Roof	
BC	E-Wing Fume Hood E-EF-14	E-EF-14	9.0	11.0	70.0	9,034	1,980	3,000	Vertical	15.0	Main Roof	
BD	N-Wing West Lab Exhaust	N-EF-1	9.0	11.1	70.0	9,125	2,000	3,000	Vertical	16.0	Main Roof	
BE	N-Wing Central Lab Exhaust	N-EF-2	9.0	7.8	70.0	4,563	1,000	3,000	Vertical	16.0	Main Roof	
BF	N-Wing East Lab Exhaust	N-EF-3	9.0	8.6	70.0	5,475	1,200	3,000	Vertical	16.0	Main Roof	
BG	C-Wing Lab Exhaust EF-22	C-EF-22	7.0	10.0	70.0	3,650	800	1,467	Vertical	15.0	Main Roof	
BH	C-Wing Lab Exhaust EF-23	C-EF-23	7.0	10.0	70.0	2,281	500	917	Vertical	15.0	Main Roof	
BI	R-Wing Lab Exhaust EF-2/3	R-EF-2/3	7.0	47.9	70.0	106,996	23,450	1,870	Vertical	29.0	Penthouse	
BJ	R-Wing Lab Exhaust EF-4	R-EF-4	7.0	19.6	70.0	11,179	2,450	1,170	Vertical	29.0	Penthouse	
BK	Q-Wing Lab Exhaust EF-25	Q-EF-25	7.0	10.0	70.0	3,650	800	1,467	Vertical	20.0	Step Above Main Roof	
BL	A-Wing Lab Exhaust EF-5	A-EF-5	7.0	34.0	70.0	43,346	9,500	1,510	Vertical	30.0	Penthouse	
BM	R-Wing Lab Exhaust EF-24	R-EF-24	9.0	14.0	70.0	7,528	1,650	1,543	Vertical	29.0	Penthouse	
Potential Mitigation for E Wing												
BN	E-Wing Potential Mitigation Design	E-EF-100	9.0	30.3	70.0	68,441	15,000	3,000	Vertical	29.0	Main Roof	

Site Parameters:

Scale Reduction:	120
Grade Elevation (m):	105.2 345 ft msl
Typical Building Height (m):	9.1
Ambient Temperature (°K):	294.3 70 F
Anemometer Height (m):	10.00 Snohomish County Airport
Anemometer Surface Roughness (m):	0.03 Snohomish County Airport
Site Anemometer Height (m):	10.00
Site Surface Roughness (m):	0.35
1 Percent Wind Speed (m/s):	12.1 Snohomish County Airport (Period of Record: 1978-2007)

Table 4
Summary of Normalized Concentration Design Criteria

Source Type	Design Criteria Type ($\mu\text{g}/\text{m}^3$) / (g/s)	Basis for Design Criteria ⁽¹⁾
BSL Exhausts	Health/odor	2,000
	ASHRAE	400
Fume Hood Exhausts	Alternate Health/odor	1,500
Existing Lab Exhausts	Alternate Health/odor	1,500
Loading Dock - 200hp Diesel Truck	Health	1,309,091
	Odor	10,586
1250 KW Diesel Generator	Health	912
	Odor	200
	Filtered Odor	1,000

Note:
 See Section 2 and Appendix C for detailed discussion.

Table 5
Test Plan, Normalized Concentration Results
and Percent Time the Design Criteria may be Exceeded For Each Source/Receptor Combination Evaluated

Run No.	Source Letter	Stack Height Above Base (ft)	Receptor Identification	Air Intake Operating (Deg.)	Wind Direction (Deg.)	Wind Speed (m/s)	Max Normalized WT-Measured Concentration (µg/m³)/(g/s)	(2) Design Criteria (µg/m³)/(g/s)	(3) Design Criteria Achieved?	(4) Percent Time Design Criteria May Be Exceeded
WASHINGTON PUBLIC HEALTH LAB ADDITION										
Fume Hood - 2000 cfm / 4651 fpm										
921	AI	EF-5a	10.8	1 - Planned AH-1	No	125	4.5	734	ANSI	-
922	AI	EF-5a	10.8	2 - E-Wing AHU	No	115	4.5	1,337	1,500	Yes
923	AI	EF-5a	10.8	3 - R-Wing AHU	No	55	3.5	1,352	1,500	Yes
924	AI	EF-5a	10.8	7 - SW Operable Window	No	75	2.7	516	1,500	Yes
925	AI	EF-5a	10.8	10 - N Operable Window	No	175	2.1	402	1,500	Yes
926	AI	EF-5a	10.8	12 - Surrounding S	No	25	2.1	329	1,500	Yes
927	AI	EF-5a	10.8	14 - Surrounding W1	No	90	2.1	292	1,500	Yes
928	AI	EF-5a	10.8	15 - Surrounding W2	No	105	1.6	273	1,500	Yes
929	AI	EF-5a	10.8	21 - Surrounding NE2	No	200	1.6	345	1,500	Yes
930	AI	EF-5a	10.8	22 - Surrounding NE3	No	215	2.7	690	1,500	Yes
981	AI	EF-5a	10.8	23 - Surrounding SE1	No	305	2.7	218	1,500	Yes
BSL - 3500 cfm / 3220 fpm										
931	AC	EF-2a	5.7	1 - Planned AH-1	No	40	4.5	482	2,000	Yes
932	AC	EF-2a	5.7	2 - E-Wing AHU	No	105	4.5	1,134	2,000	Yes
933	AC	EF-2a	5.7	3 - R-Wing AHU	No	40	3.5	1,780	2,000	Yes
934	AC	EF-2a	5.7	7 - SW Operable Window	No	75	2.1	525	2,000	Yes
935	AC	EF-2a	5.7	10 - N Operable Window	No	175	2.1	452	2,000	Yes
936	AC	EF-2a	5.7	12 - Surrounding S	No	25	2.1	285	2,000	Yes
937	AC	EF-2a	5.7	14 - Surrounding W1	No	90	1.6	386	2,000	Yes
938	AC	EF-2a	5.7	22 - Surrounding NE3	No	225	3.5	994	2,000	Yes
BSL - 4600 cfm / 4482 fpm										
941	AK	EF-6a	10.9	1 - Planned AH-1	No	60	7.3	569	2,000	Yes
942	AK	EF-6a	10.9	2 - E-Wing AHU	No	25	9.4	1,033	2,000	Yes
943	AK	EF-6a	10.9	3 - R-Wing AHU	No	15	5.7	1,048	2,000	Yes
944	AK	EF-6a	10.9	7 - SW Operable Window	No	65	3.5	445	2,000	Yes
945	AK	EF-6a	10.9	10 - N Operable Window	No	180	3.5	275	2,000	Yes
946	AK	EF-6a	10.9	12 - Surrounding S	No	20	2.7	170	2,000	Yes
947	AK	EF-6a	10.9	14 - Surrounding W1	No	90	2.7	323	2,000	Yes
948	AK	EF-6a	10.9	22 - Surrounding NE3	No	235	5.7	729	2,000	Yes
Fume Hood - 4965 cfm / 5226 fpm										
951	AE	EF-3a	9.7	1 - Planned AH-1	No	125	7.3	213	ANSI	-
952	AE	EF-3a	9.7	2 - E-Wing AHU	No	115	7.3	580	1,500	Yes
953	AE	EF-3a	9.7	3 - R-Wing AHU	No	55	7.3	816	1,500	Yes
954	AE	EF-3a	9.7	7 - SW Operable Window	No	75	2.7	309	1,500	Yes
955	AE	EF-3a	9.7	10 - N Operable Window	No	170	2.7	212	1,500	Yes
956	AE	EF-3a	9.7	12 - Surrounding S	No	25	2.7	192	1,500	Yes
957	AE	EF-3a	9.7	14 - Surrounding W1	No	90	2.7	259	1,500	Yes
958	AE	EF-3a	9.7	22 - Surrounding NE3	No	225	5.7	346	1,500	Yes

Table 5
Test Plan, Normalized Concentration Results
and Percent Time the Design Criteria may be Exceeded For Each Source/Receptor Combination Evaluated

Run No.	Source Letter	Stack Height Above Base (ft)	Receptor Identification	Air Intake Operating	Wind Direction (Deg.)	Wind Speed (m/s)	Max Normalized WT-Measured Concentration (µg/m³)/(g/s)	(2)		(3)	(4)
								Design Criteria (µg/m³)/(g/s)	Design Criteria Achieved?		
BSL - 7610 cfm / 4756 fpm											
964	AA	13.3	1 - Planned AH-1	No	120	12.1	327	2,000	ASHRAE	Yes	-
965	AA	13.3	2 - E-Wing AHU	No	110	9.4	919	2,000	Health	Yes	-
966	AA	13.3	3 - R-Wing AHU	No	55	7.3	831	2,000	Health	Yes	-
967	AA	13.3	7 - SW Operable Window	No	75	4.5	308	2,000	Health	Yes	-
968	AA	13.3	10 - N Operable Window	No	175	4.5	209	2,000	Health	Yes	-
969	AA	13.3	12 - Surrounding W	No	25	4.5	135	2,000	Health	Yes	-
970	AA	13.3	14 - Surrounding W 1	No	85	4.5	180	2,000	Health	Yes	-
971	AA	13.3	22 - Surrounding NE 3	No	225	9.4	389	2,000	Health	Yes	-
Diesel Vehicle at the Loading Dock											
401	AH	10.0	1 - Planned AH-1	No	40	1.0	4,472	Odor	Health	Yes	-
402	AH	10.0	2 - E-Wing AHU	No	125	1.0	4,170	10,586	1,309,091	Yes	-
EXISTING SOURCES											
Diesel Generator											
501	BA	9.0	1 - Planned AH-1	No	20	9.4	224	200	Health	Yes	5.30%
502	BA	9.0	2 - E-Wing AHU	No	45	9.4	355	200	912	No	2.50%
503	BA	9.0	3 - R-Wing AHU	No	10	5.7	324	200	912	No	3.84%
504	BA	9.0	5 - S, N-Wing AHU	No	150	9.4	627	200	912	No	20.46%
N-Wing											
603	BF	9.0	1 - Planned AH-1	No	345	2.1	966	1,500	ANSI	Yes	-
801	BF	9.0	7 - SW Operable Window	No	30	1.6	832	1,500	ANSI	Yes	-
802	BF	9.0	10 - N Operable Window	No	200	2.1	914	1,500	ANSI	Yes	-
803	BF	9.0	13 - Surrounding SW	No	50	1.3	700	1,500	ANSI	Yes	-
804	BF	9.0	14 - Surrounding W 1	No	70	1.0	519	1,500	ANSI	Yes	-
805	BF	9.0	15 - Surrounding W 2	No	85	1.6	574	1,500	ANSI	Yes	-
806	BF	9.0	16 - Surrounding WNW 1	No	110	2.1	1,302	1,500	ANSI	Yes	-
807	BF	9.0	17 - Surrounding WNW 2	No	115	1.3	878	1,500	ANSI	Yes	-
808	BF	9.0	18 - Surrounding NW	No	150	1.0	618	1,500	ANSI	Yes	-
809	BF	9.0	20 - Surrounding NE 1	No	250	2.1	610	1,500	ANSI	Yes	-
810	BF	9.0	21 - Surrounding NE 2	No	245	2.1	966	1,500	ANSI	Yes	-
811	BF	9.0	22 - Surrounding NE 3	No	285	2.1	848	1,500	ANSI	Yes	-
812	BF	9.0	23 - Surrounding SE 1	No	315	1.0	410	1,500	ANSI	Yes	-
821	BD	9.0	10 - N Operable Window	No	200	2.1	834	1,500	ANSI	Yes	-
822	BD	9.0	18 - Surrounding NW	No	150	1.3	479	1,500	ANSI	Yes	-
823	BD	9.0	21 - Surrounding NE 2	No	240	1.6	538	1,500	ANSI	Yes	-
824	BD	9.0	22 - Surrounding NE 3	No	280	2.1	600	1,500	ANSI	Yes	-

Table 5
Test Plan, Normalized Concentration Results
and Percent Time the Design Criteria may be Exceeded For Each Source/Receptor Combination Evaluated

Run No.	Source Letter	Stack Height Above Base (ft)	Receptor Identification	Air Intake Operating (Deg)	Wind Direction (Deg)	Wind Speed (m/s)	Max Normalized WT-Measured Concentration (µg/m³)(g/s)	(1)	(2)	(3)	(4)
E-Wing Existing Sources											
601	BB	E-EF-7	9.0	1 - Planned AH-1	No	305	2.7	2,837	ANSI 1,500	No	4.01%
611	BB	E-EF-7	9.0	2 - E-Wing AHU	No	280	2.7	2,017	1,500	No	2.35%
841	BB	E-EF-7	9.0	7 - SW Operable Window	No	45	1.6	1,279	1,500	Yes	-
842	BB	E-EF-7	9.0	10 - N Operable Window	No	200	1.0	902	1,500	Yes	-
843	BB	E-EF-7	9.0	13 - Surrounding SW	No	60	1.0	721	1,500	Yes	-
844	BB	E-EF-7	9.0	14 - Surrounding W 1	No	90	1.0	720	1,500	Yes	-
845	BB	E-EF-7	9.0	15 - Surrounding W 2	No	105	1.0	818	1,500	Yes	-
846	BB	E-EF-7	9.0	16 - Surrounding WNW 1	No	135	1.0	617	1,500	Yes	-
847	BB	E-EF-7	9.0	18 - Surrounding NW	No	160	1.0	858	1,500	Yes	-
848	BB	E-EF-7	9.0	20 - Surrounding NE 1	No	230	1.0	843	1,500	Yes	-
851	BB	E-EF-7	9.0	21 - Surrounding NE 2	No	225	1.0	680	1,500	Yes	-
849	BB	E-EF-7	9.0	22 - Surrounding NE 3	No	255	1.0	407	1,500	Yes	-
850	BB	E-EF-7	9.0	23 - Surrounding SE 1	No	300	1.6	312	1,500	Yes	-
602	BC	E-EF-14	9.0	1 - Planned AH-1	No	310	7.3	944	1,500	Yes	-
612	BC	E-EF-14	9.0	2 - E-Wing AHU	No	295	9.4	2,708	1,500	No	1.84%
852	BC	E-EF-14	9.0	7 - SW Operable Window	No	55	1.6	492	1,500	Yes	-
853	BC	E-EF-14	9.0	10 - N Operable Window	No	190	2.1	472	1,500	Yes	-
854	BC	E-EF-14	9.0	14 - Surrounding W 1	No	90	1.0	647	1,500	Yes	-
856	BC	E-EF-14	9.0	21 - Surrounding NE 2	No	220	1.0	386	1,500	Yes	-
855	BC	E-EF-14	9.0	22 - Surrounding NE 3	No	250	2.1	433	1,500	Yes	-
Potential Mitigation											
701	BN	E-EF-100	9.0	1 - Planned AH-1	No	305	12.1	520	1,500	Yes	-
703	BN	E-EF-100	9.0	2 - E-Wing AHU	No	290	12.1	1,061	1,500	Yes	-
711	BN	E-EF-100	15.0	1 - Planned AH-1	No	305	9.4	231	1,500	Yes	-
712	BN	E-EF-100	15.0	2 - Planned AH-1	No	295	9.4	316	1,500	Yes	-
C-Wing											
604	BH	C-EF-23	9.0	1 - Planned AH-1	No	225	1.0	3,080	1,500	No	1.25%
861	BH	C-EF-23	7.0	7 - SW Operable Window	No	85	1.0	4,039	1,500	No	0.31%
862	BH	C-EF-23	7.0	10 - N Operable Window	No	190	1.0	908	1,500	Yes	-
863	BH	C-EF-23	7.0	12 - Surrounding S	No	5	1.0	1,525	1,500	No	0.15%
864	BH	C-EF-23	7.0	13 - Surrounding SW	No	90	1.0	1,952	1,500	No	0.04%
865	BH	C-EF-23	7.0	14 - Surrounding W 1	No	100	1.0	928	1,500	Yes	-
866	BH	C-EF-23	7.0	15 - Surrounding W 2	No	115	1.0	754	1,500	Yes	-
867	BH	C-EF-23	7.0	16 - Surrounding WNW 1	No	140	1.0	1,499	1,500	Yes	-
868	BH	C-EF-23	7.0	18 - Surrounding NW	No	210	1.0	792	1,500	Yes	-
869	BH	C-EF-23	7.0	20 - Surrounding NE 1	No	215	1.0	706	1,500	Yes	-
870	BH	C-EF-23	7.0	22 - Surrounding NE 3	No	235	1.0	2,122	1,500	Yes	-
871	BH	C-EF-23	7.0	23 - Surrounding SE 1	No	290	1.0	738	1,500	No	0.10%
872	BH	C-EF-23	7.0	24 - Surrounding SE 2	No	300	1.0	854	1,500	Yes	-
873	BH	C-EF-23	7.0	21 - Surrounding NE 2	No	215	1.0	471	1,500	Yes	-
875	BG	C-EF-22	7.0	7 - SW Operable Window	No	85	1.0	2,633	1,500	No	0.30%
876	BG	C-EF-22	7.0	12 - Surrounding S	No	355	1.0	1,232	1,500	Yes	-
877	BG	C-EF-22	7.0	16 - Surrounding WNW 1	No	145	1.0	1,335	1,500	Yes	-
878	BG	C-EF-22	7.0	22 - Surrounding NE 3	No	235	1.0	1,288	1,500	Yes	-

Table 5
Test Plan, Normalized Concentration Results
and Percent Time the Design Criteria may be Exceeded For Each Source/Receptor Combination Evaluated

Run No.	Source Letter	Source ID	Stack Height Above Base (ft)	Receptor Identification	Air Intake Operating	Wind Direction (Deg.)	Wind Speed (m/s)	Max Normalized WT-Measured Concentration (µg/m³)(g/s)	(2) Design Criteria (µg/m³)(g/s)	(3) Design Criteria Achieved?	(4) Percent Time Design Criteria May Be Exceeded
R-Wing											
881	BJ	R-EF-4	7.0	7 - SW Operable Window	No	80	2.1	1,050	ANSI 1,500	Yes	-
882	BJ	R-EF-4	7.0	10 - N Operable Window	No	185	1.0	508	1,500	Yes	-
883	BJ	R-EF-4	7.0	12 - Surrounding S	No	10	2.1	297	1,500	Yes	-
884	BJ	R-EF-4	7.0	14 - Surrounding W 1	No	95	1.3	626	1,500	Yes	-
885	BJ	R-EF-4	7.0	18 - Surrounding NW	No	155	1.3	468	1,500	Yes	-
886	BJ	R-EF-4	7.0	21 - Surrounding NE 2	No	210	1.0	554	1,500	Yes	-
887	BJ	R-EF-4	7.0	22 - Surrounding NE 3	No	230	2.1	530	1,500	Yes	-
606	BM	R-EF-24	7.0	1 - Planned AH-1	No	190	9.4	659	1,500	Yes	-
616	BM	R-EF-24	7.0	2 - E-Wing AHU	No	175	4.5	1,233	1,500	Yes	-
891	BM	R-EF-24	9.0	7 - SW Operable Window	No	80	2.1	404	1,500	Yes	-
892	BM	R-EF-24	9.0	14 - Surrounding W 1	No	95	1.0	459	1,500	Yes	-
895	BI	R-EF-2/3	7.0	7 - SW Operable Window	No	80	7.3	230	1,500	Yes	-
896	BI	R-EF-2/3	7.0	14 - Surrounding W 1	No	95	4.5	194	1,500	Yes	-
897	BI	R-EF-2/3	7.0	10 - N Operable Window	No	185	3.5	140	1,500	Yes	-
898	BI	R-EF-2/3	7.0	21 - Surrounding NE 2	No	210	3.5	143	1,500	Yes	-
899	BI	R-EF-2/3	7.0	22 - Surrounding NE 3	No	250	4.5	250	1,500	Yes	-
Q-Wing											
605	BK	Q-EF-25	7.0	1 - Planned AH-1	No	190	1.3	1,181	1,500	Yes	-
901	BK	Q-EF-25	7.0	7 - SW Operable Window	No	115	1.3	2,008	1,500	No	0.45%
902	BK	Q-EF-25	7.0	10 - N Operable Window	No	190	1.0	368	1,500	Yes	-
903	BK	Q-EF-25	7.0	12 - Surrounding S	No	110	1.3	715	1,500	Yes	-
904	BK	Q-EF-25	7.0	14 - Surrounding W 1	No	110	1.0	880	1,500	Yes	-
905	BK	Q-EF-25	7.0	18 - Surrounding NW	No	160	1.0	462	1,500	Yes	-
906	BK	Q-EF-25	7.0	21 - Surrounding NE 2	No	210	1.0	441	1,500	Yes	-
907	BK	Q-EF-25	7.0	22 - Surrounding NE 3	No	220	1.0	886	1,500	Yes	-
908	BK	Q-EF-25	7.0	23 - Surrounding SE 1	No	275	1.6	1,046	1,500	Yes	-
A-Wing											
911	BL	A-EF-5	7.0	7 - SW Operable Window	No	110	4.5	441	1,500	Yes	-
912	BL	A-EF-5	7.0	12 - Surrounding S	No	20	4.5	230	1,500	Yes	-
913	BL	A-EF-5	7.0	14 - Surrounding W 1	No	105	2.7	270	1,500	Yes	-
914	BL	A-EF-5	7.0	18 - Surrounding NW	No	160	1.6	213	1,500	Yes	-
915	BL	A-EF-5	7.0	21 - Surrounding NE 2	No	210	1.6	176	1,500	Yes	-
916	BL	A-EF-5	7.0	22 - Surrounding NE 3	No	215	3.5	182	1,500	Yes	-
917	BL	A-EF-5	7.0	23 - Surrounding SE 1	No	275	4.5	382	1,500	Yes	-

Notes:

- 1) The maximum normalized concentration (C/m) measured in the wind tunnel for the specific source/receptor pair.
- 2) The maximum acceptable C/m for each specific source, based on criteria discussed in Section 2.4 and Appendix C.
- 3) "Yes" if (1) < (2) or "No" if (1) > (2).
- 4) Percentage of time for which the prescribed emission scenario may produce concentrations greater than (2), based on a curve fit to all data collected for the specific source/receptor pair and the local wind frequency distribution (data tabulations are located in Appendix D).

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Washington State Public Health Lab
 Planning & Programming Report

Part 4 Master Development Plan Narrative

Proposed Site Zoning Regulations

The following table illustrates the proposed zoning regulations for the property.

Zoning Restrictions

Setbacks		
Front	40 feet	
Side	20 feet	
Rear	20 feet	
Building Mass		
Building Height	65 feet	Allow roof top equipment to exceed the height limitation by 15 feet
Modulation	50 feet max of street front façade before modulation or change of materials for min. 15'.	
Coverage		
Impervious Surface	75% max	
Building Lot Coverage	50% max	
Parking and Transportation	1 stall per 500 nsf lab and 1/300 nsf for office. Provide landscape screening per current City of Shoreline requirements. Designate van pool stalls and encourage alternate means of transportation/trip reduction, provide covered bicycle parking	
Site Lighting		
Parking	Full cut off fixtures, limited to 25' tall fixtures	
Building/Security	Provide well lit pedestrian paths. No light from building fixtures to cross property line	