The Background Documents contain existing conditions, opportunities and constraints, and a public engagement report. The Cathedral Waterfront Plan is the final document of three main reports produced during this project. The Toolkit includes strategies for general neighborhood engagement and more specific advice about how the neighborhood can anticipate and influence development processes. Finally, the Appendices contain more detailed background information on various topics mentioned in the three documents, as well as a glossary of terms and printable information.
existing conditions
introduction

When considering future development, it is important to examine the existing conditions on the site itself and the larger context from a number of angles in order to understand how they should or could influence what the site becomes. What is the site’s history? Who used it in the past, who is using it now, and who is likely to be using it in the future? What is the profile of the neighborhood to which this site is so central? What regulatory, geographic, environmental, and economic factors will affect future development on this site?

The Existing Conditions report reviews the Steel Hammer Site’s industrial past and present and how this history has led to current environmental issues on the site - issues that will not prevent development, but will influence its timeline and cost. It summarizes relevant information from past and current plans that will guide development on the Steel Hammer Site and gives an overview of site access and transportation factors. Finally, the report concludes with a socioeconomic and market analysis - a key component that determines what types and amounts of uses can be developed on the site. The longer sections of this report conclude with a summary of the key “takeaways”.

Background Documents
Cathedral Waterfront Vision Plan

THE CATHEDRAL PARK WATERFRONT’S BEGINNINGS

The waterfront stretch of the Cathedral Park Neighborhood became the earliest place of western settlement on the North Portland peninsula and has been listed as a native fishing ground. Native lodge camps were recorded nearby the current Steel Hammer Site by the Lewis and Clark expedition in the early 1800’s, and in the 1840s, James John, the namesake forebear of St. Johns, established his home at the present-day foot of North Burlington Avenue,¹ the southwest corner of the Steel Hammer Site.

From his homestead, John operated a store and a ferry across the Willamette, forming a new center of activity for the area. John laid out plans for lots and streets within his 320-acre land claim with an orientation to the river², which defines the neighborhood’s current street pattern and relationship to the water even today. The first small parcel of the townsite is the very same area for sale by Steel Hammer today.

The Steel Hammer Site was home to the first industrial activity on the St. Johns peninsula, the Pacific Barrel Company, which operated between the current location of North Richmond Avenue and North Charleston Avenue starting in the mid-1860s.³ Growth along the waterfront was slow through the remainder of the 19th century, until the OR&N Railroad established the existing line along the shore in 1902.⁴ The rails that run through the site today sparked a boom of activity, employing people in a number of industries, bringing ships to the docks, and new residents to the neighborhood.

The one-mile stretch from the western edge of modern-day Cathedral Park through the Willamette Cove site became a collection of smoke stacks, docks, and working people. Several more businesses joined in the following years, and the first half of the twentieth century saw the Cathedral Park waterfront producing lumber, wool clothing, asphalt products, asbestos, flour, manufacturing tools, and even warships.

Many of the neighborhood’s strongest assets, as well as its challenges, find their roots in these early times. While the active industrial uses brought positive economic activity, environmental stewardship was not a known priority. A photograph from the Port of Portland in 1921 documents large oil slicks discharged from visiting barges, mixed in with the lumber floating by the docks. As will be explored in subsequent sections of this report, effluent from industrial manufacturing processes has leached into the soil and waterways, creating environmental health hazards that persist well after many of the industries themselves have shut their doors.

² Nelson (9)
³ Nelson (9)
1919 Map of Portland. Portland Lumber Co. is in yellow.

1930 bridge construction, facing North.

1946 image during labor strike at Portland Lumber Co.

1906 Image looking across the river toward the Cathedral Park Neighborhood. The Steel Hammer Site is at the center fold. St Johns Lumber Co. (later Portland Lumber Co., is labeled)

pdxhistory
then & now

1850s: James John plats the neighborhood oriented to the river

1902: Railroad line built north along the Willamette River coast

1910’s: Willamette River along neighborhood waterfront is dredged for WWI shipbuilding

1917: Peninsula Iron Works founded--a company still going strong in the neighborhood today

1931: St. Johns Bridge opens

1960: Portland Woolen Mill closes

1997: BES Water Lab opens

2001: Columbia Sportswear leaves Portland Woolen Mills site

2004: Green Star LLC (current Steel Hammer tenant) founded

Cathedral Park Place (below) was originally the Portland Woolen Mills (above), which opened in 1904. After time as a toy factory and Columbia Sportswear facility, it is now home to various small offices, as well as a restaurant and brewery.

Where grassy Cathedral Park now stands was once marginal industrial land. An asbestos factory (above) once stood near the northern edge of the park.
The BES Water Pollution Lab stands on land formerly occupied by the Portland Lumber Company (aerial view above).

The Steel Hammer Site (below) was once characterized by docks that supported Star Sand Co. (above) and the Portland Lumber Company.

The Metro-owned Willamette Cove site was formerly home to the Willamette Dry Docks (above), as well as a barrel company, shipbuilding, lumber, and plywood manufacturing.
Toward the middle of the 20th century, nearby shipyards went vacant, and dock activity declined, although many manufacturers remained. Nearby Peninsula Iron Works, for example, has been active on their site (and expanded) for a full century. The St Johns Lumber Company, becoming the Portland Lumber Company, remained in place at least through the 1940’s. Through at least the 1970’s, much of the site was also operated by Skookum Co., which was involved in forging operations. One of its buildings from 1919 is still in place today as part of the Columbia Forge & Machine Works, which established itself in the 1960’s. Green Star LLC, a company that recycles materials from port activities, located to the site in 2001.

CHANGE IN THE LATE 20TH CENTURY AND TODAY:

By the 1950’s, the waterfront area near the St. Johns Bridge developed a somewhat seedy reputation, fueled in part by an infamous unsolved rape-murder in the 1950s. By the 1970s, neighbors were taking a growing interest in improving the community by establishing green spaces and other amenities and addressing industrial pollution. Neighbors started a tradition of holding music festivals and publicizing the potential for a park on the mostly abandoned site under the St. Johns Bridge. In 1981, they succeeded in having the space officially dedicated as Cathedral Park, an iconic greenspace on the waterfront which would become the namesake for a newly redefined Cathedral Park Neighborhood Association later that same decade. Community activism grew, exemplified by the figure of Howard Galbraith of Willamette Blvd., who was noted for his involvement in challenging local polluters and standing up for his neighborhood regularly at City Council. While North Portland overall is not always considered as vocal in traditional civic forums as other areas of Portland, there is also a clear tradition of strong and effective community action in and near the Cathedral Park Neighborhood.

More recently, activism on the north end of the peninsula has included action around environmental pollution and contamination, health hazards, racial and economic justice, and gentrification concerns.

Less than a mile north of the site in St. Johns, neighborhood activists have secured municipal action to keep trucks off of largely residential North Fessenden Street, and there is also ongoing work to address air pollution from freight and industrial sources by going through upstream channels. Addressing the Portland Harbor Superfund is also a key issue that activates many community members from different neighborhoods in North Portland. Neighborhood land use representatives from North Portland, including Cathedral Park, have also proposed measures to address environmental justice and health concerns through a proposed Health Overlay to reduce residential exposure to harmful pollutants and noise. Another ongoing concern running parallel to this planning process involves a proposal for a large propane export terminal on the peninsula, which some residents have argued poses a large risk to the community, both through the increase in oil trains running through the places they live and work, and the blast risks associated with the terminal itself.

As a historically racially diverse and working class area of the city, neighborhoods on the peninsula have also been heavily engaged with issues related to race and poverty. Accusations of civil rights violations have circulated around the current Roosevelt High School redesign process, and other proposals for shrinking and repeatedly reforming the school have drawn criticism for differential treatment for students of color.

Issues of gentrification, displacement, and housing access have also been prevalent in many dialogues and public forums around development in North Portland. The Cathedral Park Neighborhood west of North Richmond Avenue was identified as an area in the early stages of gentrification in a citywide study by Professor Lisa Bates of Portland State University. Bates further defines the status applied to Cathedral Park as being characterized by rising home values in adjacent areas, coupled by

6 “Cathedral Park, Once Just a Dream” http://www.cpjazz.com/cathedral-park-jazz-festival-history/
the presence of vulnerable populations (renters, low-income people, people of color, and those with limited educational attainment), and current demographic change suggesting future displacement of current residents. This classification stands in contrast to the “dynamic” ongoing gentrification identified further north in St. Johns, which is classified as an area where housing prices have rapidly appreciated and displacement of vulnerable populations is evident, but overall costs are still low.

Responses to new development in North Portland have varied, and there is not a consistent model, or consensus on methods, for achieving effective results. While neighborhood associations in Portland are set up to have specific abilities to respond to development proposals, involvement has historically occurred primarily in the design review stage, and only where such review is necessary, often when there is a special design overlay on the map. It has been far less common for neighborhoods to have a proactive role in informing development prior to the point where the developer has already created a full proposal. Throughout the city, some attempts to engage with developers end in lawsuits and land use appeals, or even extreme situations where neighbors with means team together to actually purchase properties away from developers. Even where neighborhood associations have taken strong action through negotiation with developers, there is never a guarantee that negotiations balance a wide range of neighborhood concerns.

The neighborhood’s history lays out a variety of environmental justice and equity concerns. As neighborhood residential use has intensified, conflicts between residential and industrial interests can be observed. In a 2013 article from Oregon Business on small manufacturers, Columbia Forge owner Tom Leaptrott was quoted as having concern for the future of the site as manufacturing and residential interests square off, even as his company is experiencing success in terms of sales and new contracts. “It’s getting to be more of a problem as more people move back into the St. Johns area and more residential housing goes up...”8

---

the neighborhood today

STEEL HAMMER SITE AND THE CATHEDRAL PARK NEIGHBORHOOD

To understand the socio-economic context around the site using the latest available American Community Survey (ACS) 2009-2013 5-year estimates, this section illustrates the Cathedral Park Neighborhood demographic profile as of 2013. The neighborhood boundary approximately coincides with the three “Census Block Groups” geography, as shown in Figure 2, and the Steel Hammer Site lies within Census Tract 42 (Block Group 2).

Overall, a total of 3,764 people live in the Cathedral Park Neighborhood, of which 55% of the population is female. The median age of the population is 35 years which is younger than Portland’s 36.6 years old. The majority of the population is white (87%) and non-Hispanic and the Hispanic/Latino population is around 6%. These figures make it less diverse than Portland’s averages during the same period, where the white population was 72% and Hispanic population was 9.4% of the total population. Around 4% of the population is African American and around 3% of the population identifies as belonging to two or more races, compared to Portland which has 6% of the total population identifying as African-American.

The median income of the neighborhood is $48,060 (adjusted for inflation to 2013 values), which is lower than the citywide average of $52,657. Around 15% of the neighborhood population is in poverty as of 2013, which is lower than the citywide average of 17.5% living below the federal poverty level. Around 62% of the population holds some college or Bachelor degree and nearly 15% of the population has a graduate, doctorate or a professional degree. Both figures are slightly lower than city averages. A majority of the housing in the neighborhood is owner occupied (60%). Nearly 71% of the neighborhood commute by car, truck or van to work.

---

9 Block Groups (BGs) are statistical divisions of census tracts and are generally defined to contain between 600 and 3,000 people. For painting the most recent demographic profile of the Cathedral Park Neighborhood, census block groups 2 and 3 of Census Tract 41.02 and Block Group 2 of Census Tract 42 are used.

---

Table 1: Demographic Snapshot of the Cathedral Park Neighborhood (2013) Based on Census Block Groups

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population &amp; Gender</td>
<td>3,764</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,695</td>
</tr>
<tr>
<td>Female</td>
<td>2,069</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>0-9 years</td>
<td>9%</td>
</tr>
<tr>
<td>10-17 years</td>
<td>41%</td>
</tr>
<tr>
<td>18-34 years</td>
<td>42%</td>
</tr>
<tr>
<td>35-64 years</td>
<td></td>
</tr>
<tr>
<td>65+ years</td>
<td>8%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>86%</td>
</tr>
<tr>
<td>African American</td>
<td>4%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>6%</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>3%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>94%</td>
</tr>
<tr>
<td>Not Hispanic/Latino</td>
<td>5%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>High School/less</td>
<td>23%</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>62%</td>
</tr>
<tr>
<td>Master's</td>
<td>15%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>4%</td>
</tr>
<tr>
<td>Housing Tenure</td>
<td></td>
</tr>
<tr>
<td>Owner Occupied</td>
<td>59%</td>
</tr>
<tr>
<td>Renter Occupied</td>
<td>41%</td>
</tr>
<tr>
<td>Means of Commute</td>
<td></td>
</tr>
<tr>
<td>Public Transit</td>
<td>11%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>8%</td>
</tr>
<tr>
<td>Walk</td>
<td>7%</td>
</tr>
<tr>
<td>Work at Home</td>
<td>3%</td>
</tr>
</tbody>
</table>

Figure 2: Neighborhood Census Block Groups

LEGEND
- Census Block Groups
- Cathedral Park Neighborhood
- Steel Hammer Site

Existing conditions
planning context

Recommendations from a number of past plans affect the Steel Hammer Site, both directly and indirectly. Below is a chronological list of these plans and their recommendations relevant to the Steel Hammer Site.

**ST. JOHNS URBAN DEVELOPMENT ACTION GRANT (1978)**

In 1978, the City of Portland in association with consultant groups, began assessing the feasibility of various development alternatives for the St. Johns Urban Development Action Grant (UDAG) site, which included the Steel Hammer Site. These alternatives included a mix of uses that were synthesized into three options: assisted residential, assisted industrial, and unassisted industrial. The residential option was deemed most feasible given the lack of access and connectivity required for industrial use. The changes to modern industrial needs meant that access to freeways was prioritized over rivers, leading to other areas in the Portland Metropolitan area being deemed more desirable for industrial businesses to locate. The UDAG project was never completed, and the Steel Hammer Site was sold 10 years later.

**WILLAMETTE GREENWAY PLAN (1987)**

In 1987, the City of Portland’s Bureau of Planning adopted the Willamette Greenway Plan with the goal of enhancing the Willamette riverbank as a public resource. It amended City code to add development overlay zones to riverfront land all along the Willamette’s banks within which the greenway trail could be built, but other development was restricted. Other plan objectives included catalyzing and encouraging attractive development for increased activity on the waterfront, creating public access via trails, and conserving and enhancing habitat areas along the riverbank. This early plan shows the Steel Hammer Site as a focus area for mixed-use development and encourages waterfront site and trail design that protects views, provides public access through or between developments, and facilitates water access. The Willamette Greenway Plan was a unique effort to provide a unifying logic in development efforts along the riverfront. However, in light of new environmental, economic, and social considerations, the City revisited its goals for the Willamette River with a series of projects called the River Renaissance.

**RIVER RENAISSANCE PLANS (2001 – 2011)**

These planning efforts began in 2001 with the River Renaissance Vision, an aspirational document outlining goals for the river including environmental health, economic prosperity for river-dependent industry, public access and usage, and partnerships, leadership and education surrounding river issues. The Vision was followed by the River Renaissance Strategy, adopted by Portland’s City Council in 2004. This plan outlines the guiding principles for decision-making surrounding the Willamette River in order to achieve the Vision. It breaks the Willamette riverfront into three main sections: North Reach, Central Reach, and South Reach. The Steel Hammer Site lies within the North Reach section, Portland’s “Working Waterfront”, which was prioritized as the first area for improvement.

In 2006, the River Renaissance work culminated in the River Plan/North Reach, a plan to realize the vision for the North Reach of the Willamette as outlined in the River Renaissance Strategy. This plan outlined specific projects for public and private groups to prioritize along the riverfront. It also proposed changes to the original Willamette Greenway Plan - as well as changes to city zoning code - that would help to achieve the vision for the North Reach as described in the previous River Renaissance efforts. However, in 2011, a local waterfront industry group and two major companies that work in the Portland Harbor raised concerns about the plan’s possible effect on the supply of industrial lands. As a result, the plan was appealed and remanded by the State Land Use Board of Appeals (LUBA). The main problem was the City’s use of a 2009 Economic Opportunities Analysis that was not part of the Portland Comprehensive Plan.

---

11 Greenway overlay zones on the Steel Hammer Site are shown in Appendix B of this report.
This economic analysis was deemed insufficient to prove that adequate industrial lands would remain available in the North Reach if the River Plan/North Reach was implemented. The plan has not yet been revisited since it was overturned in 2011.

The River Plan/North Reach proposes several projects that relate directly to the Steel Hammer Site. Although the plan was ultimately never adopted, these relevant projects should be taken into account as potential future actions that are desired by the community and could benefit the area. Firstly, the River Plan recommends an additional viewpoint on the Willamette Greenway Trail located on the Steel Hammer Site (see Figure 3, River Plan/North Reach Diagram, for its proposed location). This significant recommendation should be considered when planning development of the site. Next, the plan recommends a “whistle-free zone” in the Cathedral Park Neighborhood. Such a zone would require signalized railroad crossings with alarm bells and gates to allow trains to pass through the area without blowing their horns. This project was pursued through a Good Neighbor Agreement in the past, but has not been implemented. Finally, the plan recommends an amendment to the 2004 St. Johns/Lombard Plan to require enhanced insulation for noise mitigation in any new residential development within 500 feet of a railroad.

Figure 3: The River Plan/North Reach Diagram (viewpoint identified by red asterisk)

---


ST. JOHNS/LOMBARD PLAN (2004)

The St. Johns/Lombard Plan, mentioned above, was another major planning effort that involved numerous recommendations for the Steel Hammer Site. This plan amended the Comprehensive Plan and zoning code to include specific language about the St. Johns and Cathedral Park Neighborhood areas. It specifically outlines areas for housing and mixed use development, desirable character of new development, and the importance of retaining employment uses in the area. It recommends further planning efforts to evaluate “development patterns and potential near the Willamette River, an asset to both the peninsula community and the city.” The plan refers to the Cathedral Park Neighborhood as the “Cathedral Park Hillside,” treating it as a sub-area of the St. Johns Town Center area rather than a neighborhood in its own right. However, it does provide a vision for the site based on community input from the larger St. Johns area:

“The St. Johns riverfront south of Cathedral Park makes the St. Johns town center unique in the region. It is well connected to the St. Johns commercial core, and includes a mix of activities – housing, ‘new’ industry, limited office and retail, and other community serving uses. New development is well designed and compatible with the surrounding neighborhood. The area has a ‘sense of place’ that adds vitality to the town center and riverfront [...] While the area is home to industry now, the 20-year vision ... sees the area evolving from an underutilized industrial area to a vibrant mixed-use area. The riverfront area offers particularly attractive amenities for new housing, including surprising views of the river and Forest Park and access to Cathedral Park and the river.” (St. Johns/Lombard Plan, 20)

The plan calls for a strong visual, physical, and pedestrian connection between the Steel Hammer Site and the St. Johns town center along North Burlington Avenue with the main goal of supporting the town center. It also notes policies and design guidelines for the area, though these may be subject to change under the new Comprehensive Plan update. Now, more than ten years after this plan’s adoption and with the real possibility of waterfront development in the Cathedral Park Neighborhood, it will be important to revisit the St. Johns/Lombard Plan’s recommendations to ensure a plan for development that explores the full potential of the Cathedral Waterfront as a destination in its own right.

CATHEDRAL PARK MASTER PLAN (2009)

The most recent planning effort near the Steel Hammer Site was the 2009 Cathedral Park Master Plan. This plan outlines proposed improvements to Cathedral Park and its trails, including the Willamette Greenway Trail. See Figure 4, for a relevant cross-section of the trail at the terminus of North Pittsburg Avenue. The master plan outlines a key point about trail development that may also be relevant to the Steel Hammer Site - trail construction and related riverbank improvements could trigger a permit process called a Level 1 Sediment Review from the Army Corps of Engineers and the Department of State Lands. Time should be built into the development schedule to consider this possibility. Finally, the master plan also proposes enhanced planting along North Crawford Street to treat stormwater runoff, recommends improvements to the park’s docks and boat launches, outlines opportunities for interpretive signage, and presents strategies for including native vegetation. Future development on the Steel Hammer Site will connect to these improvements, and should consider including interpretive signage and native vegetation patches where possible to connect to improved upland and riparian habitat areas in Cathedral Park.

19 For a full summary of the St. Johns/Lombard Plan’s regulations as relevant to the Steel Hammer Site, see Appendix B of this report.
planning context summary

- Though the River Renaissance Plan was never adopted, the recommendation for a trail viewpoint, a "whistle-free zone" for the neighborhood, and enhanced sound insulation for new residential development, should be considered on the Steel Hammer Site.
- The St. John’s/Lombard Plan calls for a development plan that explores the full potential of the Cathedral Waterfront as a destination in its own right.
- The Cathedral Park Master Plan suggests that new development on the Steel Hammer Site should consider including interpretive signage and native vegetation patches where possible.

Figure 4: Cross section of greenway trail at terminus of N Pittsburg Avenue. Drawing by Mayer/Reed.
zoning

Zoning is the regulatory authority given to local governments to control and plan for the potential impacts of private development. Traditionally, zoning has regulated both the use of land as well as the shape and form of the buildings. There are different zones for various uses which includes a range of residential to industrial, and each zone has its own specifications for physical development.

The Cathedral Park Neighborhood has a variety of these zones (see Figure 5). Directly adjacent to the Steel Hammer Site is a mix of open space, residential, and employment. The site itself is being used for industrial purposes and the current zoning applied to the site (EG1 and EG2) allows for that use. However, a new land-use designation will be applied to the future as part of the City of Portland 2035 Comprehensive Plan update, and the zone on the site could also change (though it is unlikely). Thus far, the general use designation that has been identified as appropriate for the Steel Hammer Site (and some of the surrounding properties as well) is called “Mixed Use-Urban Center.” This is a new designation that wasn’t present in the previous code, and the specific zones that will implement that new land-use designation are still being created. Therefore, the exact information on allowed heights as well as setbacks from lot lines and allowed building coverage on the lot, is still to be determined. This city process is of direct importance to the Cathedral Park neighborhood as it will determine what can and cannot occur with regard to future development. The community should take advantage of this unique opportunity to advocate for what regulations they would like applied to their neighborhood.

In addition to the base zone (whether that is the current employment zone or a future mixed-use zone) are other zoning codes that apply to the Steel Hammer Site. The St. John’s Neighborhood Plan District and The Willamette Greenway Overlay directly impact uses and where new development can occur. It is important to note that although the city has expressed that overlays and neighborhood plan districts will likely remain as part of the 2035 Comprehensive Plan Update, the process should be monitored to ensure that the end result, and compatibility of the base zones with the overlying elements, delivers a regulatory framework that serves the interests of the neighborhood.
The Cathedral Waterfront team is operating under the assumption that the St. John’s Neighborhood Plan District will indeed remain and impose additional use and height restrictions (see Figure 6), and that the Willamette Greenway Overlay zones will continue to impose a large setback from the Willamette River (see Figure 7). Though the Willamette Greenway Overlay does not allow building development within the setback from the top of the river bank, it does allow the development of a public recreational trail, the standards of which are set by other zoning code chapters as well as the design standards set forth by Portland Parks and Recreation and the Portland Bureau of Transportation. Any development that will occur on the portion of the site that is riverward of the railroad tracks, would trigger the development of a public recreational trail within the setback, given the trail easement that is located on the Steel Hammer Site.

Regarding other development limits on the site, like the range of additional setbacks, floor area ratios, lot coverages, and landscaping and parking requirements, the CW team will need to make additional assumptions about the future regulatory structure when determining final recommendations. For more detailed information about the current and future zones, as well as the additional requirements of the plan district and overlay, refer to Appendix B.

**zoning summary**

- There is a swath of land throughout the Cathedral Park neighborhood that will have a change of its land use designation to Mixed Use. This may mean that the zones for certain properties in this area will change too.
- In addition to the base zone are plan districts and overlays that impact allowed uses and the development standards for these properties
  - The St. John’s Neighborhood Plan District restricts residential and office uses in EG zones as well as limits the heights to a maximum of 55 feet with view corridors of 30 feet
  - The Willamette Greenway Overlay limits how close to the river new buildings can be developed
parks, trails & recreation

TRAILS

Portland Parks and Recreation’s 2009-2015 Strategic Plan outlines a major goal to “meet the demand by filling gaps in the trail network”. The Steel Hammer Site contains a key gap in the Willamette Greenway Trail alignment that will be completed along with development on the site. This trail easement is a key public space asset in the Cathedral Park Neighborhood, representing future opportunities for recreation as well as a safe and direct bike or walking route to adjacent areas. The Willamette Greenway Trail runs the north-south length of the neighborhood. It is currently incomplete, but the built portions in Cathedral Park and through the BES water lab property are well-used. Once completed, the trail holds great potential as a neighborhood amenity and a means to draw visitors and residents alike to local destinations, bringing support for local businesses and increasing a sense of ownership and stewardship of the waterfront. Existing uses include walking and jogging along the trail. Many people bring their dogs. There is also a small, undeveloped beach which is accessed from the trail easement on the northern edge of the site - the beach is referred to as “Pirate’s Cove”, as it is sometimes used as an unofficial location for mooring boats and otherwise accessing the water.

PARKS, OPEN SPACES, AND NATURAL AREAS

The Cathedral Park Neighborhood enjoys good access to parks and recreational areas. In 2014, 91% of households in the North Portland Neighborhood Services coalition area\(^\text{21}\) (see Figure 8) were within \(\frac{1}{2}\) mile distance of a park, and 85% of surveyed users rated their local parks as “good” or “very good”.\(^\text{22}\) There are also several significant open spaces outside the neighborhood’s boundaries, including St. Johns Park and Community Center, Racquet Center, Pier Park, and Forest Park across the river. However, the Cathedral Park Neighborhood’s closest and most accessible open spaces are located along the waterfront.

\(^{21}\) North Portland Neighborhood Services (NPNS) is one of seven regional neighborhood offices funded by the City of Portland Office of Neighborhood Involvement. NPNS staff work at the direction of the community and without charge providing organizational, technical, material, and financial assistance and support. (from NPNS website: http://npnspostcommunity.org/about-us/)

\(^{22}\) Portland Bureau of Parks and Recreation 2014 Performance Report

Figure 8: Portland Parks & Recreation’s Level of Service map - North Portland Neighborhood Services coalition area with 91% of households within \(\frac{1}{2}\) mile of a park.

Three major open spaces exist along the neighborhood’s riverfront edge: the Metro-owned Willamette Cove Natural Area to the south, the central node of Cathedral Park (the neighborhood’s namesake), and the Baltimore Woods natural area to the north. Of these three major open spaces, Cathedral Park is the only developed recreational area. The Baltimore Woods natural area was designated as the result of significant community effort to protect it as natural area; however, while the public currently uses it, it does not yet have a complete trail connection. The Willamette Cove Natural Area, though
slated for trail development, contains known contamination and currently has no areas developed for public recreation. Therefore, while there is great potential for open space access within the neighborhood, Cathedral Park is currently the only significantly used and accessible park within the neighborhood. This significant 23-acre park opened in 1980, and has since become Portland's most photographed park. It is also an extremely popular location for weddings with its photogenic backdrop of the green space, St. Johns Bridge, and river. A coalition of local organizations hosts a Jazz Festival every summer that is free to the public. This event is consistently well attended, drawing thousands of visitors over three days in July. Overall, Cathedral Park is a major recreational, social, and cultural destination that brings a steady flow of activity and visitors to the Cathedral Park Neighborhood. It is directly adjacent to the Steel Hammer Site.

OTHER RECREATIONAL FACILITIES

Roosevelt High School Fields. Athletic events and other school-related recreation activities take place on the Roosevelt High School fields just outside the Cathedral Park Neighborhood boundaries. This recreation is generally limited to school-related activities, but an intergovernmental agreement with Portland Public Schools allows Portland Parks and Recreation to use Roosevelt's athletic fields and buildings for other events and recreation activities, including organized sports and other public activities.

St. Johns Park and Community Center. The Community Center offers a wide range of recreational and educational programs for children and adults through Portland Parks and Recreation, including drop-in activities and an educational preschool at subsidized rates. The St. Johns Park and its amenities are open to use by the general public. The park and community center are located 4 blocks from the boundary of the Cathedral Park Neighborhood (about one mile from the Steel Hammer Site), making them an accessible destination for neighborhood residents.

Johns Community Garden. Close to an acre of land was acquired in 1974 for this community garden space, located within the boundaries of the Cathedral Park Neighborhood. It contains 71 plots, and is active year-round. In the Fall, existing users can request a renewal or transfer to another plot in the city. New plot assignments are created in the Spring, when Portland Parks and Recreation holds annual orientations and work parties. Of the 50 community gardens in the City of Portland, North Portland gardens currently have the shortest waitlists.
EXISTING RECREATIONAL USES

Races and Other Major Neighborhood Events. The Cathedral Park Neighborhood hosts numerous major events each year, including bike rides, runs, and walks, including the Portland Marathon and Half Marathon, Portland Triathlon, Holiday Half, and others. Willamette Boulevard is a key route for these races and other events, and it is also a central thoroughfare for residents and visitors in the Cathedral Park Neighborhood. Therefore, some concerns exist about conflicts between race routes and daily access by residents and other users. However, such events can also increase awareness of the Cathedral Park Neighborhood as a recreation destination, potentially providing economic benefit to local businesses.

As many as 10,000 runners participate in the Portland Marathon each year, one of the many major recreational events that pass through the Cathedral Park Neighborhood.

The annual Cathedral Park Jazz Festival draws thousands of visitors each summer.

The Portland Triathlon is one of many high-profile recreational events that takes place in the neighborhood.
Figure 9: Parks, Open Spaces, & Trails Context
environmental conditions

The Steel Hammer Site enjoys unique environmental assets for development including its proximity to the Willamette River and unobstructed views. Although it is located within the Portland Harbor Superfund and has soil, water, and air quality issues, this specific site does not require the level of immediate comprehensive action necessary in some areas. Development on brownfields such as this site is in the public interest because it helps meet Portland’s need for industrial, commercial, and residential space without impacting untouched land. The Steel Hammer Site also has potential to contribute to ecological health by restoring the existing greenspace for habitat and wildlife corridors.

PHYSICAL PROPERTIES

The site slopes moderately toward the river, overall in the 5-10% range with steeper slopes along the riverbank and in the upper southern corner, up to 25%. There are four large warehouse-style buildings above the train tracks, while below the tracks the site is currently unbuilt (see Figure 10 below).

Figure 10: Steel Hammer Site Existing Physical Properties

ENVIRONMENTAL ASSETS

The unobstructed view of the river, the St. Johns Bridge, and the forested hills on the other side is a significant asset for future development, as is the proximity and access to the Willamette River itself. There are no tall buildings in the immediate vicinity, allowing maximum sun exposure on the site itself.

The Steel Hammer Site is important for general ecosystem health because it is adjacent to the Willamette River. Land adjacent to the river (called the riparian zone) is critical to both land and water health and has particular needs. The site also has potential to provide habitat connectivity through wildlife corridors. Even a small amount of green space on the Steel Hammer Site is valuable as a connector between open space to the North and South, and Forest Park across the river to the West. Isolated patches have far greater value to wildlife if they are connected.

CURRENT HUMAN USE

A mix of formal and informal uses exist on the Steel Hammer Site today. Formally, it is an industrial site. Above the railroad tracks is Columbia Forge & Machine Works, Inc. - classified as “industrial special uses”, which here includes iron and steel forging as well as several warehouses.23 Below the railroad tracks are unbuilt lots currently used to store large steel plates. Informal uses are also important to note: people are camping in some portions of the site while others are walking, running, and walking their dogs through the area towards Cathedral Park to the north and into the neighborhood to the east. Although not signed or officially acknowledged, there is a river access point, with a small sandy beach when the river levels are low enough.

Human use of the Steel Hammer Site has both positive and negative impacts for the natural environment, including water, soil, and air quality. Beneficial aspects of the current uses include a moderate amount of unpaved land dominated by invasive species, which allows better stormwater infiltration than the impermeable surfaces of traditional buildings and pavement. This should help prevent seasonal flooding and naturally filter pollutants from stormwater runoff before it reaches the river or


Cathedral Waterfront Vision Plan
seeps into groundwater. The green space is not high quality habitat but it provides wildlife corridors as previously mentioned and mitigates the urban heat island effect. The urban heat island is the phenomenon of cities having significantly higher temperatures due to extensive pavement and buildings reflecting the sun’s heat. This seriously exacerbates air pollution issues among other negative impacts.

Current human use of the site has negative environmental impacts as well. The properties on the Steel Hammer Site currently hold three permits with the Oregon Department of Environmental Quality (DEQ) for hazardous waste, air quality, and environmental cleanup. Since 1991, DEQ has recognized Columbia Forge as a hazardous waste generator. Columbia Forge has a DEQ air quality permit because it is a source of hazardous air pollutants (HAPs) totaling 33 tons per year. The site also has a Contaminated Site Permit with DEQ who conducted a complete investigation of groundwater and since 2009 the site has collected data on stormwater, erodible soil, and riverbank soil for evaluation as part of ongoing efforts to monitor pollution in the lower Willamette River.

SUPERFUND WATER AND SEDIMENT CONTAMINATION

The Portland Harbor Superfund site stretches along 11 miles of the Willamette River. Contaminants of concern in the superfund include polychlorinated biphenyls (PCBs), dioxins and furans, polycyclic aromatic hydrocarbons (PAHs), pesticides including DDT, and a number of heavy metals. These toxic pollutants pose serious risks to human health, specifically of elevated cancer rates through fish consumption, shellfish consumption, and direct sediments contact. Aquatic life is also threatened. The Steel Hammer Site (sometimes referred to as the Crawford Corp Site in official documents) has been identified as a potential source of contamination but is a low priority site for pollutant source control, although the evaluation is in progress. It is already known that because of its location in the middle of the polluted zone and its industrial history, the site’s soil and the water in the river directly adjacent have been measurably contaminated. Certain contaminants found on the site are from upstream sources (such as mercury and PAHs), meaning that they are coming to the site from other locations. Other contaminants are likely from the Steel Hammer Site itself, such as organotin sediment contamination. Stormwater, rather than groundwater, is the primary issue on this site and ongoing monitoring should lead to a management plan in the coming year. In October of 2001, over 300 tons of black sand (contaminated by petroleum and metals) was excavated from the bank and beach of the Steel Hammer.

Figure 11: Informal and Formal Current Use of the Steel Hammer Site

---

Site. It was replaced with clean sand, however there is a continued risk of residual contamination on the beach, as elevated levels of chromium, copper, lead, zinc, and PAHs were found in follow-up testing.²⁸

The regulatory framework for the superfund has multiple tiers. On a federal level, the Environmental Protection Agency has jurisdiction over the site as it pertains to the superfund. The National Oceanic and Atmospheric Administration is responsible for certain parts of the scientific study of the extent of the contamination. At the state level, the Oregon Department of Environmental Quality is the EPA's designated management agency and is responsible for coordination and, together with the Oregon Department of Human Services, issued human health advisories concerning recreation and fish consumption. The Oregon Department of Fish and Wildlife assessed the natural resource damage.

There are also several non-governmental bodies that influence the regulatory process. The Lower Willamette Group (LWG) is composed of 10 members who are a mix of companies and public agencies. They are a subset of the parties identified by the EPA as potentially responsible for contamination that led to superfund designation. The LWG was responsible for drafting both the Remedial Investigation and the Feasibility Study. In 2009 they filed suit against 69 other responsible parties who have so far refused to cooperate. Willamette Riverkeeper and the Audubon Society of Portland are two of the prominent environmental advocacy nonprofit groups pushing for progress on the clean up efforts for the superfund. The Portland Harbor Citizens Advisory Group is a group of concerned residents that has also proven itself influential in the process, as has the Portland Harbor Community Coalition.

In 2012, the Lower Willamette Group presented a draft Feasibility Study to the EPA. The document analyzes a suite of alternative scenarios for sediment cleanup for the entire 11 miles with a range of costs and timelines. In considering the options,
two minimum criteria must be met: protecting human and environmental health and compliance with the state and federal law.

All of the possible scenarios involve a combination of the following methods.29

Dredging: Digging up and removing sediment
Capping: Covering contaminated areas with clean soil
In-Situ Treatment: Treating the contamination where it is, direct placement of amendments
Monitored Natural Recovery: Letting natural recovery processes restore the area

Potential Superfund scenarios include A (no action), and a range of action scenarios, from B, which would cost $169 – 250 million to F, which is the most comprehensive and would cost $0.9 - $1.8 billion. Scenario A does not meet regulatory standards for human or ecological health and is not being considered but the full range of action scenarios (B-F) do meet minimum regulations. There are two versions of each scenario, one taking an integrated approach and the other focused on sediment removal. The removal-focused scenarios would have longer construction timelines and would be less effective in the short term. Any scenario would require 5-year reviews. Of all the potential options, integrated scenarios C and D ranked the highest for long-term effectiveness.30

Selecting an alternative requires balancing five key factors: long-term effectiveness, short-term effectiveness, reducing toxicity, mobility, or volume, ability to be implemented, and cost. The EPA is also considering official acceptance of the chosen scenario by State of Oregon and buy-in from the general public. The EPA will propose a Cleanup Plan in 2016, and after being reviewed by tribal authorities, the State of Oregon, and an open public comment period, final decisions will be made and the plan will be implemented.31

Figure 13: Superfund Timeline

The final decision will have specific implications for the Steel Hammer Site. It has been identified as having a high risk of riverbank erosion and is in the wave zone. The area of the river directly adjacent to the Steel Hammer Site does not require the level of in-depth response needed by other stretches of the river. The riverbed nearest the site would therefore not receive direct response under the less-comprehensive scenarios (B and C). Under scenario D, a small area of riverbed near the southern end of the Site would be targeted for either removal or in-situ treatment, while under scenario E, this area would be significant. Scenario F would entail either the majority of the riverbed being targeted for removal or implementing a mix of in-situ treatment in conjunction with a large engineered cap adjacent to the northern end of the site. Some of this uncertainty should be cleared up by 2016 as the process continues to move forward. The positive potential of the Steel Hammer Site was also identified and it was listed as a Potential Habitat Restoration Site by Portland Harbor Natural Resource Damages Trustees.32

The level of cleanup required will depend on the way that it is developed. Given that Oregon has what are called “risk-based cleanup standards”, the level of remediation required will be lower if it stays industrial than if it becomes commercial, or residential.

FISH ADVISORIES

As a result of water pollution, there are fish advisories for the entire Lower Willamette, which recommend against eating any Carp, Bass, or Catfish caught in the area. Unlike Salmon and Steelhead, which migrate through the superfund site, Carp, Bass, and Catfish remain in the polluted waters absorbing more dangerous chemicals. Toxics found in the water are further concentrated as they move up the food chain through a process known as bioaccumulation. This is why it is recommended to discard fatty portions of fish, where toxic chemicals are concentrated.

AIR POLLUTION

North Portland has been identified by DEQ as an area exposed to air pollution levels significantly exceeding air toxics benchmarks. The area is surrounded by sources of air pollution including river and railroad freight as well as roads congested with gas and diesel vehicles, residential heating, and industrial processes. This issue intersects with social justice work because North Portland neighborhoods have high concentrations of low-income residents and people of color. (See demographics section for further analysis) DEQ implemented a more comprehensive monitoring program in 2014, which will provide the data necessary to prioritize air toxic reduction work but does not impose any new regulations. Air pollution issues may worsen as a result of increased rail and truck freight taking goods to and from the Port of Seattle rather than directly shipping out of the Port of Portland due to the Hanjin pullout.

NATURAL HAZARDS

There are several serious natural hazards that must be taken into account when planning for the future of the Steel Hammer Site, including flooding, landslides, and earthquakes. Along the Willamette River, the 100-year floodplain extends into the site by 50-100 feet. The floodplain is designated as a FEMA special flood hazard area. This means that each year, there is approximately a 1/100 chance that the area will be flooded (as it was in 1996). Almost the entire site is classified in the potential landslide hazard zone by the City of Portland. Below the train tracks, the site is classified as a high earthquake hazard, while above the tracks, it is principally in the moderate earthquake hazard zone, according to data from the City of Portland.

INCENTIVES AND TECHNICAL ASSISTANCE

There are programs, subsidies, and technical assistance available for environmental remediation, and developing on brownfields. Brownfields are defined as any site where the presence or potential presence of environmental contamination is hurting development prospects. The City of Portland Bureau of Environmental Services administers two EPA grants: one to assess contamination, and the other to support cleanup on private property. In order to be eligible, the current owner cannot be responsible for the contamination, there must be financial need, and the project must provide a community benefit. In addition to grant funds, technical assistance is available, both from BES and from the Northwest Environmental Business Council.

There is further technical assistance available at the State level. DEQ has two pathways for voluntary cleanup: the Independent Cleanup Pathway for property owners who do not want ongoing DEQ supervision of contamination clean up, and the Voluntary Cleanup Program that does include ongoing DEQ oversight. Although the Steel Hammer Site is considered low priority as a source of contamination, the complexity of the site means new owners would most likely be eligible for the VCP. A VCP agreement was signed in 2000.

Brownfield redevelopment is in the public interest because it is a more economically efficient, environmentally sound approach than developing greenfields and will help close the industrial land deficit and generate new jobs. Current incentives are unlikely to be enough to facilitate optimal redevelopment of the 910 acres of potential brownfield sites in Portland, however. This led to the Portland Brownfield Assessment, completed in 2012, which analyzed an array of innovative state tax incentives and city institutions with the potential to address the issue.\textsuperscript{15} Legislation currently under consideration would add to the suite of options available. Policy is likely to progress for this issue because of continual pressure to develop while simultaneously preserving untouched land.

\paragraph*{environmental conditions summary}

- The Steel Hammer Site has unique environmental assets for development including its proximity to the Willamette River and unobstructed views.
- Although it is located within the Portland Harbor Superfund and has soil, water, and air quality issues, this specific site does not require the level of immediate comprehensive action necessary in other areas.
- Development on brownfields such as this site is in the public interest because it helps meet Portland’s need for industrial, commercial, and residential space without impacting untouched land.
- The Steel Hammer Site also has potential to contribute to ecological health by restoring the existing greenspace for habitat and wildlife corridors.
- The location of the Steel Hammer Site means additional risk from floods, earthquakes, and landslides.

EXISTING SITE ACCESS & CONNECTIVITY TO REGIONAL NODES

The Steel Hammer Site is located in the North Portland District. The major arterials that create the east-west street system in this area include Marine Drive, Columbia Boulevard, Lombard Street, and Going Street. The major roads in the north-south direction that provide regional connectivity to the site include Interstate 5 (I-5), Portland Road, and Greeley Avenue. The main access points into the North Portland District are via I-5 Interstate and U.S. 30. The St. Johns Bridge and Lombard Street are included in the US 30 Bypass federal highway system (Figure 14). The map to the right also highlights automobile, transit, bicycle and freight connectivity at the district-scale.

MULTI-MODAL CONNECTIVITY

The Steel Hammer Site is around 20 minutes away from Downtown (Pioneer Courthouse Square) by car and around 40 minutes by public transportation (TriMet bus route 16). The nearest MAX stops to the Steel Hammer Site are the Rosa Parks Max Station which is nearly 4 miles from the site (transfer to Bus Route 44) and the North Lombard Transit Center (nearly 4.3 miles from the site). Figure 15 shows, at a neighborhood-scale how the Steel Hammer Site is accessible by various modes (transit, bicycle, pedestrian network and automobile connections). The map also highlights location of neighborhood destinations and commercial corridors near the site within a ¼ mile and ½ mile radius.
The Steel Hammer Site can be accessed by three streets: North Burlington Avenue, North Crawford Street and North Richmond Avenue (Figure 17). At present, the site has certain access issues—both North Burlington Avenue and North Richmond Avenue dead-end at the top half of the site, at the railroad tracks. This raises concerns regarding on access to the site beyond the railroad tracks. There is a turnaround provided at North Burlington Avenue near the Portland Water Pollution Control Lab. A freight rail line also passes through the site, thus dividing it. Currently, an easement of 55-75 feet (varies in width) is dedicated for the freight rail line passing through the site. North Crawford Street connects North Burlington Avenue and North Richmond Avenue. Other issues include missing or inaccessible sidewalks at some portions of streets along the site.

The sections below analyze the streetscape context or the design quality of the surrounding streets and their visual effect. This includes the street surface and also the fixtures and fittings that facilitate their use—from street signage to tree plantings. The unification of these elements of a streetscape can help create a welcoming environment for people to visit and gather, improve environmental quality (control stormwater runoff, improve air quality etc.), encourage outdoor activities and help with economic vitality and vibrancy of a neighborhood.

Overall, the surrounding streets lack defined street tree plantings, adequate streetlights, and other pedestrian furniture and amenities (North Burlington Avenue is located within the St. Johns Pedestrian District). Looking more closely at the streetscape inventory, North Burlington Avenue lacks tree canopy except for a few mature trees at the intersection of North Burlington Avenue and North Crawford Street and a few trees along North Richmond Avenue. Along North Burlington Avenue, the site has two street lights- one placed at the intersection of North Crawford Street and North Burlington Avenue and the other placed at mid-block length. There are no streetlights to the south of the rail line near the Portland Water Pollution Control Lab. The sidewalks are continuous along North Burlington Avenue. North Crawford Street lacks sidewalks at some points along the site and also lacks streetlights. North Richmond Avenue has a sidewalk along the site, but is currently inaccessible with overgrown plants preventing its usage. North Richmond Avenue also lacks streetlights along the site currently. There is one streetlight provided on the sidewalk facing the site.

Figure 16: Steel Hammer Site access and surrounding streets
Figure 17: Steel Hammer Site access and surrounding streets
STREET SECTIONS

Currently, North Burlington Avenue serves as one of the primary access routes to the Steel Hammer Site. It is also used to access the BES Water Pollution Control Lab that is adjacent to the site. North Burlington Avenue, with a right-of-way of 60 feet, includes two travel lanes and parallel on-street parking on both sides and lacks lane markings currently. The average daily traffic volume recorded on North Richmond Avenue, north of North Lombard is 628 (Northbound) and 631 (Southbound). The posted speed limit on North Richmond Avenue is 25 mph and the 85th percentile speed (the speed at or below which 85 percent of vehicles travel) recorded on North Richmond Avenue, north of North Burlington Avenue is actually 28 mph (portlandmaps.com). North Richmond Avenue has a sidewalk along the site, but is currently inaccessible with overgrown plants preventing its usage. North Richmond Avenue also lacks streetlights along the site currently. There is one sidewalk streetlight provided facing the site.

North Crawford Street connects North Burlington Avenue and North Richmond Avenue and provides access to the northern part of the site. It has a right-of-way of 60 feet, similarly including two travel lanes with on-street parking. Sidewalk network on this street has many gaps and no clear lane markings. The cross-section (Figure 19) shows the travel lanes, width of the street and sidewalk dimensions.

North Richmond Avenue has a right-of-way of 75 feet, two travel lanes and on-street parking on both sides, but lacks lane markings. The average daily traffic volume recorded on North Richmond Avenue, north of North Lombard is 628 (Northbound) and 631 (Southbound). The posted speed limit on North Richmond Avenue is 25 mph and the 85th percentile speed (the speed at or below which 85 percent of vehicles travel) recorded on North Richmond Avenue, north of North Burlington Avenue is actually 28 mph (portlandmaps.com). North Richmond Avenue has a sidewalk along the site, but is currently inaccessible with overgrown plants preventing its usage. North Richmond Avenue also lacks streetlights along the site currently. There is one sidewalk streetlight provided facing the site.
Figure 18: Cross-section of North Burlington Avenue looking north towards the river.

Figure 19: Cross-section of North Crawford Street, looking west towards the St. Johns Bridge. Steel Hammer Site on the left.

Figure 20: Cross-section of North Richmond Avenue, looking south towards the river.
EXISTING SEWER AND WATER UTILITIES

The following section looks at existing utilities and infrastructure that run below the road surface and below ground. Sewer lines ring the site and a major line runs along the railroad. A major water line also runs along the railroad. The direction of water flow along North Crawford Street and along the railroad easement demonstrates the contours of the land. Slopes vary throughout the site and affect utilities and access. North Richmond Avenue is at a higher elevation than North Burlington Avenue. Both North Burlington Avenue and North Richmond Avenue slope towards the river. North Burlington Avenue experiences a 100 feet rise or drop in elevation for every 1,110 feet distance (9% slope or 5 degree slope). North Richmond Avenue experiences a 100 feet rise or drop in elevation for every 900 feet distance (11% slope or nearly 6.5 degree slope). No utility lines cross the site itself, which will ease the building process (Figure 21).

FIRE AND EMERGENCY ACCESS

Additional access requirements are necessary for fire and emergency vehicles and are determined by the 2014 Oregon Fire Code as well as the Portland Fire Code. These codes differ from both the International Building Code and the City of Portland zoning code, but impose their own restrictions on building size relative to street width, location of fire hydrants, and presence of a sprinkler system.

Most relevant to the Steel Hammer Site is the height concern - anything over 30 feet requires a street width of 26 feet (instead of 20) excluding parking. Additionally, fire hoses are at most 250 feet in length, which means that the massing of the buildings needs to allow for cut throughs for a fire hose and/or fire apparatus. Most practical for this would be to allow dedicated emergency lanes that don’t allow other vehicular traffic (and would thus have to conform to additional design standards), but could allow pedestrian and bike access. Other street dimensional requirements include angles of the corners (25 degree interior, 45 degree exterior) as well as minimum and maximum distances away from the building the fire apparatus can park (15 foot minimum, 28 foot maximum).

Given that the site is currently relatively undeveloped, fire code approved water lines will need to be placed underground along with strategically placed fire hydrants. If the building uses require sprinkler systems, restrictions will occur for distances from those exterior hookups to the fire hydrants. Lastly, the slope of the site, which varies from 5-10% could pose additional problems in some areas given that a fire truck that requires a ladder (any building taller than 30 feet requires this type of fire vehicle) can only be parked on a maximum slope of 6%.
THE TRANSPORTATION SYSTEMS PLAN AND THE SITE

The Portland Bureau of Transportation’s Transportation System Plan (TSP) is the City’s long-range plan guiding transportation investments. TSP addresses local transportation needs for cost-effective street, transit, freight, bicycle, and pedestrian improvements with the goal of providing a balanced transportation system that supports neighborhood livability and economic development.

The table to the right summarizes the seven TSP street classifications for each street surrounding the Steel Hammer Site and what these classifications mean for the development of the site.

According to the TSP, the alignment of the North Greenway Trail passes directly through the Steel Hammer Site. The North Greenway Trail is a 10.4-mile-long off-street path that is intended to connect the Eastbank Esplanade at the Steel Bridge to Kelley Point Park. As the system grows, so do opportunities for alternative transportation and recreation. When the entire trail is finally finished, it will connect the most distant point of north Portland to downtown—thus making the easement through the site very essential to this connection.

The site is located near St. Johns Bridge, North Philadelphia and the US 30 Bypass which are Priority Truck Routes (Figure 22). The TSP mentions working with the Federal Highway Administration and ODOT to remove the US 30 Bypass designation from Philadelphia and Lombard (west of Martin Luther King, Jr. Boulevard), and relocate it to more appropriate streets to minimize impacts on the St. Johns town center and the Lombard main street.

The railroad line that passes through the Steel Hammer Site is a designated Railroad Branch Line (Figure 22). As per the TSP, Railroad Branch Lines transport freight cargo over short distances on local rail lines that are not part of a rail network and distribute cargo to and from Main Line Railroads.

The Steel Hammer Site also adjoins the TSP designated St. Johns Pedestrian District (Figure 23). Pedestrian Districts are intended to give priority to pedestrian

<table>
<thead>
<tr>
<th>Street Classification</th>
<th>North Burlington Avenue</th>
<th>North Richmond Street</th>
<th>North Crawford Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>Local Service Street</td>
<td>Neighborhood Collector</td>
<td>Neighborhood Collector</td>
</tr>
<tr>
<td>Transit</td>
<td>Local Service Transit</td>
<td>Transit Access Street</td>
<td>Local Service Transit</td>
</tr>
<tr>
<td>Bicycle</td>
<td>Local Service Bikeway</td>
<td>Local Service Bikeway</td>
<td>Local Service Bikeway</td>
</tr>
</tbody>
</table>

- An Off-Street Path (N Greenway Trail) passes through Site
- A Branch Rail Line passes through Site
- Site near St. John’s Bridge which is a Priority Truck Street

<table>
<thead>
<tr>
<th>Emergency Response</th>
<th>Minor Emergency Response</th>
<th>Minor Emergency Response</th>
<th>Minor Emergency Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Design</td>
<td>Local Street</td>
<td>Local Street</td>
<td>Local Street</td>
</tr>
</tbody>
</table>
access in areas where high levels of pedestrian activity exist or are planned, including the Central City, Gateway regional center, town centers, and station communities. TSP recommends that the zoning should allow a transit-supportive density of residential and commercial uses that support lively and intensive pedestrian activity.

TSP has designated North Richmond Avenue to connect the neighborhood to other urban centers, corridors and other nearby destinations. North Richmond Avenue is planned to accommodate transit stops to connect to other major transit lines nearby. North Crawford Street is the other major Neighborhood Collector serving a similar role as North Richmond Avenue to distribute traffic from the neighborhood roads to major arterials nearby. But it is not intended to be a transit route. North Burlington Avenue, compared to other two streets, is intended to provide local circulation for automobile traffic, pedestrians and bicyclists and provide access to mainly local residences and local commercial uses. It is also located within the St. Johns Pedestrian District.

Please refer to Appendix D for what these TSP designations and terminologies mean for each of the surrounding streets.

**TSP RECOMMENDS A LIST OF MAJOR PROJECTS AND CITYWIDE PROGRAMS NEAR THE SITE**

On January 30th, 2015, the Portland Bureau of Transportation posted an updated TSP recommendation for major projects and citywide programs. These projects were also represented in the City’s Map App. The projects are prioritized as “constrained” and “unconstrained” depending on the revenue forecasts over 20 years and how well the programs/projects aligned with the adopted city goals and policies. Most projects have timelines listed as 1-10 years.

The North Portland Greenway Trail segments 2 and 3, which are very close to the site, are in the recommended projects list by the TSP. Segment 2 multi-use trail will connect Chimney Park, Pier Park, Baltimore Woods, Cathedral Park,
and St Johns. Segment 3 will connect Cathedral Park with Swan Island via University of Portland and Willamette Cove. Easements along the waterfront properties in between segments 2 and 3, including via the Steel Hammer Site will help implement the missing links of the Greenway trail.

The TSP has also recommended pedestrian safety and streetscape enhancements to the St. Johns Pedestrian District which is adjacent to the site. Improvements include pedestrian access to transit, improve safety, and providing better lighting and crossings. Improvements including realigning the “ivy” island, curb extensions, a new traffic signal at Richmond/Lombard, and pedestrian connections between St. Johns and the riverfront based on the St. Johns/Lombard Plan.

Because the railroad bisects the Steel Hammer Site, the Cathedral Park Quiet Zone project would have direct impact on future development there. If funded, the quiet zone would require alarm bells and signals at all railroad crossings in the zone, allowing trains to pass without blowing their horns - and eliminating what would be a significant noise impact to development on the Steel Hammer Site. The quiet zone was previously proposed in 2000 by the Cathedral Park Neighborhood Association and was eventually listed as a priority project in the TSP, but it was removed at the last minute. The Cathedral Park Master Plan, the St. Johns/Lombard Plan, and the Port of Portland’s freight master plan mention the quiet zone, but funding remains a challenge. The neighborhood will need to work with the City or other agencies (the Port of Portland is currently listed as lead agency) to reestablish priority for funding. Due to safety concerns at the federal level, there is some risk that the Federal Railway Administration (FRA) could decline to allow the quiet zone even after the crossings are improved - if the quiet zone is funded, implementors should maintain frequent and clear communication with the FRA to ensure the project’s success.

**transportation summary**

- Railroad tracks bisect the Steel Hammer Site and have noise impacts as well as create barriers for accessing the riverward portion
- Access/egress issues:
  - The right-of-way of North Burlington Avenue barely cross the railroad tracks and North Richmond Avenue doesn’t cross at all - this could be problematic for multiple reasons including fire and emergency access requirements
  - The long length of site might lead to permeability requirements for pedestrian connectivity
- Permits for new development on the site would likely trigger a traffic impact assessment which would be the basis for understand the dedications of land and other conditions of approval necessary to improve the streets
  - For instance, the sidewalks on the property side of North Crawford Street would be improved to current standards
- The Steep slopes of North Burlington Avenue and North Richmond Avenue could create barriers for accessing the Steel Hammer Site by modes other than vehicles
socioeconomic trends

The Steel Hammer Site is situated within the Cathedral Park Neighborhood. The neighborhood socio-economic trends have been set forth earlier in this report. However, for planning purposes it is important to understand the Steel Hammer Site’s larger context and to reflect on a broader market analysis. Therefore, demographic data from the U.S. Census Bureau for the Cathedral Park Neighborhood as well as the adjacent neighborhoods of University Park and St. Johns are set forth below and grouped into three scales or tiers of geography (Figure 24 shows Tier 1 and 2). These different scales/tiers of socio-economic trends which help inform what is feasible to build on the site are defined below:

Study Area (Tier 1). The area immediately around the Steel Hammer Site, defined by Census Tracts 42 and 41.02. This includes the entire Cathedral Park Neighborhood with small parts of the St. Johns neighborhood.

Area of Planning Influence (Tier 2). The larger context that has impacts on site development and is also affected by the Steel Hammer Site development. This area includes the Cathedral Park Neighborhood, University Park neighborhood and St. Johns neighborhood. Its boundaries are defined as Census Tracts 42, 41.02, 41.01 and 40.02.

City of Portland (Tier 3). The entire city of Portland.

Some of the key socio-economic trends for the study area surrounding the Steel Hammer Site (defined by the area defined by Census Tracts 42 and 41.02) are summarized below:

• The study area around the Steel Hammer Site has grown at a much slower rate as compared to City of Portland. It has experienced population declines in the children (under-18) and in the older (65 and above) age groups.

• The study area around Steel Hammer Site has always had a greater percentage of people who are Hispanic/Latino when compared to the City of Portland. The African-American population in the study area around the site is lower than the overall African-American population in the City.

• The median income for the study area around the site has been historically lower than the City of Portland’s median income. However, the study area has experienced a lower increase in the percentage of people in poverty from 2000 to 2013 than the City of Portland as a whole.

For a complete socio-economic analysis using U.S. Census demographics data for the three geographies (study area, area of planning influence and the City of Portland), please refer to Appendix E. These trends are used in the housing section of the following Market Analysis.
Figure 24: Tier 1 and 2 geographies used for analyzing the socio-economic trends.
market analysis

The purpose of this section is to provide information on existing market conditions and the outlook for industrial, office, retail, and residential development in the Portland metropolitan area. Data for industrial, office, and retail trends were synthesized from Kidder Mathews quarterly reports and information presented about the housing market is the result of analysis using data from U.S. Census Bureau.

Given the preliminary market trends, it is apparent that retail and light industrial uses, will be the most successful non-residential development for the Steel Hammer Site. This is due to the fact that office space is desired in, or close to, the central business district. With regard to residential development the mixed-use zone change, along with environmental conditions and demographic preferences, indicate a greater likelihood for multi-family residential.

INDUSTRIAL

By the end of 2014, the Portland metropolitan area had the lowest vacancy rates since 2007 at 4.8%, the highest asking rents since 2008 at an average of $5.48 per square foot, and positive net absorption of over one million square feet. Over half a million square feet of new construction was added to the market in 2014, which is a typical yearly average for the area. However, decreasing unemployment (down to 6%), increasing rents, and low vacancy rates will impact speculation around industrial development and an anticipated 1.5 million additional square feet of modern and functional warehouse space will be added over the course of 2015 and 2016. Specifically, there is increased demand for larger spaces, 100,000 square feet and up, as well as Class A properties. Market rental rates do not support the construction of smaller warehouse projects, unless completed by larger developers who can take advantage of economies of scale.

Additional relevant information about the industrial market includes the vacancy rates of the submarket areas closest to the Steel Hammer Site, the specific industries that are most active, and the capitalization rates. The Rivergate and Hayden Island/Swan Island submarkets closed the 2014 year with 9.9% and 4.5% vacancy rates respectively. Food and beverage companies were the most active in 2014, with many pursuing and/or signing leases for large spaces. Future capitalization rates are difficult to determine given the uncertainty of rent growth, however, the trend is that capitalization rates have been declining since the end of 2012 and are currently hovering between 6% and 8%. Lower capitalization rates mean higher value of the real estate.

OFFICE

The trends in office space parallel the industrial market. The 2014 year closed with the lowest vacancy rates since 2007 at 8.2%, the highest asking rents in recent history at $20.68 per square foot, and nearly one million square feet of net absorption. The average asking rents differ between the class of office space - Class A averaged $24.94 per square foot, Class B averaged $19.33 per square foot, and Class C averaged $16.68 per square foot. New construction totaled almost 600,000 square feet in 2014 and an anticipated 1.8 million square feet of office space will be added to the market over the course of 2015 and 2016.

Continued demand has been for Class B creative office spaces either in the Central Business District, or close to it in areas like the Lloyd District or Johns Landing. The tech industry is one of the driving forces behind this trend and many Seattle or San Francisco-based companies are opening new locations in areas of Portland that are close to transit and easily accessible by bikes. Although the demand for Class B creative office spaces is greatest and thus experiencing the highest net absorption, two new Class A buildings are under construction in the Central City, which combined, will add a total of around 700,000 square feet to the market. The average capitalization rates for office space was around 7%.
RETAIL

In 2014, the retail market experienced the lowest vacancy rates since 2008 at 4.9%, the highest asking rental rates since 2010 at $16.78 per square foot per year on a triple net lease, and the highest annual net absorption since 2007 of over one million square feet. All aspects of the retail market are active, including new development - over 2 million square feet of new construction was added to the market.

The retail spaces desired by tenants are for smaller, higher-quality, and more functional spaces. However, convenience centers, which are categorized as 30,000 square feet or less and are experiencing the highest average asking rental rates, are also experiencing the highest vacancy rates of 11%. Most of the new development is occurring around new light rail stops in the South East and the largest increase in type of retail offered is for “fast casual” food joints. The average capitalization rate settled around 7%.

HOUSING MARKET

Within Portland’s robust housing market, the Steel Hammer Site offers an interesting opportunity for additional residential units in the area. As the market sees increased demand for housing in Portland, along with low inventory, homes are selling quickly and at ever increasing prices. As the market heats up, more buyers will be looking at older neighborhoods with lower prices.

Recently, nearby St. Johns was named the 11th on the top twenty Portland neighborhoods in terms of hot residential real estate markets. The ranking was due, in part, to a median list price for the neighborhood of $234,925 and an average of $164 per square foot.

While median home value for Portland is reported as $284,900 on the US Census figures for 2013, the North Portland study area figure was $228,483. When isolating just the Cathedral Park study area, the value is slightly higher at $230,765, but the highest value is in University Park ($278,200).

The University Park area (Census Tract 40.02), which is just south of the Steel Hammer Site, is the only tract in the North Portland study area to have median gross rents above the citywide average of $917. In fact, with a median rent of $1,224, it was higher than all other tracts studied, which had median rents in the $800-$900 range. The Cathedral Park study area has 30% of their rents in that range, the highest percentage of all categories.

Homes in University Park also have an older average year built than all areas studied (1942). The averages for most homes in the study area and the Area of Planning Influence are on par with Portland’s average (1957). However, more of the study area homes are owner occupied and fewer are vacant. In Portland, 53.36% of the housing units are owner occupied and 6.17% of all units are vacant, but the study area has 58.41% owner occupied and only 5.57% vacancy. Most of these homes (63%) are considered affordable, with mortgage payments less than 30% of the owner’s monthly income. This figure is slightly less than the 66% reported by the city. While the percentage of affordable rental units (47%) is also comparable to the city levels, a greater percentage of homes are considered severely unaffordable with more than 50% of income going to rent each month.

The housing mix for the Area of Planning Influence includes 43% large lot single family, which is a 9% increase over Portland, and only 27% multifamily units compared to Portland’s 37%. Given that the area may be zoned for mixed-use in the near future, this may suggest that the Steel Hammer Site would be appropriate for multi-family residential. This is supported by demographic changes and the environmental conditions on the site.
opportunities and constraints
The Steel Hammer Site presents a unique opportunity for the Cathedral Park community; at 15 acres of waterfront property, there is no other comparable piece of land. It is in the heart of the Cathedral Park Neighborhood, a small but vibrant, largely residential neighborhood in North Portland. This is an opportune moment for the Cathedral Park Neighborhood to be actively engaged because the neighborhood is poised for new development on several sites including this one.

Site assets include its proximity to the Willamette River and Cathedral Park, which will connect to the Steel Hammer Site by a trail network leading up and down the Willamette all the way to downtown Portland. Nearby amenities include the park itself, which is an active hub of outdoor recreation that has a boat launch and regularly hosts events. Also nearby is light industrial production included Moonstruck Chocolates as well as Cathedral Park Place, which is a small retail center with a brewery and restaurant.

There are several interlocking opportunities and challenges to future development including:
- The new mixed use zoning
- The involvement of the neighborhood
- The waterfront
- The active heavy rail bisecting the site
- A history of environmental contamination
- The existing street network
- The market for new development in Portland

Each of these seven issues might be an opportunity, a limitation, or both, depending on your perspective.
context

CITY-WIDE PATTERNS

The development of the Steel Hammer Site has the potential to impact the surrounding area in terms of population, employment, environmental health, and neighborhood affordability. Although this is only one site, it is large, potentially iconic, and cannot be divorced from citywide patterns. The future of the Steel Hammer Site will be influenced by larger trends and will in turn have impacts—positive, negative, and simply new—for the larger community.

Patterns that frame the context in which the Steel Hammer Site sits are numerous and include the following:

- **Population Growth:** The population of Portland has been growing steadily and that growth is projected to continue into the foreseeable future, which will fuel the demand for residential units radiating out from inner city neighborhoods and demand for commercial spaces and other amenities will follow.
- **Industrial Land Deficit:** Portland has a deficit of usable industrial land within the urban growth boundary. Innovative solutions, such as integrating light industry into commercial and mixed use spaces will help alleviate the problem and keep jobs in the region.
- **Displacement:** Across Portland, community groups are organizing around the displacement of low-income and fixed-income residents further and further from the city center and the issue is particularly associated with neighborhoods in North and Northeast Portland. The City of Portland has set a goal to proactively manage inequitable impacts of neighborhood change.\(^3^8\)
- **Air Quality:** The Oregon Department of Environmental Quality has identified North Portland as an area with serious air quality issues and has increased monitoring to better understand the issue.

HISTORY

The history of this neighborhood, and the historical significance of this site in particular, is an opportunity for future development to root itself in the culture of the neighborhood. Throughout the public engagement process, the Cathedral Waterfront Team heard from community members that the history and culture of the area is a point of pride and something they hope is reflected in new development, rather than seeing a development that could have been built in any neighborhood or any city. History and culture might be expressed through building and landscape design choices, informational signage, or public art, in addition to considering the impact of development choices on the existing neighborhood fabric.

---

\(^3^8\) For more information about gentrification and displacement, and a comprehensive neighborhood vulnerability analysis, see: https://www.portlandoregon.gov/bps/62635
Physical constraints define what is possible for the site. The land is relatively flat, mostly between 5 and 10% slope, with steeper slopes (up to 25%) along the river and in the upper Southern corner. The site is in a landslide hazard zone and is split between moderate and high risk from earthquakes. Additionally, the floodplain extends approximately 100 feet into the site from the riverbank. These constraints will impact the cost and design of future buildings but will not prevent development.

In addition to physical constraints, there are important regulatory constraints as well. The land use designation is changing in 2015 from employment to “mixed use – urban center”, which will increase the value of the land by allowing a variety of uses including light industrial, commercial, and residential. Although the broader land-use designation has been chosen, the specifics of the new mixed use zones and where they will apply will be determined between now and Fall 2015, which presents the community with a powerful opportunity to influence the City’s regulatory process. There is a public advisory committee meeting monthly, and a draft of the zoning details will be released for discussion in May, followed by public hearings, which will be held in July.39

Four types of commercial mixed use zones have been identified, each with different requirements. The Steel Hammer Site may fall into the more intense development version, the CM3, which would allow heights of up to 65’-75’. (Currently, heights maximums for the area are set at 45’-55’, with select view corridors of 30’).40 There is a ten-foot range in height maximums because while a landowner can build “by right” to 45’, they may build up to 55’ if they earn bonuses by providing community benefits, such as affordable housing, affordable commercial space, and public open space, among others.

On top of the base zone, there is an overlay preventing development along the river and an easement that requires the Willamette Greenway trail be built at the developer’s expense when the lower portion of the site (where the trail will run) is developed. The site is split by a rail line and the railroad company owns 55’ of land along the railroad tracks, which prevents development adjacent to them and limits access to the lower portion of the site. Additionally, the City prohibits “superblocks” from being developed as contiguous buildings, which will necessitate at least a pedestrian street. If built to a width of 26 feet, a pedestrian street could also serve a dual purpose of meeting fire and emergency access requirements. A developer may choose to widen this and improve it to include bike and car access, or provide multiple access points through the site.

Figure 26: Maximum Building Footprint

39 NOW is the time to get involved in the zoning process: https://www.portlandoregon.gov/bps/63621
40 As of April 12, 2015, the most detailed information on the new mixed use zones: https://www.portlandoregon.gov/bps/article/509165
maximum building height

Figure 27: Maximum Building Heights

30' Current View Corridors

75' Potential Max Height

55' Current Max Height

BES Water Lab
Height 26'

Steep Slope of River Bank

Green Space
The waterfront presents an incredible opportunity. The riparian zone (land adjacent to the river), which is critical for habitat and water quality, is protected from development by the environmental overlay zone that prohibits building within 50 feet of the bank (defined by the steep slopes approximately 50 feet from the water). Although currently dominated by invasive blackberries, this area could be restored to high quality habitat by removing invasive plants and planting native species consistent with the riparian forest that existed there pre-1851. In addition to providing habitat for local and migrating wildlife, this would help to stabilize the riverbank and prevent erosion.

Within the protected buffer, only the Willamette Greenway trail can be built. If a developer wants to build on the lower half of the Steel Hammer Site they will be required to complete this trail, which will connect to Cathedral Park through an existing trail to the North and to Willamette Cove to the South. It is part of a 40-mile loop along the Willamette River that is currently only partially completed.\textsuperscript{41} The trail is planned as a paved, two-way bicycle and pedestrian path that will be 12 feet wide, with additional 2-foot buffers on either side.

Views—of the Willamette River, the St. John’s Bridge, the Railroad Bridge, and Forest Park—are an asset both to the Steel Hammer Site and to the surrounding Cathedral Park Neighborhood. This may lead to tensions between new multi-story development and community members worried about losing their own views. There are some protections in place currently, including the prohibition against building along the river itself, view corridors, which prevent building above 30’ feet in certain strips, and general height restrictions, which are currently set at 45’ – 55’ (or about 4 stories) in the Neighborhood Plan. Height restrictions may change as the details of the mixed-use zones are finalized. Although there may be impacts to views, building higher but narrower is also an opportunity for a developer to preserve open space without undermining their ability to make a return on their investment.

\textsuperscript{41} Learn more and get involved in the Willamette Greenway Trail at: http://www.npgreenway.org
case study: Harborpark

Harborpark, which is a 69-acre site in downtown Kenosha, Wisconsin is an interesting model for understanding how the Steel Hammer Site could complement Cathedral Park to form a strong waterfront center. In many ways the surrounding neighborhood functions as its own town, which makes other vibrant small towns good models of how to use waterfront space. Harborpark was historically industrial but was redeveloped as a mix of open space, residential housing, and other amenities such as a playground, art installations, a marina and a museum. It is a popular location for outdoor weddings and other events and draws people of all ages. To this successful base, a commercial district is now being added. The site connects to a larger trail system and leverages strong access by transit, car, bike, and on foot.

Two of the underlying factors leading to the success of the project are meaningful community involvement and prioritizing access by all types of transportation. Additionally, several key recommendations from the 1997 Master Plan have supported the success of the development:

- Maintain a strong orientation to the water
- Create a high-quality street environment
- Concentrate civic uses to create a destination
- Encourage mixed-use development
- Create a new water-oriented residential neighborhood

Although it is impossible to replicate any redevelopment project because of the unique context of the Steel Hammer Site and the Cathedral Park Neighborhood, there are lessons that can be learned from others’ efforts. Specific lessons include phasing commercial in after forming a strong residential and visitor base. Second, prioritizing easy access for people arriving on foot, bike, car, or transit supports both the new development and existing neighborhood. Third, creating a sense of place is a community priority for the Cathedral Park Neighborhood and can be accomplished through urban design choices such as focus on key street corners, concentrated “destination” buildings, the placement of benches and street trees, as well as general orientation towards the water and towards public space.

Source: placemaking.pps.org

Harborpark Source: placemaking.pps.org

POLLUTION

Environmental contamination on the Steel Hammer Site must be taken into consideration to fully understand the potential for sale and development of the site and the associated risks and responsibilities. There are two overlapping issues: the history of industrial use that has left a legacy of site-specific contamination regulated at the state and local levels and the Portland Harbor Superfund contamination that affects 11 miles of the Willamette River and falls under federal regulation through the Environmental Protection Agency.

The Superfund will require costly remediation in the river itself and on certain highly contaminated sites (such as the well-known Willamette Cove). The Steel Hammer Site will not require the same immediate, intensive response underway at Willamette Cove, however it is likely that some level of soil and water contamination will need remediation. The level of cleanup that will be required on this site will depend on what it is used for (residential uses necessitate the highest level of remediation, while commercial requires less and industrial uses have the lowest standards).

evironmental contamination

CLEANUP

A history of contamination should not constrain an area’s future possibilities. There are many potential strategies that may be appropriate. First, halting ongoing contamination by addressing potential sources of pollution (specifically stormwater or sediment erosion at the Steel Hammer Site) from continuing to worsen the problem. Second, strategies to address the damage already done may include removing contaminated soil (as has already been done on the riverbank), containing soil contamination with an engineered cap, or treating residual contamination with soil amendments (in situ treatment). Most likely, the site will require a suite of complementary strategies. There are many success stories, including those published by EPA on its brownfields site.43

In addition to restoration tools, it is important to consider the financial mechanisms that will support their implementation. There is federal funding available through EPA (distributed by the Oregon Department of Environmental Quality and the Portland Bureau of Environmental Services) for Targeted Brownfields Assessments as well as Brownfield Cleanup. There is additional technical assistance available through both DEQ and BES as well as Business Oregon. These grant funds can then be used to leverage many times their value in additional public and private investment through tax breaks, and profitable development.

43 More information on brownfields: http://epa.gov/brownfields
case study: Cully Park

A former landfill in Northeast Portland is being transformed into a 25-acre park complete with community gardens, a Native American garden suited to ceremonies as well as every-day use, walking paths, and a playground. The City of Portland said for years that it did not have the resources to build the park but in 2010, a group of community members organized under the Living Cully umbrella organization, took action to make it happen and the project is currently underway.

This is part of a larger effort by Living Cully (a coalition of four neighborhood organizations: Verde, NAYA, Hacienda CDC, and Habitat for Humanity) that is working towards reinterpreting, "sustainability as an anti-poverty strategy, introducing new environmental assets to Cully in response to existing community needs: health, employment, education, housing".44

The Cully Park project is an example of highly effective neighborhood organizing and the benefits of leveraging strategic partnerships. Although the issues and priorities may not be the same in the Cathedral Park Neighborhood, there is a lot that can be learned from the strategies used in Cully. In-depth community engagement included:

- Public meetings
- Design workshops
- Surveys
- Community celebrations
- Volunteer work parties

Partnerships were established with many outside organizations and stakeholders representing a wide variety of interests and geographies but united behind the goal of building the park. A strong partnership was also forged with Portland Parks and Recreation, who have invested $1.25 million in the project and agreed to an innovative community based planning model for building the park.45

44 From the Verde website: http://www.verdenw.org/outreach-and-advocacy
45 More information about this ongoing project: http://letusbuildcullypark.org
The Steel Hammer Site is divided into two approximately equal upper and lower sections by an active freight railroad. Union Pacific owns and operates the railroad tracks (which is most active at night) as well as a strip of land about 55 feet wide that buffers the tracks themselves. This buffer is currently vacant and although trees cannot be planted there for safety reasons, the land could be planted as a vegetated buffer, and perhaps restored to upland savannah that characterized it pre-1851 with the permission of Union Pacific.

Although the presence of active heavy rail poses a significant challenge, there are many successful developments that have overcome similar issues. In Portland, these include the developments near Union Station downtown and near railroad tracks in the Pearl. Solutions that have been pioneered include modifications to the buildings themselves to improve soundproofing and mitigate vibration, and to the surrounding environment to buffer noise and create safe access points using building setbacks, safety barriers, insulating walls and vegetation. Rather than choosing one strategy, developments are more successful when they apply a package of best practices.

**POTENTIAL SOLUTIONS**

- **Noise:** This can be reduced with building setbacks, soundproofing, building a wall, planting a vegetated buffer, and other techniques in addition to designing the site to put residences as far as possible from the rail line.
- **Safety:** There a number of crossing-types including both at-grade crossings, when the road is on the same level as the tracks, or bridges, in which the road or path is elevated above the tracks.
- **Access:** Two access points to the lower half of the site will be required for emergency access. Currently only North Burlington Avenue crosses the railroad tracks, which means that a second crossing will need to be installed either at North Richmond Avenue or at a new mid-block location.
case study: Thea’s Landing

Thea’s Landing is a $40 million multifamily housing development in Tacoma, Washington that sits directly across the street from an active heavy rail line. It has 46 condos, which sold for between $125,000 and $568,000 when the building opened in 2002 as well as 189 apartments that rent for between $800 and $2,200 per month, depending on the floor plan, and two restaurants. There were many unknowns surrounding the project at the outset. In addition to the rail impacts, the market was untested as this was the first development in a formerly industrial area of Tacoma’s waterfront. Also, due to the industrial legacy, soil contamination required not digging too deeply in certain areas so as not to disturb caps that were put in place to prevent further contamination.

This project was successful in many ways. It was fully sold and leased four months after opening and remains popular, which highlights the potential for residential to thrive near railroad tracks. Soundproofing was done using a glazing system and air conditioners are available for rent to residents, which helps cut down on the need to keep windows open in the summer. However, railroad noise remains a perennial complaint among some residents who live on that side of the building, although others report no issue. Tenants on the opposite side (facing out toward the water rather than the city of Tacoma) do not report problems, which suggests that residential units might be best placed on the North Crawford Street side of the Steel Hammer Site, and that this could make a noticeable difference for livability. Perhaps investing in building a buffer wall could have helped Thea’s Landing, and might help the Steel Hammer Site as well.
The current street network provides car, bicycle, and pedestrian access to the Steel Hammer Site on North Burlington Avenue, North Crawford Street, and North Richmond Avenue as shown in Figure 29. However some sidewalks are incomplete, particularly along North Crawford Street and there is no bicycle infrastructure or public transit that serves the site. North Burlington Avenue and North Richmond Avenue are the two at-grade access points across the railroad tracks currently. However, North Richmond Avenue stops at the tracks without crossing them and while North Burlington Avenue does cross the tracks, it turns into the BES Water Pollution Lab property. Three streets that would complete the urban grid between North Burlington Avenue and North Richmond Avenue were vacated by the city and are currently indistinguishable from surrounding property.

Development of the site would require street improvements including sidewalk improvements, curbs, lighting, and green stormwater facilities. As was previously mentioned, development of the lower portion of the site would also require the developer to build the public Greenway Trail, improving bicycle and pedestrian connections to the adjacent neighborhoods and downtown Portland.

New development at the Steel Hammer Site will have a greater chance of success if it is easily accessible by all modes of transportation and improving upon the existing infrastructure could benefit the surrounding neighborhood as well. These might include larger efforts such as completing the trail network or bringing transit service further down North Richmond Avenue (the closest busline is 44-Capitol Hwy/Mocks Crest) or simply improving what already exists.

The permits for development of a site this large will trigger a traffic impact analysis that will determine if additional improvements will be required to the surrounding transportation infrastructure, which would be paid for by the developer but implemented by the Portland Bureau of Transportation. If there are specific changes the neighborhood would like to see happen (such as crosswalks, bicycle lanes, parking minimums, street lights, etc.) this will be an important process to follow. Improvements to transit service would require advocacy on the part of the community beyond the scope of a single site.46

46 For further information on transit investments, see the Transit Investment Priorities at: http://trimet.org/tip/ To learn about community activism around transit issues, see Bus Riders Unite! at: http://www.opalpdx.org/bus-riders-unite/
Figure 29: Steel Hammer Site Access
Although there is a wide range of possibilities for the future of the Steel Hammer Site, the types of development that takes place—and its ultimate success—will depend on market feasibility. Residential development on some portion of the site may make financial sense, most likely multi-family buildings. Light industrial, and some amount of retail space (when the customer base is there to support it) could make sense as well. Office space is unlikely because generally it is preferred closer to downtown.

RETAIL

In Portland currently all aspects of the retail market are active, including new development. The retail spaces desired by tenants are for smaller, higher-quality, and more functional spaces. The positive outlook for the retail market may not (or not yet) apply to this site. For retail to be successful, there needs to be a critical mass of people living in or visiting the area. Most of the new development is occurring around new light rail stops in South East, where it is concentrated in “fast-casual” restaurants. Convenience centers, which are categorized as 30,000 square feet or less are experiencing the highest vacancy rates.

EMPLOYMENT

Over the past year, Portland saw some of the lowest vacancy rates and highest rents for industrial land since the 2008 recession. Specifically, there is increased demand for larger spaces, 100,000 square feet and up, as well as Class A properties. Market rental rates do not support the construction of smaller warehouse projects, unless completed by large developers who can take advantage of economies of scale to build multiple small warehouses or rent space in a shared warehouse to smaller manufacturers.

RESIDENTIAL

The Steel Hammer Site offers a potential opportunity for additional residential units in the area. As the market sees increased demand for housing in Portland, along with low inventory, homes are selling quickly, and costs are increasing in waves moving out from the inner neighborhoods. As these trends continue, more buyers will be looking at older neighborhoods with lower prices. The housing mix for the North Portland study area includes significantly less multi-family and more single-family homes than in the city overall. Given that the area will be zoned for mixed-use in the near future, this suggests that the Steel Hammer Site may be appropriate for multi-family residential. The costs of environmental cleanup will necessitate efficient development to make a return on the investment, and this motivation, in addition to projected population increases, help make the case for multi-family residential
neighborhood involvement

The continued involvement of the community and the organization of the Cathedral Park Neighborhood Association itself present an opportunity for the neighborhood to influence the future development of the Steel Hammer Site, as well as other sites that will likely be developed nearby. Being well-organized, well-informed, and able to construct compelling arguments to advocate for the needs of the Cathedral Park Neighborhood and of the city overall will help the community successfully forge relationships with city representatives and developers to get their priorities met.

THREE TIERS

- **Internal Organization**: A core group of leaders who hold regular meetings, communicate clearly, and provide consistency
- **Engaging Neighbors**: Involving the people within the neighborhood itself, and specifically reaching out to people who have not previously been part of the organization
- **Building Relationships**: Forging partnerships with key people and organizations outside of the neighborhood. This includes forming single issue based coalitions with outside groups that have shared interests, as well as building productive relationships with local government bodies and active developers.

THREE PRESSURE POINTS

- **Zoning Changes**: Influencing the specifics of new zones and which will apply to what location is an opportunity to greatly impact the trajectory of whole neighborhoods.
- **New Development**: When new projects are being built, there is an opportunity to influence the direction it takes before it is in the ground.
- **Existing Urban Fabric**: Even if the City or private developers are not acting to address community priorities, the CPNA can be proactive, as neighbors were in the 1970’s to create Cathedral Park.
An impressive example of a public-private partnership leveraging funds to redevelop a brownfield is the Dahlia Square project in Denver, Colorado. This 7.8-acre site was formerly a brickyard and when preliminary soil testing was done in 2001, significant soil contamination was discovered. Through a combination of EPA grants (totaling $278,000 for assessment and cleanup), local government support (including tax credits), and private capital, almost $20 million were used for cleanup and redevelopment combined.

The cleanup involved the removal of tens of thousands of cubic yards of material as well as four underground storage tanks. After cleanup was completed in 2006, the site was redeveloped. In 2009, a 12,000 square foot medical clinic opened its doors and after a delay during the recession, a 128-unit affordable housing unit for seniors was completed in 2011 and a phased expansion continued into 2013.47

In this case, private sector developers had been wary of taking on the risk associated with an unknown level of contamination. Public investment in contamination assessment and the cleanup effort leveraged private investment worth many times that amount.

47 More information about this and other brownfield redevelopments is available at http://epa.gov/brownfields
In order to develop a site plan that the Cathedral Park Neighborhood Association could advocate for, that would meet long-term community needs, it was critical to determine a range of interests and priorities for community members who would experience either the positive or negative effects of development. The Cathedral Waterfront Team focused on better understanding existing perceptions of community character and problems, aspirations, and preferences with regard to possible site uses and design. Our goals during engagement efforts were to not only gather insight to steer specific suggestions, but to build excitement and interest for continued involvement and self-advocacy with regard to development, which includes networking with neighbors, and increasing interest in neighborhood association participation.

Months of community engagement activities focused on the potential development of the Steel Hammer Site generated both qualitative and quantitative data that reflected community priorities for future development. From these priorities, a clear list of twelve goals emerged. These goals informed the development alternatives offered by the CW Team.
outreach and engagement methods

Between January and April 2015, the Cathedral Waterfront Team gathered a range of community perceptions and preferences related to potential site development on the Steel Hammer Site. Engagement strategies included key informant interviews, a written survey, a Community Walk and Talk event, and a Public Design Workshop.

Outreach methods employed to generate public interest in these events included creating a project blog, Cathedral Park Neighborhood Association (CPNA) email and Facebook updates, fliers distributed to local businesses, neighborhood door-knocking, advertising in the St. Johns Review, and networking through stakeholder interviews and attending other community events.

Figure 30: CW Team Public Engagement Timeline

<table>
<thead>
<tr>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Informant Interviews</td>
<td>Community Survey Online</td>
<td>Community Walk &amp; Talk March 7</td>
<td>Design Workshop March 29</td>
<td>CPNA Discussion May 12</td>
<td>Final Report to CPNA</td>
</tr>
<tr>
<td>Outreach through email, facebook, and fliers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blog Updates

Outreach through email, facebook, and fliers
ONLINE PRESENCE

A description of the project, along with facts and event updates, has been available on the cathedralwaterfront.wordpress.com blog. This blog was shared with people on the neighborhood association email list, and included on subsequent flyers and event materials. Some of the first community input received was through comments on the blog.

INTERVIEWS

The CW Team conducted over a dozen key-informant interviews that included both technical expertise and community interests. Technical interviews were integral in the understanding of the rail, trail, and right of way impacts, as well as DEQ and Port of Portland requirements. Please see Appendix F for the full list of interviews conducted by the CW Team and brief summaries of their content. The information that was gathered directly contributed to the Existing Conditions Report and the Opportunities and Constraints Analysis.
SURVEY

From mid-February to mid-April, our team ran a survey about community character, community problems that need attention, and hopes for the future of the Cathedral Park neighborhood. The survey also gauged the participants’ interest in future involvement with CPNA.

In addition to offering the survey online, and sharing it through existing networks through the neighborhood association and other organizations, we also offered the survey in person. The survey was shared at local Occidental Brewing during a special event in February, during a community garden meeting, during one of our events adjacent to the site, and outside of the St. Johns Library, as shown in Table 2. These efforts generated over two hundred responses from the community. Surveys provided easily quantifiable data from a large number of community members, but do not capture the more nuanced perspectives that emerge in the live events.

Although the survey was translated into Spanish, delays in the translation process meant that the Spanish version was not made available to the public until over a month after the initial English-language survey was introduced. This delay also meant that certain event opportunities that gave greater promise for engaging Spanish-speaking community members were missed.
Table 2: Breakdown of Survey Administration

<table>
<thead>
<tr>
<th>WHERE</th>
<th>WHEN</th>
<th>LANGUAGES AVAILABLE</th>
<th>NUMBER OF SURVEYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occidental Brewing during Zwickelmania</td>
<td>Saturday, Feb. 14th, late morning and afternoon</td>
<td>English</td>
<td>47</td>
</tr>
<tr>
<td>Waterfront Trail adjacent to site</td>
<td>Saturday March 7th, morning</td>
<td>English</td>
<td>5</td>
</tr>
<tr>
<td>Johns Community Garden orientation</td>
<td>Saturday March 7th, afternoon</td>
<td>English</td>
<td>3</td>
</tr>
<tr>
<td>Outside St. Johns Library, coinciding with Spanish-language programming night</td>
<td>Tuesday March 24th, evening</td>
<td>English and Spanish</td>
<td>23</td>
</tr>
<tr>
<td>Online</td>
<td>February 15th-April 8th.</td>
<td>English. Spanish version only available from March 23rd</td>
<td>132</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>210</strong></td>
</tr>
</tbody>
</table>

Members of the CW Team administering surveys along the trail
COMMUNITY WALK AND TALK

The team used additional live events to supplement the survey. The CW Team led a Community Walk and Talk, which included a staffed information table adjacent to the site and three neighborhood walks led by members of the CW Team. This event provided an opportunity for people to ask questions about the Steel Hammer Site and the development process as well as provide insights into the needs, assets, and challenges of the neighborhood. Two of the walks traveled a two-mile route, while an abbreviated one-mile route proved to be more popular for families with children.

Approximately thirty adults attended, as well as several young children who did not fully participate. With participation from the Cathedral Park Neighborhood Association board and the North Portland district liaison, neighbors also had greater networking opportunities and started many conversations about current issues and concerns, sharing information and resources.

The community walk was primarily advertised via email and Facebook notifications to groups and accumulated contacts, the CPNA Facebook page, and flyers. The team also directly contacted businesses adjacent to and currently on the site in person. Flyers were placed in businesses on Lombard, Willamette, and Cathedral Park Place. People shared their perceptions about existing neighborhood character, current concerns, and initial reactions to the site. It gave the team a great opportunity to hear more in-depth thoughts, and see the neighborhood surrounding the site alongside local eyes.
PUBLIC DESIGN WORKSHOP

The March 29th Design Workshop drilled down further into possibilities for the site and opportunities for involvement. The event drew approximately 60 participants and included a presentation on existing conditions, a visual preference photo activity, and group mapping activities that explored preferences for use and locations.

NEIGHBORHOOD ASSOCIATION DISCUSSION

On May 12, 2015 the CW Team presented the progress made at a meeting of the membership of the Cathedral Park Neighborhood Association. After an overview of the community engagement process, the CW Team presented the draft Community Goals. Everyone had a chance to ask questions and give written feedback. The CW Team then presented the demonstration scenarios, along with example photos and an overview of next steps for the community.
whose voices were heard

In interpreting the results of the community engagement process, it is important to first understand whose views are represented. At the in-person events, we did not ask participants for any kind of demographic data. Although it is unreliable to make conclusions based on appearance, it seemed that the majority of the participants were white, and that older adults (perhaps 50 and up) were the best represented age group. There were more younger people at the Community Walk, and the smallest proportion of people under 40 at the Neighborhood Association Discussion. This does not negate the value of the information that was gathered, but it does suggest that future engagement processes should consider outreach and engagement methods targeted at people not yet participating.

For the survey, the targeted population consisted of people who live or spend time near the Steel Hammer Site. There are people who are not geographically close to the site but who will be impacted by future development. The impact of development for this broader stakeholder group is important, but because of logistical considerations, the CW Team attempted to capture their perspectives and interests through research and interviews rather than through this survey (see Figure 31 for breakdown of survey respondents’ neighborhoods).

The racial and ethnic breakdown of survey respondents is harder to compare to census data because our survey was set up such that people could check all categories that apply. While this is the method that produces the most authentic

Figure 31: Survey Respondents’ Neighborhoods

What neighborhood do you live in?

- Cathedral Park, 47%
- St. Johns, 31%
- University Park, 9%
- Other, 13%
responses, it does not align with Census methods. The general pattern of demographics reflect the demographics of the Cathedral Park neighborhood: mostly white, with small percentages of other groups. White people make up a significantly greater percentage of survey respondents than of Portland overall (about 72%). Some of this difference may be because the census reports people who identify as, “white alone”, but also it suggests that this group is more racially homogeneous than the city.

Unfortunately, the survey did not ask about income level or home ownership, so these important pieces of demographic data are missing. This is particularly unfortunate because generally neighborhood associations engage more homeowners than renters and more people in the higher income brackets of the neighborhood. Lower income people and renters are groups that should be targeted for future outreach and, if they have not been a part of the public engagement process, it is important to attempt to represent their interests in other ways (through interviews, research, etc) and not simply neglected entirely.

There was a large age spread among survey respondents, although young people were represented in lower numbers than in the Cathedral Park Neighborhood or City of Portland overall. Women outnumbered men by several percentage points, but they may also be more than half of the target population (55% of Cathedral Park Neighborhood residents are women).

Figure 32: Racial and Ethnic Breakdown of Survey Respondents

Race/Ethnicity
(check all that apply)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>90%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>10%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>5%</td>
</tr>
<tr>
<td>Native American or American Indian</td>
<td>2%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>
sense of place

GOAL 1: DEVELOPMENT FOSTERS A SENSE OF PLACE AND CREATES A NEIGHBORHOOD-LEVEL DESTINATION

GOAL 2: DEVELOPMENT INCLUDES A MIX OF USES THAT COMPLEMENT ONE ANOTHER

We consistently heard that a strong sense of place was a priority. At both public events and through the survey, participants expressed a desire for unique amenities, from boutique hotels, to marinas or boat launches. There were also several comments related to the site becoming iconic (imagining the neighborhood’s picture in Sunset Magazine), and to building upon existing amenities such as Cathedral Park or the planned Greenway Trail to create a destination for bicyclists and pedestrians. There were also comments eschewing “generic” development that felt like it could be dropped anywhere.

“\textit{I appreciate growth and development in neighborhoods. However, they are starting to look and feel the same. This area is different. In a good way. Keep it original!!}”

-survey respondent

Every map from the Map Activity showed a strong mix of uses and none included one dominant use. This desire for a number of uses is consistent with additional feedback gathered on the Walk and Talk, other parts of the Design Workshop, and detailed comments written in response to an open-ended question on the survey.

However, it was also clear from the survey that restaurants and retail, while valued, were not as important as other issues. Expert interviews that focused on the feasibility of retail, given the number of people currently living in the vicinity of the site, support delaying any push for retail.

“I’d like to see a mix of housing and retail, offices perhaps light manufacturing, event space/ etc. A diverse vibrant community center, with some business having direct access to the waterfront trail - similar to the Vancouver, WA waterfront.”

-survey respondent
Figure 33: Important Issues

How important is each of the following?

- Cost of rental housing
- Cost of single-family homes
- Availability of good jobs
- Industry and housing close together
- Air quality
- Soil and water pollution
- Railroad noise
- Access to grocery stores
- Access to retail shopping
- Traffic safety
- Events blocking access to streets

- We should fix this NOW!
- This problem can wait until we fix bigger problems.
- This is not a problem here.
Anticipated differences between the priorities held by residents of the Cathedral Park Neighborhood and those of surrounding communities were not evident in the variety of engagement tools utilized. In fact, we found that people’s priorities were very similar in both the Design Workshop activities and in the survey results. Figure 34 shows the difference in priorities between those who live in Cathedral Park versus other neighborhoods. The largest difference is the preference for nature space/natural habitat (about 10%)

Figure 34: Priorities Expressed - Cathedral Park versus Other Neighborhoods
GOAL 3: RESIDENTIAL DEVELOPMENT ACTIVELY MAINTAINS SOCIO-ECONOMIC DIVERSITY IN THE CATHEDRAL PARK NEIGHBORHOOD.

GOAL 4: DEVELOPMENT PROVIDES SPACES FOR JOBS AND ENTREPRENEURIAL ACTIVITY, IN BALANCE WITH RESIDENTIAL DEVELOPMENT.

GOAL 5: DEVELOPMENT AND AMENITIES SUPPORT AND FOSTER DIVERSITY IN AGE GROUPS.

One-third of survey respondents reported that housing costs in the neighborhood are a concern that should be addressed immediately. Responses during the Workshop and the Community Walk and Talk also addressed housing affordability and specifically the continued affordability of homes for a range of household incomes. People expressed a need for good management of affordable housing options and a desire for the continued growth of market-rate housing as well. Supporting the local tax base for schools and infrastructure was also mentioned, which indicates that a mix of incomes is desired for the neighborhood.

Almost half of survey respondents and 60% of those ages 19-24 identified an increase in quality jobs as an immediate priority for the community. This was echoed in conversations at the Design Workshop. Many expressed a particular interest in live/work spaces and manufacturing that would have a limited impact on adjacent residential areas, also indicating that food production would “fit” with the neighborhood.

During the Map Activity at the Design Workshop, four out of five tables included senior housing as part of their site plans. Groups also discussed how to make the site as accessible as possible by improving sidewalks, streetlights, and bus service. We also heard that people wanted family-oriented public spaces and playgrounds. 100% of the survey respondents under 18 said that the neighborhood needs more places for kids to play and hang out. An expert interview with a local development agency corroborated this view by suggesting that in order to foster healthy neighborhoods, it is important to create developments that are attractive to people of all ages and stages of life.

“A natural play space would be so valuable, before all of our kids grow up!”

-survey respondent
Figure 35: Neighborhood Priority for “Places for Kids”, by Age

Which of the following does this neighborhood need more of?
Places for kids to play/hang out

<table>
<thead>
<tr>
<th>Percent of Question Respondents</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 or younger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>19-24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>25-34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65-74</td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 or older</td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of the following does this neighborhood need more of?
Places for kids to play/hang out
GOAL 6: THE GREENWAY TRAIL IS A DEFINING FEATURE OF NEW SITE DEVELOPMENT AND IS IMPLEMENTED EARLY, AND WITH HIGH-QUALITY AMENITIES.

GOAL 7: SITE DEVELOPMENT IS PEDESTRIAN ORIENTED.

GOAL 8: DEVELOPMENT INCLUDES INFRASTRUCTURE IMPROVEMENTS FOR THE SURROUNDING NEIGHBORHOOD.

GOAL 9: VIEWS OF NATURE AND LOCAL LANDMARKS ARE PROTECTED FOR RESIDENTIAL NEIGHBORS AND IN PUBLIC VIEWSHEDS.

GOAL 10: DEVELOPMENT MITIGATES RAILROAD NOISE, PRIORITIZING IMPACTS ON RESIDENTIAL DEVELOPMENT.

During the Community Walk and Talk and the Design Workshop, neighborhood priorities consistently focused on street safety and the experience of pedestrians. There are existing safety concerns in some places due to poorly managed intersections and missing sidewalks. People already use the area to walk, run, and walk their dogs, and many would like to improve on what already exists.

At the Community Walk and Talk, many participants discussed how much they enjoy the current trail network and expressed their hopes to have it completed. Many people use the railroad tracks as an informal trail across the Steel Hammer Site but are looking forward to having the Greenway Trail completed. Likewise, participants at the Design Workshop were excited to hear that when the lower portion of the Site is developed, the developer will be required to build the trail, but were concerned that this may take years if the upper portion is built first. The high priority placed on greenspace was expressed in the survey as well. A sample of the survey results for the questions that pertain to the Thriving Community goals, are included on the following page.

“This neighborhood can be a bike destination with the new trail”

-survey respondent
Figure 36: Respondent Activities in Cathedral Park, by Age

**Which activities did you do in the CP neighborhood in the last month?**

![Bar chart showing activities and age groups](chart1.png)

- Work/School
- Restaurant
- Shopping
- Friends/Family
- Event/Service
- Park

**Figure 37: Hypothetical Frequency of Activities by the Waterfront**

**Which of the following activities would you do by the waterfront?**

![Bar chart showing frequency of activities](chart2.png)

- Walking or jogging
- Biking
- Fishing or boating
- Relaxing
- Spending time at a waterfront cafe or bar
- Playing with friends or family
- Event/service
- Friends/family
- Shopping
- Restaurant
- Work/school

**Legend:**
- At least once a week
- At least once a month
- At least a few times a year
At the Design Workshop and the Community Walk and Talk, participants expressed concerns about allowable building heights and the impact to neighborhood views. Analysis of building heights (below) shows that key western views would be negligibly impacted for homes on North Edison Street and other uphill locations, and that views available to the public of the St. Johns Bridge and natural areas would be preserved, even with buildings of up to four stories across the Steel Hammer Site (the current limit). However, because this was a concern expressed and because zoning changes may allow buildings up to five or six stories, this was included as goal.
During the Map activity at the workshop, most of the groups buffered the area of the site directly adjacent to the railroad in some way. (The full results of this activity are available in Appendix J). Several key informant interviews and at the Community Walk and Talk included concerns about the impact of railroad noise on development. The railroad is most active at night, and would therefore impact users on the site at that time; most likely residents, rather than office workers. Goal 10 is a response to this concern.

Sample Map from the Community Design Workshop, Showing Railroad Buffer
At the Community Walk and Talk, there were many questions about local environmental contamination, both related to the Portland Harbor Superfund, and to the area’s industrial past. This concern was also reflected in the survey results, where over half of respondents ranked soil, water, and air quality as problems requiring immediate action.

Figure 38: Community Concerns Requiring Immediate Attention
There was consensus at the Design Workshop that trees and landscaping were aesthetically important to the community. This was particularly apparent in the Photo Activity, during which participants were asked to put yellow positive stickers or black negative stickers, on a variety of photos. The discussion that followed made it clear that opportunities to add trees and other landscaping could make a night-and-day difference in the appeal of a place. (See Appendix K for the full results of this activity.) This was also apparent in the choices people made during the Map Activity to include street trees, pocket parks, and plazas to break up building mass. It was echoed by the high priority placed on natural areas that ran throughout the survey responses.

Figure 39: Sample of Digitized Results from the Photo Activity at the Community Design Workshop
The May 12th meeting of the CPNA membership was an opportunity to recap the work done by the CW Team and to present the goals and objectives for discussion and feedback. The meeting also included an overview of the demonstration scenarios, zoning changes, and leverage points for successful neighborhood advocacy, which are further explored in the implementation section of the Final Plan Document and the Toolkit. In addition to discussion at the meeting, the CW Team collected written feedback forms, which showed high levels of support for the twelve goals, as shown in Figure 40. While some people were neutral towards a few of the goals, there was no one who said they were opposed to any of the goals. Two of the goals, concerning the greenway trail and preserving views, received unanimous support, and the least popular goal, diversity in residential development, was still supported by more than three quarters of the participants, while 24% were neutral. Some people felt that this site would not be a good location for any type of residential development due to its constraints, while others did not explain their neutrality.

The support for the 12 Community Goals suggests that the CW Team accurately interpreted neighborhood priorities and needs that were expressed throughout the community engagement process. There were approximately 30 people in attendance, and 22 feedback forms collected, so while it is a positive affirmation of this list of goals, it will be important to continue engaging the broader membership base who may have different priorities.

Figure 40: Results from the Feedback Forms
involvement in the CPNA

Throughout this process, community member responses reflected a great deal of interest in becoming more engaged in the neighborhood, specifically through CPNA. One-third of survey respondents had already attended a CPNA meeting at the BES Water Lab and one-third are interested in becoming more involved in CPNA activities. Among Latino, Black, and Native American people, this number went up to over 50% (as compared to only 32% of white people), suggesting that there is untapped interest and that the CPNA Board would be successful in reaching out to those communities. The survey also revealed that the younger the respondent, the less likely they were to report having attended a CPNA meeting in the past. However, interest in becoming more involved was constant across age groups (reaching 50% of those 19-24). This suggests that this is another part of the community that is ready to become more active and that the CPNA might consider ways to reach out to younger demographics. Recommendations for inclusive community engagement are in the Toolkit.

Figure 41 & 42: Involvement in CPNA, by Age

- **Attended a CPNA Meeting**
  - 18 or younger: 10%
  - 19-24: 30%
  - 25-34: 40%
  - 35-44: 50%
  - 45-54: 60%
  - 55-64: 70%
  - 65-74: 80%
  - 75 or older: 90%

- **Interested in being more involved**
  - 18 or younger: 20%
  - 19-24: 50%
  - 25-34: 40%
  - 35-44: 30%
  - 45-54: 20%
  - 55-64: 10%
  - 65-74: 0%
  - 75 or older: 10%
While a range of concerns and ideas from community members have shaped goals for site development outcomes, other site constraints, broader trends, and analysis of potential outcomes, have further informed specific objectives that could achieve these goals. These objectives give a more concrete focus for meeting community needs, which will become important during the process of negotiating with a developer, and evaluating agreement outcomes.

SENSE OF PLACE

GOAL 1: DEVELOPMENT FOSTERS A SENSE OF PLACE AND CREATES A NEIGHBORHOOD-LEVEL DESTINATION

Objectives:
1.01 Development design incorporates and reflects characteristics of the surrounding neighborhood, including natural landscaping, industrial working class roots, and the river.
1.02 Neighborhood history is celebrated through design elements and interpretive signs.
1.03 Public space on the site is a key element of the overall design, and creates a sense of welcome.
1.04 Features of site plan are linked to existing amenities such as Cathedral Park.

GOAL 2: DEVELOPMENT INCLUDES A MIX OF USES THAT COMPLEMENT ONE ANOTHER

Objectives:
2.01 Building design should incorporate flexibility for future adaptation between residential and commercial space.
2.02 Long-term site development includes multi-family residential and townhouses, retail shops and eateries, and employment areas.

THRIVING, DIVERSE COMMUNITY

GOAL 3: RESIDENTIAL DEVELOPMENT ACTIVELY MAINTAINS SOCIO-ECONOMIC DIVERSITY IN THE CATHEDRAL PARK NEIGHBORHOOD.

Objectives:
3.01 The cost range of available housing reflects the range of existing neighborhood household incomes. At least one third of new rental housing should therefore remain affordable to families at twice the poverty level or less. 15% should remain affordable to families at or below the federal poverty level.
3.02 New housing of all varieties should be well managed and maintained.

GOAL 4: DEVELOPMENT PROVIDES SPACES FOR JOBS AND ENTREPRENEURIAL ACTIVITY, IN BALANCE WITH RESIDENTIAL DEVELOPMENT.

Objectives:
4.01 Employment-related uses are included in the site plan.
4.02 Low-cost entrepreneurial opportunities and affordable commercial space are given high priority.
4.03 Impacts of commercial development, especially transportation, noise, and air quality impacts, are mitigated.

GOAL 5: DEVELOPMENT AND AMENITIES SUPPORT AND FOSTER DIVERSITY IN AGE GROUPS.

Objectives:
5.01 Long-term site plan includes features and housing types that appeal to young families, with a high priority on places for outdoor play.
5.02 Long-term site plan includes senior-friendly housing.
GOAL 6: THE GREENWAY TRAIL IS A DEFINING FEATURE OF NEW SITE DEVELOPMENT AND IS IMPLEMENTED EARLY, AND WITH HIGH-QUALITY AMENITIES.

Objectives:
6.01 Trail should be implemented during the first stages of new development on the N Crawford Site, even if the first new construction is on a tax lot north of the railroad line.
6.02 The trail should be implemented with places for pedestrians to enjoy views and natural areas separate from oncoming bicycles.
6.03 New development will be oriented toward the trail and the river, rather than isolating the trail.
6.04 Amenities such as benches, public art, and publicly accessible restrooms should be included.

GOAL 7: SITE DEVELOPMENT IS PEDESTRIAN ORIENTED.

Objectives:
7.01 Pedestrian safety is protected on edges of the site, as well as between developments on the site itself.
7.02 Pedestrian comfort is supported through lighting, street trees, and pedestrian-oriented design.

GOAL 8: DEVELOPMENT INCLUDES INFRASTRUCTURE IMPROVEMENTS FOR THE SURROUNDING NEIGHBORHOOD.

Objectives:
8.01 Auto traffic impacts on neighboring streets are mitigated through traffic-calming and other measures.
8.02 Streets connecting to the site are improved for pedestrians, with better crossings and sidewalks.
8.03 Water and sewage system improvements receive direct funding from developer.
8.04 Improved transit service is accommodated within a block of new site development.
8.05 Improved railroad crossings include signals. Railroad overcrossing should be explored, if feasible, and access improvements should be delivered before full development of land between river and railroad.

GOAL 9: VIEWS OF NATURE AND LOCAL LANDMARKS ARE PROTECTED FOR RESIDENTIAL NEIGHBORS AND IN PUBLIC VIEWSHEDS.

Objectives:
9.01 Site design provides multiple on-site areas where views of nature, the river, and bridge are publicly accessible.
9.02 Analysis of future views from homes uphill on N Edison and above will retain visibility of natural areas and St. Johns Bridge.
9.03 Green roofs or ecoroofs are implemented, particularly where rooftops may be in view of existing neighbors.

GOAL 10: DEVELOPMENT MITIGATES RAILROAD NOISE, PRIORITIZING IMPACTS ON RESIDENTIAL DEVELOPMENT.

Objectives:
10.01 Do not construct residential use buildings within 150-200 feet of railroad line.
10.02 A soundproof wall can be constructed near the railroad line as a noise and vibration buffer. The wall is decorated with art, vegetation, or room for creation of new art.
10.03 Use enclosed balconies for residential development facing the railroad line. Developer should invest in noise mitigation measures in building construction.
10.04 Parking and vegetation is sited closer to rail as buffer.
10.05 Position industrial, parking, or green spaces closer to rail, rather than homes.
HEALTHY ENVIRONMENT

GOAL 11: DEVELOPMENT IMPROVES LOCAL AIR, SOIL, AND WATER QUALITY.

Objectives:
11.01 Air pollution from the site will decrease.
11.02 Brownfield remediation of soil and water will meet or exceed standards for residential land within 5 years and decisions will be made with local health and environmental conditions as the top priority.
11.03 Stormwater is treated on site.
11.04 The land within the greenway overlay zone will be fully restored to natural conditions within 5 years, with habitat and water quality as top priorities.
11.05 Landscaping outside the greenway overlay zone will be designed to optimize wildlife corridors for native species and to reduce the urban heat island effect (which exacerbates air pollution).

GOAL 12: DEVELOPMENT WILL INCLUDE TREES, GREEN PLANTINGS, AND INTENTIONAL LANDSCAPING.

Objectives:
12.01 Street trees and generous natural landscaping will be incorporated into site design.
12.02 Site development will include publicly accessible and welcoming pockets of open space.

These twelve goals informed development alternatives for the Steel Hammer Site and could be useful to CPNA in assessing other potential neighborhood development as well. They are not absolute or unchangeable and should be considered a starting point and an ongoing list for the community to edit and build upon.
The Appendices contain more detailed background information on various topics mentioned in the three documents, as well as a glossary of terms and printable information. The Background Documents contain existing conditions, opportunities and constraints, and a public engagement report. The Cathedral Waterfront Plan is the final document of three main reports produced during this project. The Toolkit includes strategies for general neighborhood engagement and more specific advice about how the neighborhood can anticipate and influence development processes.
appendix a: glossary of terms

**Active Use:** Active uses in a building/development put the focus on people and on creating experiences that are engaging, safe and comfortable. Developments with active uses usually have design elements that are conducive to a walkable and active sidewalk environment. Examples of active uses can be a cafe with outdoor seating, ground floor retail and live-work units.

**Brownfield:** A site previously used for industrial or certain commercial uses and possibly contaminated from those uses, but develop-able upon cleanup.

**Buildable Land Area:** the percentage of a tax lot that the zoning code allows to be covered by developed structures

**Census Block:** the smallest geographic unit used by the United States Census Bureau for tabulation of 100-percent data (data collected from all houses, rather than a sample of houses).

**Community Benefit Agreement:** a legally binding contract negotiated between a developer and a coalition representing broad spectrum of community members impacted by the development. In exchange for community members' support for the project, the developer agrees to provide certain benefits. Existing CBAs include provisions such as funds for affordable housing and open space, card check neutrality for workers who choose to organize unions, and living wage goals for workers employed at the development.

**Comprehensive Plan Designation:** a high-level category for zoning decisions, determined in the Comprehensive Plan. Unlike zoning, the designation does not detail the specific rules and regulations for what can be built on the site—rather, it specifies the range of zones that can be selected for a site. Sometimes the designation and zone have the same title, like a box that fits precisely within another box. Other times, the zone may be a lower density than the designation.

**Construction loan:** A loan made usually by a commercial bank to a builder to be used for the construction of improvements on real estate and usually running six months to two years.

**Debt Service Coverage Ratio (DCR or DSCR):** a ratio used by bank loan officers in determining income property loans. This ratio should ideally be over 1. That would mean the property is generating enough income to pay its debt obligations.

**Equity:** The portion of an ownership interest in real property or other securities that is owned outright, that is, above amounts financed.

**Exaction:** a concept in property law when a condition is required to mitigate the impacts of development. Exactions must share an “essential nexus” between the mitigation in question, and a public interest. The burden on the landowner must also be roughly proportional to the impact created.

**FAR (Floor Area Ratio):** the relationship of the total building floor area to the buildable land area - essentially dividing the gross square footage of a building by the total land area on which it can be built.

**Land Use Review:** A Land Use Review is a procedure that allows a local government to review and approve the proposed land use, assuring that it is compatible with all the regulatory plans before issuing a permit or approval. Depending on the zoning at the site, constraints on the land (flood plains etc.) and the uses or developments that are proposed, a project may or may not require a land use review. If you have checked the applicable zoning code requirements (e.g., base zone, overlay zone, plan district) and if your proposal can meet all of the applicable use and development standards, then you may not need a land use review. Land use reviews vary in their procedure, length of time for reviewing and “who” (City Staff, Hearings Officer, Design Commission, City Council etc.) reviews a particular project.

**Loan to Value (LTV):** The relationship between the amount of a mortgage loan and the value of the real estate securing it; the loan amount divided by market value.
**Net Operating Income (NOI):** Cash flow from rental income on a property after operating expenses are deducted from gross income.

**Operating expenses:** Expenses directly related to the operation and maintenance of a property, including real estate taxes, maintenance and repair, insurance, payroll and management fees, supplies, and utilities.

**Overlay Zone:** Overlay zones consist of regulations that address specific subjects in particular areas in the City. Overlay zone regulations are in addition to regulations in the base zone and modify the regulations of the base zone.

**Pencil out:** A term used for a rough analysis of the viability of an investment. A developer may usually use this term to express whether a proposed investment in a development is expected to be profitable for him or not.

**Pro forma:** Financial assessment tool used by developers, often in the form of a spreadsheet, to calculate either current and/or projected financial results of a piece of real estate.

**Permanent financing/long-term mortgage:** The financing that takes over after constructions. Permanent financing usually has fixed interest rates and amortized over 20-30 years. The size of the permanent loan is determined by the value of the property and the cash flow that the property generates to pay debt service.

**Superfund:** A US federal government program designed to fund the cleanup of toxic wastes.

**System Development Charge (SDC):** Charge levied (on developers) by local governments to pay for the cost of providing public facilities necessitated by a given development.

**Zoning:** Classification and regulation of land by local governments according to use categories (zones); often includes density designations as well.

**COMMON DEVELOPMENT ACRONYMS**

Are people throwing around strings of letters? First off, never hesitate to stop a person and bring them down to earth--most acronyms have different meanings in different professions. Skipping acronyms you use everyday in work can also be a challenge however, and the authors of this toolkit catch themselves using coded lingo too--that's why we hope the following list will be helpful.

**BDS:** Bureau of Development Services

**BES:** Bureau of Environmental Services

**BLI:** Building Land Inventory

**BPS:** Bureau of Planning and Sustainability

**CBA:** Community Benefits Agreement OR Cost Benefit Analysis

**CDBG:** Community Development Block Grant

**CEL:** Community Engagement Liaisons ([https://www.portlandoregon.gov/oni/?c=62226&a=482264](https://www.portlandoregon.gov/oni/?c=62226&a=482264))

**CM1, CM2, or CM3:** Categories of zoning used in the spring drafts of the Mixed Use Zone Concept Report

**CU:** Conditional Use

**DLC:** Oregon Department of Land Conservation and Development

**EPA:** Environmental Protection Agency

**FAR:** Floor Area Ratio

**GIS:** Geographic Information System

**LU:** Limited Use

**LUBA** (rhymes with tubea): Land Use Board of Appeals

**MFI:** Median family income

**MUF:** Mixed Use Zone

**NCU:** Non-conforming use

**ONI** (rhymes with Tony): Office of Neighborhood Involvement

**PDC:** Portland Development Commission

**PSC:** Planning and Sustainability Commission (oversees BPS decisions)

**PUD:** Planned Unit Development

**SDC:** System Development Charge

**UBG:** urban growth boundary
appendix b: zoning

Figure B1: Cathedral Park Neighborhood Base Zones

The Portland Zoning Code regulates the types of uses as well as physical development that can occur on any given property. The Steel Hammer Site is subject to the regulations of a base zone, overlay zones, and the neighborhood plan district. See Figure B1 for the variety of base zones present in the Cathedral Park Neighborhood.

EMPLOYMENT BASE ZONE (CHAPTER 33.140)

The Steel Hammer Site was designated as Central Employment (EX) in the 1980 Portland Comprehensive Plan. The General Employment zones contain a variety of allowed, conditional, and limited uses. For instance, manufacturing and production, wholesale sales, industrial service, and vehicle repair are examples of the uses that are allowed outright while household living, retail sales, and office are subject to limitations and conditions (see Table 140-1, from the City of Portland Zoning Code). The zones that were selected to implement that designation on the Steel Hammer Site were General Employment 1 (EG1) and General Employment 2 (EG2), with EG1 abutting North Crawford Street and EG2 applied to the area between the railroad tracks and the Willamette River. The general employment zones, “allow a wide range of employment opportunities without potential conflicts from interspersed residential uses. The emphasis of the zones is on industrial and industry-related uses. Other commercial uses are allowed to support a wide range of services and employment opportunities” (Portland Zoning Code Chapter 33.140).

The EG1 zone is geared toward areas that generally have smaller lots and a grid block pattern. The area is mostly developed, with sites having high building coverages and buildings that are usually close to the street. EG1 zoned lands will tend to be on strips or small areas.

The EG2 zone is for areas that have larger lots and an irregular or large block pattern. The area is less developed, with sites having medium and low building coverages and buildings that are usually set back from the street. EG2 zoned lands will generally be on larger areas than those zoned EG1.
The development standards for the General Employment zones include information about floor area ratio (FAR), height, setbacks, and building coverage. The EG1 zone has an FAR of 3:1, a maximum height of 45 feet, minimum building setbacks of 5 feet, and limits the building coverage to 85% of the lot while requiring a minimum of 15% of the lot to be landscaped. The EG2 zone has similar standards except for no height limit and requires a minimum setback of 25 feet from the street lot line. Both zones do not require ground floor window standards (see Table 140-3).

<table>
<thead>
<tr>
<th>Table 140-3</th>
<th>Development Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td><strong>EG1</strong></td>
</tr>
<tr>
<td>Maximum FAR (see 33.140.205)</td>
<td>3 to 1</td>
</tr>
<tr>
<td>Maximum Height (see 33.140.210)</td>
<td>45 ft.</td>
</tr>
<tr>
<td>Min. Building Setbacks Street Lot Line (see 33.140.215)</td>
<td>5 ft.</td>
</tr>
<tr>
<td>- Lot line abutting an OS, C, E, or I zoned lot</td>
<td>0</td>
</tr>
<tr>
<td>- Lot line abutting an R zoned lot</td>
<td>See Table 140-4</td>
</tr>
<tr>
<td>Max. Building Stbks (see 33.140.215)</td>
<td>10 ft.</td>
</tr>
<tr>
<td>Transit Street or Pedestrian District</td>
<td></td>
</tr>
<tr>
<td>Maximum Building Coverage (see 33.140.220)</td>
<td>85% of site area</td>
</tr>
<tr>
<td>Min. Landscaped Area (see 140.225)</td>
<td>15% of site area</td>
</tr>
<tr>
<td>Ground Floor Window Standards apply (see 33.140.230)</td>
<td>No</td>
</tr>
<tr>
<td>Pedestrian Standards Apply (see 33.140.240)</td>
<td>Yes</td>
</tr>
<tr>
<td>Min. Landscaping Abutting an R zoned lot (see 33.140.215.B.)</td>
<td>5 ft. @ L3 or none</td>
</tr>
</tbody>
</table>

### Table 140-1

**Employment and Industrial Zone Primary Uses**

<table>
<thead>
<tr>
<th>Use Categories</th>
<th>EG1</th>
<th>EG2</th>
<th>EX</th>
<th>IG1</th>
<th>IG2</th>
<th>IH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential Categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Living</td>
<td>CU</td>
<td>CU</td>
<td>L/CU [2]</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td><strong>Commercial Categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quick Vehicle Servicing</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Vehicle Repair</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Self-Service Storage</td>
<td>Y</td>
<td>Y</td>
<td>L [7]</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Commercial Outdoor Recreation</td>
<td>Y</td>
<td>Y</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
</tr>
<tr>
<td>Major Event Entertainment</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
</tr>
<tr>
<td><strong>Industrial Categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing And Production</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Warehouse And Freight Movement</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Wholesale Sales</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industrial Service</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Railroad Yards</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td><strong>Institutional Categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks And Open Areas</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Schools</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Colleges</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Medical Centers</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Religious Institutions</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td><strong>Other Categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aviation And Surface Passenger Terminals</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
</tr>
<tr>
<td>Detention Facilities</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
</tr>
<tr>
<td>Mining</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>CU</td>
<td>CU</td>
<td>CU</td>
</tr>
<tr>
<td>Rail Lines And Utility Corridors</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Y = Yes, Allowed
L = Allowed, But Special Limitations
CU = Conditional Use Review Required
N = No, Prohibited
The Steel Hammer Site and surrounding properties are included in the St. Johns Plan District, which regulates development beyond the requirements of the base zones in order to meet goals for an urban level of mixed-use development. The Steel Hammer Site is also subject to additional regulations of the Riverfront Subdistrict within the St. Johns Plan District. The additional regulations serve to protect industry while also encouraging the transition to an urban mixed-use area by allowing the development of housing and office uses only where appropriate.

The main objective of the St. Johns Plan District is to strengthen the area’s role as the commercial and civic center of the North Portland Peninsula. The regulations in this district generally serve to discourage auto-oriented uses and development and enhance the pedestrian environment and character of the commercial and residential buildings in the district. Another important regulation that influences physical development in the district is supporting the Willamette Greenway and opportunities to celebrate the Willamette River.

Under the St. Johns Plan District, the General Employment zone has additional prohibited uses as well as additional limitations on the size of uses. For instance, vehicle repair and self-service storage are allowed uses in the General Employment base zones, but the St. Johns Plan District prohibits them. Additionally, retail sales and service uses are subject to additional floor area limits to ensure that they do not dominate the riverfront areas or overwhelm the transportation system and are generally limited to community-serving establishments.

The development standards of the St. Johns Plan District serve to provide additional guidance on the preferable form of development in the area. These standards include the prohibition of drive-through facilities and detached houses in the General Employment zone, but the encouragement of exterior activities like outdoor seating for cafes. Additional building height limits are also imposed to preserve public views and the character of the neighborhood (see Figure B2). Most important to note is that the Riverfront Subdistrict prohibits residential and office uses on properties that are zoned General Employment.
GREENWAY OVERLAY ZONES (CHAPTER 33.440)

In addition to the base zone and the plan district regulations, the Steel Hammer Site also falls under two Greenway overlay zones - River General (g) and River Water Quality (q). The purpose of the greenway overlay zones is to implement the land use pattern identified in the Willamette Greenway Plan and the water quality requirements of Metro Code 3.07.340.B (Title 3).

The River General overlay (g) allows uses and development consistent with the base zoning, which allow for public use and enjoyment of the waterfront, and which enhance the river’s natural and scenic qualities. It does not restrict the primary uses allowed in the base zones and the applicable greenway setback extends from the top of the bank to a point 25 feet landward of the top of the bank (see Figure B3).

The River Water Quality overlay (q) protects the functional values of water quality resources by limiting or mitigating the impact of development in the setback. The River Water Quality overlay applies additional use restrictions within a setback of the greenway and the setback extends from the top of the bank to a point 50 feet landward for sites with less than 25 percent slope, or to a point 200 feet landward for sites with 25 percent or greater slope (see Figure B4). Development in the greenway setback is discussed in terms of river-dependent or river-related primary uses. Primary uses that are not river-dependent or river-related may be allowed within the setback if they are approved through greenway review. For instance a marine freight terminal is a river-dependent primary use, but not all other development associated with the terminal is (i.e. parking and storage areas). Development landward of the greenway setback is not required to be river-dependent or river-related but is subject to greenway review unless exempt under Portland Code 33.440.320 (see Figure B5). Development within the greenway setback that is not river-dependent or river-related requires greenway review and a Greenway Goal Exception to locate in the greenway setback. Development on sites that fall underneath a greenway overlay are subject to supplemental application materials (i.e. supplemental site plans, mitigation plans) and are subject to additional approval criteria.
The Greenway Overlay Zone also regulates floor area ratio (FAR), landscaping, and public recreational trails. For 200 feet inland of the high water line, development is subject to a FAR of 2 to 1 unless the site is already subject to a more restrictive FAR (i.e. from the base zone). The greenway landscaping requirements may be included in the overall percentage-of-site landscaping requirements of the base zone. These requirements also dictate how many trees and shrubs need to be planted for every foot of river frontage as well as as well as ground cover limitations. Lastly, trails are allowed within the Greenway Overlay setback if the site has the public recreational trail symbol as shown on the Official Zoning Maps and if it complies with the requirements of Chapter 33.272, Public Recreational Trails.

PUBLIC RECREATIONAL TRAILS (CHAPTER 33.272)

The construction of a recreational trail is required on all lands with a recreational trail symbol when there is new development, when exterior alterations to existing development are greater than 35% of the assessed value of the total improvements on the site, or when streets are developed in a subdivision, industrial park, or PUD. The trail must be constructed prior to the issuance of certificate of occupancy, and it must comply with the design standards of Portland Parks and Recreation for a recreational trail, or with Portland Bureau of Transportation for a trail that is located in the public right-of-way.

2035 COMPREHENSIVE PLAN UPDATE AND THE MIXED USE ZONES PROJECT

2035 Comprehensive Plan Update could have direct impacts on the allowed uses on the Steel Hammer Site. The Mixed Use Zones (MUZ) Project revises commercial and employment properties in Centers and Corridors outside of the Central City. The land use designation has already been chosen for the site but the specific zone to implement the new designation will be proposed in mid-2015.

The new land use designation for the Steel Hammer Site is Mixed Use - Urban Center which, “allows a broad range of commercial and employment uses, public services, and a wide range of housing options. Areas within this designation are generally mixed-use and very urban in character. Development will be pedestrian-oriented with a strong emphasis on design and street level activity, and will range from low- to mid-rise in scale. The range of zones and development scale associated with this designation are intended to allow for more intense development in core areas of centers and corridors and near transit stations, while providing transitions to adjacent residential areas.”

According to the preliminary zoning concept for the MUZ Project, the new framework of zones to replace the existing Commercial and Central Employment zones will reduce the current number of nine zones down to a set of four (Commercial Mixed Use 1 through 3, and Commercial Employment). Given that the General Employment zones that are currently on the Steel Hammer Site are not included in the proposed conversion system, specific attention will need to be paid to ensure that they remain and a new commercial mixed-use zone is not chosen instead.

The allowed uses and design standards are still conceptual at this point in time and need additional refinement, testing, and development by the city. In addition to developing a new framework for the zones, the city is also exploring additional development standards and incentives which will include concepts like height transitions and buffering, pattern area standards, street frontage standards, outdoor space requirements for residential units, bonuses for community benefits, and the expansion of the allowances for shared parking.

The Portland Planning and Sustainability Commission (PSC) will hold public hearings in late 2015 after the proposed mapping and application of the new zones has been completed. Adjustments may be made based on public testimony and the PSC recommendations will be forwarded to Portland City Council for final public hearings.
appendix c: zoning leverage points

INTRO

During the CW Team report-out and wrap-up at the Cathedral Park Neighborhood Association on May 12, 2015 there was an overwhelming interest in knowing more about the zoning on the Steel Hammer Site. Below is as condensed as we could make it while still providing ALL the layers of information about this really large zoning “onion”. Fortunately, there are maps and graphics to help tell the story. If reading the lengthy anthology below seems daunting, the important takeaway is this:

there are multiple LEVERAGE POINTS for the neighborhood depending on the combination of base zone, overlay zone, and land use designation, and these various combinations could differ if a developer wants to submit an application tomorrow, over the next year, or a couple years in the future. Upon first glance, the combination might look prohibitive to the mixed-use type of development a lot of the neighborhood would like to see, but it is BECAUSE of this restrictive combination, and the multiple hoops that a developer will have to jump through to build almost anything lucrative, that the community is able to have input on what gets built (via various LEVERAGE POINTS) instead of a developer being able to build almost anything simply by right.

BACKGROUND

Every property in Portland has both a zone and a land use designation. Often, these two regulations are the same for a property (i.e. both are EX or R1), but in other cases they are different. Land use designations are actually a higher, more nebulous level of regulation that somewhat hangs in a cloud above the actual property. In the planning process, the designations come before the zoning and describe the general use that is expected for the site for the following decades. In order to plan for conditions many years in the future, the land use designation can help allow for more (or less) intense development while the zone that is chosen reflects a level that is more appropriate for the current conditions. Zones are also more specific about not just the allowed use, but the physical parameters for development, known as “Development Standards” which impact things like height, FAR, and lot coverage.

The Steel Hammer Site has a land use designation of EX and zones of EG1 and EG2. In addition to these base zones are the Willamette Greenway Overlay zone and the St. Johns Neighborhood Plan District (further referred to as the SJNPD). These constitute a second layer of zoning for the site and provide additional restrictions than what is dictated in the base zone. So essentially, these overlays fall in between the cloud that is the Comprehensive Plan land use designation, and the zone that is actually on the ground. You will see this situation represented in the upper left corner of Figure C1 below.

Note: for the sake of this conversation, the Willamette Greenway Overlay has not been included in the diagrams, or discussion, because the restrictions on uses and development are limited to a certain distance from the waterfront. To summarize the greenway restrictions (specifically the River Water Quality overlay, which is applied to the Steel Hammer Site), only the North Portland Willamette Greenway Trail can be built within 50 feet of the top of the riverbank (no buildings). Given that the top of the riverbank is currently about 50 feet from the water, any building development would occur a total of approximately 100 feet from the edge of the water. As part of the Willamette Greenway Overlay, any development will be subject to “greenway review” which includes a myriad of checkpoints to ensure more conscious development (see section 33.440.300 of the zoning code). The rest of the site is still subject to the combination of the base zone, SJNPD, and the Comprehensive Plan land use designation.

TODAY

The current zoning conditions are shown in Figure C1. The combination of the SJNPD with the base zone of EG (both EG1 and EG2) creates conditions that are not favorable for a developer. As part of the SJNPD, there is an additional Riverfront Subdistrict (see Map 583-1). There are regulations that apply to the whole spatial area of the SJNPD (like the height limits shown in Map 583-2), and then there are additional regulations for the properties that fall within the Riverfront Subdistrict. The
Steel Hammer Site is one of these properties, and depending on the zone on the site, there are regulations on the allowed uses. Section 33.583.285.C (of the SJNPD) explicitly states that residential and office uses are prohibited on properties zoned EG that are located within the Riverfront Subdistrict. And to clarify, this regulation supersedes the allowed uses of the stand alone, EG1 and EG2 base zones.

Map 583-1: St. Johns Neighborhood Plan District and Riverfront Subdistrict

![Map 583-1: St. Johns Neighborhood Plan District and Riverfront Subdistrict](image)

Given that the residential and office uses (arguably the two most lucrative uses) are explicitly prohibited, if a developer were to submit an application for development any time between now and when the City of Portland 2035 Comprehensive Plan Update is approved, they would want a more favorable zoning combination. Fortunately, the City of Portland has processes for submitting applications for new zones.

Unlike applying for a completely new zone (i.e. R1 or R5 for this site), applying to have the Comprehensive Plan land use designation become the zone on the ground requires less paperwork/money (although $30,000 is nothing to scoff at - FYI, that is the approximate cost to have a designation become the zone) and has a greater likelihood of being approved. The EX zone on the Steel Hammer Site will allow for a significantly more profitable development, as the uses are not as restricted by the SJNPD (caveat: if it is entirely residential, however, then there are actually minimum density requirements, see section 33.583.285.D).

Figure C1: Zoning Combination for the Steel Hammer Site Today

![Figure C1: Zoning Combination for the Steel Hammer Site Today](image)
When a developer submits an application to have the land use designation become the zone, this triggers a Type III land use review process, which requires that notices be sent and a period of time is set aside for a public comment. Notices will be sent to property owners within 400 ft of the site (which doesn’t include many residences) as well as to recognized organizations in the area, like the Cathedral Park Neighborhood Association. After that notice is sent, there is a 21 day commentary period, which is a LEVERAGE POINT for the neighborhood. It is important to regularly check with the Neighborhood Association Board to see if they have received this notice.

If the current comprehensive plan land use designation is applied to the site, it could occur with conditions depending on the outcome of the comment period. Additionally, the current designation is not just EX, but technically EXd - the little “d” means there is a design overlay. The overlay requires that when plans are actually submitted for development (not just applications for land use/ zoning changes, but actual plans with renderings of the development), the Design Commission has to review them. The meeting in which they review the plans is a public meeting and another LEVERAGE POINT for community members to come and provide testimony on the development.

2015-2017

Currently, the City of Portland 2035 Comprehensive Plan Update is still underway. There are multiple tasks associated with this process, and the task to select the zones. The Comprehensive Plan Update land use designations have already been chosen and for the Steel Hammer Site it is Mixed Use - Urban Center (further referred to as MU-UC). Although this has been chosen, it is important to note that the whole 2035 Comprehensive Plan Update is not final until after City Council approves the entire plan, which is expected to be no earlier than 2016. The Mixed-Use Urban Center designation is very likely to be approved, but it is important to remember that this has not happened yet, and nothing is 100% certain.

Likewise, although most draft material published by the city states that overlays and plan districts are likely to remain it is important to keep watching for potential areas of conflict. Goal 1.15 of the Comprehensive Plan Update Proposed Draft (see pg. 12) states that, “Community, area, and neighborhood plans that were adopted by ordinance prior to [Comp Plan adoption date] are still in effect, however the goals and policies of this Comprehensive Plan supersede any goals or policies of a community, area, or neighborhood plan that conflict with a goal or policy in this plan.”

The 2035 City of Portland Comprehensive Plan update map application indicates that although the land use designation is changing, the EG zones may remain (type in “8524 N Crawford” into the search window of the map app to see more). If this is the case, the subsequent process will be almost identical to what would happen if the developer wanted to start building today - the only difference would be that instead of applying for the land use designation of EXd, the developer would be applying

Figure C2: Zoning Combination for the Steel Hammer Site 2015-2017
for the designation of MU-UC (with "likely remaining" Design Overlay). So if EG1 and EG2 are the zones that are chosen, the LEVERAGE POINT for the neighborhood will be the same - a public comment period and the Design Commission meeting.

If the developer waits until the new mixed use zones go into effect citywide (estimated as 2016 or 2017), and one of the new Mixed Use zones is chosen (which is the less likely scenario), the process looks a lot different. As you can see in Figure C2, the title of the figure is actually 2015-2017 because of the timeline for the 2035 Comprehensive Plan Update zone selection process, which is occurring during the summer and fall of 2015. Over the coming months, the developer will have conversations with multiple stakeholders including various city bureaus, to determine if one of the new Commercial Mixed-Use (CM) zones is likely for the Steel Hammer Site. If a CM zone is actually what the city is considering, the developer will determine whether or not it is in their best interest to wait for these zones to be applied. The public testimony that is required as part of the 2035 Comprehensive Plan Update is a LEVERAGE POINT for the neighborhood. Although in the figure this is symbolized with a microphone, public testimony is received in four different ways - oral testimony at hearings and written testimony via letters, email, or as comments on the Comprehensive Plan Zoning Map Application (note: the land use map is currently online, but the zoning map is still being created). It is recommended that the neighborhood stay on top of this process and ensure that the zones selected for the Steel Hammer Site (as well as other sites of interest) are beneficial for the neighborhood.

**FUTURE**

As previously mentioned, the future of the site will very likely include a Comprehensive Plan land use designation of MU-UC (hence why the cloud in Figure C3 has a solid border). Given that we are still unsure that the SJNPD will remain, we have excluded it from this third diagram. Lastly, we are also hesitant to confirm which zone will be applied to the site and have chosen to show the three most likely scenarios. Since the 2035 Comprehensive Plan map app shows EG as the potential future zone, this is considered the most probable scenario, though once again, it limits development potential and an application will likely be submitted to have the land use designation pulled down from the cloud and applied as the zoning on the ground. This will once again provide a LEVERAGE POINT for the neighborhood. On the off chance that a different zone is chosen for the site, less public involvement may be required for the developer.

![Figure C3: Zoning Combination for the Steel Hammer Site in the Future](image-url)
This appendix provides for what the Transportation Systems Plan (TSP is the City of Portland’s long-range plan that guides transportation investments) designations and terminologies mean for each of the surrounding streets.

**NORTH BURLINGTON AVENUE IN THE TSP**

- Traffic: The TSP has designated North Burlington to function as a Local Service Traffic Street. This means that North Burlington is intended to provide local circulation for automobile traffic, pedestrians and bicyclists and provide access to local residences and local commercial uses. Auto-oriented land uses are discouraged from using Local Service Traffic Streets as their primary access.
- Transit: As a designated Local Service Transit Street, North Burlington is intended to provide transit service to nearby residents and adjacent commercial areas. Local Service Transit Streets seldom carry regular bus service, except for short street segments to accommodate bus operations and for loops at the ends of routes. Location of bus stops along Local Service Transit Streets are to be based on TriMet service standards.
- Pedestrian and bicycle route: North Burlington is intended to serve as a Local Service Bikeway and Walkway. Local Service Bikeways are intended to serve local circulation needs for bicyclists and provide access to adjacent properties. Some of the design treatments that can be provided in such streets include creating shared roadways, traffic calming, adding bicycle lanes, and providing extra-wide curb lanes. TSP specifies that on-street parking on Local Service Bikeways should not be removed to provide bicycle lanes. As a Local Service Walkway, North Burlington is intended to serve local circulation needs for pedestrians and provide safe and convenient access to local destinations, including safe routes to schools. TSP recommends the usage of the Pedestrian Design Guide to design improvements on Local Service Walkways.
- Freight: North Burlington, as a Local Service Truck Streets is intended to serve local truck circulation and access. In general, Local Service Truck Streets provide for goods and service delivery to individual commercial, employment, and residential locations outside of Freight Districts. Use of restrictive signage and operational accommodation are appropriate for Local Service Truck Streets.
- Emergency Response: North Burlington, as a Minor Emergency Response Street, is intended to allow access to individual properties by emergency response vehicles, but maintain livability on the street.
- Street Design: North Burlington, as a Local Street, is designed to complement planned land uses and reduce dependence on arterials for local circulation. Depending on the surrounding land use, TSP suggests that Local Streets should be designed to support multi-modality, but are not intended for trucks (other than local deliveries) in residential areas. Local Streets are important for local circulation of trucks in commercial and industrial areas. The design for Local Streets include many connections with other streets, sidewalks, on-street parking, and planting of street trees and groundcover (where planting strips are included).

**NORTH RICHMOND AVENUE AND NORTH CRAWFORD STREET IN THE TSP**

North Richmond and North Crawford streets are almost classified in a very similar way to serve similar roles as per the TSP except for their transit service classification.

- Traffic: The TSP has designated North Richmond and North Crawford to function as Neighborhood Collectors. This means that both streets are intended to serve as distributors of traffic from Major City Traffic Streets or District Collectors to Local Service Streets. Both streets are planned to connect the neighborhood to other urban centers, corridors and other nearby destinations.
- Transit: North Richmond is designated as a Transit Access Street. This means that North Richmond is intended for district-oriented transit service serving main streets, neighborhoods, and commercial, industrial, and employment areas. North Richmond should be designed to provide bus shelters, safe and convenient pedestrian access and street crossings. The TSP encourages pedestrian- and transit-oriented development in commercial, institutional, and mixed-use areas along Transit Access Streets.
- North Richmond and North Crawford are classified in the same way as North Burlington Avenue for pedestrian, bicycle, freight, emergency response and street design classifications.
appendix e: socio-economic trends around the site

To understand the larger context within which the Steel Hammer Site is situated, we have analyzed demographic data from the U.S. Census Bureau for the Cathedral Park Neighborhood and also adjacent neighborhoods including University Park and St. Johns neighborhoods.

We have considered three scales or tiers of geography (Figure E1 shows Tier 1 and 2). These different scales/tiers of socio-economic trends which help inform what is feasible to build on the site are defined below:

- **Study area (Tier 1):** Tier 1 or “study area” immediately around the Steel Hammer Site is defined by Census Tracts 42 and 41.02. This includes the entire Cathedral Park Neighborhood with small parts of St. Johns neighborhood.

  Census tracts, which typically have between 1,500 and 8,000 people, with an average size of about 4,000 people, are intended to represent neighborhoods (U.S. Census Bureau). Census tracts 42 and 41.02 have retained their boundaries from 1980 to 2013. This stability of boundaries over time periods these census tracts provide is the main reason for defining the Cathedral Park Neighborhood boundaries by tracts rather than census blocks for the demographic analysis purposes.

- **Area of Planning Influence (Tier 2):** “Area of planning influence” or Tier 2 is the larger context that has impacts on site development and is also affected by the Steel Hammer Site development. This area includes the Cathedral Park Neighborhood, University Park neighborhood and St. Johns neighborhood. Its boundaries are defined by taking Census Tracts 42, 41.02, 41.01 and 40.02.

- **City of Portland (Tier 3):** Tier 3 includes the entire city of Portland.

**POPULATION CHANGE**

Over a period of 33 years since 1980, the population of the study area (Tier 1) around the Steel hammer Site has grown at a much slower rate (18%) as compared to City of Portland (62%, refer to Table E1). The study area’s share of population in Portland has been decreasing since 1980 (from 2% in 1980 to 1.4% in 2013).

The area of planning influence (Tier 2) has grown at a rate of 22 percent in the period of 33 years (from 1980 to 2013) which is also slower than the City of Portland’s overall growth change for the same period (Figure E1a).

Table E1: Total Population, 1980 - 2013

<table>
<thead>
<tr>
<th>TOTAL POPULATION</th>
<th>1980</th>
<th>2000</th>
<th>ACS 2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Area (Tier 1)</td>
<td>7,290</td>
<td>7,781</td>
<td>8,575</td>
<td>1,285</td>
</tr>
<tr>
<td>Area of Planning Influence (Tier 2)</td>
<td>17,703</td>
<td>19,345</td>
<td>21,504</td>
<td>3,801</td>
</tr>
<tr>
<td>City of Portland (Tier 3)</td>
<td>366,383</td>
<td>529,121</td>
<td>594,687</td>
<td>228,304</td>
</tr>
</tbody>
</table>

Figure E1a: % Change in Total Population from 1980 - 2013

% Change in Total Population, 1980-2013

AGE
The median age in the study area around Steel Hammer Site is slightly younger (34 years) compared to City of Portland’s median age (36 years). Overall, study area has experienced similar growth rates as Portland for the working age populations (age 35-64, Figure E2). However, the study area has experienced population declines in the children (under-18) and in the older (65 and above) age groups. This is in contrast with Portland’s growth trends for these age groups from 1980 to 2013 (Figure E2).

Figure E2: % Change in population age groups from 1980 - 2013
Racial and Ethnic Trends

The study area around Steel Hammer Site has always had a greater percentage of people who are Hispanic/Latino (14% in 2013) when compared to the City of Portland (9% in 2013). The percentage of white non-hispanic population has declined by 5% (from 6,558 to 6,175 people) from 1980 to 2013 in the study area around the site while the overall white non-hispanic population in Portland has increased by 37% (from 312,466 to 428,334 people) for the same period. Interestingly, the percentage African-American population in the study area around the site is lower than the overall African-American population in the City (Figure E4).

Figure E3: % Hispanic/Latino and Non-Hispanic/Non-Latino populations, 2000-2013

![Figure E3](image)


Figure E4: % White and African-American population, 2000-2013

![Figure E4](image)

POVERTY & MEDIAN INCOME

Overall, in 2013, the percentage of people (17.9%) in the study area around the Steel Hammer Site who are living in poverty is similar to the percentage of the population living in poverty in the City of Portland (17.8%). The study area around the site has experienced an increase in the percentage of people in poverty by nearly 38% from 2000 to 2013. However, both the tri-neighborhood area and the City of Portland have experienced greater increases in the percentage of people living in poverty for the same period (Table E2).

Table E2: % of population in poverty, 2000-2013

<table>
<thead>
<tr>
<th>POPULATION IN POVERTY</th>
<th>2000</th>
<th>ACS 2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Area (Tier 1)</td>
<td>1,115</td>
<td>1,540</td>
<td>425</td>
</tr>
<tr>
<td>Area of Planning Influence (Tier 2)</td>
<td>2,920</td>
<td>4,395</td>
<td>1,475</td>
</tr>
<tr>
<td>City of Portland (Tier 3)</td>
<td>67,481</td>
<td>103,514</td>
<td>36,033</td>
</tr>
</tbody>
</table>


The median income for the study area around the Steel Hammer Site has historically been lower than the City of Portland’s median income (Table E3). The median income in the study area has increased from $38,517 in 1980 to $43,518 in 2013. In the same period, City of Portland experienced a similar increase in median income. Interestingly, the median incomes in the tri-neighborhood area have more or less remained at the same level since 1980s.

Table E3: Median Income, 1980 - 2013

<table>
<thead>
<tr>
<th>MEDIAN INCOME</th>
<th>1980</th>
<th>2000</th>
<th>ACS 2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Area (Tier 1)</td>
<td>$38,517</td>
<td>$44,551</td>
<td>$43,518</td>
<td>5,002</td>
</tr>
<tr>
<td>Area of Planning Influence (Tier 2)</td>
<td>$47,114</td>
<td>$50,353</td>
<td>$45,034</td>
<td>-2,080</td>
</tr>
<tr>
<td>City of Portland (Tier 3)</td>
<td>$47,432</td>
<td>$56,136</td>
<td>$52,657</td>
<td>5,225</td>
</tr>
</tbody>
</table>

* All dollar values are in 2013 inflation adjusted dollars

EDUCATIONAL ATTAINMENT

Overall, the study area around the Steel Hammer Site has a lesser percentage of people (16%) holding graduate or professional degrees than City of Portland (21%) in 2013. However, trends from 2000-2013 indicate that a higher percentage of people above 25 years of age in the study area around the site have obtained college degrees when compared to City of Portland (Table E4).

Table E4: Education attainment levels (age 25 and above), 2000 - 2013

<table>
<thead>
<tr>
<th>EDUCATION (25 years &amp; above)</th>
<th>2000</th>
<th>ACS 2013</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Area (Tier 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School or Less</td>
<td>5,256</td>
<td>6133</td>
<td>877</td>
</tr>
<tr>
<td>College/Bachelor’s</td>
<td>2,789</td>
<td>1721</td>
<td>-1,068</td>
</tr>
<tr>
<td>Master’s/ Professional/ Doctorate</td>
<td>2,224</td>
<td>3550</td>
<td>1,326</td>
</tr>
<tr>
<td>Area of Planning Influence (Tier 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School or Less</td>
<td>11,653</td>
<td>13,629</td>
<td>1,976</td>
</tr>
<tr>
<td>College/Bachelor’s</td>
<td>6,145</td>
<td>4,510</td>
<td>-1,635</td>
</tr>
<tr>
<td>Master’s/ Professional/ Doctorate</td>
<td>4,932</td>
<td>7,477</td>
<td>2,545</td>
</tr>
<tr>
<td>City of Portland (Tier 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School or Less</td>
<td>363,851</td>
<td>427,180</td>
<td>63,329</td>
</tr>
<tr>
<td>College/Bachelor’s</td>
<td>133,073</td>
<td>115,627</td>
<td>-17,446</td>
</tr>
<tr>
<td>Master’s/ Professional/ Doctorate</td>
<td>189,401</td>
<td>236,656</td>
<td>47,255</td>
</tr>
</tbody>
</table>

**COMmuters:**

In 2013, majority of the people (76.3%) in the study area around the Steel Hammer Site commute to work in a car, truck or van (Figure E5). This trend is similar to the City of Portland (68% of people commute to work in a car, truck or van). However, the percentage of commuters by car, truck or van in the study area around the site is higher than Portland’s percentage. 9% of people in the study area around the site use active modes of transportation (bicycle, walk) which is lesser than the percentage of people in the City of Portland (12%) using active modes to commute to work (ACS 2013). The average commute time for residents in the study area is 30 minutes compared to 24 minutes for Portland residents (ACS 2013).

Figure E5: Means to commute to work in the study area (Tier 1), 2009-2013

**Crime**

Within the last year, less than 25 crimes have occurred within ½-mile radius of the Steel Hammer Site (Figure E6). For comparison, Downtown Portland has experienced 300-500 crimes within the last twelve months and around 100-300 crimes were committed within ½-mile radius of the James John Elementary School in the adjacent St. Johns neighborhood.

Larceny (includes pickpocket, purse snatch, shoplift, and bike theft) was the major type of crime (55%) that occurred within half-mile distance from the site in the past year. Burglary (20%), theft from auto (15%), assault (5%) were the other prominent crimes within a half-mile radius of the site.*

---

SCHOOLS

There are five schools belonging to the Portland School District within one mile of the Steel Hammer Site (Figure E7). The Portland School District is the largest school district in the state of Oregon. It is a Pre K-12 district with an enrollment of approximately 48,000 students. About 78 schools and 42 special needs sites are maintained within the district. The closest Portland Public Schools are James John Elementary, James John Head Start, Roosevelt High, Sitton Elementary and Pathfinder Academy. Overall, schools within one mile of the site are underperforming when compared to the District results (Table E5).

The percentage of students who exceed the state standards in mathematics (52) and reading (70) tests from Roosevelt High School are fewer than the percentage of students who exceed the standards in the Portland School District overall (74 and 83% respectively, Table E5).


Portland Public Schools Head Start serves 844 low-income three and four year old children and their families. Head Start programs provide quality comprehensive services that are family focused, including education, social and emotional development, physical and mental health, and nutrition.

Pathfinder Academy is an alternative education program for pregnant and parenting teens, who reside in the Portland Public Schools attendance area. Students are supported in the program through individualized academic plans, peer support groups, job readiness training, and transitional support to community colleges or professional training.


Table E5: Percentage of students from each school in the Portland School District who met or exceeded state standards in each test (2014-2015)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Math 3</th>
<th>Math 4</th>
<th>Math 5</th>
<th>Math 6</th>
<th>Math 7</th>
<th>Math 8</th>
<th>Math 11</th>
<th>Reading 3</th>
<th>Reading 4</th>
<th>Reading 5</th>
<th>Reading 6</th>
<th>Reading 7</th>
<th>Reading 8</th>
<th>Reading 9</th>
<th>Reading 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>District</td>
<td>65</td>
<td>71</td>
<td>72</td>
<td>66</td>
<td>66</td>
<td>66</td>
<td>74</td>
<td>73</td>
<td>77</td>
<td>73</td>
<td>71</td>
<td>76</td>
<td>71</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>James John</td>
<td>42</td>
<td>43</td>
<td>52</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>34</td>
<td>45</td>
<td>53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roosevelt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sitton</td>
<td>51</td>
<td>44</td>
<td>42</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>51</td>
<td>49</td>
<td>45</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix F: Interviews

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Big Takeaways from Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Person &amp; Bob Thompson</td>
<td>Mackenzie: (Architecture, Engineering, Design, Planning firm)</td>
<td>Industrial needs: Big trucks, freeway access, and favorable grades on arterials (not too steep of slopes). Healthy neighborhoods have a mix of age groups: Different age groups have different needs. For instance, a development for older adults (say even a cohousing community) could support a pharmaceutical retailer.</td>
</tr>
<tr>
<td>Staff-on-Duty at the Front Counter of Development Services Center (DSC)</td>
<td>Bureau of Development Services</td>
<td>The river quality greenway overlay zone requirements supersede the river general requirements, which means that the setback from the top of the bank is 50 feet. Development of a greenway trail, if developed to city standards, can be built within this setback. If development permit application is NOT submitted for the parcels on the riverside of the site, the trail will not get developed.</td>
</tr>
<tr>
<td>Barbara Quinn</td>
<td>Friends of Baltimore Woods</td>
<td>Site is one of the last waterfront habitats for wildlife, which protects the river and provides connection for migration. Concerned about camping on the site. Whistle Free Zone has been a fight for 10-15 years. River Plan is in limbo. DEQ should be done with upland site in next two years.</td>
</tr>
<tr>
<td>Ben Wood</td>
<td>Piedmont Group Development</td>
<td>Purchased nearby site at $19 per square foot to have approximately 100 residential units, with flexible first floors. Estimates cost for Steel Hammer at $11.5-$12.3 per square foot, requiring phasing and potentially parceled off to other developers, and office built to suit a contracted large tenant. Efficiency of the building/development is more important than heights. Environmental conditions and the need to develop all new infrastructure are the biggest challenges. Market conditions drive the uses and the neighborhood has the opportunity to interject on where those uses might go, the transition areas and places for height step backs as well as public access.</td>
</tr>
<tr>
<td>Brooke Berglund</td>
<td>Port of Portland</td>
<td>Railroad noise is a big concern as Cathedral Park builds out. Port has tried four times for funding of no whistle zone without success. Notification has not been required for new residents. Suggests soundproofing, limiting residential to North Crawford Street and including light industrial to preserve limited industrial waterfront. Port owns half of McCormick and Baxter with no plans currently. Port is eager to be a good neighbor.</td>
</tr>
<tr>
<td>Jason Birch, Fire Marshal</td>
<td>City of Portland</td>
<td>Fire and emergency access requires more than one point of entry to the site. If a second access point across the railroad tracks is NOT allowed, then the Fire Marshal will not allow development to occur riverward of the tracks. The length of the hoses dictates that certain cut-throughs will be required in the building structure so they can wrap the hoses around to the other side. Emergency access roads will need to be 26 feet in width for buildings taller than 30 feet in order to position the vehicle in such a way that the ladder can be used to reach the upper floors. The emergency vehicles need to park a minimum of 15 feet away from a building, and can park a maximum of 38 feet away. Emergency vehicles can reverse for lengths up to 300 feet, anything longer will require a fire-code approved area to turn around.</td>
</tr>
<tr>
<td>NAME</td>
<td>ORGANIZATION</td>
<td>BIG TAKEAWAYS FROM MEETING</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Jenn Bildersee</td>
<td>City of Portland, Brownfield Program</td>
<td>Site like this probably has federal (superfund) liability and state (brownfield) liability. Anyone in chain of ownership is liable. State offers a strong prospective purchaser agreement to help with cost, but no such federal mechanism. Oregon cleanup levels are determined by use, with industrial being the least rigorous and residential the most. BES and Business Oregon have financial incentives. Metro has coalition of people working on brownfields statewide.</td>
</tr>
<tr>
<td>Jeremy Finkle</td>
<td>PBOT Engineering Tech</td>
<td>Fully lighted intersections, traffic impact analysis, dedications, and street improvements always required. Confirmed appropriate right of way dimensions for nearby streets.</td>
</tr>
<tr>
<td>Leslie Lum</td>
<td>Bureau of Planning &amp; Sustainability (BPS)</td>
<td></td>
</tr>
<tr>
<td>Mary Jaron Kelley</td>
<td>North Portland Neighborhood Service</td>
<td>United Neighbors for Reform is an interesting example of interactions with developers. Cathedral Park Master Plan from 2008 brought together new and old residents, but has not been implemented. St. Johns is active in land use and has a strong business association. Some residents identify with both groups and some do not.</td>
</tr>
<tr>
<td>Maya Agarwal &amp; Emily Roth</td>
<td>Parks &amp; Recreation Department</td>
<td>Developer will be required to either build the trail according to their standards or transfer that portion to them to build. Triggered by any development on those parcels. Alignment currently along the water.</td>
</tr>
<tr>
<td>Shawn Rapp</td>
<td>Oregon Department of Environmental Quality</td>
<td>Does not expect sediment removal below high water line to impact the site. Still evaluating stormwater, but major issue was PCBs prior to removal action in 2001. Schnitzer is currently the ‘responsible party’ for source control for the site and applicable cleanup levels are determined by use.</td>
</tr>
<tr>
<td>Tom Karwaki</td>
<td>University Park Neighborhood Association</td>
<td>Raised issues of vehicle access for emergency personnel. Wants to see the Greenway trail along the water throughout. Thinks that a mix of housing on the site makes sense given development patterns.</td>
</tr>
<tr>
<td>Vern Rifer</td>
<td>Rifer Development &amp; Portland State University Adjunct</td>
<td>Helpful Cost Estimates: new construction at $160 per square foot and land costs at $40-$50 per square foot, which is supported by the sale price of another site.</td>
</tr>
<tr>
<td>Doug Macy</td>
<td>Walker Macy</td>
<td>Provided feedback on student site planning schemes.</td>
</tr>
<tr>
<td>Heather Howe and Hunter Zackary</td>
<td>Oregon Department of Transportation</td>
<td>Union Pacific Railroad (UPRR) is the owner &amp; operator of the freight line that passes through the site. The Rail Corridor ROW is 60 feet in width and widens out at the SE end of tax lot 5500. Design/ development of the site should not interfere with UPRR’s operations. A fence may be required in case of the site being developed to prevent trespassing into UPRR’s right-of-way. To request a Quiet Zone, ODOT gave us the Federal Railroad Association (FRA) contact details (<a href="http://www.fra.dot.gov/Page/P0001">http://www.fra.dot.gov/Page/P0001</a>). No setback required as such from the railroad as per ODOT regulations.</td>
</tr>
</tbody>
</table>
appendix g: survey

The CW Team hosted the survey online as well as in print. This appendix shows a copy of the print version, which was administered and/or available at various events throughout the public engagement process.

Cathedral Park Neighborhood Survey

We are a student group from Portland State University, and we want to learn what YOU think about potential new buildings and development in the Cathedral Park neighborhood. The information that we gather from these surveys will directly inform what happens on a particular site directly on the waterfront, and the direction that the neighborhood association advocates for future development.

The large site (shown below) is close neighbors with Cathedral Park, and is the size of 1⅓ football fields, or over 9 downtown city blocks. While there are two businesses that rent a small portion of the site, most of the land is a former industrial lot - currently an empty field of dirt and concrete. There is also an existing rail line, and plans for a public trail to run through the site. The land is currently for sale and going through a rezoning process, which creates a wide range of possible buildings and activities that could happen there.

1. What neighborhood do you live in?
   - Cathedral Park
   - St. Johns
   - University Park
   - Portsmouth
   - Kenton
   - Arbor Lodge
   - Overlook
   - Other

2. Which of the following activities have you done in the Cathedral Park neighborhood this month? Check all that apply.
   - Went to work or school
   - Visited a restaurant/ bar/ cafe
   - Went shopping
   - Visited friends or family
   - Went to a community event or religious service
   - Visited a park or nature space
   - Other

3. Which of the following does this neighborhood need more of? Please check up to 4 options.
   - Manufacturing and industrial jobs
   - Business offices
   - Spaces for artists & small start-ups
   - Education or job-training opportunities
   - Places to shop
   - Places to eat
   - Housing
   - Community meeting space
   - Places for kids to play/hang out
   - Nature space/natural habitat
   - A place to access the water
   - Other
4. Which of the following activities would you personally see yourself doing by the waterfront...

<table>
<thead>
<tr>
<th>Activity</th>
<th>At least once a week</th>
<th>At least once a month</th>
<th>At least a few times a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking or jogging</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Biking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fishing or boating</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Relaxing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Playing with friends or family</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spending time at a waterfront cafe or bar</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Other:</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>

5. When thinking of the Cathedral Park Neighborhood area, how important are each of the following issues?

<table>
<thead>
<tr>
<th>Issue</th>
<th>This is not a problem.</th>
<th>This problem can wait until we fix bigger problems.</th>
<th>We should fix this NOW!</th>
<th>I don’t know.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of rental housing</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
<td>❌</td>
</tr>
<tr>
<td>Cost of single-family homes</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Availability of good jobs</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Industry and housing close together</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Air Quality</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Soil and water pollution</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Railroad noise</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Access to grocery stores</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Access to retail shopping</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Traffic safety</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
<tr>
<td>Events blocking access to streets</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✓</td>
</tr>
</tbody>
</table>

6. Is there anything else we should know about this site or the neighborhood that is important to you?

______________________________________________________________________________________

We want to know if we’re doing a good job of reaching as many different people as possible. Please help us by answering the demographic questions below.

7. How old are you? Please check the category that applies.

- 18 or younger
- 19 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 or older

8. Which ethnicity or race do you identify with, if any? (Check all that apply)

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian / Pacific Islander
- Other________________________

9. Gender?

- Male
- Female
- Other_________________

10. If you live in the Cathedral Park Neighborhood, have you ever attended Neighborhood Association meetings at the BES Water Pollution Lab building?

- Yes
- No

11. Are you interested in being more involved with the neighborhood association?

- Yeah, sounds good!
- Not really.
- I’m not sure.

Please write down your email address so we can keep you informed of how your input is shaping a vision for the Cathedral Waterfront site!

EMAIL ADDRESS: ____________________________________________

THANK YOU! Your participation is incredibly valuable to this process. Your input helps to influence new development in a way that meets neighborhood needs.
Appendix H: Survey Results

Who Took the Survey?

In interpreting the results of the Community Survey, it is important to first understand whose views are expressed in the survey results. The targeted population consisted of people who live or spend time near the Steel Hammer Site. There are people who are not geographically close to the site but who will be impacted by future development. The impact of development for this broader stakeholder group is important, but because of logistical considerations, the CW Team attempted to capture their perspectives and interests through research and interviews rather than through this survey.

The target population (those people who currently live or spend time near the Steel Hammer Site) is hard to define and rigorous random sampling was not feasible. Therefore, there are limits to the types of statistical analysis that are appropriate to perform.

Likewise, the uncertainty about the demographics of the target population make it difficult to understand if our sample is representative. There is available data for the census blocks that make up the Cathedral Park Neighborhood, and for the City of Portland overall. Neither of these populations are perfectly aligned with the target population but comparing the demographics of survey respondents to those known demographics provides useful context in order to understand who we heard from and whose voices are missing. Almost half of the survey respondents currently live in the Cathedral Park Neighborhood, while an additional 40% live in the two adjacent neighborhoods.

Note that the percentages shown in the tables and graphs that follow represent the percentage of people who responded to that individual question, rather than percentage of survey respondents overall. This is because some respondents skipped questions.
There was a large age spread among survey respondents, although young people were represented in lower numbers than in the Cathedral Park Neighborhood or City of Portland overall. Survey respondents were given three choices for identifying their gender, although all chose either male or female. Women outnumbered men by several percentage points, but they may also be more than half of the target population (55% of Cathedral Park Neighborhood residents are women).

The racial and ethnic break down of survey respondents is harder to compare to census data because our survey was set up such that people could check all categories that apply. While this is the method that produces the most authentic responses, it does not align with Census methods. The general pattern of demographics reflect the demographics of the Cathedral Park neighborhood: mostly white, with small percentages of other groups. White people make up a significantly greater percentage of survey respondents than of Portland overall (about 72%) some of this difference may be because the census reports people who identify as, “white alone”, but also it suggests that this group is more racially homogeneous than the city.
The survey did not ask about income level or home ownership, so these important pieces of demographic data are missing. This is particularly unfortunate because generally neighborhood associations engage more home owners than renters and more people in the higher income brackets of the neighborhood. Lower income people and renters are groups that should be targeted for future outreach and, if they have not been a part of the public engagement process, it is important to attempt to represent their interests in other ways (through interviews, research, etc) and not simply neglected entirely.
WHERE DID PEOPLE TAKE THE SURVEY?
The survey was available online for two months as well as in person at several locations.

HOW DO PEOPLE USE THE AREA?
The two most popular activities that people had participated in over the past month were visiting a park and going to a restaurant.
Which of the following activities would you do by the waterfront?

- Walking or jogging
- Biking
- Fishing or boating
- Relaxing
- Playing with friends or family
- Spending time at a waterfront cafe or bar

Percent of question respondents

- At least once a week
- At least once a month
- At least a few times a year
WHAT ISSUES ARE OF CONCERN?

How important is each of the following?

- Cost of rental housing
- Cost of single-family homes
- Availability of good jobs
- Industry and housing close together
- Air quality
- Soil and water pollution
- Railroad noise
- Access to grocery stores
- Access to retail shopping
- Traffic safety
- Events blocking access to streets

Percent of question respondents

- We should fix this NOW!
- This problem can wait until we fix bigger problems.
- This is not a problem here.
- I don't know.
WHAT IS DESIRABLE?

Which of the following does the neighborhood need more of?

*Check up to four*

- Manufacturing and industrial jobs
- Business offices
- Spaces for artists & small start-ups
- Education or job-training opportunities
- Places to shop
- Places to eat
- Housing
- Community meeting space
- Places for kids to play/hang out
- Nature space/natural habitat
- A place to access the water

Percentage of Question Respondents
ARE PEOPLE INTERESTED IN CPNA WORK?

The survey respondents were quite interested in becoming more involved in the activities of the Neighborhood Association. This may be due to self-selection (if you are interested in the CPNA, you are likely to also be will to take a survey about neighborhood priorities). About one third of respondents have attended a CPNA meeting at the BES Water Lab and one third are interested in increasing their involvement.

Have you attended an NA meeting?

- Yes: 36%
- No: 64%

Are you interested in being more involved in the NA?

- Yeah, sounds good!: 35%
- Not really.: 30%
- I'm not sure.: 35%
WERE THERE DIFFERENCES BY NEIGHBORHOOD?

There were not significant differences in the priorities expressed by people living in the Cathedral Park Neighborhood and those living in other neighborhoods. Although there were some differences when asked about immediate priorities, they were not large and overall, patterns were very similar.
WERE THERE DIFFERENCES BY RACE?

Due to the small numbers of responses received from people of color, it is difficult to extrapolate from the results of the survey to make any kind of generalization to broader preferences or differences by race. From the results we do have, however, it appears that there is greater interest in becoming more involved with CPNA among Black, Latino, and Native people than whites or Asians. This may reveal communities that would be amenable to outreach efforts on the part of the CPNA board.

Which activity did you do in the CP neighborhood in the last month?

![Chart showing activities by race: Work/School, Restaurant, Shopping, Friends/Family, Event/Service, Park.](chart_image)
Which of the following does the CP neighborhood need more of?
WERE THERE DIFFERENCES BY GENDER?

There were some differences by gender, but they were not significant. Generally, the same patterns emerged among men and women with regard to how they use the neighborhood currently, concerns they have, what they want more of, and whether or not they want to be involved in CPNA work.
How important are each of the following?

- Cost of Rental Housing
- Cost of Single Family Homes
- Availability of Good Jobs
- Proximity of Industry + Housing
- Air Quality
- Soil + Water Pollution
- Railroad Noise
- Access to Grocery Stores
- Access to Retail Shopping
- Traffic Safety
- Events Blocking Street Access
Which of the following does the CP neighborhood need more of?

- Manufacturing and industrial jobs
- Business offices
- Spaces for artists & small start-ups
- Education or job-training opportunities
- Places to shop
- Places to eat
- Housing
- Community meeting space
- Places for kids to play/hang out
- Nature space/natural habitat
- A place to access the water

Percent of question respondents

Men

Women
WERE THERE DIFFERENCES BY AGE?

There were some differences by age, most significantly in attendance of CPNA meetings. Although people expressed similar levels of interest in being involved with the CPNA, the younger someone is, the less likely they were to have attended a meeting. This suggests a huge untapped demographic. The CPNA board should seriously consider how to create alternative pathways to involvement, beyond the Tuesday night meetings.
How important are each of the following?

Cost of Rental Housing
Cost of Single Family Homes
Availability of Good Jobs
Proximity of Industry + Housing
Air Quality
Soil + Water Pollution
Railroad Noise
Access to Grocery Stores
Access to Retail Shopping
Traffic Safety
Events Blocking Street Access

Percent of Question Respondents who said "we should fix this NOW!"

18 or younger
19-24
25-34
35-44
45-54
55-64
65-74
75 or older

Background Documents
Which of the following does this neighborhood need more of?

- Manufacturing and industrial jobs
- Business offices
- Spaces for artists & small start-ups
- Education or job-training opportunities
- Places to shop
- Places to eat
- Housing
- Community meeting space
- Places for kids to play/hang out
- Nature space/natural habitat
- A place to access the water

Percent of question respondents:

- 18 or younger
- 19-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or older
Interested in being more involved

Attended a CPNA Meeting
appendix i: walk and talk routes

1 Mile Community Walk & Talk

1. Steel Hammer Site
2. N Edison
3. Johns Community Garden
4. N Salem
5. BES Water Lab
6. Back to the Steel Hammer Site

2 Mile Community Walk & Talk

1. Steel Hammer Site
2. N Edison
3. N Tyler & Willamette
4. Water Tower
5. Town Center
6. Cathedral Park Place
7. Baltimore Woods
8. N Crawford & Pittsburgh
9. Cathedral Park
10. Back to the Steel Hammer Site
appendix j: workshop map activity results
appendix k: workshop photo activity results

#17
2 yellow
28 black
30 total

#30
26 yellow
3 black
29 total

#8
25 yellow
1 black
26 total

#9
25 yellow
1 black
26 total

*Pools are ok but I’d prefer expanse of wild area & trail*
“no parking on street - like gathering space”; “for its outdoor seating for all citizens to be able to enjoy relaxing/dining along the beautiful waterfront”
"like building, Ø intersection"

"like style, needs outdoor seating"

"East bank esplanade was a bad default position instead of rerouting the freeway. There was no alternative, but we don’t have to get stuck with that"
#12
10 yellow
11 black
21 total

#13
4 yellow
17 black
21 total

#4
19 yellow
1 black
20 total

#24
7 yellow
13 black
20 total
#28
7 yellow
12 black
19 total

#5
13 yellow
5 black
18 total

#1
2 yellow
16 black
18 total

#23
2 yellow
16 black
18 total

Background Documents
Additional Comments from the Workshop Photo Activity:
- 12 foot fireproof mural sound barrier
- Need to add marina as option
- No low income housing
- Color please, no gray beige
- Brick is cold and too geometric, bad for earthquakes
- We don't want to lose the current view we have
- All photos are cookie cutter images and other areas that didn't meet [commitment] (not sure what exactly was written - can't read) - These photos are not clear. Would be more helpful if words describing what the photo represents
appendix l: development scenario pro formas

The CW Team took each development scenario and applied the scenario to a basic pro forma model in Microsoft Excel. The Steel Hammer site will be a complex development for even the most experienced developers, and thus the below financial models are significantly oversimplified. Their purpose is less for accuracy of how well each scenario will “pencil out” and more to show examples of the inputs that developers consider when determining the feasibility of a project (see Appendix A for glossary of terms).

What is important to note about these models is that they are the permanent financing pro formas. The financing that occurs during construction is more akin to a personal line of credit. Permanent financing, however, is for a greater period of time and is calculated from the expected operating incomes and expenses. However, permanent loans are usually secured before construction loans, because they serve to pay off the construction loan once the project is completely built, and the construction lender wants to ensure that there will be adequate funds to pay off their shorter term loan.

Due to this order of lending, a key piece to notice in each development scenario pro forma is the computed “Project Value”. This is the value that is expected to be earned from the developed uses and what the permanent loan is calculated from. However, if the cost of development exceeds this value (due to brownfield remediation for instance), the project will not be feasible.

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Operating Pro Forma (per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross Flex. Office/Industrial Area</td>
</tr>
<tr>
<td></td>
<td>Gross Retail Area</td>
</tr>
<tr>
<td></td>
<td>Gross Live/Work Income</td>
</tr>
<tr>
<td></td>
<td>Gross Residential Income</td>
</tr>
<tr>
<td></td>
<td>Gross Community Space Income</td>
</tr>
<tr>
<td></td>
<td>Gross Parking Income</td>
</tr>
<tr>
<td></td>
<td>Gross Income</td>
</tr>
<tr>
<td></td>
<td>Vacancy for Flex Office/Ind.</td>
</tr>
<tr>
<td></td>
<td>Vacancy for Retail</td>
</tr>
<tr>
<td></td>
<td>Vacancy for Live/Work</td>
</tr>
<tr>
<td></td>
<td>Vacancy for Residential</td>
</tr>
<tr>
<td></td>
<td>Operating costs for Flex Office/Ind.</td>
</tr>
<tr>
<td></td>
<td>Operating costs for Retail</td>
</tr>
<tr>
<td></td>
<td>Operating costs for Live/Work</td>
</tr>
<tr>
<td></td>
<td>Operating costs for Residential</td>
</tr>
<tr>
<td></td>
<td>Expenses</td>
</tr>
<tr>
<td></td>
<td>Net Operating Income (NOI)</td>
</tr>
</tbody>
</table>

Color Definition:
- Important Value
- Input Value
- Formula Cell

<table>
<thead>
<tr>
<th>Office Rent/s.f./year</th>
<th>$19.33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Rent/s.f./year</td>
<td>$16.78</td>
</tr>
<tr>
<td>LiveWork Rent/s.f./year</td>
<td>$20.04</td>
</tr>
<tr>
<td>Residential Rent/s.f./year</td>
<td>$24.00</td>
</tr>
<tr>
<td>Community Space rent/s.f./year</td>
<td>$5.46</td>
</tr>
<tr>
<td>Parking Space rent/space/year</td>
<td>$300</td>
</tr>
</tbody>
</table>
**PRO FORMA INPUTS AND FORMULAS**

The first two pages of this appendix show the formulas and inputs used in each model so that a reader could easily recreate this model on their home computer and play with the inputs to see how different values impact the outcomes.

The yellow cells are the inputs and the teal cells show the formulas. What is important to note when recreating the teal cells is that for the purpose of being able to print these formulas and include them in this document, a key character has been omitted - the “equals” sign. For the excel formula to actually work, each equation in the teal cells must start with an equal sign first, and then follow with the values that are listed.

<table>
<thead>
<tr>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Revenue (3% increase per year)</strong></td>
<td>SUM(I1:I6)</td>
<td>B49*1.03%</td>
<td>C49*1.03%</td>
<td>D49*1.03%</td>
<td>E49*1.03%</td>
<td>F49*1.03%</td>
<td>G49*1.03%</td>
<td>H49*1.03%</td>
<td>I49*1.03%</td>
</tr>
<tr>
<td><strong>Expenses (3% increase per year)</strong></td>
<td>SUM(J1:J6)</td>
<td>B50*1.03%</td>
<td>C50*1.03%</td>
<td>D50*1.03%</td>
<td>E50*1.03%</td>
<td>F50*1.03%</td>
<td>G50*1.03%</td>
<td>H50*1.03%</td>
<td>I50*1.03%</td>
</tr>
<tr>
<td><strong>NOI</strong></td>
<td>SUM(B49:B51)</td>
<td>B52+B53</td>
<td>B54+B55</td>
<td>B56+B57</td>
<td>B58+B59</td>
<td>B60+B61</td>
<td>B62+B63</td>
<td>B64+B65</td>
<td>B66+B67</td>
</tr>
<tr>
<td><strong>Debt Service</strong></td>
<td>SUM(B49:B51)</td>
<td>B63/B64</td>
<td>B65/B66</td>
<td>B67/B68</td>
<td>B69/B70</td>
<td>B71/B72</td>
<td>B73/B74</td>
<td>B75/B76</td>
<td>B77/B78</td>
</tr>
<tr>
<td><strong>Net Cash Flow</strong></td>
<td>SUM(B49:B51)</td>
<td>B81+B82</td>
<td>B83+B84</td>
<td>B85+B86</td>
<td>B87+B88</td>
<td>B89+B90</td>
<td>B91+B92</td>
<td>B93+B94</td>
<td>B95+B96</td>
</tr>
<tr>
<td><strong>Project Appreciation at 3%</strong></td>
<td>SUM(B49:B51)</td>
<td>B117+B118</td>
<td>B119+B120</td>
<td>B121+B122</td>
<td>B123+B124</td>
<td>B125+B126</td>
<td>B127+B128</td>
<td>B129+B130</td>
<td>B131+B132</td>
</tr>
<tr>
<td><strong>Net Sales Proceeds</strong></td>
<td>SUM(B49:B51)</td>
<td>B135+B136</td>
<td>B137+B138</td>
<td>B139+B140</td>
<td>B141+B142</td>
<td>B143+B144</td>
<td>B145+B146</td>
<td>B147+B148</td>
<td>B149+B150</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td>SUM(I1:K1)</td>
<td>K59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The sources for creating this model are as follows:

- Square foot inputs are derived from scenario calculations
- Rents, vacancies, and cap rates were retrieved from current commercial broker quarterly reports
- All other inputs came from expert interviews.
- Formulas were created based on real estate finance standards
### Project Elements

<table>
<thead>
<tr>
<th>Site Area (s.f.)</th>
<th>650,642</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate Buildable Area (less streets, emergency access, and trail)</td>
<td>500,000</td>
</tr>
<tr>
<td>Height</td>
<td>45' - 55'</td>
</tr>
<tr>
<td>Number of stories</td>
<td>3 to 5 stories</td>
</tr>
<tr>
<td>FAR</td>
<td>3 to 1</td>
</tr>
<tr>
<td>Crawford</td>
<td>River</td>
</tr>
<tr>
<td>Gross Flex. Office/Industrial Area</td>
<td>-</td>
</tr>
<tr>
<td>Gross Retail Area</td>
<td>41,400</td>
</tr>
<tr>
<td>Gross Live/Work Area</td>
<td>41,400</td>
</tr>
<tr>
<td>Gross Residential</td>
<td>205,200</td>
</tr>
<tr>
<td>Gross Community Space</td>
<td>-</td>
</tr>
<tr>
<td>Gross Parking Area</td>
<td>34,358</td>
</tr>
<tr>
<td>Net Flex. Office/Industrial Area (85% of gross)</td>
<td>-</td>
</tr>
<tr>
<td>Net Retail Area (85% of gross)</td>
<td>35,190</td>
</tr>
<tr>
<td>Net Live/Work Area (85% of gross)</td>
<td>35,190</td>
</tr>
<tr>
<td>Net Residential (85% of gross)</td>
<td>174,420</td>
</tr>
<tr>
<td>Net Community Space (85% of gross)</td>
<td>-</td>
</tr>
<tr>
<td>Net Parking Area (85% of gross) (286 spaces)</td>
<td>32,640</td>
</tr>
<tr>
<td>Gross Building Area</td>
<td>646,253</td>
</tr>
<tr>
<td>Net Leasable Area</td>
<td>556,540</td>
</tr>
<tr>
<td>Overall Efficiency</td>
<td>86%</td>
</tr>
</tbody>
</table>

### Operating Pro Forma (per year)

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Operating Pro Forma (per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Flex. Office/Industrial Income</td>
<td>$ -</td>
</tr>
<tr>
<td>Gross Retail Income</td>
<td>$ 888,595</td>
</tr>
<tr>
<td>Gross Live/Work Income</td>
<td>$ 1,061,042</td>
</tr>
<tr>
<td>Gross Residential Income</td>
<td>$ 9,167,760</td>
</tr>
<tr>
<td>Gross Community Space Income</td>
<td>$ -</td>
</tr>
<tr>
<td>Gross Parking Income</td>
<td>$ 85,800</td>
</tr>
<tr>
<td>Gross Income:</td>
<td>$ 11,203,187</td>
</tr>
<tr>
<td>Vacancy for Flex Office/Ind.</td>
<td>8.20%</td>
</tr>
<tr>
<td>Vacancy for Retail</td>
<td>4.90%</td>
</tr>
<tr>
<td>Vacancy for Live/Work</td>
<td>3.60%</td>
</tr>
<tr>
<td>Operating costs for Flex Office/Ind.</td>
<td>40%</td>
</tr>
<tr>
<td>Operating costs for Retail</td>
<td>40%</td>
</tr>
<tr>
<td>Operating costs for Live/Work</td>
<td>40%</td>
</tr>
<tr>
<td>Operating costs for Residential</td>
<td>40%</td>
</tr>
<tr>
<td>Expenses:</td>
<td>$ (4,739,551)</td>
</tr>
<tr>
<td>Net Operating Income (NOI)</td>
<td>$ 6,463,635.31</td>
</tr>
</tbody>
</table>

### Financial Calculations and 10 Year Internal Rate of Return

<table>
<thead>
<tr>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue (3% increase per year)</td>
<td>$80,795,441$</td>
<td>$84,825,892$</td>
<td>$88,955,266$</td>
<td>$93,086,337$</td>
<td>$97,217,843$</td>
<td>$101,349,344$</td>
<td>$105,481,490$</td>
<td>$109,614,401$</td>
<td>$113,748,170$</td>
</tr>
<tr>
<td>Expenses (3% increase per year)</td>
<td>$(4,628,758)$</td>
<td>$(4,881,738)$</td>
<td>$(5,028,190)$</td>
<td>$(5,079,036)$</td>
<td>$(5,334,407)$</td>
<td>$(5,494,439)$</td>
<td>$(5,659,272)$</td>
<td>$(5,829,050)$</td>
<td>$(6,003,922)$</td>
</tr>
<tr>
<td>NOI</td>
<td>$6,463,635$</td>
<td>$6,657,544$</td>
<td>$6,857,271$</td>
<td>$7,062,989$</td>
<td>$7,274,878$</td>
<td>$7,493,125$</td>
<td>$7,717,919$</td>
<td>$7,949,456$</td>
<td>$8,187,940$</td>
</tr>
<tr>
<td>Debt Service</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
<td>$(4,628,758)$</td>
</tr>
<tr>
<td>NET CASH FLOW</td>
<td>$1,834,878$</td>
<td>$2,028,787$</td>
<td>$2,228,513$</td>
<td>$2,434,231$</td>
<td>$2,646,121$</td>
<td>$2,864,367$</td>
<td>$3,089,161$</td>
<td>$3,320,699$</td>
<td>$3,559,182$</td>
</tr>
<tr>
<td>RETURN ON INVESTMENT</td>
<td>6.8%</td>
<td>7.5%</td>
<td>8.3%</td>
<td>9.0%</td>
<td>9.8%</td>
<td>10.6%</td>
<td>11.5%</td>
<td>12.3%</td>
<td>13.2%</td>
</tr>
</tbody>
</table>

### Combined DCR

<table>
<thead>
<tr>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$63,653,847.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan-to-Value</td>
<td>75%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value per Net Square Foot</td>
<td>$194</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stabilized NOI</td>
<td>$8,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity in Project</td>
<td>$130,720,459</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 yr IRR</td>
<td>16.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(26,931,814)</td>
<td>1,834,878</td>
<td>2,028,787</td>
<td>2,228,513</td>
<td>2,434,231</td>
<td>2,646,121</td>
<td>2,864,367</td>
<td>3,089,161</td>
<td>3,320,699</td>
<td>3,559,182</td>
</tr>
</tbody>
</table>

### Cathedral Waterfront Vision Plan
## Permanent Financing Assumptions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Loan Amount</strong></td>
<td>$ 80,795,441</td>
</tr>
<tr>
<td><strong>Interest Rate</strong></td>
<td>4.0%</td>
</tr>
<tr>
<td><strong>Term (Years)</strong></td>
<td>30</td>
</tr>
<tr>
<td><strong>Debt-Coverage Ratio</strong></td>
<td>min: 1.25</td>
</tr>
<tr>
<td><strong>Project Value</strong></td>
<td>$ 107,727,255.16</td>
</tr>
<tr>
<td><strong>Loan-to-Value</strong></td>
<td>75%</td>
</tr>
<tr>
<td><strong>Value per Net Square Foot</strong></td>
<td>$ 194</td>
</tr>
<tr>
<td><strong>Stabilized NOI</strong></td>
<td>$ 6,463,635</td>
</tr>
<tr>
<td><strong>CAP Rate</strong></td>
<td>6%</td>
</tr>
<tr>
<td><strong>Annual Debt Service</strong></td>
<td>$ (4,628,758)</td>
</tr>
<tr>
<td><strong>Equity in Project</strong></td>
<td>$ 26,931,814</td>
</tr>
</tbody>
</table>

## SCHEME A MID-RISE RESIDENTIAL

### Financial Calculations and 10 Year Internal Rate of Return

<table>
<thead>
<tr>
<th></th>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue (3% increase per year)</strong></td>
<td>11,203,187</td>
<td>11,539,282</td>
<td>11,885,461</td>
<td>12,242,024</td>
<td>12,609,285</td>
<td>12,987,564</td>
<td>13,377,191</td>
<td>13,778,506</td>
<td>14,191,862</td>
<td>14,617,617</td>
</tr>
<tr>
<td><strong>Expenses (3% increase per year)</strong></td>
<td>(4,739,551)</td>
<td>(4,881,738)</td>
<td>(5,028,190)</td>
<td>(5,179,036)</td>
<td>(5,334,407)</td>
<td>(5,494,439)</td>
<td>(5,659,272)</td>
<td>(5,829,050)</td>
<td>(6,003,922)</td>
<td>(6,184,039)</td>
</tr>
<tr>
<td><strong>NOI</strong></td>
<td>6,463,635</td>
<td>6,657,544</td>
<td>6,857,271</td>
<td>7,062,989</td>
<td>7,274,878</td>
<td>7,493,125</td>
<td>7,717,919</td>
<td>7,949,456</td>
<td>8,187,940</td>
<td>8,433,578</td>
</tr>
<tr>
<td><strong>Debt Service</strong></td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
<td>(4,628,758)</td>
</tr>
<tr>
<td><strong>NET CASH FLOW</strong></td>
<td>1,834,878</td>
<td>2,028,787</td>
<td>2,228,513</td>
<td>2,434,231</td>
<td>2,646,121</td>
<td>2,864,367</td>
<td>3,089,161</td>
<td>3,320,699</td>
<td>3,559,182</td>
<td>3,804,820</td>
</tr>
<tr>
<td><strong>RETURN ON INVESTMENT</strong></td>
<td>6.8%</td>
<td>7.5%</td>
<td>8.3%</td>
<td>9.0%</td>
<td>9.8%</td>
<td>10.6%</td>
<td>11.5%</td>
<td>12.3%</td>
<td>13.2%</td>
<td>14.1%</td>
</tr>
<tr>
<td><strong>Combined DCR</strong></td>
<td>1.40</td>
<td>1.44</td>
<td>1.48</td>
<td>1.53</td>
<td>1.57</td>
<td>1.62</td>
<td>1.67</td>
<td>1.72</td>
<td>1.77</td>
<td>1.82</td>
</tr>
</tbody>
</table>

### Project Appreciation at 3%

- **TOTAL EQUITY**: $130,720,459

### Debt Service

- Short term: $72,253
- Long term: $62,300

### Return on Investment

- **10 yr IRR**: 16.3%

### Total Equity

- **TOTAL EQUITY**: $130,720,459

### Net Sales Proceeds

- **TOTAL EQUITY**: $130,720,459

### Loan Balance

- **TOTAL EQUITY**: $130,720,459

### Background Documents
### Cathedral Waterfront Vision Plan

**Site Area (s.f.)** 650,642

**Approximate Buildable Area (less streets, emergency access, and trail)** 500,000

**Height**
- 45' - 55'
- 4 - 5 stories
- 3 to 1

**Number of stories**
- 4 - 5 stories

**FAR**
- 3 to 1

---

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Crawford River Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Flex. Office/Industrial Area</td>
<td>90,700</td>
</tr>
<tr>
<td>Gross Retail Area</td>
<td>16,200</td>
</tr>
<tr>
<td>Gross Live/Work Area</td>
<td>32,400</td>
</tr>
<tr>
<td>Gross Residential</td>
<td>181,400</td>
</tr>
<tr>
<td>Gross Community Space</td>
<td>-</td>
</tr>
<tr>
<td>Gross Parking Area</td>
<td>75,789</td>
</tr>
<tr>
<td>Net Flex. Office/Industrial Area (85% of gross)</td>
<td>77,095.0</td>
</tr>
<tr>
<td>Net Retail Area (85% of gross)</td>
<td>13,770</td>
</tr>
<tr>
<td>Net Live/Work Area (85% of gross)</td>
<td>27,540</td>
</tr>
<tr>
<td>Net Residential (85% of gross)</td>
<td>154,190</td>
</tr>
<tr>
<td>Net Community Space (85% of gross)</td>
<td>-</td>
</tr>
<tr>
<td>Net Parking Area (85% of gross) (500 spaces)</td>
<td>72,000</td>
</tr>
</tbody>
</table>

**Gross Building Area** 605,216

**Net Leasable Area** 527,065

**Overall Efficiency** 87%

**Office Rent/s.f./year** $19.33

**Retail Rent/s.f./year** $16.78

**LiveWork Rent/s.f./year** $20.04

**Residential Rent/s.f./year** $24.00

**Community Space rent/s.f./year** $5.48

**Parking Space rent/space/year** 200 $300

---

### Operating Pro Forma (per year)

| Gross Flex. Office/Industrial Income | $1,490,246 |
| Gross Retail Income | $231,061 |
| Gross Live/Work Income | $551,810 |
| Gross Residential Income | $6,927,840 |
| Gross Community Space Income | - |
| Gross Parking Income | $150,000 |

**Gross Income:** $9,350,957

**Vacancy for Flex Office/Ind.** 8.20% ($122,200)

**Vacancy for Retail** 4.90% ($19,885)

**Vacancy for Live/Work** 3.60% ($19,865)

**Operating costs for Flex Office/Ind.** 40% ($596,099)

**Operating costs for Retail** 40% ($11,322)

**Operating costs for Live/Work** 40% ($19,885)

**Operating costs for Residential** 40% ($2,771,136)

**Expenses:** ($3,993,110)

**Net Operating Income (NOI)** $5,357,846.41

**Loan Amount** $66,973,080

**Interest Rate** 75%

**Term (Years)** 30

**Debt-Coverage Ratio min:** 1.25

**Project Value** $89,297,440.12

**Loan-to-Value** 75%

**Value per Net Square Foot** $169

**Stabilized NOI** $5,357,846.41

**CAP Rate** 6%

**Annual Debt Service** ($3,836,877)

**Net Cash Flow** $1,520,970

**Return on Investment** 6.8%

**Combined DCR** 1.40

**Project Appreciation at 3%** $89,297,440 $91,976,363 $94,735,654 $97,577,724 $100,505,056 $103,520,207 $106,625,813 $109,824,588 $113,119,325 $116,512,905

**Net Sales Proceeds** $108,357,002

**Loan Balance ($52,764,044.10)**

**Total Equity** $108,357,002

**10 yr IRR:** 16.3%

**(22,324,360) 1,520,970 1,681,705 1,847,263 2,017,787 2,193,427 2,374,336 2,560,672 2,752,599 2,950,283 $58,746,855.36

### Cathedral Waterfront Scheme B Mid-Rise Mixed Use - Full Build Out

**Project Elements Operating Pro Forma (per year)**

---
### Permanent Financing Assumptions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$66,973,080</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>4.0%</td>
</tr>
<tr>
<td>Term (Years)</td>
<td>30</td>
</tr>
<tr>
<td>Debt-Coverage Ratio</td>
<td>min: 1.25</td>
</tr>
<tr>
<td>Project Value</td>
<td>$89,297,440.12</td>
</tr>
<tr>
<td>Loan-to-Value</td>
<td>75%</td>
</tr>
<tr>
<td>Value per Net Square Foot</td>
<td>$169</td>
</tr>
<tr>
<td>Stabilized NOI</td>
<td>$5,357,846</td>
</tr>
<tr>
<td>CAP Rate</td>
<td>6%</td>
</tr>
<tr>
<td>Annual Debt Service</td>
<td>$(3,836,877)</td>
</tr>
<tr>
<td>Equity in Project</td>
<td>$22,324,360</td>
</tr>
</tbody>
</table>

### SCHEME B MID-RISE MIXED USE

#### Financial Calculations and 10 Year Internal Rate of Return

<table>
<thead>
<tr>
<th></th>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue (3% increase per year)</td>
<td>9,350,957</td>
<td>9,631,485</td>
<td>9,920,430</td>
<td>10,218,043</td>
<td>10,524,584</td>
<td>10,840,322</td>
<td>11,165,531</td>
<td>11,500,497</td>
<td>11,845,512</td>
<td>12,200,878</td>
</tr>
<tr>
<td>NOI</td>
<td>5,357,846</td>
<td>5,518,582</td>
<td>5,684,139</td>
<td>5,854,663</td>
<td>6,030,303</td>
<td>6,211,212</td>
<td>6,397,549</td>
<td>6,589,475</td>
<td>6,787,160</td>
<td>6,990,774</td>
</tr>
<tr>
<td>NET CASH FLOW</td>
<td>1,520,970</td>
<td>1,681,705</td>
<td>1,847,263</td>
<td>2,017,787</td>
<td>2,193,427</td>
<td>2,374,336</td>
<td>2,560,672</td>
<td>2,752,599</td>
<td>2,950,283</td>
<td>3,153,898</td>
</tr>
<tr>
<td>RETURN ON INVESTMENT</td>
<td>6.8%</td>
<td>7.5%</td>
<td>8.3%</td>
<td>9.0%</td>
<td>9.8%</td>
<td>10.6%</td>
<td>11.5%</td>
<td>12.3%</td>
<td>13.2%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Combined DCR</td>
<td>1.40</td>
<td>1.44</td>
<td>1.48</td>
<td>1.53</td>
<td>1.57</td>
<td>1.62</td>
<td>1.67</td>
<td>1.72</td>
<td>1.77</td>
<td>1.82</td>
</tr>
</tbody>
</table>

#### PROJECT APPRECIATION at 3%

- YR 1: $89,297,440
- YR 2: $91,976,363
- YR 3: $94,735,654
- YR 4: $97,577,724
- YR 5: $100,505,056
- YR 6: $103,520,207
- YR 7: $106,625,813
- YR 8: $109,824,588
- YR 9: $113,119,325
- YR 10: $116,512,905

#### NET SALES PROCEEDS

- $108,357,002

#### LOAN BALANCE

- ($52,764,044.10)

#### TOTAL EQUITY

- $108,357,002

#### 10 yr IRR:

- 16.3%

- (22,324,360)
## Project Elements

<table>
<thead>
<tr>
<th>Site Area (s.f.)</th>
<th>650,642</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approximate Buildable Area (less streets, emergency access, and trail)</td>
<td>500,000</td>
</tr>
<tr>
<td>Height</td>
<td>65' - 75'</td>
</tr>
<tr>
<td>Number of stories</td>
<td>6 - 7 stories</td>
</tr>
<tr>
<td>FAR</td>
<td>3 to 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crawford River Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Flex. Office/Industrial Area</td>
<td>95,800</td>
</tr>
<tr>
<td>Gross Retail Area</td>
<td>25,600</td>
</tr>
<tr>
<td>Gross Live/Work Area</td>
<td>44,800</td>
</tr>
<tr>
<td>Gross Residential</td>
<td>290,000</td>
</tr>
<tr>
<td>Gross Community Space</td>
<td>5,000</td>
</tr>
<tr>
<td>Gross Parking Area</td>
<td>63,158</td>
</tr>
<tr>
<td>Net Flex. Office/Industrial Area (85% of gross)</td>
<td>81,430.0</td>
</tr>
<tr>
<td>Net Retail Area (85% of gross)</td>
<td>21,760</td>
</tr>
<tr>
<td>Net Live/Work Area (85% of gross)</td>
<td>38,080</td>
</tr>
<tr>
<td>Net Residential (85% of gross)</td>
<td>246,500</td>
</tr>
<tr>
<td>Net Community Space (85% of gross)</td>
<td>4,250</td>
</tr>
<tr>
<td>Net Parking Area (85% of gross) (450 spaces)</td>
<td>60,000</td>
</tr>
<tr>
<td>Gross Building Area</td>
<td>873,084</td>
</tr>
<tr>
<td>Net Leasable Area</td>
<td>753,490</td>
</tr>
<tr>
<td>Overall Efficiency</td>
<td>86%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Office Rent/s.f./year</th>
<th>$19.33</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retail Rent/s.f./year</td>
<td>$16.78</td>
</tr>
<tr>
<td></td>
<td>LiveWork Rent/s.f./year</td>
<td>$20.04</td>
</tr>
<tr>
<td></td>
<td>Residential Rent/s.f./year</td>
<td>$24.00</td>
</tr>
<tr>
<td></td>
<td>Community Space rent/s.f./year</td>
<td>$5.48</td>
</tr>
<tr>
<td></td>
<td>Parking Space rent/space/year</td>
<td>200/250 $300</td>
</tr>
</tbody>
</table>
### Permanent Financing Assumptions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$104,056,823</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>4.0%</td>
</tr>
<tr>
<td>Term (Years)</td>
<td>30</td>
</tr>
<tr>
<td>Debt-Coverage Ratio</td>
<td>min: 1.25</td>
</tr>
<tr>
<td>Project Value</td>
<td>$138,742,430.50</td>
</tr>
<tr>
<td>Loan-to-Value</td>
<td>75%</td>
</tr>
<tr>
<td>Value per Net Square Foot</td>
<td>$184</td>
</tr>
<tr>
<td>Stabilized NOI</td>
<td>$8,324,546</td>
</tr>
<tr>
<td>CAP Rate</td>
<td>6%</td>
</tr>
<tr>
<td>Annual Debt Service</td>
<td>$(5,961,398)</td>
</tr>
<tr>
<td>Equity in Project</td>
<td>$34,685,606</td>
</tr>
</tbody>
</table>

### Project Elements Operating Pro Forma (per year)

<table>
<thead>
<tr>
<th></th>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue (3% increase per year)</td>
<td>14,539,390</td>
<td>14,975,571</td>
<td>15,424,838</td>
<td>15,887,584</td>
<td>16,364,211</td>
<td>16,855,137</td>
<td>17,360,792</td>
<td>17,881,615</td>
<td>18,418,064</td>
<td>18,970,606</td>
</tr>
<tr>
<td>Expenses (3% increase per year)</td>
<td>(6,214,844)</td>
<td>(6,401,289)</td>
<td>(6,593,328)</td>
<td>(6,791,128)</td>
<td>(6,994,861)</td>
<td>(7,204,707)</td>
<td>(7,420,846)</td>
<td>(7,643,474)</td>
<td>(7,872,778)</td>
<td>(8,106,961)</td>
</tr>
<tr>
<td>NOI</td>
<td>8,324,546</td>
<td>8,574,282</td>
<td>9,096,456</td>
<td>9,369,350</td>
<td>9,650,430</td>
<td>9,939,943</td>
<td>10,238,141</td>
<td>10,545,286</td>
<td>10,861,644</td>
<td></td>
</tr>
<tr>
<td>RETURN ON INVESTMENT</td>
<td>6.8%</td>
<td>7.5%</td>
<td>8.3%</td>
<td>9.0%</td>
<td>9.8%</td>
<td>10.6%</td>
<td>11.5%</td>
<td>12.3%</td>
<td>13.2%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Combined DCR</td>
<td>1.46</td>
<td>1.44</td>
<td>1.48</td>
<td>1.53</td>
<td>1.57</td>
<td>1.62</td>
<td>1.67</td>
<td>1.72</td>
<td>1.77</td>
<td>1.82</td>
</tr>
</tbody>
</table>

### Financial Calculations and 10 Year Internal Rate of Return

<table>
<thead>
<tr>
<th></th>
<th>YR 1</th>
<th>YR 2</th>
<th>YR 3</th>
<th>YR 4</th>
<th>YR 5</th>
<th>YR 6</th>
<th>YR 7</th>
<th>YR 8</th>
<th>YR 9</th>
<th>YR 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT APPRECIATION at 3%</td>
<td>$138,742,431</td>
<td>$142,904,703</td>
<td>$147,191,845</td>
<td>$151,607,600</td>
<td>$156,155,828</td>
<td>$160,840,503</td>
<td>$165,665,718</td>
<td>$170,635,689</td>
<td>$175,754,760</td>
<td>$181,027,403</td>
</tr>
<tr>
<td>NET SALES PROCEEDS</td>
<td>$168,355,485</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOAN BALANCE</td>
<td>$(91,980,084.09)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL EQUITY</td>
<td>$168,355,485</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**10 yr IRR:** 16.3%

### Background Documents

**Net Community Space (85% of gross)**
- 4,250

**Net Residential (85% of gross)**
- 209,100
- 246,500
- 455,600

**Expenses:**
- (6,214,844)$

**Net Flex. Office/Industrial Area (85% of gross)**
- 81,430.0
- 81,430.0

**Net Retail Area (85% of gross)**
- 44,370
- 21,760
- 66,130

**Operating costs for Retail 40%**
- (443,864.56)$

**Operating costs for Live/Work 40%**
- (305,198.51)$

**Gross Parking Area**
- 50,526
- 63,158
- 113,684

**Vacancy for Residential 2.30%**
- (251,491)$

**Vacancy for Live/Work 3.60%**
- (27,468)$

**Height 65’ - 75’**
- Gross Live/Work Income 762,996$

**Approximate Buildable Area**
- (less streets, emergency access, and trail) 500,000

**Gross Retail Area**
- 52,200
- 25,600
- 77,800

**Vacancy for Flex Office/Ind. 8.20%**
- (129,071)$

**Site Area (s.f.)**
- 650,642

**Gross Flex. Office/Industrial Area**
- 95,800
- 95,800

**Gross Income:**
- 14,539,390$

**Equity in Project**

**CAP Rate**

**Stabilized NOI**

**Value per Net Square Foot**

**Loan-to-Value**

**Debt-Coverage Ratio min:** 1.25

**Loan Amount**

**Debt Service**

**Net Parking Area (95% of gross)**

**Net Leasable Area**
- 753,490

**Net Parking Income**
- 135,000$

**SCHEME C MIXED-HEIGHTS MIXED USE**

**Short term**
- 126,316
- 90,700
- 48,600
- 339,600

**Long term**
- 126,316
- 90,700
- 32,400
- 339,600
appendix m: Cathedral Waterfront Team members

Mathangi Murthy
Tabitha Boschetti
Michelle Anderson
Saumya Kini
Rosa Lehman
Violet Brown
appendix n: Cathedral Waterfront project timeline

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>FEBRUARY</th>
<th>MARCH</th>
<th>APRIL</th>
<th>MAY</th>
<th>JUNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finalize MOU+workplan</td>
<td>2/18</td>
<td>2/28</td>
<td>Existing Conditions Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project scoping (MOU, work plan)</td>
<td></td>
<td></td>
<td>2/8</td>
<td>3/8</td>
<td>3/10</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td>2/22</td>
<td>3/22</td>
<td>4/5</td>
</tr>
<tr>
<td>Bi-weekly Client check-in meetings</td>
<td></td>
<td></td>
<td>3/10</td>
<td>4/19</td>
<td>5/3</td>
</tr>
<tr>
<td>FCPNA meetings (General and Board)</td>
<td></td>
<td></td>
<td></td>
<td>5/17</td>
<td>5/31</td>
</tr>
<tr>
<td>* For additional meetings, 2 weeks notice required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6/14</td>
</tr>
<tr>
<td>Holidays, Exams etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Analysis and Design Alternatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Recommendation (Product and Program)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
appendix o: printable materials

1. FLYER OF INFORMATION
2. GOALS & OBJECTIVES
3. DEVELOPMENT SCORECARD
ZONING
The site is currently zoned for General Employment, which allows for a range of industrial and commercial uses. Zoning proposals and recommendations will be made Fall 2015.

MARKET CONSIDERATIONS

No one knows the precise market demand for this development, as market conditions are changing rapidly.

BUILDING CONSTRAINTS

There are a number of key land use and zoning issues that impact the site, including environmental and floodplains, landslide hazard, and noise. The site is located adjacent to Union Pacific Railroad tracks, which are used for freight only.

MARKET CONSIDERATIONS

To make a convincing argument for a particular type of development, it is necessary to consider the site itself, and the needs of the Cathedral Park Neighborhood in which it sits, as well as the context for development: it is necessary to consider the site's utility and the desire of the community.

TRANSPORTATION + RECREATION

There are a number of key transportation issues that impact the site, including road access, pedestrian access, and public transit. The site is located adjacent to Union Pacific Railroad tracks, which are used for freight only.

HISTORY + ENVIRONMENTAL CONDITIONS

James John's original home and store once stood at the foot of N Burlington on the SW corner of the site. Cathedral Park to the North of this site was created thanks to neighborhood activism in the 1970's and opened in 1980. It is a reminder of the power this community has to shape its future.

This site has been used for industry from the 1860's to the present day. It has been used as a site for industrial activity but also leaves a legacy of potential contamination, leaving the site a blank slate for development.

This is also in the middle of the Mt. Portland Harbor Superfund site, which has been designated as a superfund site. The railroad tracks are adjacent to the site, and noise from union Pacific Railroad tracks is a concern. The site is located adjacent to Union Pacific Railroad tracks, which are used for freight only.

This area is already actively used recreationally and any development on the riverward site would trigger the development of a public trail along the waterfront, connecting with existing portions of the greenway trail in Cathedral Park and Willamette Cove.
Cathedral Park Waterfront Vision

PROJECT PURPOSE
PSU Urban Planning students worked with the Cathedral Park Neighborhood to develop a vision for waterfront development in Cathedral Park, specific to the Steel Hammer Site, and create a public engagement toolkit to facilitate future outreach on the part of the Cathedral Park Neighborhood Association. The site is at 8524 N Crawford and is approximately 15 acres.

CONTACT US
Cathedral Waterfront PSU Team
E-mail: cathedralwaterfront@gmail.com
Website: cathedralwaterfront.wordpress.com

Cathedral Park Neighborhood Association
Website: facebook.com/cathedralparkneighborhood

PROJECT TIMELINE

<table>
<thead>
<tr>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Stakeholder Interviews + Community Survey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Walk March 7</td>
<td>Design Workshop March 29</td>
<td>CPNA Discussion May 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cathedral Park Neighborhood Association (efforts are ongoing)</td>
<td>Final Report to CPNA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Get Involved!

CATHEDRAL PARK WATERFRONT VISION
Attend the Cathedral Park Neighborhood Association meetings, which occur on the second Tuesday of every other month.

CHECK OUT OTHER COMMUNITY GROUPS
There are too many groups to list working on affordability, air quality, jobs, transportation, and other concerns. The Cathedral Park Neighborhood Association represents the community on a wide variety of issues. Information and meeting times are at facebook.com/cathedralparkneighborhood.com

Office of Neighborhood Involvement has information for all the Portland Neighborhood Associations at portlandoregon.gov/oni/

Portland Harbor Community Advisory Group has information on the Superfund at portlandharborcag.info

npGrenway has information on the North Portland Willamette Greenway trail system at npgreenway.org

The City of Portland Mixed Use Zones Project has information at portlandoregon.gov/bps/63621

Participar en Español

Somos un grupo de estudiantes de PSU. Queremos saber lo que usted piensa sobre la posibilidad de construir edificios nuevos al lado de Cathedral Park y lo que piensa usted sobre el desarrollo en general en la comunidad.

Encuesta y mas información al sitio web: cathedralwaterfront.wordpress.com

Contacto del Grupo de PSU: cathedralwaterfront@gmail.com

Contacto de la Asociación de la Comunidad de Cathedral Park:
facebook.com/cathedralparkneighborhood
While a range of concerns and ideas from community members have shaped goals for site development outcomes, other site constraints, broader trends, and analysis of potential outcomes, have further informed specific objectives that could achieve these goals. These objectives give a more concrete focus for meeting community needs, which will become important during the process of negotiating with a developer, and evaluating agreement outcomes.

SENSE OF PLACE

GOAL 1: DEVELOPMENT FOSTERS A SENSE OF PLACE AND CREATES A NEIGHBORHOOD-LEVEL DESTINATION

Objectives:
1.01 Development design incorporates and reflects characteristics of the surrounding neighborhood, including natural landscaping, industrial working class roots, and the river.
1.02 Neighborhood history is celebrated through design elements and interpretive signs.
1.03 Public space on the site is a key element of the overall design, and creates a sense of welcome.
1.04 Features of site plan are linked to existing amenities such as Cathedral Park.

GOAL 2: DEVELOPMENT INCLUDES A MIX OF USES THAT COMPLEMENT ONE ANOTHER

Objectives:
2.01 Building design should incorporate flexibility for future adaptation between residential and commercial space.
2.02 Long-term site development includes multi-family residential and townhouses, retail shops and eateries, and employment areas.

THRIVING, DIVERSE COMMUNITY

GOAL 3: RESIDENTIAL DEVELOPMENT ACTIVELY MAINTAINS SOCIO-ECONOMIC DIVERSITY IN THE CATHEDRAL PARK NEIGHBORHOOD.

Objectives:
3.01 The cost range of available housing reflects the range of existing neighborhood household incomes. At least one third of new rental housing should therefore remain affordable to families at twice the poverty level or less. 15% should remain affordable to families at or below the federal poverty level.
3.02 New housing of all varieties should be well managed and maintained.

GOAL 4: DEVELOPMENT PROVIDES SPACES FOR JOBS AND ENTREPRENEURIAL ACTIVITY, IN BALANCE WITH RESIDENTIAL DEVELOPMENT.

Objectives:
4.01 Employment-related uses are included in the site plan.
4.02 Low-cost entrepreneurial opportunities and affordable commercial space are given high priority.
4.03 Impacts of commercial development, especially transportation, noise, and air quality impacts, are mitigated.

GOAL 5: DEVELOPMENT AND AMENITIES SUPPORT AND FOSTER DIVERSITY IN AGE GROUPS.

Objectives:
5.01 Long-term site plan includes features and housing types that appeal to young families, with a high priority on places for outdoor play.
5.02 Long-term site plan includes senior-friendly housing.
GOAL 6: THE GREENWAY TRAIL IS A DEFINING FEATURE OF NEW SITE DEVELOPMENT AND IS IMPLEMENTED EARLY, AND WITH HIGH-QUALITY AMENITIES.

Objectives:
6.01 Trail should be implemented during the first stages of new development on the N Crawford Site, even if the first new construction is on a tax lot north of the railroad line.
6.02 The trail should be implemented with places for pedestrians to enjoy views and natural areas separate from oncoming bicycles.
6.03 New development will be oriented toward the trail and the river, rather than isolating the trail.
6.04 Amenities such as benches, public art, and publicly accessible restrooms should be included.

GOAL 7: SITE DEVELOPMENT IS PEDESTRIAN ORIENTED.

Objectives:
7.01 Pedestrian safety is protected on edges of the site, as well as between developments on the site itself.
7.02 Pedestrian comfort is supported through lighting, street trees, and pedestrian-oriented design.

GOAL 8: DEVELOPMENT INCLUDES INFRASTRUCTURE IMPROVEMENTS FOR THE SURROUNDING NEIGHBORHOOD.

Objectives:
8.01 Auto traffic impacts on neighboring streets are mitigated through traffic-calming and other measures.
8.02 Streets connecting to the site are improved for pedestrians, with better crossings and sidewalks.
8.03 Water and sewage system improvements receive direct funding from developer.
8.04 Improved transit service is accommodated within a block of new site development.
8.05 Improved railroad crossings include signals. Railroad overcrossing should be explored, if feasible, and access improvements should be delivered before full development of land between river and railroad.

GOAL 9: VIEWS OF NATURE AND LOCAL LANDMARKS ARE PROTECTED FOR RESIDENTIAL NEIGHBORS AND IN PUBLIC VIEWSHEDS.

Objectives:
9.01 Site design provides multiple on-site areas where views of nature, the river, and bridge are publicly accessible.
9.02 Analysis of future views from homes uphill on N Edison and above will retain visibility of natural areas and St. Johns Bridge.
9.03 Green roofs or ecoroofs are implemented, particularly where rooftops may be in view of existing neighbors.

GOAL 10: DEVELOPMENT MITIGATES RAILROAD NOISE, PRIORITIZING IMPACTS ON RESIDENTIAL DEVELOPMENT.

Objectives:
10.01 Do not construct residential use buildings within 150-200 feet of railroad line.
10.02 A soundproof wall can be constructed near the railroad line as a noise and vibration buffer. The wall is decorated with art, vegetation, or room for creation of new art.
10.03 Use enclosed balconies for residential development facing the railroad line. Developer should invest in noise mitigation measures in building construction.
10.04 Parking and vegetation is sited closer to rail as buffer.
10.05 Position industrial, parking, or green spaces closer to rail, rather than homes.
GOAL 11: DEVELOPMENT IMPROVES LOCAL AIR, SOIL, AND WATER QUALITY.

Objectives:
11.01 Air pollution from the site will decrease.
11.02 Brownfield remediation of soil and water will meet or exceed standards for residential land within 5 years and decisions will be made with local health and environmental conditions as the top priority.
11.03 Stormwater is treated on site.
11.04 The land within the greenway overlay zone will be fully restored to natural conditions within 5 years, with habitat and water quality as top priorities.
11.05 Landscaping outside the greenway overlay zone will be designed to optimize wildlife corridors for native species and to reduce the urban heat island effect (which exacerbates air pollution).

GOAL 12: DEVELOPMENT WILL INCLUDE TREES, GREEN PLANTINGS, AND INTENTIONAL LANDSCAPING.

Objectives:
12.01 Street trees and generous natural landscaping will be incorporated into site design.
12.02 Site development will include publicly accessible and welcoming pockets of open space.

These twelve goals informed development alternatives for the Steel Hammer Site and could be useful to CPNA in assessing other potential neighborhood development as well. They are not absolute or unchangeable and should be considered a starting point and an ongoing list for the community to edit and build upon.
## Scorecard

### Sense of Place & Design Score

- Site design interacts with the river and greenway trail
- Site layout encourages connections to the surrounding neighborhood and Cathedral Park
- Features of the site celebrate the neighborhood’s natural features and industrial history
- Developer has consulted the neighborhood on design decisions, and choices have been made to reflect local character
- Planned uses on the site include places where members of the public can visit, shop, or use services
- Welcoming public outdoor spaces (besides the trail itself) are included in the site plan, and the neighborhood has been consulted on their design
- Design incorporates space for future commercial capacity if not immediately created
- If retail or commercial tenants are known, the tenants reflect the unique identity of North Portland, and neighbors have been consulted on the selection
- Capacity for multi-family homes, townhouses, employment areas, and retail shops are all present in the site design
- Funding for public art is included in the overall site plan and includes local artists

**Total Score**

### Transportation & Infrastructure Score

**Minimum standards**

- Developer will pay system development charges and specifically provide for street improvements connecting to site, including pedestrian safety
- Developer will pay system development charges for necessary improvements in water and sewage systems
- Developer has shared the results of a traffic impact analysis and illustrated how they will mitigate the impacts of new development on the neighborhood, including an estimate of how many trips will be generated by uses on the site and specific projects to off-set the new trips.
- Developer can illustrate improved access to the part of the site between the railroad and the river

**Further evaluation**

- Improved railroad crossings are part of the development plan
- Pedestrian connections are visible in the developer's site design. PBOT standards require pathways for pedestrians between buildings at least every 500 feet.
- Site plan has active ground floor uses where people will feel a connection to the building and windows
- Site design encourages pedestrian access through the site
- Plans are in place for improved current and future access to transit

**Total Score**
The developer's estimates of housing rent (or sale prices) reflect a range of existing incomes represented in the neighborhood, using the standard that people should not be paying more than 30% of their income toward housing.

- At least 15% of houses/apartments/condos available to people at less than federal poverty level--$673 for a family of four
- At least 15% of houses/apartments/condos available to people between the federal poverty level and twice the federal poverty level--$1,350 for a family of four
- Market-rate apartments are included in the remainder of new development
- The developer has a plan for the management of multi-family dwellings to ensure ongoing maintenance and care, either planning to keep building in their possession, or choosing a reputable management company
- The developer's estimates of commercial rents create affordable commercial space for small businesses and entrepreneurs. This may include live/work spaces
- The site plan includes amenities that appeal to families with youth, e.g., playgrounds, skateboarding facilities, art
- The site plan includes amenities that appeal to senior residents
- The site plan includes housing that accommodates families with youth, such as homes with at least three bedrooms

Additional Equity Considerations
- Support is given for current homeless populations in the neighborhood
- Energy efficient, safe and healthy housing reduces utility bills for the residents and is free from environmental hazards.
- Preservation and replacement of any naturally occurring affordable and/or below market rate housing.

TOTAL SCORE_________
HEALTHY ENVIRONMENT SCORE

Minimum standards

☐ Trail will be built to Parks and Recreation standards, with 12 feet asphalt paving with 2 feet of plantings on either side, if development is happening on one of the two riverfront taxlots.

☐ There are no buildings planned between the river, and 50 feet from the top of the river bank

Further evaluation

Trail:

☐ Design for the greenway trail includes measures for avoiding bicycle and pedestrian conflicts near developed area

☐ Design for the greenway trail includes amenities such as public restroom access, benches, historic markers, and/or play features

☐ Design for the greenway trail includes space for people to get close to the river

☐ Greenway trail will be improved early in the development process

Green features and air quality:

☐ Site design includes landscaping with native plants

☐ Street trees and generous natural landscaping are present in the site plan

☐ Green roofs or ecoroofs are used in the project

☐ Air quality and noise impacts of commercial uses near residential uses are mitigated by design elements

Soil contamination:

☐ Brownfield remediation will meet or exceed standards for residential land

☐ The neighborhood has been consulted on the soil remediation process, with plans to minimize disruption to immediate neighbors

Noise pollution:

☐ Building construction is planned with noise mitigation measures such as sound-resistant windows

☐ Site design shows parking, vegetation, or other uses where people are not constantly present, in areas most immediately adjacent to the railroad line

☐ A sound and vibration buffer, such as a decorative wall, is in place

☐ Measurable reduction of noise pollution and emissions pollution

☐ Residences are not constructed within 200 feet of the railroad line

TOTAL SCORE________
SURROUNDING COMMUNITY SCORE

These are more difficult to quantify, but are important considerations for how previous criteria may impact different populations. Items with an asterisk* have further detail below.

☐ Actions and commitments have been taken to minimize the impact of rising rent values in the neighborhood*
☐ Actions and commitments have been taken to minimize pressure on redeveloping existing housing stock in the neighborhood*
☐ Neighbors uphill from the site retain views across river
☐ Actions and commitments have been made to improve for surrounding environmental health
☐ New development will positively contribute to the local tax base*

TOTAL SCORE_________

TOTALS

SENSE OF PLACE & DESIGN SCORE_____
TRANSPORTATION & INFRASTRUCTURE SCORE_____
THRIVING DIVERSE COMMUNITY_____
HEALTHY ENVIRONMENT SCORE_____
IMPACTS ON SURROUNDING COMMUNITY SCORE_____

Where is the developer's proposal weak?

What are the easiest improvements to make?

Considering the shortcomings of the proposal, who is most impacted in your community?