



NORTH PEARL DISTRICT PLAN



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Executive Summary & Recommendations



The North Pearl District Plan is a neighborhood plan intended to direct public and private development and investment in the portion of the Pearl District north of NW Lovejoy Street. The plan was developed over an 18-month period through extensive public outreach process, engaging a diverse group of stakeholders in the evaluation of what began as the request by developers for additional floor area and height allowances within the plan area.

This evaluation process soon merged into a community-wide discussion about the type of neighborhood and community that should be developed in the north end of the Pearl and the larger district as a whole. The following issues all became a focus of the plan: urban form and design; green building and community design; public realm enhancements; a need for a range of community-serving public amenities; a need for more diverse housing options; and the ability to make the public and private investments necessary to serve the growing and diversifying population in the Pearl, especially families with children.

As a result of this conversation this plan proposes an urban design and development concept intend to guide future development decisions, a series of new policies addressing community development, sustainability, and multi-modal transportation, and various Zoning Code amendments intended to implement the urban design plan and policies.

To implement this plan, the Portland City Council adopted the North Pearl District Plan on Wednesday, November 5, 2008, and the plan became effective on Friday, December 5, 2008. The specific elements of the plan were adopted as follows:

Elements adopted via City Ordinance No. 182319:

- *North Pearl District Plan*
- *North Pearl District Plan Zoning Code Amendments*
- Amended River District Design Guidelines
- Amendments to *Comprehensive Plan* adopting new policies for North Pearl Subarea

Elements adopted via City Resolution No. 36642:

- *Action Charts of North Pearl District Plan*



Introduction

The North Pearl District Plan (NPDP) is intended to guide public and private investment and development decisions in the portion of the Pearl District north of NW Lovejoy Street. The plan focuses on the creation of a pleasing and dynamic urban form, mix of complementary land uses, the creation of community-serving amenities, and the creation of a range of housing opportunities to serve the growing diversity in household types in the Pearl.

This planning process for the NPDP follows an earlier effort, the 2005 *North of Lovejoy Study*, adopted by City Council in 2005. This earlier plan focused on future development immediately surrounding two of the three parks identified in the *2001 River District Park System Urban Design Framework* (also known as the Peter Walker Master Plan). The primary changes emerging from this effort were:

- **Parks Zoning and Comprehensive Map Amendments:** The zoning and comprehensive plan designations of three parks identified by the Walker Master Plan were amended from Central Employment (CX) to Open Space (OS) with the intent of recognizing the long-term use and ownership of these facilities.
- **Height Changes:** The maximum building height provisions around the parks edges to the south, southwest and west were modified such that the portions of the sites closest to the edge of the park are capped at 100'; however, the portions of these sites located further from the parks are allowed to obtain a maximum height of 225'. This creates a "step down" to the parks designed to ensure greater access to sunlight within the parks.

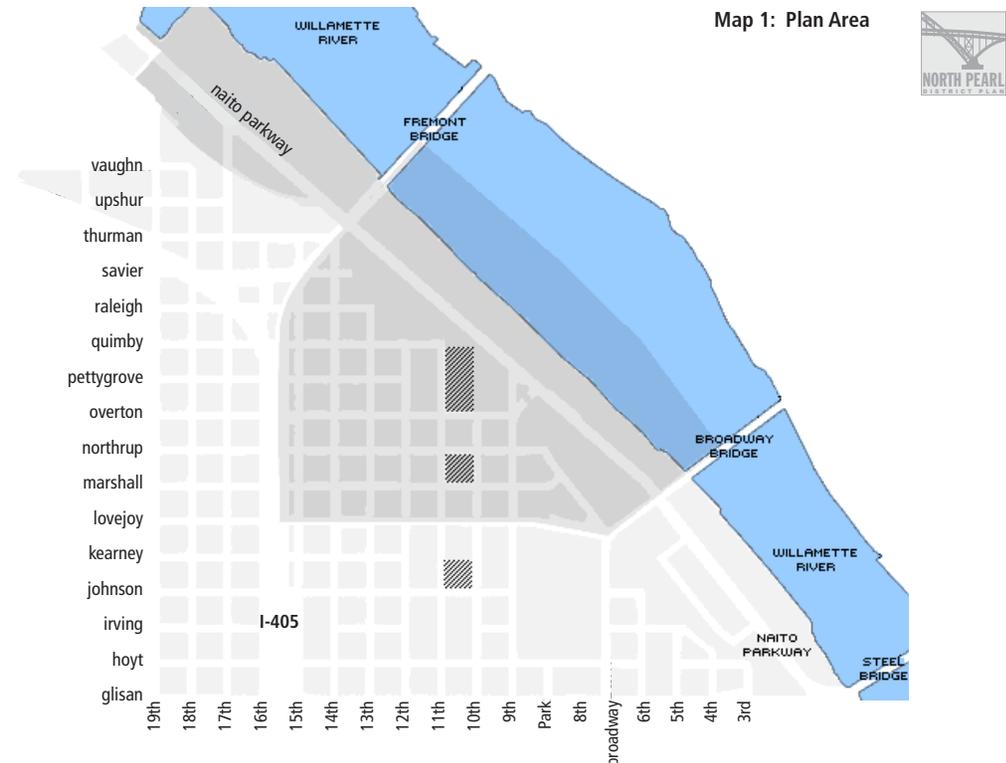
- **Additional Development Capacity:** Building mass and density within the Central City Plan District is regulated by floor area ratio (FAR) standards. Within the project area the maximum FAR was previously capped at 2:1. The amendments adopted by Council increased maximum FAR to 4:1 allowing for increased housing densities and overall development potential in the project area.

In addition to these regulatory amendments, a design charrette was conducted to analyze the urban design and development potential of the project area and adjacent areas. Beyond the confines of the project area, the charrette identified a need to further investigate the overall urban design and development framework affecting the greater geography of the Central City located north of NW Lovejoy. The charrette findings proposed a transportation analysis, improved connections to the river, the rehabilitation/redevelopment of Centennial Mills, and the need for additional waterfront parks and open space. The *North of Lovejoy Study* also concluded that there is a desire to see that new River/Pearl District development maximize ongoing community building efforts. Thus, the NPDP was initiated to address these desires and is intended to establish a framework plan for future development in the northern end of the Pearl District.

Project Overview & Objectives

This NPDP is intended to provide a blueprint for how development should continue the expansion of the Pearl District northward. The plan specifically focuses on:

- **Community Building Strategies.** The plan addresses the need to provide more diverse housing opportunities and a range of public amenities to serve the growing number of families with children that are emerging in the Pearl District. Incentives are recommended that are intended to create market rate and affordable family housing opportunities. The plan also seeks to encourage the development of a range of public amenities currently absent in the Pearl that will be necessary to retain the growing number of families with children in the Pearl and to support the continued growth of high-density residential development in this district. These amenities include a K-8 public school facility, community space/center, daycare facilities, a library, intended to serve families with children and other residents and employees in the district.
- **Creating an Urban Design & Development Framework.** A framework plan guiding urban design decisions as well as public and private investment in the plan area was created as part of the NPDP. This framework plan considers where public amenities might best be located; ways to enhance connections to the waterfront and between the plan area and adjacent districts; street hierarchy; and the protection and enhancement of areas and buildings of special character within the plan area and the larger Pearl District. The plan also contains strategies to implement this framework in a manner that incorporates a more sustainable development pattern responsive to issues such as



climate change, stormwater management, energy conservation, social equity and healthy neighborhood development.

- **Zoning Code Amendments.** Various amendments to the Zoning Code are proposed to implement the community building strategies and urban design and development framework developed for the plan area. The amendments allow for increased development potential (floor area or FAR) as well as building height, and they guide the massing and character of taller, larger buildings in the plan area. Amendments to the development bonus system intended to provide incentives to create family housing and community amenities are also proposed.



Plan Area Boundaries

The plan area for the NPDP is limited to the portions of the Central City Plan District that are located north of NW Lovejoy Street (see Map 1). The plan area includes opportunity sites along the waterfront such as the former Port of Portland Terminal One South site (the Riverscape Development site), Centennial Mills, and numerous properties south of Naito Parkway that are either vacant or available for redevelopment.

Although the action items and proposed Zoning Code amendments proposed by the plan focus on the plan area, this planning effort spent a considerable amount of time considering how connections to other portions of the Pearl District, as well as other surrounding neighborhoods, could be enhanced. Specifically, the plan considered how to link the plan area with adjacent opportunity sites such as the Conway Properties and the Upshur Warehouse District both located in the NW District just west of the Pearl. The plan contains recommendations and strategies to make transportation improvements, create new public community serving amenities, and increase housing diversity with the goal of enhancing livability in the Pearl and within the adjacent neighborhoods to the west of the district.

Plan Organization

The NPDP consists of several interrelated components, described as follows:

Plan Concepts

The following concepts were developed to describe community desires and serve as the basis for policies, objectives, and actions recommended by the plan to guide development in the North Pearl plan area.

- 1. Complete Community Concept.** Identifies and describes the elements necessary to transition the Pearl into a complete community, with a rich collection of public-serving amenities and a diversity of housing options.
- 2. Sustainable Community Concept.** Outlines a series of development goals for the North Pearl plan area intended to influence green site and building design and construction, social equity and neighborhood health, sustainable economic development, natural system approaches to stormwater management, and the expansion of a multi-modal transportation system into the plan area.
- 3. Urban Design & Development Concept.** Illustrates a desired urban form, land use, and development pattern to guide future public and private development decisions in the north end as well as way to better connect this area with adjacent established and evolving neighborhoods with the intent of establishing a greater sense of community in NW Portland and the Central City.
- 4. Multi-Modal Transportation Concept.** Describes additional steps necessary to create a true multi-modal transportation system into the plan area that includes expanded and enhance pedestrian and bicycle routes, access to transit, efficient auto routes, and the development of a network of green streets.

Comprehensive Plan

A new policy is proposed for the Comprehensive Plan addressing the development of a complete and sustainable neighborhood in the North Pearl plan area. The adoption of this policy would make the *North Pearl District Plan* and its policies part of the *Comprehensive Plan, Goal and Policies for the City of Portland*.

Legislative Process

Public Policy Framework

The planning process for the NPDP is being conducted within the applicable framework of state, regional, and local planning policies that guide future land use, transportation and public infrastructure decisions. This framework can be thought of as a hierarchy in which plans for smaller areas or jurisdictions must be consistent with those for larger jurisdictions or more encompassing areas – from the neighborhood level to the state level. Hence, planning done for the NPDP plan area must be consistent with the City of Portland’s adopted plans and policies, which must be consistent with regional plans and policies, which in turn must be consistent with state goals, laws and rules. Some of the important state, regional and local planning policies are described in the “Legislative Findings” section of this plan.

North Pearl District Planning Process

The NPDP is the result of a collaborative process between Bureau of Planning (Planning), Portland Office of Transportation (PDOT), Portland Development Commission (PDC) and neighborhood associations, development interests, and various other stakeholder groups with a role in shaping the community emerging at the northern end of the Pearl District. As noted earlier, this effort is in part a follow-up to a previous planning effort in the north end, the 2005 *North of Lovejoy Study*, and fulfills a recommendation of the study calling for a larger planning/ community building effort that would focus on the remaining portions of the Central City located north of NW Lovejoy Street.



The NPDP also seeks to implement elements of the 2001 Pearl District Development Plan that are applicable to the north end of the Pearl. This earlier plan, created through a joint effort of PDC, the City of Portland, and a 26-member stakeholder committee consisting of community, development, and business representatives, established a vision statement and action plan intended to inform future development decisions in the Pearl District. The goals and objectives of this plan served as a starting point in the development of the policies, objectives and actions recommended by the NPDP.

Public Outreach & Community Involvement

During the development of the NPDP, a Project Advisory Group (PAG) was created to provide feedback on staff proposals and to ensure that issues important to stakeholders on the PAG were addressed in the plan recommendation. The PAG included stakeholders from the development community, neighborhood associations, business owners, and residents at large. This group also included representatives with experience in architecture and urban design, affordable housing, sustainable development, and other disciplines/focuses important to the creation of a successful neighborhood in the plan area. The PAG met on average once a month, and numerous meetings and conversations were held with PAG members and the stakeholder groups they represent during the course of the planning effort. Additionally, all PAG meetings and events were open to all members of the public and opportunities were provided for nonmembers to address the PAG to provide feedback and to share additional ideas to consider as the NPDP was developed.

In addition to the PAG, a public open house was held as well as a walking tour of the plan area. A two-day urban design and development charrette was conducted in the fall of 2007 with PAG members, other stakeholders, and interested members of the public. Lastly, the Bureau of Planning maintained a website providing project updates and background materials and other relevant information while the NPDP was being developed.

Major public events and project key milestones are listed below:

Project Advisory Group Meeting 1	October 12, 2006
Neighborhood Walk	November 4, 2006
Project Advisory Group Meeting 2	November 14, 2006
Planning Commission Briefing 1	November 28, 2006
Project Advisory Group Meeting 3	January 30, 2007
Project Advisory Group Meeting 4	February 26, 2007
Project Advisory Group Meeting 5	March 21, 2007
Project Advisory Group Meeting 6	May 22, 2007
Design Commission Briefing 1	August 2, 2007
Project Advisory Group Meeting 7	August 14, 2007
Planning Commission Briefing 2	September 11, 2007
Urban Design & Development Charrette	September 27 & 28, 2007
Project Advisory Group Meeting 8	October 17, 2007
Public Open House	November 15, 2007
Project Advisory Group Meeting 9	November 28, 2007
Design Commission Briefing 2	December 20, 2007
Planning Commission Briefing 3	January 8, 2008
Project Advisory Group Meeting 10	January 16, 2008
Design Commission Briefing 3	January 17, 2008
Design Commission Briefing 4	February 21, 2008



Next Steps in Legislative Process

The first step in a legislative process involves the development of a staff-proposed recommendation. The current version of the NPDP is the result of the larger community effort described previously and completes this first phase in the legislative process. Next the staff-recommended NPDP will be reviewed by the Portland Planning Commission, with some elements also being reviewed by the Portland Design Commission, most notably the proposed update to the River District Design Guidelines.

Following the Planning Commission's review of the NPDP, the commission will forward its recommended version of the plan for the consideration of the Portland City Council. Following is the tentative schedule for the remainder of this legislative process:

Planning Commission Hearing:	March 11, 2008
Design Commission Hearing:	March 20, 2008
Design Commission:	April 17, 2008
Design Commission:	May 1, 2008
Planning Commission:	May 20, 2008
Planning Commission Hearing & Decision:	June 10, 2008
City Council – First Hearing:	September 24, 2008
City Council – Second Hearing:	October 30, 2008
City Council Adoption:	November 5, 2008
Plan Effective Date:	December 5, 2008

Background Documents & Related Plans

The following is a list of documents, plans, and other materials either created during the development of the NPDP or that served as background information and guidance during the development of the plan. These documents can be reviewed at the Bureau of Planning's website: www.portlandonline.com/planning.

- Centennial Mills Framework Plan*
- City of Portland Development Bonus System: FAR Bonus & Transfer Provisions Overview*
- North of Lovejoy Plan*
- North Pearl District Plan Urban Design & Development Charrette Summary*
- North Pearl District Plan: Planning Policy Framework Analysis*
- Northwest District Plan*
- Pearl District Development Plan*
- Portland River District Park System Urban Design Framework Study*
- River District Design Guidelines*
- University and River District Plans*
- Central City Transportation Management Plan*
- River District Right-of-Way Standards*
- Central City Plan*



Complete Community Concept

For the first time in 50 years, central cities across America are attracting talented young people. But what happens when they begin to have children? Unfortunately, as many as half of them leave for the suburbs once their children reach school age. Why should urban leaders be concerned?

- *It contributes to middle-class flight*
 - *It erodes the base of the population that supports mainstream institutions – banks, libraries, museums – places that serve everyone*
 - *It reduces the diversity and vibrancy of the city*
 - *It pulls entrepreneurship from urban centers*
 - *It undermines city parent advocacy*
- CEOs for Cities – City Kids Report 2007

Background

In a little over a decade the Pearl District has been transformed from a former railyard and industrial district to a vibrant mixed-use residential neighborhood. The first generation of residents to call the district home consisted primarily of young working professionals, some members of the so-called “creative class;” others, “empty nesters.” These residents were integral in the establishment of a community in the district and they remain so today. Many maintain businesses or are employed in the Pearl and Central City. Many others are active in civic and volunteer activities which have directly helped to shape and strengthen their evolving community.



Now an increasing number of this first generation is beginning to have children and this is transitioning the Pearl into a new phase of community development. With this transition will come an increased demand for public amenities and services, more diverse housing, and a range of retail services that have previously not been viewed as critical to maintaining livability in the Pearl District.

The baby boom currently occurring in the Pearl is not unique to Portland. Many other urban inner-city neighborhoods across North America are finding that the young professionals they have been able to attract to downtown living are beginning to have children, and many desire to remain downtown. A great deal of analysis has been directed towards the growing trend of urban living for families with children. Although the specific needs and tradeoffs families identify vary from city to city, the same basic needs are generally identified. Further, if these needs are not met, research finds these cities will lose these families, and the positive impact they bring to the city, once their children reach school age.

Similar research conducted locally by PDC, Central City Concern, and the Bureau of Planning demonstrates that there is a market for family housing in the Pearl District and Central City but that opportunities and constraints exist to making the Central City attractive for families with children.

- **Family Compatible Housing.** Generally, families stated that they needed housing units, two bedrooms or larger, within the development that includes adequate storage and play space and interior and exterior common areas to accommodate play and the ability for families to gather on-site. It should be noted that residents, whether they live in subsidized or market-rate housing, noted that unit size was not as big a factor as unit cost, meaning that smaller units were acceptable if this drove down the cost of housing. Of course units would also need to be well laid out and be accessible to basic on-site amenities as well.
- **Access to Public Amenities.** Many residents identified parks with play areas, a public school, and a community center as critical to their decision to remain in or locate to dense urban neighborhoods.

- **Retail Services.** Families noted that having access to daycare providers in the neighborhood, as well as grocers and restaurants and cafes that also catered to children was very important.
- **Cultural Institutions.** Many families indicated they choose to live in a downtown environment because they like to be close to libraries, museums, performing arts venues, and other learning and cultural institutions as the entire family actively supports these institutions through annual memberships and frequent visitations.
- **Access to Public Transportation.** Many families living in the Central City do not have automobiles and have noted that living there allows them the opportunity to give up the financial burden of owning an automobile. Being in close proximity to work, childcare, retail services, and a school, while having access to transit and bike and pedestrian routes, increases the likelihood that more families would potentially give up an automobile.

Although the Pearl has experienced extraordinary growth in residential development over the last decade and this growth has been well sup-

Tenderloin Community Elementary School;
San Francisco



Tenderloin Playground & Rec Center;
San Francisco



Rosa Parks Elementary School;
Portland Public School District



Hollywood Public Library; Portland





ported by the development of a vibrant retail community and expansion of public services and amenities, public and private investment in the district has not focused on the needs of families with children. For instance, most housing in the Pearl consists of one-bedroom and studio units and none have yet been designed to be compatible with the needs of families with children. Although retail stores that cater to children are beginning to open, no daycare facilities exist directly within the district to serve either residents or employees of the district.

As for public sector amenities, the parks and schools currently serving the district are not adequate to meet the long-term needs of a growing population of families with children. Specifically, neither of the two parks recently developed in the Pearl include a play area and although the fountain at Jamison Square attracts many families this is not its intended use. The only playground in the Pearl is located at the southern end of the North Park Blocks, far from where most residential development is occurring in the Pearl. However, the design proposed for The Fields Park should begin to address the need for play areas as it would include a play area specifically designed for children as well as an open field that will accommodate play along with other uses.

With regard to schools, the only school facility in the district is the K-5 Emerson School, a charter school located on the North Park Blocks. This school is currently serving at or near its capacity of 132 students. The closest public schools to the Pearl are Chapman Elementary, West/East Sylvan Middle School, and Lincoln High School. Chapman is a K-5 school located in NW Portland with an enrollment of 485 students and is approaching its intended capacity. West Sylvan Middle School is located approximately 5 miles from the Pearl District and serves 896 students, well over its intended capacity. Lincoln High School, located in Goose Hollow, has a current enrollment of 1,498 students and is at or near its intended capacity. As more

families in the Pearl and Central City continue to have children, more and more pressure will be placed on the school district to increase capacity at existing facilities or create new facilities within this area as population and densities increase.

As the City and region continue to grow, the Pearl District and Central City will continue to serve as a place where much of this growth will hopefully be accommodated. To ensure that the Pearl and adjacent downtown residential neighborhoods evolve into complete communities that serve the needs of all residents various moves will need to occur by the public and private sectors alike.

Time period	Tract 50	Tract 51
1991-1996	18	45
1997-2000	25	57
2001-2005	29	128

Urban Baby Boom

A review of census tract data show births in the Pearl are in an upward trend. The Pearl is divided by two census tracts with NW 12th being the dividing line between the two. Tract 50 includes the western side of the Pearl and includes thin slice of the NW district. Tract 51 includes the eastern side of the Pearl as well as all of Old Town/Chinatown. The table above illustrates that birthrates are on the rise and that the portions of the Pearl that experience the most growth in residential development also experience the highest growth in birthrates. Based on these trends it is expected that birthrates will increase as the number of housing units and the population of the Pearl continues to grow.



Family-Compatible Housing: The Vancouver Experience

For almost two decades the City of Vancouver, British Columbia, has relied on a set of design guidelines that identify factors that architects and developers should consider when creating housing compatible with the needs of families with children. The guidelines address: how best to site and fit a project into a neighborhood; site design; and factors to consider when designing individual units and common spaces shared by all tenants. These guidelines are intended to be advisory and allow for flexibility and creativity in the design of successful housing projects. Most importantly, the guidelines are intended to be applicable to both affordable and market-rate projects and encourage integration of residents at various income levels and of tenants with and without children into housing projects to create a more balanced and equitable social environment at the site and neighborhood level.

These guidelines have been used for years in Vancouver to create very successful housing projects and have contributed to that city's success in retaining families with children in the dense downtown neighborhoods. The guidelines also encourage existing families to locate downtown. These guidelines are applicable to the development of similar types of housing in Portland and should be considered when family-compatible housing is developed in the Pearl District and other dense residential neighborhoods in the city. The guidelines are summarized below and a full version of the guidelines (*High-Density Housing for Families with Children Guidelines*) is available by going to the City of Vancouver's web page at <http://www.city.vancouver.bc.ca/commsvcs/guidelines/H004.pdf>.

Project Planning

Generally, projects designed specifically for families with children should be located in neighborhoods supported by public amenities (schools, parks, community centers, etc.), and be located near compatible land uses. Further, projects should have a critical mass of family-compatible units, located in close proximity on the site, to ensure that when units do have children living in them (not all will) there is the probability that other close-by units may also house families with children.

- **Site Selection:** Families with children should have reasonable and effective access to essential community services and recreational amenities.
- **Surrounding Land Uses:** Housing for families with children should be protected from conflicts with adjacent land uses.
- **Neighborhood Compatibility:** New high-density family developments should be encouraged to fit into their surrounding neighborhoods.
- **Number of Family Units:** There should be a sufficient number of family units in a project in order to give children peers to play with; to encourage a sense of community; and to support provision of adequate outdoor and indoor amenities for families with children.
- **Household Mix:** In developments planned for a mix of household types, the family units should be grouped together in the most appropriate parts of the building or site.

Project Design

Housing projects should be designed to provide safe gathering spaces and circulation routes for all residents, especially children. Additionally, a hierarchy of common indoor and outdoor spaces should be provided, serving as an extension of the home, to allow for gathering, play, and relaxation, designed to accommodate the needs of all residents.





- **Hierarchy of Spaces:** Residents and visitors should be able to easily distinguish among private areas, semi-private areas (areas used by residents only), semi-public areas (accessible to the public but still on-site), and the public realm in and around a development site.
- **Common Open Space:** There should be appropriate open space on-site (no less than 1,400 square feet of area) to accommodate gathering and play, and a hierarchy of spaces to accommodate the needs of residents of all ages.
- **Outdoor Play Areas for Children:** Children of all ages should have easy access to appropriately located, designed, and landscaped outdoor play areas suited to their development and play needs.
- **Supervision of Children's Play:** Small children require supervision while playing in common outdoor and indoor play spaces. Projects should be designed to facilitate opportunities to achieve that supervision by parents and other caregivers from within individual units or their private open spaces.
- **Children's Safety:** Design the whole environment with the safety of children in mind.
- **Pedestrian Circulation:** Both internal and external circulation routes should be designed to enhance security, especially for women, children and seniors, and to accommodate the full range of activities which can be expected to occur in them.
- **Common Indoor Space:** Provide appropriate common indoor space (approximately no less than 400 square feet per project) for families with children where individual units are not suited to desire indoor activities.

- **Residents' Parking:** Parking should be secure, accessible and adequate for the needs of residents and visitors.

Unit Design

Housing units designed for families do not need to be overly large in terms of total square footage, especially if on-site indoor and outdoor common space areas are available, as well as a range of neighborhood public amenities. Rather, units can be efficiently designed to accommodate the basic needs of families with children (such as adequate number of bedrooms appropriately sized, private outdoor patios or balconies, and on-site storage for strollers, bikes, and other common accessories) while still remaining relatively small in total area (850 to 1,200 square feet).

Need for Housing Diversity

In 1999, the River District Implementation Strategy was amended to include a goal of producing 6,594 housing units by 2020. As of June 2007 over 7,408 units had been produced. Of these units 4,963 were affordable to those earning 120% or less of the median family income (MFI), with approximately 2,000 units being available to those at or below 50% MFI.

Although there has been success in creating housing units for residents at various income levels, the diversity of the housing stock is somewhat limited and tends to favor residents without children. Specifically, recent housing studies by the PDC found that only 20% of the units in the River District are two- or three-bedroom units (approximately 17% for two bedrooms, and 3% percent for three bedrooms), and the overall percentage of two- and three-bedroom units shrinks to less than 15% when single-room-occupancy units are added to the calculation. Unit diversity will be critical at all income levels if the River District is expected to maintain a sustainable and diverse population.

- **Unit Design:** The size and layout of units should be appropriate to meet the needs of families with children. Family units require a minimum of two bedrooms and each bedroom should be large enough to accommodate a single bed, dresser, desk or table, and some floor space for playing.
- **Privacy:** Protect the privacy of family households. Minimize the visual and acoustic intrusion into all dwelling units and into their private open spaces.
- **Private Open Space:** Ensure that each household has a private outdoor open space adjacent to its unit for its exclusive use.
- **Storage:** Provide sufficient bulk storage within the unit or within easy access of the unit.

CEOs for Cities – City Kids

In 2007, the organization CEOs for Cities, a national network of mayors, corporate CEOs, university presidents, foundation officials and business and civic leaders, released the City Kids report which focused on why retention of families with children is critical to the long-term sustainability of urban neighborhoods like the Pearl District. The report found that over the last decade there has been a large influx of young working professionals who have returned from the suburbs to make the city their home. These professionals have started businesses, laid down roots in the urban communities that have in large part helped to shape. These residents are also beginning to have children and many want to remain and raise their children downtown. Despite this desire, the

City Kids report identified various obstacles that often exist to make these neighborhoods viable for families in the long run, causing many families to leave the city once their children reach school age.

These obstacles include:

- **Space – Family Compatible Housing.** Most urban residential projects are not designed with the needs of families in mind. Units do not usually contain two or more bedrooms, and larger units that do have more bedrooms are usually very large and typically too expensive for most residents to afford. Additionally, many projects do not contain common indoor and exterior share spaces where children can play and families can congregate.



- **Schools – Public Amenities.** Many of these emerging urban neighborhoods have either not been home to families with children, or have not had to support families with children for several decades. As a result, basic public services such as schools, libraries, parks with playgrounds, and community centers are often lacking. Neighborhood schools can serve a number of these functions.

Lastly, the City Kids report found that there is a significant economic impact associated with losing highly educated families in the prime of their careers and there are also societal impacts. Parents of children play an active role in helping the city develop strong and tight-knit communities as they are typically very involved in civic activities and neighborhood stewardship. Also, children noted as providing additional diversity and vibrancy to the city making the city an attractive place for all people. The report noted that urban neighborhoods are becoming homogenous due to the absence of the middle-class, children, and young parents, and that these neighborhoods become less sustainable in the long-term as a result.



Sustainable Community Concept

Somewhere a visionary may persuade his or her city to take on the challenge of managing the entire urban natural environment. The reasons are compelling. At issue is not just the creation of a more secure, more beautiful, more efficient and cost-effective city, but survival itself... It is time to employ one of the greatest human talents, the ability to manipulate the environment, to transform an environment that has become hostile to life itself into a humane habitat which sustains life and nurtures growth, both personal and collective.

- Anne Winston Sprin,
The Granite Garden

Focus was then placed on four primary areas: sustainable site and building development; social equity and healthy neighborhoods; stormwater management; and multimodal transportation. The ability to implement district wide energy and heating/cooling systems (that could be expanded over time to other portions of the Central City) was also considered. From this work, a series of goals were established setting aspirational benchmarks for development with regard to each individual focus areas. This section of the NPDP identifies the goals that were developed, and provides background information and case studies supportive of the goals. These goals have been used to establish the Sustainable Community policy, objectives, and actions presented later in this plan.

Background

In spring of 2007, the Portland Development Commission and Bureau of Planning convened a group of public and private professionals with expertise in different aspects of sustainable design, construction, and community development. This group explored options for integrating sustainability into multiple levels of the planning and development of the North Pearl subdistrict. Initially this group was asked how development in the north end of the Pearl could be implemented in such a way as to address the multiple aspects of sustainability and achieve the highest level of community-wide sustainability in Portland to date.

Acknowledgements

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Sustainable Site & Building Development Focus

The city's vision for the North Pearl subdistrict sets a new standard for sustainable development and will reinforce Portland's national and international leadership in progressive high performance design and construction for both sites and buildings. The development industry is maturing and some practices once considered "green" are increasingly becoming mainstream in Portland and other cities. Given the development potential in the North Pearl and support from local property owners/developers for a more sustainable model, four areas of focus with twelve goals were identified, each with performance targets. Green, high-quality development in the North Pearl subdistrict will advance Portland's reputation as a leader in sustainable design and development.

GOAL 1: Advance Sustainable Site & Building Development

- o Achieve LEED Gold, Platinum or beyond and explore LEED for Neighborhood Development certification.
- o Promote the ASHRAE 189 Sustainable Buildings standard as a target for large buildings.
- o Develop district energy system(s) to improve ecological and economic performance; establish strategic infrastructure and institutional models to allow for adaptive, advanced energy systems that dramatically reduce greenhouse gas emissions; and embrace clean, renewable technologies to the extent possible.
- o Design for passive solar, using building orientation and shading devices.
- o Place a premium on achieving healthy indoor environmental quality to protect tenant health, especially for vulnerable children.



- Decrease potable water use 25% below code using very low flow plumbing fixtures and reuse of captured rainwater.
- Reuse or recycle 95% of construction waste.
- Use nontoxic and low-emitting materials, with 10% or less of total plastics being made of polyvinyl chloride PVC.
- Compost 90% of organic wastes.

GOAL 2: Achieve Carbon Neutral Operations for New Buildings by 2030

Architecture 2030 is a challenge to the global architecture and building community to adopt aggressive reduction strategies for reduced energy use and carbon emissions. Specifically, the challenge sets the following targets:

- All new buildings, developments and major renovations shall be designed to meet a fossil fuel, global greenhouse gas (GHG) - emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.
- At a minimum, an equal amount of existing buildings shall be renovated annually to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% for the regional (or country) average for that building type.
- The fossil fuel reduction for all new buildings shall be increased to:
 - 60% in 2010
 - 70% in 2015
 - 80% in 2020
 - 90% in 2025
 - Carbon Neutral in 2030

This challenge also stipulates that renewable energy should provide no more than 20% of a building's off-site energy portfolio. Near-term targets:

- Construct new high performance buildings that use 20% less energy than the new ASHRAE 189 standard for sustainable buildings (equivalent to 50% below code).
- Develop and use onsite or local sources of renewable energy (solar, wind, micro-hydro, geothermal, bicycle or kinetic energy generation).
- Integrate new and existing buildings to district heating and cooling system, wherever feasible.

LEED for Neighborhood Development

In 2007, the 34-acre master plan area for the Hoyt Street Properties was selected to become a pilot project in the Leadership in Energy and Environmental Design for Neighborhood Development program (LEED ND). This program was developed by the US Green Building Council in partnership with the Congress for the New Urbanism and the Natural Resources Defense Council and is intended to integrate principles of smart growth, new urbanism, and green building design into a national standard for neighborhood design. Certified LEED ND projects will have demonstrated how they successfully protect and enhance overall health, the natural environment, and the quality of life in their perspective community by promoting pedestrian- and transit-oriented neighborhoods that include a mix of jobs, services, and diverse housing opportunities. The stated goal of LEED ND is to create neighborhoods that encourage developers to revitalize existing urban areas, reduce land consumption, reduce auto dependence, promote pedestrian activity, improve air quality, decrease polluted stormwater runoff, and build more livable, sustainable, communities for people of all income levels.



District Energy

Early in the workgroup's process of brainstorming approaches to sustainable development, the concept of implementing a district energy system was introduced by John Sorenson of MidTech Energy. District energy systems have a long history of use in Northern Europe and have seen increased use in North America over the last few decades. These systems heat and/or cool water at a central plant and then distribute the water to residential and commercial buildings via underground pipes built into the public right-of-way. Most often the water is then recirculated back to the main plant for reuse. Individual buildings do not need to install boilers, chillers, or similar equipment to generate heating and cooling on site. These systems are more efficient than traditional heating and cooling systems and lower overall costs to customers. Heating plants have also been developed to use green waste as a fuel and have incorporated clean air technologies that dramatically lower the release of carbon emissions waste into the atmosphere in comparison to over other fuels typically used to generate heat in the Portland metro area. An additional advantage of these systems is their potential to expand into adjacent districts of the city.

The Portland Office of Sustainable Development recently awarded a contract to Compass Resource Management and FVB Energy to conduct an analysis on the opportunities and constraints associated with creating a district-wide energy system in the North Pearl plan area. This analysis will help the City evaluate the value in pursuing such a system in the North Pearl as well as in other sections of the Central City. A report summarizing this analysis is expected to be completed in Spring 2008.

Dark-Sky Friendly Lighting

Light pollution is a common problem in the urban environment. Aside from urban sky glow (a major problem for astronomers and anyone who enjoys occasional views to the stars and planets), light pollution is also associated with light trespass (the spilling of light into units and unintended areas within the public realm), and glare (sometimes raising safety issues for pedestrian, bicycle, and vehicular circulation). Light pollution can also be linked to a waste of energy because resources are being used to project lighting into unintended areas to the benefit of no one.

In 1988, the International Dark-Sky Association (IDA) was formed to address the impacts of poorly designed and inefficient lighting. The IDA awards a Fixture Seal of Approval for fixtures that are found to minimize glare and reduce light trespass. Many of these fixtures also conserve energy, and all must provide adequate light to ensure that safety and security are provided. IDA-approved lighting has been proven to reduce negative impacts of light pollution while also providing a range of creative design options to ensure lighting is aesthetically pleasing.



CASE STUDY: OHSU CENTER FOR HEALTH AND WELLNESS — LEED PLATINUM CERTIFICATION

This facility is the first medical and research facility of its size and complexity to achieve LEED Platinum certification. The building was designed to achieve energy savings of more than 60 percent below the Oregon Energy code. The design includes on-site power generation from a gas-fired cogeneration plant (combined heat and power) and building integrated photovoltaics that double as sun shades on the south façade.

Building systems include an integrated day-lighting system, natural ventilation in stair towers, radiant heating and cooling, eco-roofs, 100 percent on-site stormwater management and rainwater harvesting, on-site waste treatment using a membrane bioreactor, and a large two-story solar collector (Trombe wall) that preheats air for laboratory spaces. No potable water is used for waste conveyance or irrigation and the swimming pools are integrated with the heating and cooling system as a thermal storage unit. Sustainable, lower toxicity materials were used for interior finishes, paints, sealants and furnishings. Carpeting systems were sustainably manufactured and the wood products are Forest Stewardship Council (FSC) certified.



Center for Health & Healing Oregon Health & Sciences University

Location	South Waterfront, Portland, OR
Developer	Gerding Edlen Development Company
Architect	GBD Architects
MEP Design + Commissioning	Interface Engineering
General Contractor	Hoffman Construction
Project Cost	\$150 million
Size	16 stories – medical space, labs, retail 412,000 sf 3 levels underground parking
Completed	Summer 2006
Annual Resource Savings	Electricity: 4.2m kWh Natural Gas: 395k therms CO2: >3,400 tons Potable Water: >2.1m gallons Construction waste recycled: 3,741 tons
Green Premiums	Soft costs estimation: \$235,000 Energy efficiency estimation: \$975,299 Additional Measures: Solar PV and Thermal: \$886,000 Green Roofs @ \$9/SF: \$180,000 Bioreactor: \$950,000
Financial Incentives	BETC: \$801,000 BETC Solar: \$173,000 Energy Trust: \$214,000 Other: Solar \$189,000, Turbines \$100,000, Bioreactor \$50,000
Total Green Costs	\$3,226,299
Total Green Saving	\$1,527,000
Net Green Costs	\$1,699,299
% Green Premium	1.13%

Source: <http://www.gerdingedlen.com/project.php?id=62>



Social Equity and Healthy Neighborhoods Focus

Sustainable development supports a stronger economy and greater social equity. A white paper by Joe Cortright, economic analyst, examined the total savings to Portland's economy from dense, infill development and a high per capita use of non-automobile travel options.¹ Cortright estimates the local economy saves \$2.6 billion annually due to shorter commutes, reduced travel costs and less time sitting in traffic.

- Promote import substitution by sourcing local materials, products and services, supporting local jobs and economic development. Import substitution helps the city and region become more economically self-reliant by developing supply chains that enhance local business ownership, and thus local wealth.
- Create live-work spaces for tenants who offer needed services. Provide tenant space for locally-owned businesses to enhance the local economic multiplier effect. The bottom line is that development needs to pencil out for the developer, community, city and region.

Mixed-use, mixed-income, transit-oriented development contributes to a livable city. Providing convenient access to retail, social services and affordable housing for citizens with lower incomes is an equity issue and a priority for the City of Portland. The North Pearl subdistrict should offer a wide range of housing options including family housing, rental and ownership options, two- and three-bedroom housing, and flexible live/work space. Dense, walkable communities contribute to healthy people, clean air and a strong economy.²

¹ Joe Cortright, *CEO's for Cities*, July, 2007.

² *Cascadia Scorecard 2006*, Sightline Institute.

Studies indicate that living in a walkable neighborhood, fostered by nature-enhanced pedestrian walkways and nearby services such as grocery stores, dry cleaners and daycare, reduces obesity and lowers the incidence of chronic disease. Residents of compact, walkable neighborhoods walk more and are less likely to be obese. High-density metropolises have about one fewer chronic illness for every 10 residents.

In 2004, Lawrence Frank, professor of urban planning at the University of British Columbia, led a study of over 10,000 residents of Atlanta, Georgia. Similar to other studies, Frank documented that people who live in the least walkable neighborhoods are one-third more likely to be obese than residents of neighborhoods that best supported foot traffic. San Diego residents of neighborhoods with available pedestrian amenities get ten extra minutes of physical activity per day and are 40 percent less likely to be overweight than residents of sprawling neighborhoods.

Additionally, a comparison of two demographically similar neighborhoods in Portland found that safe and interesting walkways correlate with higher levels of social capital or social connections.

Furthermore, compact neighborhoods allow people to drive less. Less driving reduces the risk of car crashes — the number-one killer of young people in the Pacific Northwest. Low-density sprawl forces residents to drive longer distances to stores, schools, jobs, and services.

Regarding air quality, air-monitoring stations in some suburbs find more smog and comparable levels of other pollutants than is found in urban areas with public transit options.



GOAL 3: Create Diverse Housing Opportunities

- Provide sufficient housing opportunities to households of various income levels, including affordable and workforce housing.
- Increase rental and ownership opportunities.
- Target PDC programs to ensure transition from the rental to ownership model.
- Minimize the concentration of poverty in coordination with the goal of “equitable distribution” as defined by Metro’s Regional Housing Goals.

GOAL 4: Increase Availability of Green Affordable Housing

- Establish sustainability and indoor environmental standards for affordable housing.
- Assist developers to improve energy efficiency to 15 percent below Oregon’s 2008 energy code, reducing costs for tenants who can least afford rising energy costs.
- Require energy recovery ventilation systems to raise the quality of indoor environmental quality and health of families, especially where children are involved, and reduce energy costs. Given the high incidence of individuals who smoke tobacco and the dangers of second-hand smoke, improving current ventilation systems and ensuring environmental tobacco smoke cannot travel from unit to unit would protect the health of children living in affordable housing.

CASE STUDY: ROSA PARKS PUBLIC SCHOOL & COMMUNITY CAMPUS

Rosa Parks School is the cornerstone of the new Community Campus at New Columbia, the largest revitalization project in Oregon history. Rosa Parks is only the second new school designed and constructed by Portland Public Schools in 30 years and is a model for future new schools.

The new school design meets several public goals, including sustainable construction and use, and social equity. It is an innovative

example of sharing resources and creating community. The school is divided into four “neighborhoods,” each containing 125 students. Each neighborhood contains five classrooms, a resource/student support room, and support functions around a “Neighborhood Commons.” At the entry to the school, families are provided their own resource room, as well as access to a library information center. Functions including art, computers, music, and food service are shared with the new Boys & Girls Club.

The 2.38-acre site contains five heritage trees that contribute to the property’s natural esthetics, building cooling, and fresh air. Connected to the pedestrian pathways of New Columbia, Rosa Parks is a walk-in school, with a sustainable design including, but not limited to, the incorporation of natural daylighting, 100 percent of on-site stormwater management, photo voltaic electrical panels, and displacement ventilation that provides fresh outside air, facilitating a healthy learning environment. Rosa Parks School anticipates a LEED Gold certification.



Photo © Gary Wilson Photo Graphic



GOAL 5: Mixed-Use & Transit-Oriented Development

- Provide incentives for mixed-use, mixed-income developments such as density bonuses, reduced parking requirements, fast-tracked permitting.
- Incent natural public spaces and gathering places that promote community connectivity and cohesiveness.
- Provide transit options and other affordable amenities and services such as grocery stores and daycare.

ROSA PARKS PUBLIC SCHOOL & COMMUNITY CAMPUS

Facility Owners	N4C New Columbia Community Campus Corporation Portland Public Schools Housing Authority of Portland Boys & Girls Club of the Portland Metropolitan Area
Location	8960 N. Woolsey Avenue, Portland OR
Architect	Dull Olson Weekes Architects
Project Cost	\$12,836,012
Size	66,863 sq. ft.
Completed	August 31, 2006

Source: http://archrecord.construction.com/projects/bts/archives/k-12/07_RPSPortland/default.asp

Sustainable Economic Development & “Green Collar Jobs” Focus

One component for sustainable economic development is green collar jobs. They cannot be outsourced and they are becoming a growth industry in many parts of the U.S. The increasing need for trained workers to perform a host of “green” construction-related jobs is being recognized by states, community colleges and other programs in growing numbers. Van Jones, President of the Ella Baker Center for Human Rights, is spreading an increasingly convincing message that, “We can put a whole generation to work retrofitting and rebooting a clean energy economy.” Jones adds, “Greening the economy offers an opportunity to fight poverty and pollution at the same time.”³ The demand for these new jobs is coming from a variety of sectors.

Clean and efficient energy:

- Biofuels production and delivery
- Residential and commercial building performance monitoring/reporting
- Solar panel installation
- Wind turbine construction

Naturescaping:

- Sustainable site excavation and landscaping
- Habitat restoration and maintenance
- Bioswales and green street development

³Baker, Linda, Sustainable Industries Journal, Sept. 2007.



Green construction specialties:

- Clay earth plastering/painting
- Advanced framing

Other opportunities:

- Separating and hauling construction waste for recycling
- Composting operations
- Public transit maintenance and repairs

GOAL 6: Build a Vital, Socially Equitable and Healthy Community

- Increase the development of mixed-income, mixed-use and transit-oriented development that includes multi-family affordable housing opportunities and ready access to city services.
- Work with community colleges and other partners to promote workforce training opportunities for the unemployed and underemployed. Prepare Portland to meet the increasing employee demand generated by the growth in sustainable site design, green building construction, renewable energy and other emerging economic sectors.
- “Re-nature” the community by creating open green spaces for public gatherings.

GOAL 7: Develop Diverse Regional Economic Opportunities

- Promote import substitution by sourcing local materials, products and services, supporting local jobs and economic development to help the city and region become more economically self-reliant and to develop supply chains that enhance local business ownership and local wealth.
- Create live-work spaces for tenants who offer needed services. Provide tenant space for locally-owned businesses to enhance the local economic multiplier effect. Assure that development needs to pencil out for the developer, community, city and region.
- Use the Pearl as a test-bed for training low-income residents in clean tech/sustainability, possibly housing a Visitor’s Center in a school or other facility by:
 - Tapping the EPA grant fund to train low-income residents in brownfield technology (<http://www.epa.gov/swerosps/bf/joblst.htm>).
 - Forming a public/private partnership with PSU and other institutions to offer professional development training to residents (use sustainability MBA students to organize a Job Fair linked to sustainability jobs for low-income residents).
- Plan job fairs and other employment opportunities in the district.
- Identify incentives such as tax abatements, green enterprise zones, development bonuses, and tax credits to link local occupations to residential and work opportunities.
- Use the North Pearl subdistrict to create a “green urban tourism district” showcasing the city’s and region’s green strategies and

programs for visiting officials from other cities seeking capacity building opportunities. (Note Portland's China-US Center for Sustainable Development, which is bringing Chinese officials to Portland to learn about growth strategies and sustainable development. <http://www.chinauscenter.org/>.)

Natural System Approach to Stormwater Management Focus

Redevelopment is an opportunity to correct and learn from past practices, and begin to invest in the natural capital of our urban watersheds. The informed, creative, and sustainable redevelopment of the North Pearl District Neighborhood will address stormwater while restoring health and vitality to the ecosystems and communities of this urban watershed. We want to create a stormwater system that utilizes natural processes to treat and store stormwater and provides multiple benefits such as:

- Beautification of Neighborhoods
- Replenished Groundwater
- Clean and Cool Urban Air
- Improved Bicycle Access
- Enhanced Pedestrian Safety
- Increased Community or Property Values

GOAL 8: Project Stormwater

- Develop a systems approach to the conveyance and infiltration of stormwater by embracing natural topography to reduce the need for piped infrastructure, using a surface conveyance system, minimizing conveyance distance between facilities, and embedding facilities within the urban fabric.
- Mimic natural hydrology by infiltrating stormwater to increase stream base flows and to recharge aquifers.
- Capture opportunities for management of high-flow events within the urban framework.
- Develop new public rights-of-way and seek opportunities to convert already developed rights-of-way into green streets.
- No increase in net runoff from pre-development conditions.
 - Manage 100% of stormwater runoff through the use of vegetated infiltration facilities.
 - Infiltrate 80% of annual volume of runoff.
 - Reduce 5% of impervious surface from a "typical" high-density urban development.
- Replace use of potable water with harvested stormwater where practicable such as in flush toilets and water features.
- Extract energy from stormwater to heat and cool buildings.
- Promote public education through a "stormwater walk" showcasing the variety of technologies for management and conveyance of stormwater in the urban fabric.





Multimodal Transportation Focus

Public and private efforts should focus on encouraging the use of alternative modes of transportation. They include limiting the number of parking spaces for new development, continuing to orient development towards transit, encouraging walking and bicycling, and providing opportunities for the right-of-way to become community space. Encourage residents and workers in the districts to rely on transit and walking and bicycling. Additionally, public infrastructure, including right-of-way amenities, should embrace the latest thinking in terms of energy efficiency and stormwater management.

GOAL 9: Mode Split

Set mode split goals intended to encourage and increase use of transit by bicycling and walking.

GOAL 10: Parking

- Minimize parking ratios for employees and residents to promote alternative modes of transportation beyond single-occupancy vehicles.
- Shift on-street parking to accommodate short-term use.
- Administer off-street parking to maximize utilization for a variety of trip types, including visitor parking, valet parking, and shared parking arrangements.

From Green Streets to “Sustainable Streets”

The City of Portland’s policy on green streets has recently evolved. Whereas attention has previously focused on the transportation and stormwater functions of green streets, the City finds it may be beneficial to explore expanding the definition of green streets to include additional elements. These elements will need to be explored by further analysis and/or additional pilot projects that consider elements such as street tree canopies, which is closely related to stormwater management, material use and lighting, which is related to practices that rely on less use of natural resources, and social equity, a component of sustainable development that has not yet found its way to City green street policy.

Street Tree Canopies

Street trees are a complementary strategy with bioswales and other stormwater facilities, helping to reduce the volume and rate of stormwater entering the drain system. Their presence in swales and landscaped strips increases the potential for water infiltration into the soil. Street trees also help shade impervious street surfaces, reducing the temperature of water reaching the storm system and mitigating water quality impacts.

Street trees also provide a wide range of livability benefits. They help minimize urban heat island effects, making streets more pleasant for walking and bicycling as well as helping keep homes cool in the summer. Deciduous street trees allow light into houses in the winter months, while providing a more extensive cooling effect in the summer.

Trees further have air quality and noise mitigation benefits. They have been shown to have positive effects on health, child development, and



academic achievement. And, when properly selected and maintained, they have also been demonstrated to reduce crime levels. Street trees also provide habitat for wildlife including both food and shelter.

Evergreen trees provide greenery and intercept stormwater year-round. Conifers' needles provide many surfaces and angles to trap water and absorb moisture, but they may not be well-accepted as street trees. Many conifers do not achieve broad canopies, are perceived as hazards due to their size, release sap that is hard to remove, and have low branches when young. However, they are feasible with a sufficiently wide planting area and appropriate design. Broadleaf evergreens are more accepted as street streets, though not as commonly found as street trees in Portland.

Maintenance of street trees is a key consideration. Trees that deposit sap onto cars, sidewalks and streets should be avoided. Trees with shallow roots may damage sidewalks. Trees should also be able to sustain moderate wind without damage. The City's Sunderland Recycling Facility collects leaves from streets in late fall and composts them in the winter months. The compost is then sold. This program reduces the safety impact of fallen tree leaves and prevents them from clogging storm drains. A Metro study found that 20-year old trees provided three to six times more average annual benefits than their annual cost, so proper maintenance over an extended period is a key consideration.

Material Use

One consideration in a broadened "green street" definition could be the sustainable use of underlying materials used in constructing streets and sidewalks. A "life cycle" approach to sustainability encourages the careful selection of construction materials and standards for materials reuse. This approach has roots in the industrial ecology discipline and is espoused by the United Nations Environmental Program (UNEP).

All new materials come at some environmental cost, whether petroleum content or mining raw materials. The construction industry is responsible for 7% of global CO₂ emissions, largely from concrete production (Mora, 2005, p. 1332). The recycling of materials, such as asphalt or concrete, as part of road reconstruction can help reduce oil demand and carbon footprints.

The use of waste materials is another way to increase the sustainability of projects. Only six percent of raw materials become usable products (Mora, 2005, p. 1332), creating a large materials source for reuse. Requiring the use of waste products in construction helps create a market for these materials.

For example, the table on the next page shows LEED-ND guidelines for incorporating recycled or reused materials into paving materials, which can apply to both porous and non-porous types. In the City's 2007 update of its Standard Construction Specifications Manual, it recommends that contractors recycle concrete and asphalt as well as use asphalt, filler, and base material that contains recycled material. It also allows the use of recycled concrete and asphalt products as a base material. The percentage of recycled material content can also be used to evaluate the relative sustainability of different porous pavement materials, such as concrete pavers.



Material	LEED-ND Guideline/ Requirement	City of Portland Construction Specifications
Aggregate base/ subbase	Min. 90% by volume recycled materials	
Asphalt base	Min. 15% by volume recycled materials	Recommends recycled materials
Asphalt concrete pavement	Min. 15% by volume recycled asphalt pavement OR in 75% by volume rubberized asphalt concrete from recycled tire crumb rubber OR min. 5% by weight pre/post consumer asphalt roofing shingles	Maximum 30% reclaimed asphalt pavement in new pavement (00747.03)
Portland cement concrete pavement	Recycled mineral admixtures to reduce by at least 25% the concrete mix's typical Portland cement content, AND min. 10% by volume reclaimed concrete material aggregate.	

Compiled from LEED-ND guidelines, City of Portland Construction Specifications Manual, and Portland Office of Transportation Sustainability Guidelines (Draft).

As part of street maintenance activities, asphalt grindings are now sold back to asphalt plants where they are recycled into new asphalt mixes. All concrete and asphalt rubble is also screened, crushed and recycled into an aggregate base material for reuse. During fiscal year 05-06, 196,000 cubic yards of asphalt and concrete were crushed and reused, compared to 16,000 cubic yards in 2000 (PDOT 2007 Sustainability Plan).

Lighting

The use of efficient street lighting helps improve the energy footprint of a street, as well as reduce lighting costs. Light pollution from older street light designs directed a significant amount of light into the sky, negatively impacting night sky visibility and wildlife. The City's replacement of

standard 100 watt High Pressure Sodium (HPS) lamps with 70 watt HPS or 85 watt QL lamps (white light) achieves a 15 to 30 percent reduction in energy use (Portland Office of Transportation Sustainability Plan).

In 2001, the City converted over 13,000 red and green vehicle indicators from incandescent bulbs to LEDs. It plans to introduce a new LED product that uses 25 to 40 percent less energy than previously used LEDs. Most pedestrian signals have been converted from incandescent to neon light sources. New solar powered pedestrian warning beacons have been installed at three locations, which use 100% renewable power (Portland Office of Transportation Sustainability Plan).

Social Equity

Sustainable development is commonly defined, including by the United Nations definitions, as the confluence of three overarching policy goals; environmental, economic and social. In the discussion to date about green streets in the region, attention has been placed on the environmental side of sustainability (such as in creating streets that encourage alternative modes of transportation, enhance livability and act as on-site stormwater management) but less so to the other two. This plan would like to continue to explore the potential for the right-of-way to promote a more holistic approach to sustainability to include economic development and social equity considerations.

An example for how to address this can be found locally through an organization called Verde, a Portland based non profit organization established in October, 2005 as a result of the Hacienda Community Development Corporation's Sustainable Development Program. The organization's explicit role is to address the exclusion of low-income and people of color from environmental decision-making and benefits, particularly the economic benefits of environmental protection.

Verde accomplishes this by working in the area of environmental job and business creation. Verde hires Latinos at higher wages than other landscaping businesses and trains them to be highly skilled in installing and maintaining wetland restoration, streamside revegetation and stormwater management projects, including providing native plants. With this training, Verde helps address the economic needs of disadvantaged communities through environmental job and business opportunities, opportunities driven by environmental policies, and therefore build a more direct connection between these communities and environmental protection.

GOAL 11: Green Street and Right-of-Way

- Identify streets to be designated as green streets.
- Maximize opportunities to rely on less oil-based and high-energy materials in building and maintaining the right-of-way.
- Seek opportunities to provide adequate public lighting that conserves energy and incorporates dark skies technologies.
- Incorporate sustainable stormwater management features in all new streets, and retrofit existing streets with stormwater management features where feasible.

GOAL 12: Transportation Demand Management

- Establish a Transportation Management Association (TMA) to encourage employers and employees to use alternative modes of transportation to reach a 20-point reduction in the percentage of single-occupancy vehicle commute trips by 2030.
- Include residents of condos, apartments, and other potential residential development in TMA to encourage the use of alternative modes of transportation.
- Work with local agencies and institutions to educate Pearl residents, employees, and visitors about travel options to reach a reduction of auto trips.





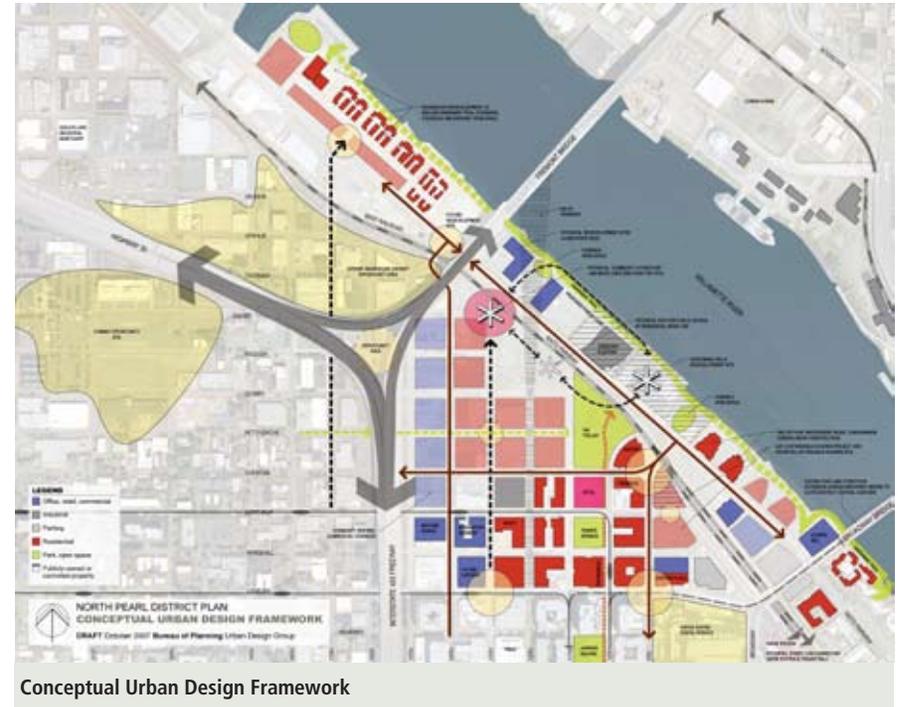
Urban Design & Development Concept

Introduction

In September, 2007, the Bureau of Planning conducted a two-day urban design and development charrette for the North Pearl District Plan (NPDP) and associated plan area. The event, facilitated by Paddy Tillett of Zimmer Gunsul Frasca Partnership (ZGF), was attended by a broad cross-section of stakeholders, including members of the NPDP Project Advisory Group (PAG), local residents, members of the Portland Design Commission, and City staff including representatives from Mayor Potter and Commissioner Sten's offices.

The intent of the charrette was to seek stakeholder input into the creation of an urban design framework plan and preferred alternative for zoning amendments regulating the use of height and FAR in the plan area. By the end of the charrette there was general agreement from participants regarding a number of key urban design and development issues. Following this event a draft Urban Design & Development Concept was created, which was further refined through additional meetings of the PAG, a public open house, and a series of briefings with the Portland Planning and Design Commissions.

This section of the plan presents a proposed urban design and development concept for the plan area. In most cases there is agreement about the specifics proposed; however, where consensus has not been reached, a range of alternatives is presented for further consideration.



Conceptual Urban Design Framework

It should be noted that elements of this concept will be memorialized through the adoption of new development standards regulating building height, floor area ratios, building setbacks, and development bonus and transfer provisions. In other cases, the concept presents ideas that have been accepted by the majority of stakeholders who have helped shape this concept, but these ideas remain advisory and implementation is not required but suggested to allow the successful implementation of the concept as a whole. This allows for flexibility in the implementation of the concept and the ability to consider new ideas that may further the community development policies of the North Pearl District Plan.



Urban Design & Development Themes

The first step in developing the Concept involved a review of basic community assumptions and desires for the plan area and the various development scenarios that would allow us to realize these desires. Then these scenarios were refined into more complete alternatives to be used to assign FAR and height ratios appropriate to implement the emerging urban design & development concepts.

While concepts were being developed, ideas for how larger public goals could be met in return for the granting of bonus height and FAR were also explored. Specifically, the ability to leverage community desires (such as the development of public amenities, supply of a more diverse housing stock, and the preservation of historic structures) as a means to access additional development potential was explored.

In the end, the following six general themes were considered in the development of the Concept.

Sustainability. Sustainable community development as well as green building design and construction practices should be pursued at both the site and district levels.

Community Assets & Public Amenities. If the Pearl is to become a complete community that supports thousands of residents as well as residents of multiple ages (children to seniors) and various household types (single residents to families with children) then a range of public community amenities, such as schools, daycare, parks, community centers, and libraries will be needed.

Complementary Mixed-uses and Development Clusters. A mix of community supporting uses (residential, institutional, and commercial) should be developed in the plan area, and clusters of different but

complementary uses should be created to create activity nodes with active ground floor uses.

Street Hierarchy. A strong street hierarchy should be established in the plan area that facilitates safe pedestrian, bicycle, and vehicle circulation; protects and enhances places of special character; and serves a diversity of land uses.

Built Form. Building height, floor area ratios, and building massing and setbacks should be established to protect and enhance the pedestrian realm, special views, greenway, and parks and open space areas, and to create a dynamic skyline that complements the Pearl District and Central City.

Open Space Amenities and the Public Realm. Opportunities to create additional public and private open space areas should be pursued and the design of these spaces should be coordinated to create a dynamic public realm of integrated public and private space with a high level of design quality.

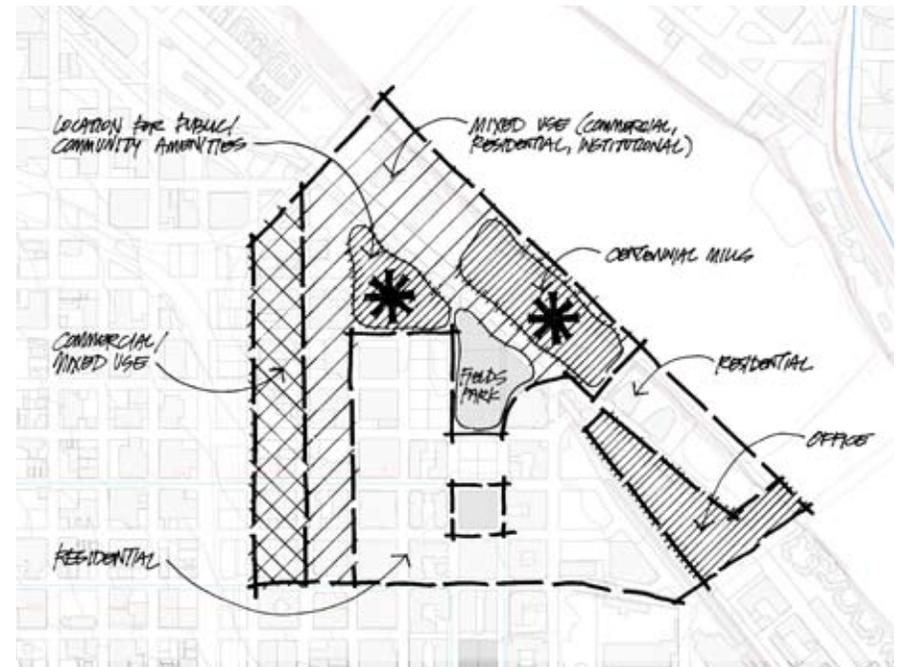
Concept Framework Goals

The Concept presents a desired framework intended to influence public and private investment in the plan area. This framework identifies community features that are to be preserved and enhanced, as well as new amenities and land use patterns that will contribute to realizing the community and stakeholder desires for the plan area. The key goals of the framework are described as follows:

- **Create and Expand Mixed-Use Nodes and Corridors:** Expand and enhance existing mixed-use corridors that extend into the plan area and identify appropriate areas for mixed-use nodes that could accommodate retail, commercial, residential, and institutional land uses.

- **Develop a Dense and Active Mixed-use Waterfront:** Redevelop the adjacent waterfront as a high density, mixed-use area that is well connected to the Pearl District and that provides numerous opportunities for public access to and along the waterfront.
- **Maintain View Corridors:** Preserve views to iconic structures associated with the Pearl such as the Fremont Bridge and Centennial Mills.
- **Make Public Realm Enhancements:** Seek opportunities to enhance the public realm through investments in public amenities, the introduction of a mix of uses at the ground level of buildings, integration of private plazas and courtyards with the public right-of-way, and the design and orientation of building massings.
- **Seek Design Excellence when Taller & Denser Buildings are Developed:** Ensure that buildings using more height and/or floor area are designed to the highest quality possible and that they contribute to and are integrated into the larger neighborhood setting, enhancing the public realm, and contributing to the skyline of the Pearl District.
- **Introduce Public & Community Amenities:** Identify appropriate sites for developing community-serving amenities either as part of mixed-used projects or as stand-alone uses.
- **Preserve Buildings of Historic Character:** Develop tools to encourage the preservation of older buildings of a historic architectural character and scale within the plan area, and Pearl District at large, to enrich the urban form of the district.

- **Establish a Street Hierarchy:** Identify streets best suited to various community desires for the public right-of-way, such as pedestrian corridors, green streets, bicycle routes, and district connectors.
- **Strengthen Connections & Integrate Community:** Make stronger connections between the plan area with the southern portion of the Pearl District, the waterfront, the NW District, and future opportunity areas such as the Conway Properties, the Upshur Warehouse District, and the Post Office site.



Projected Land Use Pattern



Framework Elements

The proposed urban design and development framework for the North Pearl plan area addresses the identified themes and goals by proposing the following development scenarios:

Waterfront

The framework divides the waterfront associated with the North Pearl District plan area into two discrete areas: the Pearl Waterfront and the Northwest District Waterfront. The Pearl Waterfront is considered those riverfront properties located between the Fremont Bridge and the Broadway Bridge. The centerpiece of this area is Centennial Mills, and it is expected that the Centennial Mills redevelopment project (underway by PDC) will result in the creation of a vibrant mixed-use development that will serve as a catalyst to continued redevelopment of available waterfront properties in this area. The Northwest District Waterfront is located north of the Fremont Bridge and contains the Riverscape development site.

Pearl Waterfront

The framework seeks opportunities to connect the Pearl Waterfront with the rest of the Pearl District through the development of a pedestrian bridge linking Centennial Mills to The Fields Park and another pedestrian bridge that would link redevelopment opportunity sites adjacent to the Fremont Bridge and at the northern terminus of NW 13th Street. Development along the waterfront is envisioned to include a mix of uses that draw the public to the site, such as retail, institutional, residential and commercial. Physical and visual access to and along the waterfront should be accommodated via a network of access corridors, plazas, and urban open space features. Towers

located along the riverfront and along the northern edge of the Pearl south of the railroad right-of-way should have an orientation towards the river to acknowledge the riverfront and to allow visual access to the river.

The Portland Planning and Design Commissions considered increases to height and FAR along the Pearl Waterfront as well as increases to FAR to larger development sites along Naito Parkway. In the end they decided that increasing these entitlements was not advisable at this time. This was in part due to transportation constraints identified by the City as well as concern about how increased development potential could impact urban form and scale.

Initially, the Design Commission’s recommended a dramatic change in how height and development could be controlled on the waterfront. They suggested that there be no maximum height limits for this area but that a new “master plan” zoning be created to control height, development and design issues on large sites. The “master plan” zoning approach would consider issues including massing and form of buildings, how additional height and/or FAR affect the site and vicinity, what public benefit could result from additional FAR, and what can be done to have better

Battery Park: NYC



Riverplace Portland





transportation mode splits. The Design Commission concluded that, without this new zoning tool, it would be premature to allow height increases on this part of the waterfront.

Based on these recommendations, the Planning Commission recommended the following:

- At this time, no height increases be granted to the Pearl Waterfront and that no increases to FAR occur to properties fronting Naito.
- The Planning Bureau should develop “master plan” zoning as part of the Central Portland Plan.
- Once “master plan” zoning has been created, the City should reconsider height and FAR allowances along the Pearl Waterfront and other sites along Naito Parkway.

Northwest District Waterfront

The framework for the Northwest District Waterfront was modified slightly during the legislative review of the NPDP. The Planning Commission recommends that height bonus provisions be extended to this area. These provisions would allow up to 75’ in bonus height to be earned on the northern most parcel of this site (Lot 8) and the southern most parcel (Lot 1). This would allow buildings up to a maximum height of 175’. However, the Commission recommended that the portions of buildings taller than 100’ be limited to floor plates no larger than 12,500 sq. ft. and facades no longer than 120’ in length to ensure these buildings maintain a slender profile when bonus height is granted along the waterfront.

The Commission also recommends that the North Pearl Open Area and Waterfront Development standards be applied to the affected

portions of the plan area (formerly the NW Triangle standards). These standards are intended to break up large parcels and supper blocks by attempting to replicate the grid/block pattern more common in the rest of the Pearl District on these large sites. These standards require that building footprints not exceed 200’ x 200’, that 30 percent of the portion of the site larger than 40,000 sq. ft. is developed as open space, and along the waterfront, that the taller a tower climbs along the greenway, the further back the tower must be placed from the greenway.

The Commission further recommends that the City and site owner pursue an agreement to develop the eastern half of Lot 8 as a public open space area. This area is important as it is the northern most terminus of the Willamette Greenway Trail in the Central City. These recommendations are intended to sculpt the skyline of the Riverscape development site and to provide additional public open space amenities that will benefit residents and employees of the Northwest and Pearl Districts and City as a whole.

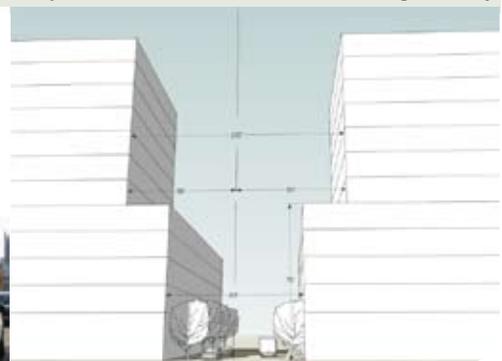
NW 13th Avenue “Main Street” Corridor

Thirteenth Avenue emerges from the framework as the “main street” of the plan area in many ways. Although there is no desire to see 13th Avenue

13th Avenue Historic District



Proposed setback: 50’ from centerline of right of way



serve as a major vehicle route, the ability to expand the pedestrian orientation of the right-of-way and the mix of uses that front 13th Avenue south of NW Lovejoy Street into the plan area was noted as desirable. Specifically, in order to maintain the pedestrian scale and visual access to sky and sunlight, there is a desire to have development along the street face maintain a lower height as viewed from the right-of-way. Thus, the framework proposes a building setback at about the 75-foot level of all buildings fronting the right-of-way.

The framework further proposes that a mix of land uses (residential, retail, and institutional) be located along 13th Avenue as it extends north of the Bridgeport Brewery to the terminus of 13th Avenue adjacent to the railroad right-of-way. At the northern terminus the framework proposes a mixed-use node of institutional uses (such as a public school, community center, and or children’s daycare) combined with family oriented housing and neighborhood serving retail uses. The potential exists to also develop some commercial office space in this area. There is also some interest in potentially developing some small-scale entertainment establishments in this area.

There is a desire to ensure that the north end of 13th Avenue contains a mix of uses that allow the terminus to be active for most of the day and night and to ensure that 13th Avenue is developed as an active corridor from its southern to its northern terminus in the Pearl. Lastly, the activation of the northern terminus would help to reinforce connections west to the NW District and Conway Properties along NW Raleigh Street and across to the Pearl Waterfront via a new pedestrian bridge.

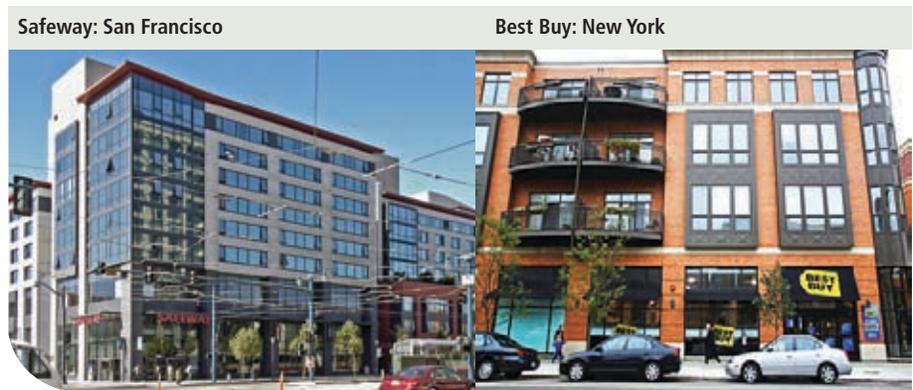
NW 12th Avenue View Corridor

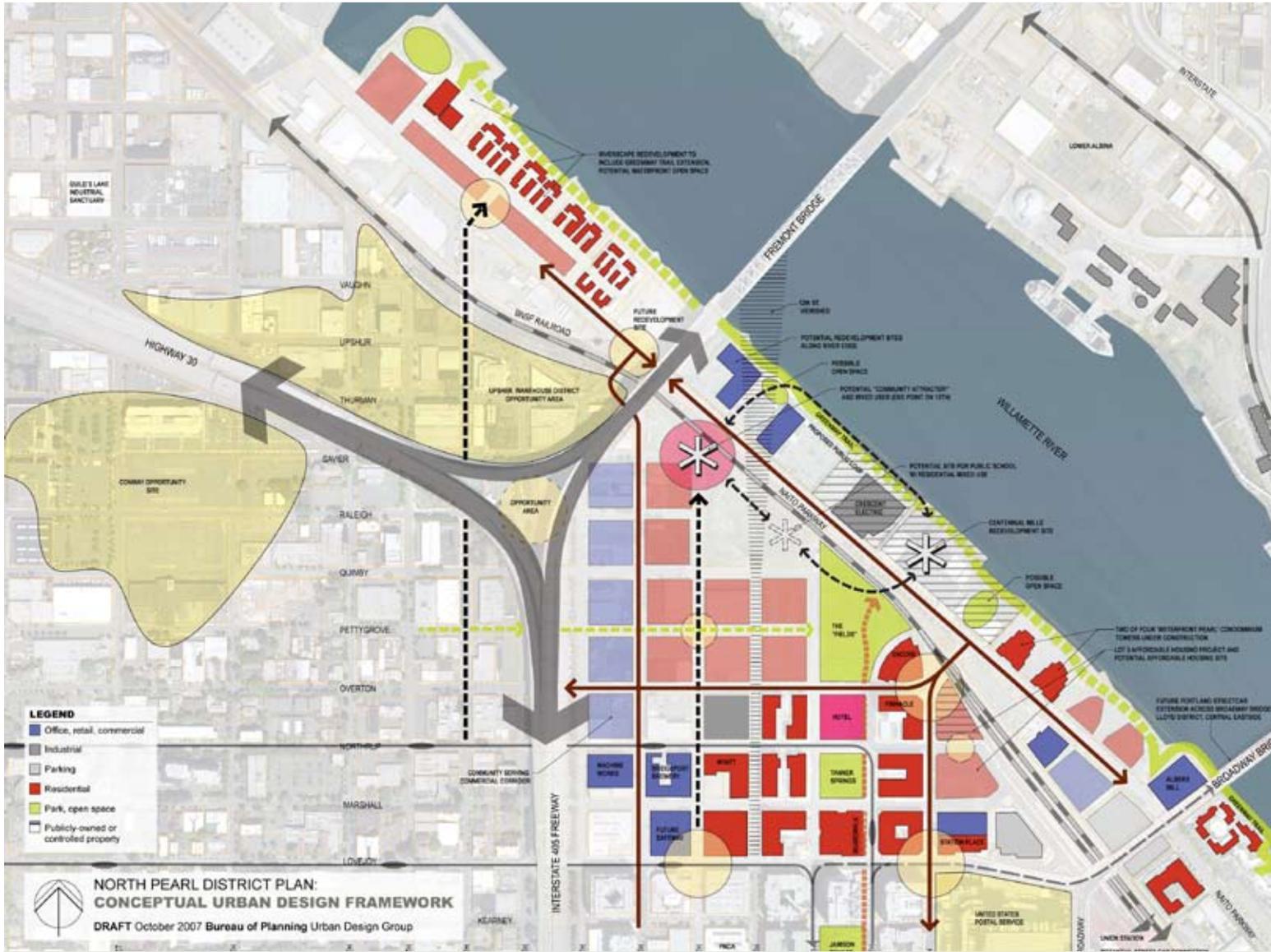
The Fremont Bridge is one of the most iconic features of the Pearl District. The preservation of views to the bridge along 12th Avenue and from The Fields Park is proposed by the framework as it is from these vantage points that the best views to the bridge are possible.

NW 14th Commercial Mixed-Use Corridor

The framework proposes that the western edge of the plan area, the blocks between NW 14th and 15th Avenues, be developed with a mix of office and community-serving mid- to large-format retail uses. The basis for this is that due to various negative impacts associated with the elevated sections of the I-405 Freeway this area is not well suited to residential development. Also, 14th Street south of NW Lovejoy is developed as a similar mixed-use corridor as that proposed by the concept, and recent development proposals north of Lovejoy propose to continue this mixed pattern northward. Lastly, 14th Avenue is a major route from downtown and for trips north through the district, and NW 15th Avenue is envisioned as a complimentary street intended to accommodate both loading and service vehicles while also allowing on-street parking and access for bicyclists and pedestrians.

The concept of allowing for urban retail development in this corridor is to provide a location for larger community-serving retail uses to locate close to areas where dense downtown residential development is occurring. Providing local access to a range of retail uses that residential neighborhoods typically rely upon should decrease the need for residents to drive to outlying suburban neighborhoods where these retail sales and service uses are currently located.





Conceptual Urban Design Framework

Public Amenities

There is a need to begin pursuing the development of a range of community amenities within the Pearl District to ensure it contains the public infrastructure necessary to support the growing and diversifying population of the Pearl District. The range of public amenities considered during the development of the concept included:

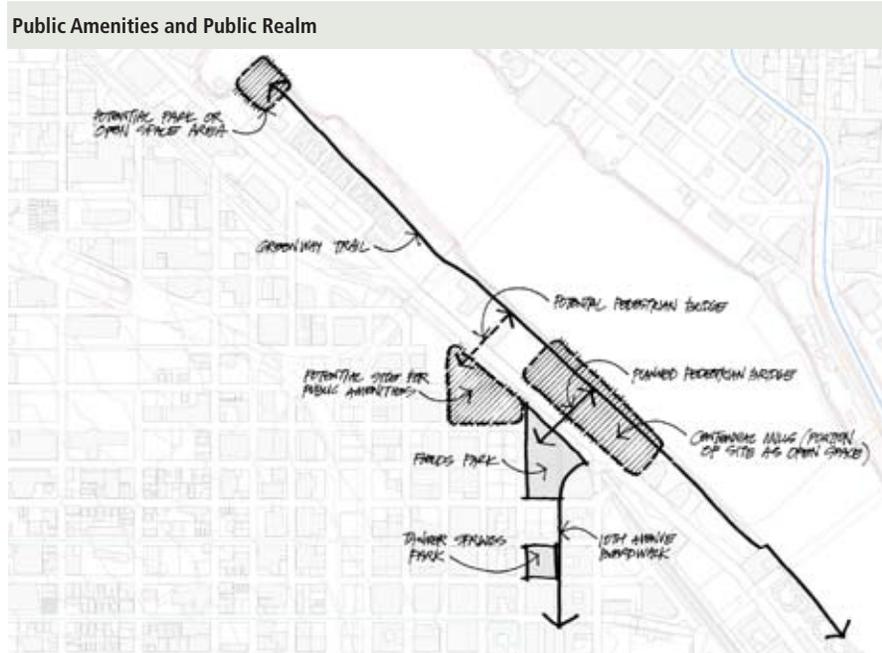
- Public school serving kindergarten through middle school-aged children
- Community Center
- Daycare for children
- Family-affordable family housing projects
- Branch Library

- Portland Community College Adjunct Facilities – Adult and Continuing Education
- Transportation Improvements, such as:
 - Transit
 - Green (amenities) streets
 - Bike/pedestrian amenities
 - Cobblestone enhanced streets
 - Public parking facilities
- Public Rest Rooms
- Places of worship

It is certain that not all of these amenities should be placed within the plan area, or even the Pearl. However, potential development sites for locating some of these amenities should be identified where the amenities could be developed as stand-alone projects or as part of mixed-used projects.

During the development of the framework, there was general agreement from stakeholders that the northern terminus of 13th Avenue as well as a vacant parcel on the northwest corner of The Fields Park may be ideal sites for the development of a K-8 public school, potentially combined with a community center and daycare facility. Locating this combination of uses on one of these sites makes sense because the sites are close enough to The Fields Park to allow use of the park in conjunction with certain activities associated with a daycare facility, community center, or school (not as the primary play space for the school). Additionally, this combination of public uses in the north end of the subdistrict was viewed as positive because it presents opportunities to:

- activate the somewhat negative northern edge of the subdistrict as it fronts the railroad right-of-way;





- create a collection of uses that could activate the northern terminus of 13th Avenue both day and night and serve as a catalyst for both residential and commercial mixed-use development; and
- strengthen connections to the NW District because community-serving uses important to the successful development of strong neighborhoods would be located along key streets linking future development sites within the Pearl and the NW Districts.

If any of these uses, or a combination of all, were developed in this area, they could serve as a major catalyst for both affordable and market-rate family housing in the plan area. The development of daycare and possibly a public school in this area would also serve commercial office development, especially for employees with children.

Buildings of Historic Character & Scale

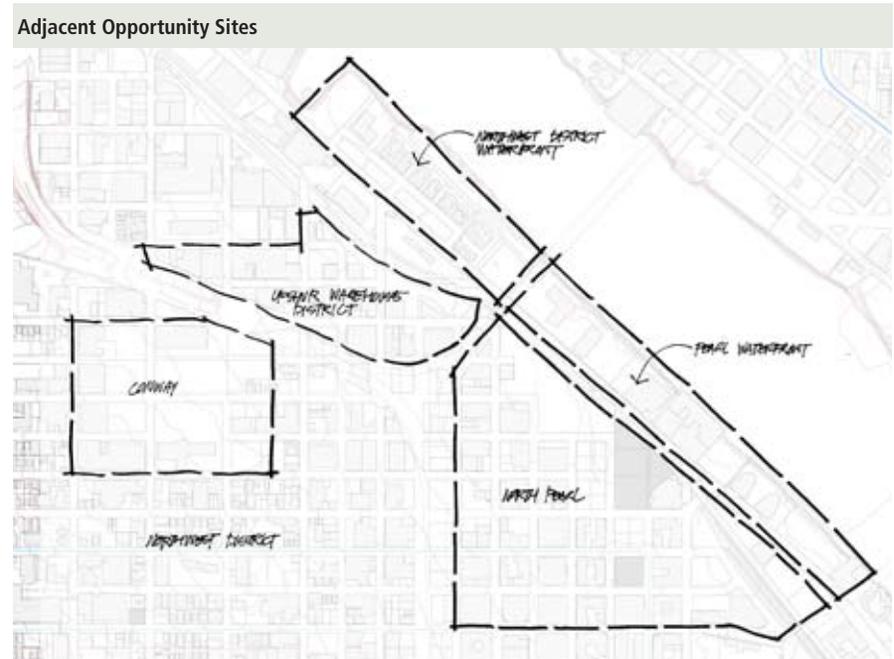
Numerous stakeholders have expressed concern that many of the older, smaller buildings in the Pearl that reflect the district’s earlier development and architectural periods will be lost as the demand for land to build larger buildings that provide a greater economic return to developers and land owners become less and less available. Specifically, the Pearl District Neighborhood Association (PDNA) has identified a number of buildings located throughout the Pearl, referred to as “buildings of character,” that the PDNA believes significantly contribute to the architectural and urban design fabric of the district. Most of these buildings are landmarks, contributing structures in the 13th Street Historic District, or are listed in the City of Portland’s Historic Resource Inventory. The generally smaller scale of these buildings has also been noted as important because they break up the skyline and scale of the district, ensuring that taller, more massive buildings do not dominate the urban form of the Pearl. The Concept identifies buildings within the plan area that should be

preserved, if possible, to address these concerns related to architectural legacy and urban form and scale.

To address these concerns Pearl District-wide, the NPDP further proposes the adoption of a new floor area transfer provision that allows floor area to be transferred from buildings that are landmarks, contributing structures in the 13th Street Historic District, or are listed on the City of Portland’s Historic Resource Inventory to other sites within the Pearl District, including the plan area for the NPDP.

Adjacent Opportunity Sites

Although not specifically a part of the plan area, there are numerous redevelopment opportunity sites in close proximity to the plan area,



and development at these sites and in the plan area should be planned and pursued to be mutually beneficial. Additionally, the ability to link these sites and the plan area through an enhanced street hierarchy, improvements within the public realm and in the strategic siting of community-serving public amenities should be vigorously pursued.

Future development at opportunity sites such as the Conway Properties and Upshur Warehouse District and the Post Office site should be planned and designed to enhance connections with the plan area both physically and through the programming of land uses and public amenities that allow these individual areas to become part of a larger complete community in NW Portland. Further, other smaller sites exist throughout the River District and NW District, and planning for these sites should also consider the greater context emerging at the community level.

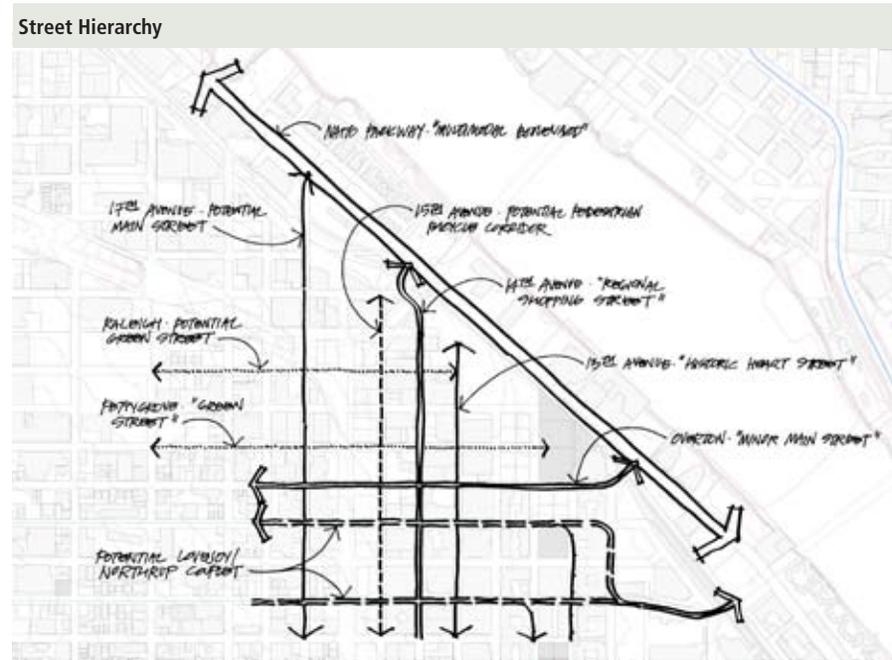
As for the specific sites identified, the Conway site, as noted in the Northwest Neighborhood Plan, has long been viewed as a site where additional residential and employment uses could be successfully integrated into the neighborhood through a comprehensive master plan that also incorporates public amenities into the area. This vision for Conway was reiterated by stakeholders of the NPDP and those currently developing a conceptual master plan for this site. The Upshur Warehouse District was also specifically called out for the historic character of its streets and older buildings, its potential for live-work use by the “creative class,” and its potential as an entertainment quarter where clubs and restaurants might inhabit and activate the ground floors of buildings.

The framework for the NPDP does not provide guidance specific to these opportunity sites, but it is strongly suggested that master plans developed for this areas consider the emerging urban form and land-use framework that emerges in the plan area as a result of this Concept.

Street Hierarchy

The framework plan proposes that the existing street hierarchy proposed for the plan area by the River District Right-of-Way Standards and by NW District Plan be continued and merged within the plan area. The map below illustrates the concept described as follows:

NW Pettygrove and Raleigh – Green Streets. The framework proposes that both NW Pettygrove and NW Raleigh be developed as “green streets” that would link open space features and public amenities in the Pearl and NW District with an enhanced right-of-way that focuses on pedestrian and bicycle circulation, sustainable stormwater management, and expanded tree canopy. NW Pettygrove will link the new Fields Park in the Pearl with Wallace Park and Chapman Elementary





School in the NW District. NW Pettygrove and NW Raleigh also cross through or border the Conway opportunity site where there is the potential to develop a mix of uses, including public amenities, that could support both the Pearl and NW Districts. The eastern terminus of NW Raleigh in the Pearl has been identified as a site where a K-8 public school or community center could be developed, and if Raleigh was developed as an enhanced green street it could create safer pedestrian and bicycle links to this major amenity from the NW District.

Various cross-sections have been developed attempting to describe how the green street concept could be implemented along Pettygrove. Desired amenities include a pedestrian- and bicycle-friendly environment that includes tree canopy, stormwater management features, dark sky lighting, curb extensions, seating areas and bicycle parking. Further study is needed to determine the street's final design.

NW Overton – Minor Main Street. The framework identifies NW Overton as a minor main street, meaning because it fronts The Fields Park and likely will be heavily used as a route to and from the intersection of Naito and 9th Avenue from the NW District, this street is well suited to accommodate retail and similar ground floor uses. Furthermore, this street is likely the northern most east-west street in the Pearl that is suited to this function. Thus, the street should accommodate on-street parking and adequate pedestrian circulation.

Naito Parkway & Front Avenue – Multi-Modal Boulevard. The River District Right-of-Way Standards call for two different treatments for Naito Parkway & Front Avenue. These standards are generally appropriate for the areas and purposes they are intended to serve; however, no adopted standard exists for Naito between the Fremont Bridge and the intersection of Naito and NW 9th Avenue. The west side of this street fronts railroad right-of-way and there are no opportunities for development along this

interface. The east side of the street contains the Centennial Mills site and other potential redevelopment sites in the long-term.

The framework envisions this street being developed to extend the urban character and pedestrian and bicycle improvements made along Naito south of the Broadway Bridge north to the frontage of Centennial Mills while also accommodating vehicles destined to industrial areas located north of the Fremont Bridge.

NW 13th Avenue – Historic Heart of District. To maintain the role of NW 13th as a pedestrian corridor with a mix of supporting uses, the framework proposes that the existing right-of-way standard remain in place. These standards allow for the development of a network of loading docks with stairs and ramps in lieu of traditional sidewalk improvements. On-street head-in parking is also allowed on 13th as is more traditional parallel parking. These improvements result in a character in keeping with the industrial warehouse character of the 13th Avenue Historic District and result in a street less dominated by vehicular circulation and more accommodating of pedestrians and bicyclists. Also, this character is well suited to accommodate special events within the right-of-way, such as

NW 13th during First Thursday



vendors during First Thursday, and creates an eclectic urban environment attractive to a diversity of uses.

NW 14th Avenue – Community Retail Street. NW 14th Avenue is well suited for a mix of mid size retail and commercial office uses in the plan area. This approach would be a northward extension of the development pattern that exists on this street south of NW Lovejoy. This street is designated as a Major City Traffic Street that connects the Pearl with the downtown, the NW District, and Naito Parkway. Blocks on the west side of 14th lend themselves to a mix of retail and office commercial in part because the backside of these blocks front NW 15th Avenue which can be used as a service street where parking and loading entrances are located, leaving 14th to serve as the active “front door” with a pedestrian orientation. NW 15th, with low traffic volume and a 60-foot right-of-way could accommodate service uses while also allowing for on-street parking and bike and pedestrian circulation. Fourteenth Avenue could be dominated by active ground floor uses perhaps supported by wider sidewalks (see alternative F). With or without such sidewalk improvements, 14th Avenue will present opportunities for the development of retail and commercial uses along its frontage.

Fields Park – Active Street Facing Uses. Two public streets (NW 11th and NW Overton) and one private accessway (located on the west side of the Encore) will front The Fields Park once it is developed. Although the function and the design of these routes will be different, there should be an effort to activate the edges of this significant public investment with uses that energize and open out to the park, especially at the ground floor. A variety of uses, oriented towards the park, could enhance the public realm allowing a merger of public and private spaces and uses to the benefit of all.

It should be noted that many of the concepts presented above are not consistent with the existing street design standards for the River District and that amendments to the adopted standards may be necessary in some situations for these concepts to be implemented. However, the overall street hierarchy proposed may still be possible if a mix of different land uses are placed along these rights-of-way and so long as they are designed to be oriented towards and to enhance the streetscape.



The Public Realm

During the development of the Concept, stakeholders universally expressed a desire that individual development projects pursue excellence in architectural design and all development make a significant contribution to the public realm. Opportunities for joint master planning between private and public sector entities were also encouraged. Specific qualities desired for the public realm included:

- Well-designed improvements.
- A thoughtful mix of public and semi-public private uses that enrich the district and become an extension of the home (important in a dense residential environment).
- Thoughtfully consider ground-level development and its interface with the public realm.
- More creative use, activation, and melding of the public right-of-way with more private plazas and courtyards, and accessways.
- The activation of the streetscape with a mix of active ground floor uses including townhouses, live-work space, neighborhood serving retail, and public amenities such as play areas, a school, or a library.



The Concept encourages developers of public and private projects to consider the overall setting of a development site in the community in terms of how it activates the public realm through complementary ground floor programming and design and in how the building fits into and enhances the overall urban design context of the neighborhood. In other words, when designing a building, architects need to consider the context of and influence of their project upon other sites within three blocks in every direction. Attention to the greater context of the neighborhood setting as well as the organization and specific elements of the public realm at this scale will provide valuable information that should influence conceptual and final building design and programming.

The Concept also calls for the City to seek opportunities to reuse the open space areas under the elevated sections of the I-405 Freeway for public uses that help to better use and activate these spaces and to strengthen connections between the Pearl and the NW District and Upshur Warehouse District. These spaces are controlled by the Oregon Department of Transportation and are used primarily for commercial surface parking. Although the range of options is limited for public uses (for example, active recreation may not be suitable due to pollution associated with the freeway) uses should be considered that create more activity and a more aesthetically pleasing treatment of this area, allowing it to become a visual gateway instead of barrier between the Pearl and NW Districts.



NPDP: Policies, Objectives, and Actions

Comprehensive Plan Policies

Portland’s *Comprehensive Plan* is the City’s broadest and most inclusive policy document. Originally adopted in 1980 and amended over time, the *Comprehensive Plan* outlines the community’s values and goals and sets courses of action for achieving them. The *Comprehensive Plan’s* vision statement, goals, policies, objectives, and map provide guidelines for the future development and redevelopment of the City.

There are numerous policies of the *Comprehensive Plan* that relate to and support the recommendations of the NPDP. Additionally, the recommended policies of the NPDP are proposed to be adopted by ordinance and would therefore become part of the *Comprehensive Plan*. These policies, along with the plan goals and objectives will be used to evaluate future land use changes in the North Pearl plan area.

Relationship to Land Use Reviews

The *Comprehensive Plan* and neighborhood and area plans serve several purposes. Each plan is a statement of desired character and urban form over time. In addition, the plans may be used in certain land use reviews. When a land use review requires a proposal to be consistent with a plan, City planners look at certain aspects for conformance. Each plan contains a set of elements that should be considered and balanced, some requirements that should be met, and some that are guidelines but not required. Each goal and policy of the *Comprehensive Plan* is designated as mandatory, balancing, or aspirational. All of the goals and policies of the NPDP are balancing, as are the goals and policies of all neighborhood plans.

This means that all of them must be considered in relation to each other and must be weighed with the balancing policies of the *Comprehensive Plan*. They must all be considered, but do not have to be individually met.

NPDP Action Items

The plan’s implementation actions are designed to realize the vision, goals, urban design and development framework concept, and policies of the NPDP. They are adopted by resolution, meaning they are advisory only and do not carry the weight of an ordinance. Each action presented by the plan has at least one implementer, and often more than one, who is agreeing to pursue realization of the action.

The policies and actions of the NPDP are organized into different focus areas; however, it should be noted that there is considerable overlap between these, and none should be considered in isolation as each is intended to serve as a building block in the creation of a more complete and livable community within the plan area.

Guide to Implementers

The following is a guide to the implementers who are listed in the action tables for the NPDP:

City	Applicable Bureaus and Agents of the City of Portland
Parks	Portland Parks & Recreation
PDC	Portland Development Commission
PDNA	Pearl District Neighborhood Association
PDOT	Portland Office of Transportation
Planning	Portland Bureau of Planning
PPS	Portland Public Schools
Private	Private sector developer and land owners



Policy 1: Complete Community

Discussion

The focus of the Complete Community Policy is to establish a framework for the evolution of the Pearl from a residential mixed-use community to a complete community that includes housing compatible with the needs of all citizens, including families with children, and a range of community-serving public amenities that are crucial to support sustainable high-density living in the Pearl District.

In just over a decade, the Pearl District has evolved from a post-industrial district with few to no housing units to one of the densest residential communities in the State of Oregon. Although the first residents to move into the Pearl consisted primarily of “empty nesters” who helped to cultivate and support the development of a vibrant range of retail and commercial services in the district, this population is now increasing diversifying and many residents are becoming parents.

To accommodate this evolution in the resident population, the amenities and housing that supports these residents need to evolve as well. New residential development will need to be compatible with the needs of families with children by supplying units with two or more bedroom units and onsite common areas that allow families and other residents to gather in a safe communal setting.

Additionally, major public amenities such as public schools, a community center, and possibly a library will be necessary to support the district's growing and diverse population, as will daycare facilities serving the children of residents and employees in the district. These actions will not only help to retain families with children, who often are forced to move to more accommodating neighborhoods once their children reach school

age, but will help to make the Pearl a more attractive place for others to live and work.

Complete Community Policy

Create a complete community by developing public amenities, a diversity of housing types, and an array of retail services, that serve the diversifying population of the Pearl District including families with children.

Complete Community Objectives

- A. Adopt incentives to create diversity of housing types ranging from studios and one-bedroom apartments to two- and three-bedroom units that are designed to be compatible with the diversifying population of the district, especially families with children.
- B. Develop and design housing compatible for families with children and others, at various income scales, on the typical block structure associated with the Pearl District.
- C. Fund and develop public amenities, including a public school, a community center, and parks that will strengthen and support the diversifying community in the Pearl.
- D. Locate and develop child care facilities throughout the district serving residents and employees of all income levels.
- E. Create mixed-use projects, whether they be residential or commercial, that also incorporate on-site public and community amenities intended to serve residents and employees of the district.

Action Chart: Complete Community



No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
CC1	Develop a new public school : Develop a K-8 public school with community space in the Pearl District; funded through tax increment financing, grants, and other available funding sources.				✓	City, PDC, PPS
CC2	Develop public preschool facilities: Develop public preschool facility within North Pearl subarea.			✓		City, PDC, PPS
CC3	Develop daycare facilities for children: Recruit, help to locate, and support daycare and early childhood education facilities in the Pearl District that will serve residents and employees of all income levels.			✓		City, PDC, Private
CC4	Continue development of parks and open space: Pursue development of additional public parks and open space facilities along North Pearl waterfront subarea.				✓	PPR
CC5	Create a family housing initiative: Develop a program that could include design competitions, design and development handbooks, demonstration projects, funding and programming strategies, and/or other assistance to promote and support the development of family-compatible housing projects in the Central City that serve residents of all income levels.			✓		City, PDC
CC6	Create community center and places for community gathering opportunities: Create a community center(s), whether public or non-profit, that offer a range of services including daycare, early childhood education, recreation, meeting space for community meetings and other events, and other services that support residents of all ages (children to seniors) and employees of the Pearl/River District.			✓		City, PDC, Private



Action Chart: Complete Community

No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
CC7	Report annually on the diversity of housing in the River District: Report the number of housing units by size (SRO, studio, and one-, two-, three-, and four-bedrooms) in the River District among both condominiums and rental housing. And, summarize the income levels within each unit type (i.e., among three-bedroom apartments and among three-bedroom condominiums). Reporting should be incorporated as part of the River District Housing Implementation Strategy Annual Report.		✓			PDC
CC8	Revise the River District Housing Implementation strategy to include diversity goals: As part of the next revision of the River District Housing Implementation Strategy in 2010, include unit size diversity goals in addition to the existing income goals to support the construction of family unit types (two-, three-, and four-bedroom units) among future affordable housing in the River District.			✓		City, PDC
CC9	Build affordable family housing: Prioritize the development of affordable family housing projects with two-, three-, and four-bedroom units that meet the River District's income goals and provide compatible family housing for low income parents with children.			✓		City, PDC, Private
CC10	Pursue Development of Public Waterfront Park: Pursue the development of a public park adjacent to the greenway trail and proposed marina on the eastern portion of Lot 8 of the Riverscape development site.			✓		Parks, Riverscape or successors in interest
REGULATIONS						
CC11	Revise the residential FAR bonus provisions to continue supporting the goal for residential development in the Central City while adding an incentive for housing designed for families with children.	✓				City, Planning
CC12	Revise the FAR regulations to reduce an unintentional disincentive for including a public school, community center, library, or daycare facility in mixed-use buildings.	✓				City, Planning



Specific Recommended Regulation Changes

1. Reduce the automatic residential FAR bonus from 3:1 to 2:1.
2. Create a new FAR bonus for family units.
3. Change the way FAR is calculated to exclude area devoted to public facilities from the maximum FAR.



Policy 2: Sustainable Community

Discussion

Equally important to creating a complete community, the Pearl must also be developed as a socially, environmentally, and economically sustainable community, designed and constructed to have a low or carbon neutral footprint-impact, and a built form that is energy efficient, and that facilitates eco-system health.

Sustainability Policy

The North Pearl and surrounding neighborhoods shall be developed to maximize livability, be socially and economically sustainable, and to promote eco-system health, resulting in a model for carbon neutral and socially restorative community development.

Sustainability Objectives

- F. Pursue LEED Gold or higher certification for all new and redevelopment projects in district.
- G. Encourage site master plans to be developed to be consistent with LEED Gold Neighborhood Development certification or higher.
- H. By 2010 achieve a goal that all new, and existing, commercial buildings, to, in aggregate, have 50 percent the carbon footprint of conventional development.
- I. Promote sustainable community design and projects as educational tools to promote associated economic, social, and environmental benefits.
- J. Increase housing diversity in the Pearl District to include housing for families with children, worker housing, and senior housing for residents at all economic levels.
- K. Promote import substitution by sourcing local materials, products and services to support local jobs and economic development.
- L. Encourage mixed-use, transit-oriented development that serves a diversity of income, employment, and residential types.
- M. Provide a range of public and private facilities and services necessary to support the diverse population of the Pearl District.
- N. Develop a district-wide stormwater management plan that mimics natural systems, handles public and private sources, and seeks to reduce runoff to predevelopment conditions.
- O. Expand transit service and bicycle and pedestrian connections to enhance the multimodal transportation system in the Pearl District, and make stronger connections to the Central City, adjacent neighborhoods, and the Willamette waterfront.

Action Chart: Sustainability

Action No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
SUSTAINABLE DEVELOPMENT PRACTICES						
S1	Pursue a minimum of LEED Gold certification and promote the 2007 ASHRAE 189 Sustainable Buildings standard as a target for large buildings.		✓			PDC, Private
S2	Design for passive solar, using building orientation and installing shading devices.		✓			Private
S3	Place a premium on indoor environmental quality to protect tenant health, especially that of children.		✓			Private
S4	Decrease demand for potable water a minimum of 25% below code using very low-flow plumbing fixtures and reuse of captured rainwater.		✓			Private
S5	Reuse or recycle 95% of construction waste.		✓			Private
S6	Use non-toxic and low-emitting materials, 10% or less of total plastics are PVC.		✓			Private
S7	Compost 90% of organic waste.		✓			Private
S8	Develop and use onsite or local sources of renewable energy including solar, wind, micro-hydro, geothermal, bicycle/kinetic energy generation.		✓			Private
S9	Integrate new and existing buildings with district heating and cooling systems when such systems are available.		✓			Private
S10	Construct new high performance buildings that use 20% less energy than the 2007 ASHRAE 189 standard for sustainable buildings.		✓			Private
S11	Use fresh air replacement ventilation systems to protect the indoor environmental quality and health of families with children, especially in affordable housing projects.		✓			Private,PDC,City
S12	Provide additional public and private open space areas to allow residents to gather and play.		✓			Private, City
S13	Manage 100 percent of stormwater with vegetative or similar infiltration facilities.		✓			City, Private
S14	Develop at-surface stormwater conveyance and infiltration systems, reducing need for piped infrastructure.		✓			City, Private
S15	Investigate feasibility of creating district energy system for North Pearl subdistrict with potential to expand to other areas.		✓			City, PDC





Action Chart: Sustainability

Action No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
S16	Expand Program to increase transitions from affordable rentals to affordable ownership.		✓			City, PDC
S17	Create live-work opportunities to increase access to jobs and local services in community.		✓			Private, PDC
S18	Pursue the development of public and private sector community amenities, including daycare, schools, parks, community centers, and other facilities that promote local civic and social interaction.			✓		City, PDC, Private
S19	Build a demonstration residential project that combines sustainable design, and affordable and market rate housing.			✓		City, PDC, Private
S20	Expand access to transit throughout North Pearl subdistrict.			✓		City, PDC, TriMet
S21	Create district parking strategy to support district uses while increasing alternative modes of transportation.			✓		City
S22	Create district green streets implementation strategy.			✓		City
S23	Identify opportunities to convert lighting in public right-of-way to energy conserving fixtures.			✓		City
S24	Convert existing lighting (public and private) and install new lighting consistent with "dark skies" technology.			✓		City
S25	Set mode split goals to encourage greater commuting though public transit, bicycle and pedestrian trips.	✓				City
S26	Produce report every five years on status of meeting sustainability objectives and actions in subdistrict.		✓			City
S27	Create Transportation Management Association that includes employers, residents, and institutions uses within Pearl District.			✓		City
S28	Replace use of potable water with harvested stormwater where practicable.		✓			City, Private

Action Chart: Sustainability



No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROGRAMS						
S29	Design and use buildings and open spaces as civic ecology learning and educational tools to promote livability and economic benefits of sustainable development practices.		✓			City, PDC
S30	Reduce the energy costs to residents in affordable housing projects by assisting developers to achieve an energy efficiency goal of 25 percent below energy code.		✓			City, PDC
S31	Create program that promotes employment opportunities in Pearl District for residents at all income levels, such as green collar job training.			✓		City, PDC, Private
S32	Create program to educate and promote the Pearl District as a case study for sustainable development and as a training center in sustainable and community development technologies.				✓	City, PDC
REGULATIONS						
S33	Adopt framework plan for North Pearl subdistrict identifying opportunities to increase multimodal connections and site community supportive amenities.	✓				City



Policy 3: Multi-Modal Transportation

The North Pearl District area is rapidly evolving from its historical industrial and freight role to mirror the vibrant, mixed-use area to the south of NW Lovejoy Street. The area still contains industrial warehouses near I-405 and bare land north of NW Overton. Important infrastructure has been planned and built in the area, including the streetcar line (that connects the Northwest District with Portland State University along NW 10th and NW 11th Avenues and NW Lovejoy and NW Northrup Streets) and Tanner Springs Park, the second of three parks for the neighborhood. A final park, The Fields Park, would extend from NW Overton to the Union Pacific railroad tracks and from NW 10th to NW 11th Avenue.

Nearby, the private sector has invested in new condo developments and supporting retail, continuing to reshape the skyline. Along the waterfront, new commercial development is being built, and plans are underway for the development of Centennial Mills, which promises to be one of the great attractors in the Pearl District and the City as a whole.

The North Pearl District Urban Design Concept reinforces these trends, calling for the continuation of the development of the area into a mixed-use district and placing special emphasis on sustainability. To realize the concept, it is necessary to improve the transportation system and reexamine existing regulations. In many ways, existing transportation policy and improvements to date provide both challenges and opportunities.

On the one hand, many streets remain nonexistent or in great need of upgrading, particularly lacking bicycle and pedestrian amenities. Transit service in the area is poor, with bus service limited to peak hours on Naito Parkway and a bus line that replicates the route of the streetcar alignment and serves the northeast and northwest parts of the City. Bicycle connections are not well defined. The Union Pacific railroad tracks act as

a significant barrier, blocking access to Naito Parkway, and the riverfront and greenway trail, cutting the study area in two. Central City policy sets a mode split goal for non-auto trips that is low compared to areas immediately to the south. On-street parking is regulated as much for long-term parking as for short-term visitor parking, discouraging turnover and better use. Interstate-405 acts as a barrier to the Northwest area, with undefined spaces and high air and noise pollution under the freeway that is not appealing to pedestrians.

On the other hand, existing regulations call for the continuation of the street grid northward to what once was Hoyt Yards. They also provide a foundation for a street hierarchy that serves the different modes of transportation. Two pedestrian bridges are planned for the area, one that would cross the railroad tracks at NW Marshall Street and another that would cross over the tracks and NW Naito Parkway at NW 10th Avenue through Fields Park to connect to the Centennial Mills site. The River District Right-of-Way Standards reaffirm the street grid and lay out how the different street cross-sections should be built, with an emphasis on high-quality public space and multimodal use. Finally, NW 13th Avenue's special cross-section and character has been extended to NW Raleigh, funded in part by a local improvement district. NW Pettygrove Street has been identified in the North of Lovejoy Plan as a green street, and the concept enjoys wide community support.

The transportation policies in this plan build on previous plans and efforts and respond to present and future challenges. They are guided by the desires to develop a balanced and sustainable transportation system that gives priority to non-auto modes and connects the district to the waterfront, to the rest of the River District, and to neighboring areas of the Central City and City as whole and allows for the development of the study area as identified in this plan.

Transportation Policy

Create a transportation system that provides a full range of options for the movement of people, goods and services, supports livability and development of the area, and meets the sustainability goals of reducing gas emissions, energy consumption, environmental degradation and the reliance of the automobile.

Objectives

1. Achieve a mode split goal for commute trips for the year 2030 of at least 40 percent transit, 20 percent walking and 10 percent bicycle trips.
2. Provide for safe and convenient access to transit.
3. Promote increased use of transit by residents, employees and visitors by increasing transit options and provide better transit coverage, quality and level of service.
4. Promote incentives and education to residents, employees and visitors to use non-auto means of travel.
5. Enhance main streets, green streets, pedestrian bridges and the streetcar alignment as key pedestrian corridors.
6. Support increased bicycle use in the district by providing better facilities from, to, and within the district, such as an expanded bicycle network, parking and signage.
7. Preserve local circulation to meet the residential, commercial, cultural and social needs of the district.
8. Prohibit private-access-only streets in the district.
9. Encourage the use of on-street parking for retail and visitor purposes and discourage it for commute parking.
10. Regulate off-street parking policy to encourage alternative means of travel to the automobile.
11. Strive for the highest design standards for the public right-of-way as a space to accommodate all users and encourage public gatherings.





Action Chart: Transportation

Action No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
T1	Update modal target for Study area: For commute trips to the area, establish targets for non-auto modes of transportation for the year 2030. Transit trips: 40 percent Walk trips: 20 percent Bicycle trips: 10 percent	✓				PDOT, Planning
T2	Transit improvements: Work with TriMet and the community to explore expanding bus service to the area, including Centennial Mills.		✓			PDOT, TriMet
T3	Long range transit improvements: Explore new rail connections as part of Central Portland Plan and Portland Streetcar System Plan.			✓		PDOT, Planning, TriMet
T4	Create Transportation Management Association (TMA): Encourage employers, employees, residents and visitors to use alternative modes of transportation to reach a 20-point reduction in commute trips to the area by 2030.			✓		PDOT, Private sector
T5	Pedestrian/bicycle bridges: Build connections across railroad tracks and Naito via pedestrian and bicycle bridges, one over Fields Park and tracks (extension of the Boardwalk) and one from NW Marshall across railroad tracks.		✓			PDOT, PDC, Planning
T6	NW Pettygrove Green Street: Work with the community to design street standard for NW Pettygrove as a green street and explore green street concept for NW Raleigh Street.		✓			PDOT
T7	Extension of NW 13th Avenue: Work to implement extension of NW 13th Avenue north with pedestrian and bicycle bridge connections over Naito to waterfront area.				✓	PDOT, PDC, Planning
T8	Extend bicycle network in the study area: Use the Platinum Bicycle Master Plan, the Central Portland Plan and the upcoming Capital, Circulation and Operations plan for the Pearl District to further explore bicycle connections identified in this plan. Explore NW Pettygrove, NW Marshall, NW 15th, NW 12th as bikeways.			✓		PDOT

Action Chart: Transportation

No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
T9	Circulation and operations: Circulation, operations and capital improvement plan for Pearl District area.			✓		PDOT
T10	Circulation and operations improvements: Recommend implementation of circulation improvements to relieve congestion on the Lovejoy corridor between NW 10th and NW 16th. Improvement scenarios to be considered include: 1) a couplet concept using NW Lovejoy and NW Northrup; and 2) a one-way east bound Lovejoy that improves left turn movements during the PM peak hour period.			✓		PDOT
T11	Circulation and operations improvements: Extension of one-way on NW 10th and NW 11th Avenue to their northern end.			✓		PDOT
T12	On-street parking: Transition long-term (4 hours or more) on-street parking to short-term and metered parking.			✓		PDOT
T13	Bicycle Parking: Provide more on-street and off-street bicycle parking in the study area as the area develops.		✓			PDOT
T14	Quiet Zone program: Explore and implement Quiet Zone program in the study area to regulate train horns at railroad crossings.			✓		PDOT
REGULATIONS						
T15	Title 33 Amendment: Amend to adjust parking ratios in study area.	✓				PDOT, Planning
T16	Transportation System Plan (TSP) Amendments: Recommend street classification amendments in the study area.			✓		PDOT, Planning
T17	River District Right-of-Way (ROW) Standards: Explore alternative ROW design standards for identified streets in the study area.			✓		PDOT, Planning





Specific Recommended Regulation Changes

1. Amend Title 33 Central City Plan to reduce the number of parking spaces allowed for residential growth parking in parking sectors River District 1 and 2 to levels equal to parking district River District 4 (1.7 spaces per dwelling unit).
2. Amend Title 33 Central City Plan to reduce the number of parking spaces allowed for commercial growth parking in parking sectors River District 1 and 2 to levels equal to parking district River District 4 (Office 2.0, Retail 2.0, Medical and Schools 2.0).
3. Recommend amendments of Transportation System Plan (TSP) to potentially include, pending further analysis:
 - o NW Northup Street: Traffic Access Street from NW 10th to NW 16th
 - o NW Pettygrove Street: City bikeway and City walkway
 - o NW Marshall: City bikeway
 - o NW 15th: City bikeway
 - o NW Overton Street: remove bikeway designation from NW 12th to NW 16th
 - o NW 12th Avenue: City bikeway from NW Lovejoy to NW Pettygrove
4. Explore alternative River District Right-of-way (ROW) Standards. Street candidates include:
 - o NW Pettygrove Street as green street
 - o NW Raleigh Street as green street
 - o NW 15th Street as bikeway
 - o Naito Parkway/Front Street north of NW 9th Street as a boulevard

Additional Issues Raised as Part of Legislative Review

Discussion

During the Planning and Design Commission's review of the NPDP, additional items were raised by the Design Commission and property owners that required further analysis. The Design Commission asked that additional height be considered along the riverfront. The owners of two properties along Naito Parkway requested that the Planning Commission increase the floor area ratios (FAR) for their properties. These separate requests came to be considered jointly as both could have significant impacts on the urban form and development pattern along Naito Parkway and the Pearl Waterfront.

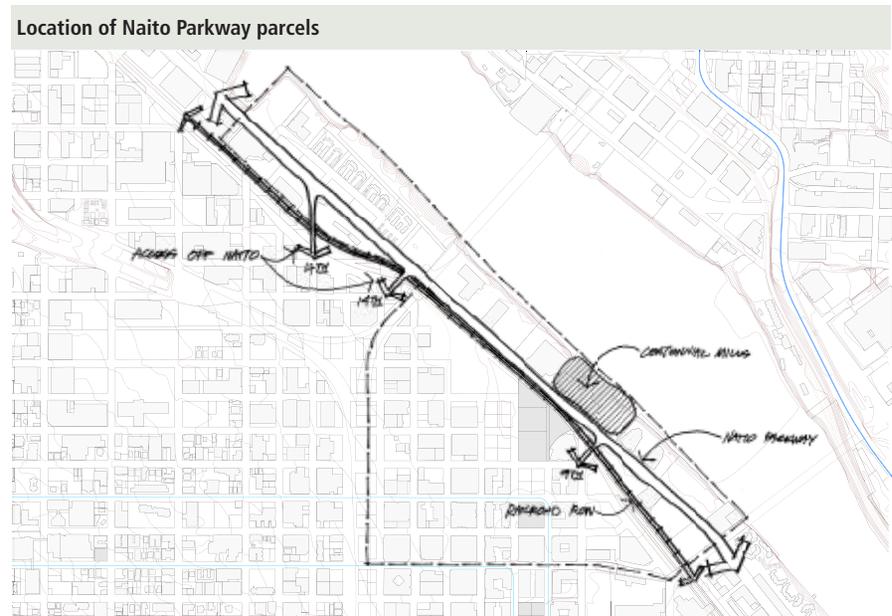
Request to Increase FAR on Naito Parkway

As noted, two property owners requested that the Planning Commission increase the base FAR entitled to their properties from a base of 2:1 to a base of 4:1 FAR. FAR increases to this portion of the plan area were discussed by the PAG early in the development of the NPDP. Traffic analysis by the Portland Office of Transportation (PDOT) determined that these increases could not be supported by the existing transportation system. Because of these results, trade-offs related to FAR increases along Naito Parkway were not discussed as they were for other FAR increases included in the project such as linking additional FAR to provision of public amenities and design standards.

The petitioners for additional FAR submitted additional transportation analysis that found that the increases they proposed could be supported

by the existing transportation network. PDOT reviewed this analysis and found that the impact estimates of the two studies were within a margin of error and that PDOT could not justify reversing their original conclusion that additional FAR was not acceptable at this time.

The petitioners for additional FAR testified to Planning Commission that the distinction being made between the Naito Parkway parcels and the parcels in the heart of the North Pearl district was unfair and unjustified.





A basic distinction is based on typical lot size in the two areas and the amount of development that can result from FAR limits. In most of the Pearl District and Central City blocks are 40,000 sq. ft. (200' x 200'). On these blocks, FAR allowance of 2:1 base plus 3:1 through bonuses allows 200,000 sq. ft. of development while the most recent development in the Pearl District averages between 280,000 sq. ft. to 320,000 sq. ft. This is why the plan recommends FAR increases from 2:1 to 4:1 for those parcels within in the part of the plan area with a typical street grid thereby allowing development up to 280,000 sq. ft. in area.

In contrast, many of the sites along Naito Parkway are 130,000 sq. ft. to 140,000 sq. ft. or larger. On a 140,000 sq. ft. site, 2:1 base FAR plus 3:1 through bonuses creates 700,000 sq. ft. of development potential. Because of the development standards for this area, such a site would typically be able to create two 350,000 sq. ft or three 233,333 sq. ft buildings. Table 1 illustrates how different FAR allowance effect sites of different sizes as well as the size and number of buildings that could be built on each site. These standards are intended to break up large parcels in a way that replicates the typical grid pattern by limiting building footprint size and requiring open space or access ways between buildings. The big difference is that the large parcels get to capture all the FAR related to the lot size whereas parcels in area with the typical street grid cannot add FAR in the public street to their sites. The net effect of these development standards is to allow much more development to occur on these pads than is typical on most 40,000 sq. ft. pads or sites elsewhere in the plan area. The conclusion is that existing FAR entitlements on the large sites along Naito Parkway do not limit development potential in the same way as they do in the area with the typical street grid. Also, increased FAR along Naito Parkway could easily result in buildings either more massive or taller than those throughout the rest of the plan area.

FAR	40,000 sq. ft. Site	Average No. of Buildings per Site	140,000 sq. ft. Site	Average No. of Buildings per Site
2:1	80,000 sq. ft.	1	280,000 sq. ft.	1
4:1	160,000 sq. ft.	1	560,000 sq. ft.	1-2
5:1	200,000 sq. ft.	1	700,000 sq. ft.	2
7:1	280,000 sq. ft.	1	980,000 sq. ft.	3
8:1	320,000 sq. ft.	1		
9:1	360,000 sq. ft.	1		

Based on the transportation findings and this analysis of development potential, staff recommended that the Planning Commission not increase the base entitlements of properties along Naito Parkway at this time. However, staff suggested that the master plan provisions proposed by the Design Commission be developed and that increases to the height and FAR allowance affecting these properties then be reconsidered using that tool.

Request to Increase Height

At the same time work was being done on the Naito Parkway FAR question, the Design Commission asked that increased height allowance be considered along the waterfront. Specifically, the Design Commission was concerned that height limits of just 100' to 175' would result in buildings that would be too bulky for the location.

The Design Commission asked that modeling be conducted to determine potential building massing if no maximum height was applied to waterfront properties. While the Design Commission was concerned that the results showed that the combination of height and FAR on the waterfront could produce development that would not be acceptable to the Commission, they concluded that greater flexibility on height could

produce better designed buildings on the waterfront if they had adequate zoning tools to address site master plan issues.

The Commission asked the Bureau of Planning to develop, as part of the Central Portland Plan, such a new “master plan” zoning tool that could be used in conjunction with the design review process to better and more flexibly shape development of large sites such as those along the waterfront. The “master plan” could be a more effective way for reviewers and designers to use FAR, height, and building and site design to produce better development more fitting with the site and vicinity. Such a tool also would also be used to ensure that the negative impacts that could result from granting too much building height or mass could be addressed.

The Design Commission recommended that as a fall back from allowing unlimited height on the waterfront that the Planning Commission should not increase height south of the Fremont Bridge until the master plan tool was available for use.

Planning Commission Recommendation

The Planning Commission recommended that the requests to increase height along the waterfront and FAR entitlements along Naito Parkway be forwarded to the Central Portland Plan (CPP). This was in part due to the fact that the CPP will need to take a larger and more comprehensive look at transportation capacity issues throughout the Central City and Northwest Portland. The CPP will also need to consider how increased development potential in the Central City affects urban form, whether development bonuses verses entitlements should be increased, and what set of community amenities are targeted by FAR development bonus and transfer provisions. Thus, the Planning Commission recommended the following two action items which were adopted by City Council:





Additional Actions Chart

No.	Action	Timeline				Implementers
		Adopt with Plan	On-Going	Next 5 Years	6 to 20 years	
PROJECTS						
LR1	Pursue Development of Master Plan Regulations: Work to create a new regulatory tool to evaluate the development of large sites within the Central City. Issues related to urban form, public amenities, multi-modal transportation, increasing mode splits, the use of height and FAR bonuses, and other factors will be considered in the development of this tool. This tool is envisioned to serve as a mechanism to lock in development entitlements or bonuses when master plans addressing these various factors are planned for and approved through the design review process.			✓		Planning
LR2	Reinvestigate FAR & Height Increases on Naito Parkway: Consider requests to increase height and/or FAR allowances on properties along Naito Parkway between the Fremont and Broadway bridges once master planning regulations to more comprehensively consider these requests is available.			✓		Planning

Summary of Zoning Code Amendments



Introduction

This section summarizes the various Zoning Code amendments adopted to implement the urban design and development framework and policies of the North Pearl District Plan. The specific amendments (text and map amendments alike) are presented in the North Pearl District Plan Recommended Zoning Code Amendments document available from the Portland Bureau of Planning. The amendments document presents the language and zoning maps as they appear in the code and includes detailed commentary explaining the purpose and intent of the amendments proposed.

Summary of Zoning Code Amendments

The NPDP adopts minor increases to the base floor area ratios (FAR) entitled to a limited amount of properties within the plan area, but the ability to earn bonus floor area is significantly increased.

Further, prior maximum height limits affecting some of the plan area were removed in exchange for new regulations that set maximum floor plate sizes combined with upper limits to how much FAR can be used on any one site.

Additionally, the NPDP adopted two new development bonuses, new provisions regarding the use of the existing residential development bonus, and a new FAR transfer provision. The following explains these amendments in more detail:

Floor Area Ratio Provisions

Base FAR: There are a number of parcels located south of the railroad right-of-way with a base FAR of 2:1. The NPDP proposed that the base FAR be raised to 4:1 for these parcels only. This amendment raised the base entitlement to a level equal to most of the other properties located in this portion of the plan area.

No increases to the base FAR entitlements were proposed for properties located along the waterfront section of the plan area, or for properties located south of Naito Parkway but north of the railroad right-of-way. Maintaining the current level of base entitlements ensured that vehicle trips generated by development in this area could be adequately served by the existing transportation system. Further, the base entitlements combined with the potential to earn an additional 3:1 FAR through development bonus or transfer provisions already provides the opportunity to create a significant level of new development on in this area

Bonus FAR: The code previously allowed for an additional FAR of 3:1 to be earned through development bonus and transfer provisions. In the portion of the plan area located south of the railroad right-of-way, the base FAR is typically 4:1 with some parcels having a base of 5:1. Thus, when the base entitlement is combined with the ability to earn additional FAR, sites have been built to a maximum of 7:1 or 8:1 respectively.

The NPDP proposed for the portions of the plan area located south of the railroad right-of-way that a new maximum be established whereby the maximum amount of FAR that could be used on any site, through a combination of base entitlements and development bonus and transfer provisions, be set at a maximum of 9:1 FAR.



The NPDP also provided that additional FAR may be earned in excess of the 9:1 maximum proposed for the areas south of the railroad right-of-way and in excess of the 3:1 maximum affecting properties along Naito Parkway if the additional FAR is earned via Central City Master Plan provisions or newly proposed provisions that allow FAR to be transferred from historic properties located in the Pearl District.

Height Provisions

North Pearl Subarea – South of Naito: For properties located south of Naito Parkway, and with a maximum base height of 100 feet, the NPDP proposed that additional height may be granted as described below.

When buildings are between 100' and 175':

- The square footage used above the 100-foot level of the building is earned through development bonus provisions; and
- The façade of the building above 100' may be no longer than 150' in length, with lengths as long as 180' possible if approved through design review.

When buildings are taller than 175', or 225' when that is the base height of a site:

- The square footage used above the 100-foot level of the building, or 225', is earned through development bonus provisions; and
- The façade of the building above 100' may be no longer than 120' in length, with lengths as long as 150' possible if approved through design review;
- The portion of the building above the 100-foot level of the building is no greater than 12,500 square feet per floor; and,

- When these provisions are met, no maximum building height applies

Pearl Waterfront – North of Fremont Bridge: Along the waterfront, north of the Waterfront Pearl housing project, the base height is 100 feet. However, in targeted areas of this portion of the waterfront, FAR earned through development bonus provisions can be used to create taller buildings provided:

- The square footage used above the 100-foot level of the building is earned through development bonuses;
- The façade of the building above 100' may be no longer than 120' in length, with lengths as long as 150' possible if approved through design review;
- The floor plate size above the 100-foot level of the building is no greater than 12,500 square feet; and,
- The total height of the building does not exceed 175 feet

Development Bonus Provisions

The development bonus provisions of the Zoning Code were amended as follows for the North Pearl Subarea.

Residential Bonus Option: The code will state that this bonus can be used to earn no more than 2:1 FAR (currently 3:1 FAR can be earned)

Efficient Family Size Unit Housing Bonus Option: The code will adopt a new provision that allows additional FAR to be earned when units containing two or more bedrooms are created and the development includes exterior and interior common areas to allow residents to gather and play space for families with children. These regulations specifically provide:

- Two-bedroom units no larger than 1,000 sq. ft. earn 2:1 FAR per sq. ft. of amenity
- Three-bedroom units no larger than 1,200 sq. ft. earn 3:1 FAR per sq. ft. of amenity
- At least 20 bedrooms meeting these specifications must be created per site
- 400 sq. ft. of interior common room space must be provided
- 1,400 sq. ft. of exterior common space must be provided

Community Amenities Bonus: Floor area developed on sites in the North Pearl subarea, as stand alone or as part of mixed-used projects, to create a public school, daycare for children, a community center, or public library, is not counted against the available FAR assigned to a site.

Residential Target Areas

The FAR transfer provisions of the Zoning Code were amended as follows for the North Pearl Subarea.

- **Residential Required Target Area:** Remove portions of plan area from residential target area. Within this target area the code requires that new development include at least 1 dwelling unit per 2,900 square feet of net site area (15 units per acre). Due to the success of residential development in the Pearl, this requirement is no longer necessary in the plan area
- **Residential Bonus Target Area:** Remove portions of plan area from residential bonus target area. Within the target area the first 1.5:1 FAR earned through development bonus must currently be earned by using the residential development bonus before other bonus options.

Development Transfer Provisions

Development Transfer Provisions: The FAR transfer provisions of the Zoning Code were amended as follows for the North Pearl Subarea.

Buildings of Historic Character. Adopt new provision allowing FAR to be transferred to sites within a new Pearl subdistrict, as long as the sending site is a designated Landmark, contributing structure in a historic district, or on the Historic Resource Inventory.

Transfers above Maximum. In the North Pearl Subarea, FAR above the 9:1 maximum may be transferred to sites if Central City Master Plan provisions or the Buildings of Historic Character transfer provisions are used.

Northwest Triangle to North Pearl Subarea

The code was amended to change the name of the existing Northwest Triangle subarea to the North Pearl subarea. The existing open space and waterfront development standards applicable to the Northwest Triangle remain applicable to the North Pearl subarea, as do many of the other provisions proposed by the North Pearl District Plan. Additionally, the boundary of the subarea will be modified so that it is applicable to properties north of NW Lovejoy to the waterfront between the Fremont and Broadway Bridges



