DRAFT

CITY OF SHORELINE

SHORELINE PLANNING COMMISSION
MINUTES OF REGULAR MEETING

March 16, 2017 Shoreline City Hall
7:00 P.M. Council Chamber

Commissioners Present
Chair Craft
Vice Chair Montero
Commissioner Chang
Commissioner Maul
Commissioner Malek
Commissioner Mork
Commissioner Thomas

Staff Present
Rachael Markle, Director, Planning and Community Development
Paul Cohen, Planning Manager, Planning and Community Development
Miranda Redinger, Senior Planner, Planning and Community Development
Steve Szafran, Senior Planner, Planning and Community Development
Julie Ainsworth Taylor, Assistant City Attorney
Maureen Colaizzi, PRCS Project Coordinator
Carla Hoekzema, Planning Commission Clerk

Others Present
Zack Semke, Chief Marketing Officer, NK Architects
Dan Whitmore, Hammer & Hand

CALL TO ORDER

Chair Craft called the regular meeting of the Shoreline Planning Commission to order at 7:00 p.m.

ROLL CALL

Upon roll call by the Commission Clerk the following Commissioners were present: Chair Craft, Vice Chair Montero, and Commissioners Chang, Maul, Malek, Mork and Thomas.

APPROVAL OF AGENDA

The agenda was accepted as presented.

APPROVAL OF MINUTES

The minutes of March 2, 2017 were adopted as presented.

GENERAL PUBLIC COMMENT

Dave Lange, Shoreline, said he attended the "Trail Along the Rail" open house on March 15th, where he learned that the initial design is a fairly organized route along the freeway from 145th to 155th Streets. However, after 155th Street, the trail detours away from the corridor and heads towards 3rd and 5th Avenues in a number of places. He voiced concern that there is no checkpoint to argue that the trail will spend too much time away from the rail and that it shouldn't attempt to use the rail corridor. While it is a catchy name, it is difficult to implement in the inconsistent terrain. He reminded them that bicycle trailers are supposed to replace rail, not coexist with it. If there were no upzone at 145th Street, 5th Avenue could be a bicycle lane, and there would be no discussion about removing bus routes from the station. Instead of the bicycle trail being two blocks away from the library and the Crest Theater, a bicycle lane on 5th Avenue would go right past the Ridgecrest landmarks.

Mr. Lange observed that the Commission will receive another presentation about "green building," and he has learned a lot from them. The City will require 4-Star Built Green in the Mixed Use Residential (MUR) zones; and after reviewing the requirements for Emerald Star and Green Community development, it is clear that it will not likely occur in the upzones for years. One requirement is that the project must be located within a half mile of at least five essential services, which includes banks, credit unions, grocery stores, municipal buildings, schools, daycares, healthcare, drug stores, restaurants, and cafes. If this logic continues, it will be important to make sure pedestrians and cyclists from the development can safely and conveniently reach those services, but transit is not mentioned. He recalled his previous correspondence with a Seattle City Council Member about density around business centers. The City of Redmond provides a good example: high-density apartment complexes within walking distance to a transit center; several areas of employment nearby, including City Hall and a major regional medical center; and convenient shopping. The City of Shoreline provides the worst example, high-density apartment complexes within walking distance of a transit center for commuting and a freeway.

Mr. Lange referred to the City's Transportation Master Plan, which ranks arterials by road width and puts density on them. He questioned if there is also value to the roads to get to the other side of town. Density and crosswalks belong in communities linked together with arterials.

Lastly, Mr. Lange said he hopes the Commission is tracking the Sound Transit issues at the State level, as well as the Federal Budget Blueprint that was released earlier in the day. He summarized that Sound Transit has completed the 60% design for the 145th Street Station. He said he is hoping there will be a Sound Transit 60% open house and that they won't charge admission.

Chris van Daalen, Olympia, said he works for a non-profit organization called the Northwest Eco-Building Guild, which is based in Seattle. The guild is a 3-state alliance of architects, builders, contractors, suppliers, and others who share a common commitment to a long-term perspective on the built environment and transforming the built environment for long-term sustainability through education and leadership. He said he has been tracking the City's progress on its Deep Green Incentive Program, and noted that the guild actively participates and supports its partners: The International Living Future Institute's Living Building and Living Community Challenge Programs; the Master Builders of King and Snohomish Counties' 4 and 5-Star Built Green and Emerald Star Programs; Salmon Safe, Stewardship Partners, and Passive House (PH) Northwest.

Mr. van Daalen said he personally works on a project called "Code Innovations Data Base," which documents successfully permitted green building innovations at the project scale and also with policy profiles on successfully adopted codes, policies and incentives that help accelerate the adoption of green building techniques, energy efficiency, etc. The guild has been doing a number of policy profiles related to the work the Commission is currently considering, and a profile was recently filed to track the history of the Seattle Living Building Ordinance. They also recently did a profile on Bainbridge Islands' Housing Design Demonstration Program, which provides density bonuses for deep green building projects and support for code departures and modifications to get through the barriers that come up with net-zero projects. The guild will also publish profiles on the City of Vancouver's PH Standard that was adopted as a citywide energy standard for new residential and commercial construction. The City of Brussels, Belgium, has adopted a citywide Exemplary Buildings Program over a 10-year period, which is basically a PH level standard. After the initial pilot program, the market was sparked to result in 5 million square feet of new commercial building space built to the PH Standard. These case studies can provide models for what the City is doing and can be found at www.codeinnovations.org. In addition, the City of Shoreline's Deep Green Incentive Program can become a role model for other cities to follow.

Mr. van Daalen encouraged the Commission and City Council to include PH as a Tier 4 or perhaps Tier 3 if combined with Salmon Safe Certification. He explained that a PH is a super-insulated, air-tight building standard. With good ventilation, it provides a building that can be heated with limited mechanical systems. The upfront construction premium is very small compared to many of the other advanced certifications. Although developers spend a little more on the building envelope to get it well-insulated and airtight, they actually save by reducing the mechanical equipment systems needed for the building. He said PH is a global standard for energy efficiency, and it is just now catching on in the United States. The urgency of the climate crisis demands that we take bold action, and the City has already demonstrated leadership with the light rail stations and other work it is doing.

STUDY ITEM: PARKS, RECREATION AND OPEN SPACE (PROS) PLAN AND PARK IMPACT FEE STUDY

Mr. Szafran reviewed that in January of 2016, the Parks, Recreation and Cultural Services (PRCS) Department began the 18-month process to update the PROS Plan, which is centered on the theme, "Securing Our Foundation and Shaping Our Future."

Ms. Colaizzi provided an update on the status of the PROS Plan. She explained that "Securing Our Foundation" is about taking care of what the City has and making it work better, and "Shaping Our Future is about providing for growth through smart development and targeted acquisitions. She reviewed that since the PROS Plan was first adopted in 1988, the goals and policies have evolved as the community has changed. The current plan contains a good set of goals, policies and implementation strategies, and some work has been done over the past year to highlight a vision and mission. The proposed Vision Statement outlines what the City wants the community to be in the future, and the proposed Mission Statement describes what the organization does now to aspire towards the future goals. The goals provided in the draft plan describe the City's aspirations, and the policies are more precise statements that describe how the overarching goals can be achieved. The implementation strategies were developed in the 2011 PROS Plan as a way to describe actions the City would like to take over a 20-year timeframe to help achieve the policies and goals.

Ms. Colaizzi pointed out that significant changes were made to the goals and policies between 2005 and 2011, and the intent was to align them with the 2029 Framework Goals. The goals were simplified and more focused and the policies were tightened up. She emphasized that staff is not proposing any major changes to the goals, but there are a few modifications to the policies to address changes that have occurred in the community such as light rail and urban forestry efforts. The policy changes also put more attention on meeting the needs of the underserved and unserved communities in the City.

Ms. Colaizzi reported that light rail, population growth and density were discussed during the outreach efforts for the PROS Plan. Early in the process, the City held neighborhood and stakeholder meetings, including meetings with the 145th and 185th Street Station Citizen Committees. There was also an on-line questionnaire. During many conversations, neighbors and stakeholders anticipated significant changes that would come with the addition of two light rail stations, from changing demographics to more wear and tear on nearby parks to new opportunities to acquire and access previously underutilized spaces. Nearly every interest group mentioned at least one way in which light rail would either negatively impact or potentially improve their concerns for the future.

Ms. Colaizzi said that in addition to the focus group and stakeholder meetings, the City also intercepted people at various community events. They met with almost all of the neighborhood associations, as well. At the end of 2016, three community workshops were held specifically on light rail and the aquatics/community center feasibility study, and there was also one final open house. Throughout the outreach program, the discussion focused on the City's strengths, weaknesses, opportunities and threats. Potential threats include:

- Key park properties are owned by others, such as the state, school district, and Seattle City Light.
- Population growth and increased density.
- Budget shortfalls.
- Invasive species in the parks.

Ms. Colaizzi said staff identified four major things to accomplish in 2017 to deal with the threats. This includes developing strategic action initiatives and setting forward a way to deal with the future of the pool and Spartan Community Center. The pool and community center are located on property owned by the school district, and the school district has made it clear that the City needs to have a future plan for what might happen at the 185th Street Station, as their interest may not include the City on a long-term basis. There was also a conversation about how to provide for density increases in the two subareas, and how to pay for the improvements, acquisitions, etc. A variety of funding alternatives were considered, and the City Council and Commission specifically asked staff to research the option of a park impact fee.

Ms. Colaizzi explained that a set of 11 Strategic Action Initiatives were developed as a way of consolidating the key messages that staff heard from the public and to address the issues identified in the SWAT Analysis. The initiatives were built on strengths, taking advantage of opportunities, addressing weaknesses, and protecting from threats. The initiatives provide the structure for implementing the PROS Plan, and the primary intent is to implement the initiatives to achieve the outcomes that will successfully move the City's PRCS in a visible and positive direction.

Ms. Colaizzi said staff has reviewed specific recommendations with the City Council on developing a Park Impact Fee Proposal (Attachment C of the Staff Report), and consultants will be coming back with a rate study later in the year. The rate study will be reviewed with the Planning Commission and the PRCS Board at a joint meeting on May 18, 2017. She explained that the Park Impact Fee is one way for the City to expand its park system beyond what currently exists in order to deal with the population increase that is expected.

Ms. Colaizzi said Aquatic and Community Center Planning started during the summer of 2016 by looking at where to site the center and what it should include to meet the community's future needs. A draft feasibility study will be reviewed by the PRCS Board on March 23rd and the City Council on April 17th. The study summarizes the results of the community survey and a market analysis that was done in 2016. It also outlines an assessment of potential locations, describes what types of uses would be housed in the new center, presents a concept of what the new facility would look like, estimates construction costs, and projects operational expenses and revenues.

Ms. Colaizzi said staff has been working to develop a plan to address increased growth in the two light rail station areas. The draft plan has been reviewed by the PRCS Board and the City Council. It describes the changes coming to the areas around the two stations and anticipates impacts, focusing on parks and recreation spaces. Recommendations from the draft plan will be incorporated into the PROS Plan to guide the overall development of parks and recreation facilities in Shoreline.

Chair Craft asked how the Strategic Action Initiatives were ranked. Ms. Colaizzi answered that initiatives set targets for how the City can address the major program and facility needs through action. More details about the initiatives is available on the PROS Plan webpage. They were also presented to the City Council. In May, the Commission will receive a large portion of the PROS Plan Update, which will include the initiatives described in greater detail.

Ms. Colaizzi said it is important for the City to have a plan for addressing future capacity needs, and the benchmarks identified in the Staff Report were developed using the 2016 National Recreation and Park Association (NRPA) Field Guide. The information provided in the NRPA Field Guide helps inform decisions on the optimal set of services and facilities offered by providing comparable data on other communities and agencies. The 9.19 acres of park space per 1,000 residents is a national benchmark for parkland, and the projected increase of 100 acres of parkland is just a little larger than Hamlin Park. She explained that finding 100 acres of additional property may be difficult and slightly unrealistic given the build-out of the City. Therefore, the City must consider other ways to meet future capacity needs, including acquiring new and smaller neighborhood-sized parks, expanding existing parks by acquiring adjacent lands, using and programming public rights-of-ways for recreation, developing public/private partnerships, designing and maintaining existing parks to avoid overuse, and adding more recreational amenities in existing parks.

Ms. Colaizzi advised that the PRCS Board was actively involved throughout the process, and several subcommittees were established to look in more detail with the consultant and staff on how to develop different pieces of the PROS Plan. During December of 2016 the Park Board and staff went through an opportunity mapping process with the consultant team to help identify potential opportunities and establish priorities for future parkland acquisition, partnerships and park expansions. The Opportunity Map was

presented at a community-wide public workshop and an open house this past winter. During the mapping process, three types of opportunities emerged:

- Connection Opportunities are intermixed throughout the City and include the Trail Along the Rail, the 195th Street Trail System, and other opportunities to connect the community to more of the parks and open spaces.
- Acquisition Opportunities identify places where additional parkland needs to be acquired. The orange circles identify the six established priorities for potential acquisition.
- Improvement Opportunities look at ways to create more recreational opportunities within the existing facilities in the parks system to add capacity to recreation value.

Ms. Colaizzi advised that the consultant team and staff looked at Level of Service (LOS) in two ways: geographic service areas and providing essential park amenities. To clarify, she explained that the City has some parkland that has minimal or no recreational value. For example, Ridgecrest Park and James Keogh Park have not had a lot of attention. The goal is to analyze where the City provides essential recreation amenities that anyone within a 15-minute walk should have. This includes a children's playground, a picnic area, a pathway system or trail, and open grass lawn areas for passive uses. She provided a Geographic Analysis Map, which illustrates the City's overall parkland distribution. The map demonstrates that when the 15-minute walkshed is applied to all parks and open spaces in the City, there are very few gaps. Most of them are along the eastern edge of Shoreline. Almost every resident of Shoreline is within a 15-minute walk of a park or open space, regardless of its classification and the amenities it provides. She also provided an Amenities Analysis Map, which identifies how close people have access to essential recreational opportunities. The map demonstrates that the City is below the LOS for essential park amenities in some areas.

Ms. Colaizzi explained that the mapping exercises allowed the consultant team and staff to identify targeted areas where more recreation value could be provided. She provided a map of the Potential LOS Targets, which shows how existing sites could provide essential recreation and the park system could be brought up to an LOS for meeting that need. Potential sites the City would look at to meet the need include Cedarbrook Elementary School, Rotary Park, Westminster Park, Park at Town Center, James Keogh Park, and Ridgecrest Park. In addition, as the two subareas become denser, there will be a need to provide more recreational opportunities in a walkable area. The team is also considering how to create more recreation value at both Hamlin Park and Southwoods Park. In addition to expanding existing City park sites, there are opportunities for park space outside of those owned by the City. Examples include Bitter Lake Park, Hickman Park, and the Innis Arden Clubhouse. She summarized that there would still be some gaps that are targeted for land acquisition, especially the projected population at 145th and 185th Streets.

Ms. Colaizzi said the consultant team and staff is working with the analysis and maps and trying to relate it to a Capital Improvement Plan list. The intent is to align priorities to make sure the gaps are being filled and capacity is being added where it is needed. Once this exercise is finished, it will be presented to the PRCS Board Subcommittee in April, followed by a discussion with the Park Board in late April about the draft plan. The City Council will be hearing more about the aquatics/community center on April 18th, and staff will come back to the Commission for a joint discussion with the PRCS Board on May 18th. The Commission will also receive a more in-depth review of the Park Impact Fee Rate Study. The Council

will review the rate study, as well as the PROS Plan draft, in June. It is anticipated that both the PROS Plan and the Park Impact Fee Program will be adopted by the City Council in July.

Commissioner Thomas requested more information about the green line on the west side of the Opportunity Map. Ms. Colaizzi answered that there are some open space parcels along the Interstate 5 corridor that are owned by the Washington State Department of Transportation (WSDOT) and the Washington State Department of Natural Resources (WSDNR). The intent is to look at how the City could create a nature trail connection along the western spine that would connect Ronald Bog with James Keogh Park and James Keogh Park with Twin Ponds Park. One major theme they heard from the community was the desire for more safe connections between neighborhoods and the parks and open spaces. She briefly reviewed some of the ideas that are being explored, and noted that they are expressed in more detail in the draft plan that is available on the website.

Commissioner Malek commended the work that has been done thus far. The public comments are well-reflected in the proposed plan. He requested more information about the Aquatics/Community Center Feasibility Study. Ms. Colaizzi answered that the draft feasibility study will be available on line via the PRCS Board's March 17th Agenda. The draft plan identifies several potential sites. The next step will be to ask the City Council and community for support to move the plan forward. If there is support from the Council and the community, staff would use the ranked list to study potential locations.

Commissioner Mork stressed that walkability is very important to the Commission and the citizens, and she is glad that the plan focuses on it. Ms. Colaizzi explained that the PRCS Department will not likely be the primary driver of the connection opportunities. The intent is for the Transportation Master Plan to turn the ideas presented in the PROS Plan into viable projects. The PRCS Department will work directly with the Transportation Division to identify opportunities for more recreation value via connections.

Vice Chair Montero asked for more information about how the Innis Arden Reserve would be incorporated into the City's LOS map. Ms. Colaizzi said more work is needed to identify where the City is and is not meeting targets for open space properties. There is already a lot of open space property in the City. The total park system is about 400 acres, and nearly half is natural. However, only a small portion of some parks are actually developed. The consultant team will prepare a Natural Areas Gap Map, which will show the Innis Arden Open Space as it relates to meeting neighborhood needs. However, it would remain a private reserve that is not open to the public.

Mr. Cohen reviewed that the Planning Commission will conduct a public hearing and make a recommendation relative to 2017 Comprehensive Plan amendments, including those related to the PROS Plan in August. The Commission's recommendation will be presented to the City Council in November or December for an additional public hearing and final adoption. Ms. Colaizzi added that the PROS Plan update is intended to meet the need for the Park Element of the Comprehensive Plan.

STUDY ITEM: GREEN BUILDING PRESENTATION – PASSIVE HOUSE (PH) PROGRAM

Ms. Redinger recalled that the programs the Commission received information about at their last meeting were included in the draft Deep Green Incentive Program, but PH was not. However, it was discussed as

an option available in the region. She introduced Zack Semke and Dan Whitmore, from PH, who were present to describe the program.

Zack Semke advised that he serves on the board of PH Northwest (PHNW) and is the chief marketing officer of NK Architects, a Seattle and Pittsburgh-based architecture firm that focuses on zero -net-carbon building, particularly at the multi-family scale. They use the PH Certification Program as a means to get to zero-net-carbon building. He is also a member of Al Gore's Climate Reality Leadership Core. Mr. Semke also introduced **Dan Whitmore,** who is a National PH Leader**,** on the Board of the PH Institute U.S. (PHIUS), and chair of PH Alliance U.S. (PHAUS). He is also one of the founders of PH Northwest (PHNW).

Mr. Semke advised that PH is the world's most energy efficient building standard, and there is no energy standard that is as rigorous on energy efficiency. The program is based on physics and the emerging field of building science. Not only is it a science-proven approach to green building, it is also almost cost equivalent to conventional construction. In addition, PH construction brings superior quality because it focuses on an advanced building envelope (walls, foundation and roof) as the way to deliver energy efficiency. It results in buildings that are very durable and long-lasting.

Mr. Semke provided a brief history of the PH Certification Program, which started in North America in the 1970s when research was being done on energy efficiency, air tightness, maximizing solar gains, etc. The research came to a halt with the new administration that came in 1981, and the focus on energy moved to Germany, where Dr. Wolfgang Feist, a German physicist, founded the Passivhaus Institute (PHI). Ten years ago, the PH concept moved back to North America, and PHIUS was established. In recent years, a climate-specific version of the PH standard was created to deal with different climate conditions in the United States. Because the climates are so similar, the PHNW's certification requirements are almost identical to those used in Germany.

Mr. Semke advised that PH optimizes the light, air and thermal energy of the buildings using physics and building science. This approach drives down the energy use in buildings in a dramatic way. It also increases the health and happiness of building occupants. PH can be applied to single-family homes, multi-family development, high-rise development, etc. He described the basic elements of the program:

- Draft-free construction is required, which means there must be an air barrier that creates an airtight building envelope.
- There must be a generous layer of insulation to thermally isolate the interior of the building from the exterior.
- High performance windows must be used.
- The building must provide a continuous supply of filtered fresh air through heat recovery ventilation (HRV). HRV is like having a bunch of windows open at all times to let fresh air in and allow stale air to exit. However, there is no heat loss.
- Thermal bridge-free construction ensures that no components used in the building envelope will allow heat to escape.
- Buildings must manage solar energy by capturing it when needed and shielding the building from it when it is not needed.

Mr. Semke advised that all of the principles, combined with advanced computer energy modeling, allow the energy use of the buildings to be reduced by as much as 75%. Once this is done, it becomes fairly straight forward to add solar panels to get to net-zero energy. The PH Program is complimentary to net-zero-energy building. PH is special because it offers a noble, cost-effective way to reduce energy use to very low levels.

Mr. Semke reviewed that the Department of Energy has studied PH and compared it to Energy Star and conventional buildings. Their data indicates that the energy efficiency of PH development is twice that of Energy Star buildings, and an order of magnitude higher than conventional buildings. Heating energy goes down by 90% compared to conventional buildings, and overall building energy use is up to 75% less. The Department of Energy also looked at the health benefits of PH compared to Energy Star and conventional buildings and PH development is considerably better for health because of the indoor air quality the buildings provide. Thermal comfort is another key benefit of PH structures, which have even and mild interior surface temperatures. The air temperatures are also very consistent and mild.

Mr. Semke summarized that efficiency, health, comfort and durability all result in superior value for the buildings, and they are able to deliver the value at a very low cost premium. The independent think tank, Pembina Institute, conducted a major study about PH both in North America and Europe and found that the average cost premium per PH is 6% in North America today. That number is expected to go down as the industry gets better at doing PH and as locally-made components become available. While the number of PH structures in the United States is still relatively small, there has been an exponential increase in the square footage of PH projects and units. According to the Pembina study, the current projects under construction will quadruple the number of PH Projects in North America. Exponential adoption is also taking place in Europe, and China is now very interested in the concept to address climate control and air pollution.

Mr. Semke advised that North America policymakers are now taking note of the program, and the City of Vancouver, B.C. is one of the leaders. PH is now the centerpiece of their zero-emissions building plan. New York City is also harnessing PH for city projects, and dozens of housing finance commissions in states across the country have either adopted or are considering adopting PH into their programs. King County will soon adopt the program into its Green Building Ordinance, and the City of Seattle has included the program in its incentive programs for quite a while. PH is becoming the standard for construction in Europe. By 2018 all civic buildings will need to be PH; and by 2020, all new construction will be at PH levels of performance. He shared examples of various PH projects to illustrate how design and style can vary and to explain some of the PH features.

Mr. Semke summarized that there is a direct connection between incentives for green building and reducing carbon pollution. Traditionally, things are incentivized based on how hard they are to do. Things that are hardest to do are given the most generous incentives, and things that are the easiest to do are given the lowest level of incentives. However, given the urgency of needing to transform the way the built environment functions and the energy use of the built environment, it is worthwhile to look at the impact and scalability of a solution and focus on incentivizing those things that can really scale and transform the market. Today, they need buildings that have revolutionary energy efficiency and predictable performance, and they need to be delivered at little or no added costs. Buildings can be part of the climate solution rather than the climate problem.

Mr. Semke observed that PH development can help communities achieve their climate goals. While it is important to hold up fantastic holistic versions of green building, they do not have time to rely on only the very most aggressive and comprehensive systems to address climate change. Although buildings are slowly becoming more energy efficient, it is important to recognize that billions of square feet will be added to the built environment in the next few decades. Dramatic steps must be taken to bend the curve downward to match the emission reduction curves. Again, he noted that PH offers a way to reduce overall energy use by as much as 75%.

Mr. Semke advised that the Pax Futura Project in Seattle provides a good example of how the PH program can be applied. It was designed by NK Architects and used by PHIUS as a case study to compare PH projects with projects that meet the Washington State Energy Code and International Energy Code. Data indicates that the measured energy intensity (measure of energy per square foot per year) for a PH project was 18.5. Projects that met the Washington State Energy Code measured 35.1, and projects that met the International Energy Code measured 39.3. He concluded that PH projects use half as much energy as development that is designed to meet some of the most progressive energy codes around.

Mr. Semke explained that because PH is based on building science and thorough energy analysis, it is very predictive. When comparing the predicted thermal performance of 25 energy-efficient buildings in the United Kingdom, the three PH buildings were the lowest. The actual thermal performance for all three PH buildings was similar, but that was not the case for the other energy-efficient buildings that were not as rigorously designed and modeled. Predictability allows policy makers to know that when encouraging PH, they will have really great performing buildings.

Mr. Semke referred to the Orchards at Orenco Project, an affordable-housing development in Hillsboro, Oregon, which is a 56-unit PH project. It is estimated that the project had an approximately 11% cost premium, but the lessons learned from the development were applied to the adjacent development, and the developer was able to slash the cost premium to 5%. The developer, Walsh Construction, is convinced that the cost premium could be reduced to 2% if a third building is constructed. This represents a fast learning curve, and incentives can make a big difference. The program is in place, and as more PH buildings are constructed, they are learning to do them better. That means the construction costs fall, and the supply chain responds so component costs fall. The overall costs go down, which means that more PH buildings can be constructed. However, the progress is too slow. They need to see faster adoption, and that is where incentives come into play.

Mr. Semke said there are a number of good examples of successful incentives that are moving things to scale in PH, but he particularly referred to an incentive offered by Brussels, Belgium. Between 2004 and 2009, Brussels enacted its Exemplary Buildings Program, which awarded PH Projects $10 per square foot. Over the course of the years, they awarded 117 buildings. This started a market transformation as occupants learned what it was like to live and work in PHs and builders learned they could deliver the projects at cost parity or close to it. The incentives leveraged the construction of 3,000 PH buildings and retrofits without subsidy by 2015. By 2015 the market had changed so much that it became an easy political lift to make PH building code. This corresponded with major progress on greenhouse emissions. Jobs and population are increasing, but energy and greenhouse gas emissions are bending downward, and this is what is needed in cities throughout the world to address the greenhouse gas emissions issue and secure a livable future for our children.

Mr. Semke asked that the Commission consider PH as an option as they make future policies for green development.

Commissioner Chang said she was intrigued by the data comparing Energy Star homes to PH homes. This is different from the data that was previously presented to the Commission where the Energy Star homes met the models or were better. She asked the source of the data. She noted that other programs include a performance measure to determine how well a project performs after construction. She asked if this is also a component of PH. Mr. Whitmore answered that PH has an energy standard goal for the building's design and construction, and user behavior can cause variations. However, because the goal for PH starts at a lower set point, the standard deviation will not move the bar very far. The program is based on a tremendous amount of science, and it is very detailed. The variability in Energy Star and other programs is there, but it is not as exacting. He agreed that the other programs are very good, and many of them are reaching the level of predictability that is offered by the PH Program.

Mr. Semke said one way to know you are getting what you are paying for is the net-zero-energy approach or Living Building Challenge approach, which is to monitor a building after it has been constructed and only certify based on user behavior. Rather than a measured-performance approach, PH is a modeled-performance approach. He explained that developers are scared of the measured-performance approach because there is a possibility that their occupants won't behave the way they would like them to. Because they can later get hurt by a penalty, they may shy away from a building project because they don't have certainty about the result. The ideal approach, in terms of working for policymakers and developers, is a modeled-performance approach that has a track record of correlation between modeled and actual.

Commissioner Maul requested more detailed information about the value of Passive Housing in single-family versus multi-family development. He noted that the Washington State Energy Code requires that buildings be buttoned quite tight. He is also interested in learning more about the HRV systems that were referenced in the presentation. He asked who would provide the incentives. Mr. Semke said the hope is that cities will provide incentives to encourage PH projects. Chair Craft said he would assume the incentives would be similar to those offered to projects that meet other types of certification such as expedited review time, reduced permit fees, etc.

Mr. Whitmore said he has had conversations with representatives from Washington State and learned that the PH approach is essentially where the Washington State Energy Code is going in the future. The Washington State code has had a prescriptive methodology where you design the building with certain elements to meet the code. The PH methodology is essentially looking at a building in a holistic sense from an energy perspective. As the Washington State Code is modified to meet carbon and energy goals, the code writers will have to transform how they look at energy consumption in buildings and approach it from a different perspective. He said he could provide data that compares multi-family and single-family development. He explained that, depending on the typology, it is much more efficient to get a larger building with a lot of internal heat gains. Chair Craft specifically asked Mr. Whitmore to share examples and describe some of the features of single-family PH projects.

Chair Craft requested more information about the system that circulates air throughout a PH structure. Mr. Whitmore said the HRV equipment is about the size of an oven. It has two fans, one to bring air into the building and another to move air out of the building. The airstreams pass near each other through a

core and transfer their energy across the core. One fan pulls the stale air out and the other deposits the same volume of fresh air throughout the building. The only energy utilized is for the fans that move the air. The equipment has a significant cost premium, and it is not really needed in Western Washington's climate. While ventilation is required by code in all buildings, a lower-cost exhaust system can be utilized in residential applications to depressurize and bring fresh air into the building. However, it is critical that the units are air tight.

Chair Craft asked about the design of a PH roof. Mr. Whitmore said the roof requirement is not overly onerous compared to standard code. It is a matter of using insulation and applying it intelligently and informatively. He explained that net-zero energy sets the bar that the building must perform to how much energy can be produced onsite. PH says energy production is terrific, but it should not define the architecture. The architecture should be defined by an efficiency standard.

Ms. Redinger asked Mr. Semke to identify the most meaningful incentives a municipality could offer to promote PH projects. Mr. Semke answered that the best incentives focus on floor area ratio, height and density. He also referred to Seattle City Light's pilot program called the "Metered Energy Efficiency Transaction Structure" (MEETS) Program. The program allows building owners and project teams to realize the full benefit of energy efficiency investments. Chair Craft asked staff to forward the Commissioners information about the MEETS Program.

Commissioner Chang recalled that incentives for green development in single-family zones was hotly debated in Shoreline. She asked what incentives would be needed to encourage PH development in single-family zones. Mr. Whitmore said most of his construction experience is in single-family development, and expediting the lengthy permitting process would be helpful.

Commissioner Thomas asked for clarification about how a PH building can be made airtight when windows are used. Mr. Whitmore said they primarily use materials that are standard for any construction project. However, a little more attention is given to detail and focus to make sure the design is comprehensive and insulation is well-planned. Commissioner Thomas asked if insulation is provided under the building foundation, as well. Mr. Whitmore agreed that is the case in some projects. The beauty of the program is that any building typology and strategy can be used. The goal is to embrace the energy engineering aspects of the project.

Commissioner Chang asked if PH could be utilized for retrofit projects. Mr. Whitmore said it is possible, but it can be very difficult to do, particularly if the building form is complex. Retrofits are costlier to do because the project cannot be addressed from a holistic sense. Mr. Semke said retrofitting larger buildings can be more economical.

Commissioner Malek referred to the Fish Singer Place Project, which appears to meet the PH requirements, yet the additional costs were minimal. The Court House 2 Project in Melbourne, Australia is another great example. He said he has a few clients who are working to do pre-fab houses, which offer a great opportunity to incorporate PH standards. He asked if PH is targeting these companies as a good source. Mr. Semke said a manufacturer is making pre-fabricated wall panels to the PH standard. Other pre-fab companies are doing PH, particularly in the northeast where the population is denser. However, there are some hurdles with manufacturing a structure off site and bringing it in.

Commissioner Mork asked how a PH becomes certified. Mr. Whitmore answered that there are two certifying bodies. The one based in Germany has a network of entities around the world that do their certification work based on specific guideposts. The other review body is the PHIUS, which has a more centralized process. They are based out of Chicago, and there is a sequence that must be followed that involves pre-certification, on-site inspections, and final inspection by a third-party rater. The European standard does not require the third-party verification, but municipalities can insist upon it.

Mr. van Daalen announced that PHNW has an annual conference, and the next one is scheduled for April 6th and 7th in Olympia. All of the presentations made at past conferences are available at www.phnw.org. The website also provides a variety of helpful resources. Mr. Whitmore added that the PSIUS just announced that their annual conference will be in Seattle in September.

DIRECTOR'S REPORT

Director Markle did not have any items to report.

UNFINISHED BUSINESS

There was no unfinished business.

NEW BUSINESS

There was no new business.

REPORTS OF COMMITTEES AND COMMISSIONERS/ANNOUNCEMENTS

There were no announcements or reports.

AGENDA FOR NEXT MEETING

Mr. Szafran advised that the Transportation Planner will be present at the April 6th meeting to present a study session on the Transportation Element of the Comprehensive Plan.

ADJOURNMENT

The meeting was adjourned at 8:56 p.m.

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Easton Craft	Carla Hoekzema
Chair, Planning Commission	Clerk, Planning Commission