

Centennial Mills Framework Plan:

EXISTING CONDITIONS

April 2006



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SECTION 1. INTRODUCTION

PROJECT DESCRIPTION

The Portland Development Commission (PDC) and the Bureau of Planning are working with stakeholders to create a framework plan for the Centennial Mills site, which will summarize public's goals for the site. The framework plan will serve as the foundation for a potential future request for design and development proposals for the site.

PROJECT HISTORY

PDC acquired the 4.75-acre Centennial Mills site, located on the west bank of the Willamette River between the Fremont and Broadway Bridges, in 2000. To date, more than \$12 million of tax increment and other funding has been spent for acquisition and improvements of the site and its buildings. The property was originally acquired for more riverfront open space as called for by the Central City Plan of 1988. Subsequent amendments to Central City policy, the adopted River District Urban Renewal Plan, and more recent open space and development master plans continued to emphasize similar objectives of developing more public open space on the river, and facilitating connectivity between the River District and greenway.

The redevelopment of Centennial Mills has been studied in the past. Most recently, a 2004 PDC study recommended demolition of most of the structures due to their condition, the high costs of rehabilitation, and the longstanding objectives to create a park on the riverfront. This recommendation generated public resistance as well as several unsolicited private development offers for the site. In response, City Council passed Council Resolution 36320, adopted May 25, 2005, which states "*BE IT FURTHER RESOLVED, that the Portland Development Commission work with the Bureau of Planning, citizens and stakeholders to develop a comprehensive plan for the site taking into consideration future development plans for the surrounding area.*"

In 2006, PDC and Planning started the "Centennial Mills Framework Plan" process to review the current conditions on the site and the clearly define the goals for its redevelopment. A Citizen Advisory Group (CAG) was formed in the winter 2006 to help advise this process. This advisory group is comprised of representatives from the affected neighborhoods, local design and development firms, local businesses, and other interested parties.

PURPOSE OF THIS REPORT

This report is a compilation of assessments of Centennial Mills prepared as part of developing the "Centennial Mills Framework Plan". The assessments cover the site's current condition and importance, its current uses, previous applicable plans and objectives, and its transportation, environmental and planning contexts. The assessments were drafted by the public agency stakeholders, including Portland Parks and Recreation Bureau, the Bureau of Environmental Services, the Portland Office of Transportation, the Bureau of Development Services, the Historic Resources and Urban Design programs at the Bureau of Planning, and the project consultant team.

The assessments are intended to be the basis for a shared understanding of the site. They provide a statement of the existing conditions at Centennial Mills today as well as a cumulative picture of the aspirations, interests and opportunities envisioned for the site. This report, plus public input gathered through the process, will serve as the foundation for development of the framework plan. The framework plan, in turn, will serve as the basis for moving forward with redevelopment of the site. Ultimately, this report will be incorporated in the final framework plan as an appendix.

SECTION 2. SUMMARY OF THE ASSESSMENTS

The report includes eight assessments of different aspects of the Centennial Mills site. This section summarizes the key points made in these assessments. The full text of the assessments is in the final section of this report.

URBAN DESIGN CONTEXT, *Bureau of Planning, Urban Design Group*

Centennial Mills is positioned to play a vital role for the northern portion of the River District, and by extension, the Central City. The site is the last significant opportunity for a major public open space and/or attraction along this segment of the Willamette River Greenway, and can be seen as a northern riverfront equivalent to the greenway in South Waterfront. (refer to the “Westside Waterfront” map included in Part 3)

Centennial Mills will serve as the riverfront culmination in the series of River District parks, and still offers the possibility of some waterfront attraction that in the early 1990s gave the “River District” its name. The existing riverfront structures provide a historic backdrop to the “Fields” park, planned to be the River District's largest and most active open space. Creative redevelopment of the site should result in facilities that strengthen links to the area’s industrial history while improving views to and from both the river and Pearl District.

Connecting Centennial Mills to the rest of the River District parks system and the Pearl District to the south is critical. The intersection of NW 9th Avenue and Naito offers an at-grade crossing of the BNSF Railroad tracks today, but this link, while convenient, is somewhat out of alignment with the NW 10th Avenue Boardwalk. A direct connection, linking Centennial Mills – and the greenway – to the Fields Park would develop the necessary “end” to the River District park system, potentially enhance both facilities, and create a powerful “sense of place” worthy of this vital downtown neighborhood. (refer to the “Opportunities and Constraints” map included in Part 3)

HISTORIC SIGNIFICANCE / MERIT, *Bureau of Planning, Historic Resources Program*

The Centennial Mills collection of buildings is almost certainly eligible for listing on the National Register of Historic Places. As a prominently sited and essentially intact milling complex, it stands as a uniquely valuable historic site.

Redevelopment that retains and/or renovates all or most of the physically connected structures would maximize its historic and architectural values. However, due to challenges that include development economics, the structural deterioration of some buildings, the architectural feasibility of new uses, and competing objectives for the site, retention of all structures is unlikely. The renovation of a subset or “core” of the historic industrial complex, as part of a multi-objective redevelopment strategy, still has the potential to communicate important elements of the mill’s historic character and rich industrial heritage. The Flouring Mill and Feed Mill are particularly significant buildings and should be prioritized in developing a preservation and redevelopment scheme for the site. Site planning and any new structures should respond sensitively to these structures and their context.

The site’s milling machinery and other specialized structures, such as the Blending Bins, notably contribute to the site’s historic significance. Efforts should be made to preserve, integrate and interpret examples of these valuable artifacts in any redevelopment program. Regardless of the final development program, systematic documentation of the site’s architectural and physical characteristics, following the standards of the Historic American Engineering Survey, should be completed prior to any further improvements, demolitions, or redevelopment actions.

PARKS / GREENWAY, *Portland Parks and Recreation*

The redevelopment of Centennial Mills offers an exciting opportunity to complete the vision for the River District parks system as well as continue the vision for waterfront parks and the Willamette Greenway Trail.

The *Portland River District Park System Urban Design Framework Study*, by Peter Walker and Partners (2001) identified a series of parks, including Jamison Square (“the Spring Plaza”) Tanner Springs Park (“the Wetland Park”) the “Fields” (to be designed this Summer) and the “Riverfront Park”, located at and around Centennial Mills. One element of the study was a boardwalk along NW 10th Avenue that would connect Jamison Square, Tanner Springs Park, the Fields and the Riverfront Park. The vision was to eventually extend the boardwalk over the railroad and Naito Parkway to the Centennial Mills site and surrounding riverfront open space(s). Design and engineering work for the Fields will consider this connection, and how it could be integrated with the park at a conceptual level. While highly desirable, this connection faces many obstacles, including uncertainties over its engineering feasibility, its costs and the future of existing structures at Centennial Mills.

The greenway portion of the Centennial Mills site has a unique opportunity to reflect the city's commitments to the development of high-density riverfront communities and the enhancement of the Willamette River natural resources. Of primary importance are public access to the Greenway Trail, and the development of the remaining trail links themselves – along the Centennial Mills and Crescent Electric (adjacent site to the north) river frontages. Greenway and riverfront designs that incorporate native species of plants and other landscape materials, provide shallow water areas for native fish, and offer interpretive displays and river viewpoints strengthen the riparian habitats adjacent to the water's edge and improve the overall quality of the Greenway experience.

PERMITTING / REVIEW, *Bureau of Development Services*

Any redevelopment or significant alteration to Centennial Mills will be subject to a series of regulations and review processes. This summary identifies the main categories of regulations and reviews that would apply to any redevelopment at Centennial Mills. Depending on the specifics of a future proposal, there could be unforeseen issues that arise, necessitating additional modifications, adjustments, or extra reviews.

The site is zoned EXdg (Central Employment base zone with design and give general greenway overlays) within the Central City plan district, with a Public Recreational Trail designation (for a Primary Greenway Trail.) The site has a base Floor Area Ratio (FAR) of 2:1 and a maximum height limit of 100 feet. New proposals would be subject to both a greenway and design review (that could be concurrent) administering the regulations of the Greenway Overlay Zone (chapter 33.440) the Central City plan district (chapter 33.510) and more specifically, the Northwest Triangle Subarea (within chapter 33.510). As part of the design review process, new proposals would also need to address applicable guidelines found in the *Central City Fundamental Design Guidelines* and the *River District Design Guidelines*.

Centennial Mills is within the Flood Hazard Area, so new proposals will be subject to the flood hazard regulations of the Oregon Structural Specialty Code and Portland City Code section 24.50. The site's base flood elevation, based on the 1996 flood, is 31.1 feet City of Portland datum, and any fill placed below this elevation must be balanced by an equal amount of soil removal to preserve the flood storage capacity of the floodplain. The riverbank area is within the Floodway. Development within the Floodway is prohibited unless hydraulic analysis demonstrates no increase in the base flood elevation will result. Improvements to existing structures may require that the entire structure be brought into compliance with current flood hazard regulations. Other city and/or federal regulations address flood insurance, potential liquefaction of the soils, erosion control, and floodproofing of the new structures.

STORMWATER / TANNER CREEK, *Bureau of Environmental Services*

The Bureau of Environmental Services contributed \$950,000 of ratepayer dollars in 2000 to help purchase the Centennial Mills site. This contribution is intended to foster the construction of innovative stormwater management systems and fish habitat restoration projects.

Goals for this site include sustainable, innovative systems that maximize onsite stormwater management, integrated site and building designs, potential runoff management from other sources and interactive and educational opportunities. In addition, the identification and implementation of riverfront projects that enhance the quality and quantity of habitat available for populations of native salmon listed on the Endangered Species Act are highly desirable. There may be opportunities to use the City's Streamlining Agreement with state and federal agencies to facilitate in-water work permitting.

The Tanner Creek outfall (pipe) located on site presents a unique opportunity to demonstrate new daylighting, filtration, and other sustainable stormwater technologies at a highly-visible location. Design solutions that increase the amount of shallow water area, provide large wood or other materials, treat any stormwater prior to its contact with the river and incorporate native species of vegetation, among others, will go the farthest toward enhancing the river's ecosystem.

There are some more specific site conditions to consider. New sanitary systems at Centennial Mills (likely with any redevelopment) will need to be pumped through a new forcemain to the nearest sanitary connection (NW 9th and Overton, or NW Overton and Naito.) The Tanner Creek outfall will have no Combined Sewer Overflow (CSO) events after December 2006, and the city/BES will retain easements over the existing outfall pipe for maintenance purposes. The Burlington Northern Santa Fe Railroad maintains a boom around the Tanner creek outfall. The Westside CSO Tunnel or "Big Pipe" is in the Naito ROW at a depth of approximately 120 feet.

TRANSPORTATION, *Portland Office of Transportation*

Redevelopment at the Centennial Mills site may result in off-site impacts to the transportation system that would require mitigation. Similar to the Permitting and Review assessment described above, in the absence of a specific proposal, it is difficult to identify all possible system impacts, necessary modeling, or any required mitigation.

Depending on the redevelopment proposal, a transportation systems impact analysis may be required. This analysis may include a smaller study area if the proposal is locally-oriented, if the proposal includes a regional attraction, the study area would expand to analyze impacts to regional facilities (freeways) and vehicular portals into the River District. Any impacts to the transportation system would require mitigation, which may include sidewalk and/or pedestrian improvements, transportation demand management or increasing capacity for vehicular traffic.

The future cross section of this segment of Naito Parkway is undetermined. It will be defined at the time that the Portland Office of Transportation conducts a streetscape plan for street and pedestrian improvements on this segment of Naito Parkway, a project currently identified in the Transportation System Plan (TSP). Per existing policy, when changes to a right-of-way are proposed, capacity impacts to the immediately affected street and surrounding area must be considered. The portal and freight movement functions of Naito must be balanced with its more local and multi-modal functions as identified by its street classifications.

Although TriMet operates the # 16 Front Ave. / St. John's bus line along Naito Parkway, offering 30 minute headways at morning and evening peak times, Centennial Mills is not well served by public transit. The closest Portland Streetcar stops are over four blocks away (westbound) and over six blocks (southbound). New pedestrian bridges at the NW 10th Avenue Boardwalk extension and at NW Marshall and the 6th Avenue extension are identified as future transportation improvement projects in the TSP.

CONDITION OF STRUCTURES, KPFF Consulting Engineers

The Centennial Mills facility is comprised by ten distinct buildings constructed between 1910 and 1940. The buildings were built using various types of concrete and timber construction, and range in size from one-story warehouses to a seven-story flour mill. Structural repairs and/or seismic strengthening will be required for all buildings included in a redevelopment. Preliminary repair and strengthening strategies are described in more detail in the attached building condition assessment. Ultimately, more analysis will be necessary as specific proposals are prepared.

Warehouses A, C and E (where the Mounted Patrol Unit is now housed) and the Flour Mill building generally appear to be in "good" condition. Warehouses B and D and the Feed Mill building generally appear to be in "fair" condition. While the specifics of each structure varies, those in good condition typically have less structural deterioration due to water penetration or other previous functions than those in fair condition; however, regardless of condition, all structures will require strengthening to comply with seismic requirements of the building code.

MOUNTED PATROL UNIT (MPU) FACILITIES, SERA Architects

In 2001 the Portland Police Bureau's Mounted Patrol Unit (MPU) was moved to new indoor and outdoor facilities at Centennial Mills. The new indoor facilities include adaptively reused portions of Warehouses E and C of the existing structures, and a new 20,000 square foot exterior paddock was constructed along Naito Parkway facing the intersection of NW 9th and Naito.

Given the uncertainties surrounding the future of the rest of the site, it is difficult to determine impacts to the MPU caused by new development at Centennial Mills. In general, it seems feasible that new open space, commercial and/or residential development could co-exist on the site with the MPU. Site security and minimizing unsupervised access to the horses are primary issues; measures should be taken to make the facility inaccessible during non-operating hours. Due to the somewhat sensitive nature of the horses, new development that creates excessive and/or startling noises, and/or permits or transmits hazardous materials will not be acceptable. Any redevelopment should carefully consider the impacts of construction so as not to cause undue hardship on the animals.

The current facilities at Centennial Mills serve the needs of the MPU, and the Police Bureau has no plans to expand into other buildings or structures on the site. The Centennial Mills location is proximate to the MPU's primary patrol areas: Old Town / Chinatown, Tom McCall Waterfront Park and the park blocks. The MPU has a 10-year lease on the facility (land is still owned by the City of Portland / Portland Development Commission) with options for two additional 5 year-leases, potentially extending the agreement to 2020. Redevelopment proposals that do not include the MPU would have to carefully consider alternative site locations for the facilities. The MPU does not pay rent to the Portland Development Commission for use of the facilities, and the site is maintained by the Bureau of General Services.

SECTION 3. FULL TEXT OF THE ASSESSMENTS

The following pages include the full text of the eight assessments prepared by the public agencies affected by redevelopment on the site.



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From: Liza Mickle, City Planner;
Nicholas Starin, City Planner

Subject: Centennial Mill Historic Preservation Assessment

Attached you will find an assessment of Centennial Mill's historic and architectural characteristics and significance, based primarily on existing engineering and cultural resource reports prepared for the Portland Development Commission. We hope you find this summary document helpful in the Centennial Mill Framework Plan process.

The overarching conclusion of the assessment is that the Centennial Mill complex is a significant cultural asset to the city that is worthy of public efforts to preserve and reuse it. As it presently stands, its integrity and historical significance are such that it is almost surely eligible for listing on the National Register, although preservation of the entire complex appears unlikely for a variety of reasons.

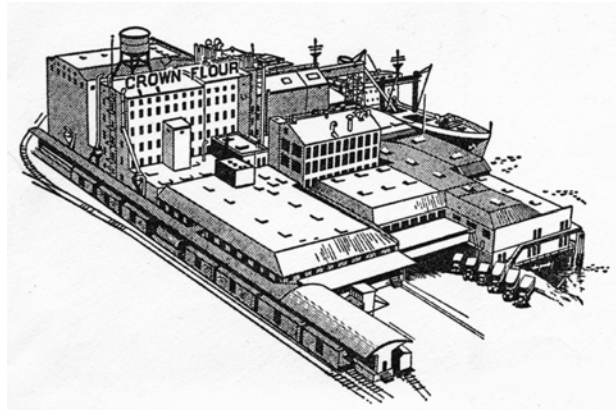
It is our belief that renovating and adapting a subset of the mills' buildings and structures as part of a multi-objective redevelopment program still has the potential to communicate important elements of the mill's industrial character and rich historical associations. The findings of the attached assessment are intended to guide the redevelopment planning process and help ensure that these historic values are preserved. The recommendations may need to be revisited and refined as planning objectives and redevelopment parameters are clarified.

Please contact us if you have any questions.

Centennial Mill Historic Preservation Assessment

I. Purpose

This document summarizes and evaluates the historical and architectural characteristics and significance of the Centennial Mill property, currently owned by the Portland Development Commission. It is intended to inform the Centennial Mill Framework Plan by providing a basis for understanding the site and its individual structures from a historic preservation perspective. It responds to and elaborates upon City Council's finding that the mill is "considered a City landmark by many citizens of Portland...[and] a symbol of Portland's rich history of maritime commerce and a valuable artifact of the industrial working waterfront ... the community supports the redevelopment of the Centennial Mill property and opposes demolition."¹



View of Crown Mill reproduced from company stationary, circa 1940's

II. Summary of Findings

The Centennial Mill complex, which includes 10 distinct but connected buildings and a number of related structures and objects (such as milling equipment, docks, canopies, etc.) is significant for its historical associations with Portland's international prominence in the grain milling industry and grain product trade. From its inception in 1910 and through much of its life as a large merchant flouring mill, the facility contributed to Portland's role as a principal West Coast grain processing and shipping hub that connected interior Northwest agricultural regions to national and international commercial markets. Centennial Mill remains a particularly prominent and still largely intact physical reminder of the importance of the milling industry, grain trade, and multi-modal transportation networks in the historical development of Portland and the Pacific Northwest. Individual buildings in the complex are also noteworthy as examples of early 20th Century reinforced concrete architecture and the industrial design of several important West Coast architects.

Given the site's array of physical and financial development constraints, the desire to address multiple policy objectives, and a large number of unknown factors, it is difficult to clearly recommend a specific preservation program at this time. However, the following findings and recommendations should guide the Centennial Mill planning process, with the understanding that they may need to be reevaluated as new information is obtained and public objectives for the site are clarified:

1. **Centennial Mill is a significant cultural resource that should be preserved.** The Centennial Mill site as a whole is almost certainly eligible for listing on the National Register of Historic Places. As a prominently sited, essentially complete and intact milling complex, it stands as a uniquely valuable historic *site*, distinct in that regard from Albers Mill and Olympic Mill. Within the context of evaluating redevelopment options, its historical and architectural values would be maximized by a development program that retains and renovates all or most of its functionally and physically connected structures. However, a number of factors make that outcome unlikely, including: the difficulty of adapting specialized industrial buildings to new uses; the apparent physical deterioration of many structural elements; competing objectives (such as provision of open space); and economic challenges. Alternatively, renovating and adapting a subset of the mills' buildings and structures as part of a multi-

¹ Portland City Council Resolution No. 36320, May 25, 2005.

Centennial Mill Historic Preservation Assessment

objective redevelopment program still has the potential to communicate important elements of the mill's industrial character and rich historical associations.

2. **The relationships between the mill's structures and its surroundings are important.** The complex's three primary functions—milling, grain storage, and product storage—are clearly expressed in its structures, their relationships to each other, and their connections to rail, street and river transportation systems. Their very interconnection poses major redevelopment challenges if individual structures are to be preserved in isolation. Consideration should be given to schemes that retain a “core” of structures that preserves the mill's most character-defining features and portrays as complete a picture of its functional operations and history as possible. An example would be the Flouring Mill, one of the warehouses and one of the grain elevators.
3. **The historical evolution of the mill is also important.** Its structures and physical layout reflect its history as a working industrial site over nearly a century. The facility is not “frozen” in any particular period and many of its physical alterations have acquired historical significance in their own right. That said, the mill's major development phases should be considered in developing preservation options and may assist in prioritizing structures for renovation and reuse.
4. **The Mill's architects and builders are significant in Portland and West Coast architectural history.** Their contributions should be considered in evaluating preservation and redevelopment options.
5. **The Flouring Mill (1910) and the Feed Mill (1928) are particularly significant buildings.** They were the operational heart of the facility and remain among its most distinctive physical structures. They most succinctly embody the mill's historical significance and convey its industrial character and should be prioritized in developing a preservation and redevelopment scheme. Future site planning and any new structures on the site should respond sensitively to these structures and their context.
6. **The site's milling machinery and other specialized structures, such as the Blending Bins and the bi-level wharf, notably contribute to its significance as part of Portland's industrial heritage.** Efforts should be made to preserve, integrate and interpret representative examples of these uniquely valuable artifacts on-site as part of the redevelopment program. Their cultural value is increased by preserving and interpreting them in their historical context.
7. **Important architectural elements, industrial artifacts and documents should be salvaged.** If not incorporated into the redevelopment program, the mill's buildings should be deconstructed and its materials (e.g. large-dimension old-growth fir) reused architecturally off-site. In addition, unique and/or representative examples of important architectural elements and milling equipment should be salvaged and relocated to one or more heritage repositories (such as the Architectural Heritage Center or OMSI) or other appropriate site. The corporate records, photographs and other documents relating to the mill's history and operations that are currently scattered in several, environmentally unstable parts of the mill and at the Portland Development Commission should be placed in a single off-site location (to assist in further site documentation) and eventually transferred to an appropriate archival repository (such as the Oregon Historical Society or the Special Collections Library of the University of Oregon).
8. **The Mill's engineering, architecture and history should be thoroughly documented.** Because all of the mill's structures will be either extensively altered or demolished, it is critical to record and document, through narrative, graphic, and photographic means, the engineering, construction methods, functions, technologies and history of the site as a complete industrial complex. Significant work has already been accomplished in this regard, but these efforts should be augmented by additional research and consolidated into a report that follows the Secretary of the Interior's Standards for Architectural and Engineering Documentation (“HABS/HAER Standards”) and made available to the public. This

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research is also needed to determine with more specificity the mill structures' most significant and defining architectural elements to assist in evaluating preservation and redevelopment options.

9. **There are existing precedents for historically-sensitive redevelopment of large historic industrial sites.** Nationwide, there is a large and growing roster of successful adaptive reuse projects involving historic industrial buildings. The Centennial Mill Framework Plan process should explore these examples for creative approaches to preserving and reusing the site's most significant buildings and features.

III. Physical Description²

The Centennial Mill complex is located on a 4.75 acre site along the west bank of the Willamette River in a historically industrial area of Northwest Portland. It is generally bounded by the Fremont Bridge on the north, the Broadway Bridge (and Albers Mill) to the south, the Willamette River to the east, and NW Naito Parkway to the West.

The site was developed as a grain milling and processing facility and contains eleven distinct but interconnected structures, built between 1910 and 1940 using various types of concrete and timber construction.³ Milling operations continued on the site until 2000. Each building played a role in the milling process and can be divided into three categories according to function: 1) milling, 2) grain storage, and 3) product storage. Building heights vary from tall, one-story warehouse structures to a seven-story flour mill. A fourth function, shipping and receiving, is expressed in structures attached or adjacent to the primary buildings, such as marine and railroad loading docks and canopies. According to a preliminary engineering report, all of the buildings have one or more perimeter walls that are either common with adjacent buildings or have insufficient separation to allow them to stand independently. Additionally, the buildings were constructed with little lateral bracing and additional structural evaluation will be required prior to determining options for strengthening and renovating individual buildings. While the buildings' physical condition varies, all show various degrees of deterioration and will require extensive structural improvements and other renovation work.

The complex may also be thought of in terms of its major development phases. The first occurred circa 1910 with construction of the Flour Mill, Warehouses A and B, and Grain Elevator A. Four structures were added between 1918 and 1921: the Blending Bins; Warehouse D; an extension to Warehouse D; and Warehouse E. Three more were added between 1925 and 1930: Grain Elevator B, the Feed Mill, and Grain Elevator C. Warehouse C was the last to be constructed in 1940. Because the site was in active use as a grain mill until it closed in 2000, all of the buildings have modifications and alterations of various kinds, as the operational needs of the facility evolved over time. A major modernization of the plant's milling machinery occurred in the early 1960's. The most recent changes to the site include partial renovations to portions of Warehouses C and E in 2001, to accommodate use by the Portland Police Mounted Patrol Unit, currently the only active use on the site. Additional research is needed to more fully document the alterations history of the Mill's facilities if they to be nominated for National Register listing or accurately recorded prior to demolition.

² The sources consulted contain a number of inconsistencies regarding the dates of construction and physical characteristics of the mill's structures. Staff has attempted to reconcile these contradictions in this report, however, this should not be considered definitive; additional research is required.

³ The October 18, 2001 kpff Consulting Engineers "Feasibility Design Study" report identifies ten structures; the October 2, 2001 SERA Architects/Ann Fulton "Cultural and Historic Analysis" report identifies 11, apparently counting the Blending Bins as a separate structure.

Centennial Mill Historic Preservation Assessment

Milling Structures⁴

Flour Mill (1910)

The Flour Mill was completed in 1910 at the same time as Warehouses A and B, and Grain elevator A. This building was the functional center of the complex and remains perhaps its most visually dominant feature. Designed by San Francisco engineer Leland S. Rosener, the Flour Mill is a rectangular building measuring approximately 51' x 109'. Its strong industrial character may be described as concrete utilitarian in style, with shallow gable ends, and what has been loosely characterized as Italian Renaissance influences. It is supported on wood piles, has reinforced concrete exterior walls, and is seven stories tall over a basement. The heavy timber floors are supported on timber beams and columns above the first floor and by concrete beams and columns (which may be later replacements for earlier wood elements) below the first floor. The ceiling height varies between 12 and 16 feet. The roof is wood post-and-beam. Above the first floor there are regularly spaced window openings centered in recessed panels along the north and south elevations. Alterations include the insertion of eight vertical steel tanks in one bay at the east end of the building, from the mezzanine through the fifth floor. On the east perimeter wall, ten full-height grain blending bins are attached; these are also connected to grain elevator A (see additional description of the Blending Bins below). There is a large water tower on the roof. The Flour Mill generally appears to be in good condition, with some minor deterioration of the level 6 wood floor and wood roof due to water damage.

Feed Mill (Starch Plant) (1928)

Along with the Flour Mill, the Feed Mill is one of the most prominent structures on the site due to its height, materials, and industrial character. Like the Flour Mill, it housed grain processing operations central to the facility's function. It was designed and built by Portland's L. H. Hoffman Building Construction Company in 1928. It is a rectangular, four-story building measuring approximately 50' x 83', with a concrete foundation, a basement, and reinforced concrete exterior walls. Its industrial character is highlighted by exterior pilasters and large steel sash windows. The structure consists of full-height concrete columns with concrete spandrel beams at the perimeter and heavy timber floors supported on timber beams and columns, with a wood post-and-beam roof. Alterations include the addition of a central atrium opening from the second through fourth floors. The Feed Mill appears to be in generally good condition, with significant deterioration to portions of the interior timber framing.

Product Storage Structures

Warehouse A and Warehouse B (1910)

Warehouses A and B were also designed by Leland S. Rosener at the same time as the Flour Mill and Grain Elevator A. Warehouse A is a one-story structure with a basement, and it measures approximately 50' x 109'. There is a penthouse at the east end. Eight grain bins extend from inside the building up the north perimeter wall to approximately 40' above the roof. The penthouse and four grain bins were added sometime after 1910. The structure consists of full-height perimeter concrete walls, a concrete deck at the first floor level, and a wood roof with timber trusses supported on the north and south perimeter walls. The building is supported on timber piles. It shares common walls with the Flour Mill and Warehouses B and E. Warehouse A generally appears to be in good condition, with some deterioration in the roof framing due to leakage.

Warehouse B measures approximately 100' x 185'. It is an L-shaped, one-story structure with a basement. On the east side, the basement level becomes the lower level of a two-story dock. In 1940, a mezzanine floor was added to connect into the Blending Bins and the Flour Mill. The structure is a combination of reinforced concrete exterior walls with a heavy timber first floor supported on timber columns. A wood roof with timber trusses spans the north-south direction. The timber-framed mezzanine support columns also support the roof. Warehouse B generally appears to be in fair condition above the basement level, with deterioration

⁴ Building condition assessments are based on kpff Consulting Engineers, "Centennial Mill Feasibility Design Study: Conceptual Structural Improvements," October 10, 2001. Additional structural analysis is ongoing and is likely to refine these preliminary assessments.

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visible in the timber roof, mezzanine, and floor framing. However, there is extensive decay in the timber pilings at the water line.

Warehouse C (1940)

Warehouse C was the last structure built at Centennial Mill in 1940, and it was constructed by L. H. Hoffman. It measures approximately 200' x 180' and is a T-shaped, one-story building with a basement. On the east side, the basement level becomes the lower level of a two-story dock. The building has concrete bearing walls on most sides; an elevated concrete and timber deck at the east of the basement; a concrete and timber first floor; and a wood roof with timber trusses. In 1965, a portion of the warehouse and its dock were rebuilt after it was rammed by the grain ship Aegean Mariner. Warehouse C generally appears to be in good condition with some decay in the timber framing above the basement level and in the timber piling below the lower deck. Warehouse C is in the best condition of all the warehouses and will require less extensive repairs due to deteriorated framing and pilings. The west portion of this building was partially renovated in 2001 and, with Warehouse E, is currently used to house the City's Mounted Patrol Unit (MPU).



Collision damage from the Aegean Mariner, 1965

Warehouse D (1919-1920)

Warehouse D has two parts, both designed by leading Portland architect Morris H. Whitehouse. The building measures approximately 100' x 160' and is one-story structure with a basement. On the east side, the basement level becomes the lower level of a two-story dock. The structure consists of an elevated concrete deck for the eastern 100' of the basement; a heavy timber first floor supported on timber columns; and a wood roof with timber trusses. Repairs to the foundation were made in 1933 and 1939. The building has significance as a rare example of industrial design by Whitehouse. Warehouse D generally appears to be in fair condition above the basement level. However, decayed timber framing is evident in several locations, likely due to roof leaks. Below the lower dock level there is extensive decay in the timber pilings at the water line.

Warehouse E (1921,1928)

Warehouse E is an approximately 109' x 175' one-story structure with a basement. The building was constructed in two phases beginning with the west side in 1921, designed by Strong & MacNaughton, followed by the east side in 1928, designed by L. H. Hoffman. The structure consists of full-height perimeter concrete walls; a heavy timber floor structure supported on concrete columns; and a wood roof with timber trusses. Warehouse E has two mezzanines, located at the north and south ends of the building. The south mezzanine was enlarged circa 1955. There is a concrete transformer penthouse at the north end of the building. Warehouse E generally appears to be in good condition with some deterioration to the north mezzanine floor. This building was partially renovated in 2001 and currently houses the City's Mounted Patrol Unit (MPU).

According to the 2001 kpff Consulting Engineers report, the three warehouses along the east side of the complex (Warehouses B, C, and D) will generally require the most extensive repairs and strengthening efforts in any reuse program. Of the three, Warehouse C appears to be in the best condition.

Centennial Mill Historic Preservation Assessment

Grain Storage Structures

Grain Elevators A, B, C (1910, 1925, 1929)

Grain Elevator A was the first one on the site, and it was designed by Leland Rosener. It is approximately 39' x 96.' Elevator B was also designed by Rosener. It measures approximately 51' x 86' and is the second largest on the site. Elevator C, constructed by L. H. Hoffman circa 1929, dominates the skyline to the north of the flour mill. It measures approximately 77' x 81' and is the largest elevator on the site. In general, the three structures consist of laminated wood walls forming numerous full-height storage bins or cribs. The interior features at the top level of Elevators B and C are noteworthy, including mechanisms for distributing grain products via an intricate system of chutes to the storage bins below. Constructed primarily of untreated wood (fir), the equipment not only represents a specialized type and style of construction; it also represents fine craftsmanship and the abundant use of native fir as a building material. The grain elevators are supported on heavy timber and concrete columns at the basement level. The foundations appear to be timber pilings. It will be difficult, although not impossible, to adapt these buildings for new uses because of the close spacing of the storage bin walls and their specialized design.

Blending Bins (1918)

The Blending Bins structure is unique. It was designed by Whitehouse & Fouilhoux, one of Portland's leading architectural firms, best known for designing significant downtown buildings during Portland's 1920s Golden Age of prosperity. Morris Whitehouse also designed the 1913 office building on SW Oak for the mill's parent company, Balfour, Guthrie & Company, which is listed on the National Register. The Blending Bins are a rare remaining example of the firm's industrial work. The purpose of the bins was to house and blend a mix of grain types in preparation for the flouring process. Each bin is a tube measuring approximately 10' x 10'. The side walls are constructed of 2" thick, clear-grain fir planks stacked on top of each other, with lapped joints. The structure is approximately 31' long by 14' wide and extends to the top of the Flour Mill.

Additional Structures and Features

Bi-Level Walkway/Dock

Along the full length on the east side (riverfront) there is a two-level, 8' wide open timber walkway. This is severely deteriorated due to decay and damage from ship impact, and would require extensive reconstruction. This assembly is one of the last remaining bi-level dock structures, designed to facilitate shipping activities as the river levels changed seasonally, that were once common along Portland's waterfront.

Canopy

Along the west side of the facility there is a metal deck canopy covering a loading dock parallel to a former rail spur. This appears to have been added after the original construction and is supported by the west exterior walls of Warehouses A & E, the Flour Mill, and Grain Elevator C. This would need to be strengthened to comply with current code requirements.

Milling Machinery

The mill still contains a number of specialized milling-related machines and industrial equipment, although much of it was removed at the time of closure. These include sifters, separators, purifiers, roller mills, and conveyors. The equipment was produced by various companies between 1913 and the mid-1960s, including Nordyke-Marmon, Carter-Day, Eureka, Great Western Manufacturing, and the Miag Company. It is not known if a complete inventory of extant machinery exists or their state of repair.

Centennial Mill Historic Preservation Assessment

IV. Historical Context

The following section is based largely on the “Cultural and Historic Analysis” report prepared in 2001 by SERA Architects and Ann Fulton.

Crown Mills (later renamed Centennial Mill) began operation in 1910 as a large merchant flour mill, entering Portland’s milling industry during a time of great expansion between 1880 and 1920. At that time, Portland was the milling capital of the northwest. It was built by Balfour, Guthrie & Company, the San Francisco affiliate of an international commodity trading firm, established in 1869 to take advantage of the economic development of the Pacific Coast. Headed by two Scottish merchant traders, the company opened a Portland office in 1878 because of its strategic location near the exit of wheat-producing interior valleys, connection to the Columbia River system and Pacific Ocean, and its deep-water port capacity. They invested heavily in grain shipping, storage and handling facilities, building more than 70 warehouses along Portland’s waterfront. By 1900, Balfour, Guthrie & Co. was one of the most successful international shipping and commodity trading companies on the Pacific Coast.

The early 20th Century witnessed tremendous growth in the U.S. and Pacific Northwest grain milling industries, fuelled by expanding domestic and export markets, and later the rise of industrial-scale commercial baking. This was expressed in a trend towards larger new mill plants, such as Crown Mills, and the purchase and consolidation of older, smaller operations by large corporate concerns. In Portland, three companies that purchased and consolidated Pacific Northwest plants between 1900 and 1920, include the Portland Flouring Mills Company, Albers Brothers Milling Company, and Centennial Mill Company. While Crown Mills, at a capacity of 1,200 cwt. (hundredweight), was not the largest mill in Portland at the time of its construction (Portland Flouring Mills’ capacity was 10,000 cwt.), it was still relatively large for its time, and it expanded over the years. By 1957, its capacity was 5,000 cwt., and it was probably the second largest flouring mill in Oregon, after 6,000 cwt. Globe Mills in Astoria.

Crown Mills capitalized on expanding foreign markets for U.S. grain products, exporting approximately 75% of its flour between 1911 to 1948 to China, Japan, Central and South America, and Europe. In 1920, Crown Mills doubled its wharfage and added a warehouse to keep up with demand. It weathered the economic depression of the 1930s and went into maximum production (and high profitability) during the World War II years. Crown Mills also cultivated regional and national markets, particularly those of large commercial bakeries which required steady, and increasingly standardized flour products. Balfour, Guthrie & Co. had purchased the rights to use the Stockton Milling Co.’s popular “Crown” brand when it built the Portland mill and local advertising used recipe booklets to promote its flour for baking.

The mill’s economic success spurred significant additions to the physical plant during the 1920’s and in 1940. The mill also expanded its product lines, branching into cereal and animal feed manufacturing. The Feed Mill was completed in 1928, and by the early 1930s it sold 14 different types of mill feed for dairy and livestock animals, and it may have been the first U.S. company to pelletize mill feed.

In 1948, Balfour, Guthrie & Co. sold Crown Mills to Seattle-based Centennial Flouring Mills. The company was renamed Centennial Mills in 1955. Improbably, the sale followed Crown Mills’ most profitable year after a record-setting wheat harvest and large worldwide demand for flour. After 1948, domestic commercial bakers and mill feed buyers were the mill’s largest customers. By the early 1950s, the feed and grain division surpassed flour milling; however, the feed business was short-lived. By 1961, Centennial Mill was out of the feed business due to pressures from cooperatives.

From 1911 to 1961, the plant’s milling process and equipment remained essentially the same. When United Pacific Corp. purchased Centennial Mills in 1960, the company decided to expand its product lines for the domestic market. The plant was modernized and equipment replaced, becoming a leader in the milling industry’s effort to modernize old mills and make them profitable. By 1964, the company claimed it operated

Centennial Mill Historic Preservation Assessment

the first fully pneumatic plant in the Pacific Northwest. A packaging unit was added, and beginning in 1964 the mill produced gelatin desserts and cake, pancake, and muffin mixes. In 1966, a starch and gluten plant was added in the former feed mill building. The gluten business proved to be highly profitable. It was marketed to local paper mills and cereal manufacturers throughout the nation.

In 1981, ADM Milling bought the company. However, competition from large mills throughout the country increased. Significant transportation changes also affected the business by the last decades of the 20th Century. Shipping by water ended in 1982, rail transportation declined, and trucks were used to transport most of the mill's products. The plant remained in production until ADM sold Centennial Mills to the Portland Development Commission in 2000.

Crown Mills played an important role in the economic growth of Portland and the Pacific Northwest, contributing to Portland's status as a major grain processing and shipping hub that connected interior Northwest agricultural regions to national and international commercial markets. Milling's role in regional development was magnified by its economic linkages to other industries. Milling, agriculture, food manufacturing, transportation and financial services were interconnected, supporting each others' growth and development in various ways. For example, milling and grain trading promoted Portland's development as a major transportation hub connected to a large hinterland via the Columbia and Willamette river systems and an extensive rail network. This nexus is clearly reflected in Crown Mills' harborside location next to mainline rail facilities. Portland also emerged as a financial center for grain trade transactions and related activities, such as farm mortgage banking. Crown Mills played a direct role in these financial and marketing activities, assisting in the organization of the Portland Grain Exchange in 1929. Crown Mills' ability to provide soft white wheat flour at a low cost also helped make Portland a regional center for commercial baking. On a wider level, Portland's flour milling and grain trade industries supported the agricultural and economic development of the greater Columbia Basin, which depended on Portland's industrial, mercantile, financial and transportation services and infrastructure to get its products to the world. As a large merchant mill associated with an international commodity trading and shipping parent company, Crown Mills was a major player in these activities. For example, the mill reportedly brought about \$6 Million to the region annually throughout the 1920s alone.



V. Conclusions

Historical Significance

Centennial Mill is not listed on Portland's 1984 Historic Resources Inventory nor is it currently designated as a local Historic Landmark or listed on the National Register of Historic Places. However, it was recently recognized by City Council Resolution as "a symbol of Portland's rich history of maritime commerce and a valuable artifact of the industrial working waterfront ... the community supports the redevelopment of the Centennial Mill property and opposes demolition."

Further, based on previous documentation and limited new research, Bureau of Planning historic resources staff finds that Centennial Mill is a significant and distinctive industrial landmark that is almost certainly eligible for listing on the National Register. Its historical significance derives from its associations with

Centennial Mill Historic Preservation Assessment

Balfour, Guthrie & Company, one of the most successful international shipping and commodity trading companies on the Pacific Coast, and Portland's international prominence in the grain milling industry and grain product trade. From its inception in 1910 and through much of its life as a large merchant flouring mill, the facility contributed to Portland's role as a principal West Coast grain processing and shipping hub that connected interior Northwest agricultural regions to national and international commercial markets. Centennial Mill remains a particularly prominent and still largely intact physical reminder of the importance of the milling industry, grain trade, and multi-modal transportation networks in the historical development of Portland and the Pacific Northwest.

Centennial Mill's buildings, constructed between 1910 and 1940 are also noteworthy, if not entirely unique, as examples of early 20th Century industrial architecture. Their overall architectural style, which may be characterized as "Reinforced Concrete Utilitarian," is fairly well represented in Portland. However, the mill's prominent and relatively isolated siting on the river and the interesting articulation of its multiple facades are distinctive. The specialized functions of its buildings represent aspects of the milling business, from the arrival of grain to its processing and the distribution of end products. They also reflect different time periods and technological changes in the milling industry. Finally, Centennial Mill's architects and builders are important in Portland and West Coast architectural history. Further research on individual buildings is needed in order to more fully evaluate their significance as distinct structures and inform preservation and reuse decisions.

There are other extant buildings that reflect Portland's historical milling and grain trading industries, including Albers Brothers Milling Company immediately to the south, and the Olympic Cereal Mill in the Central Eastside. Both have been recognized for their significance by listing in the National Register of Historic Places. As a larger and more comprehensive facility with a greater number of intact features and artifacts from its industrial past, it is very likely that Centennial Mill would qualify for listing in the National Register.

Historic Industrial Sites: Preservation and Re-use Precedents

Centennial Mill will face substantial challenges as an adaptive reuse project. However, there are a number of precedents nationwide that illustrate how historic industrial sites can be successfully adapted for new uses and provide wide-ranging economic and social benefits. Mass MoCa, a former industrial complex in North Adams, Massachusetts was adapted for a range of uses that include the arts and commercial space. Since opening in 1999, it has been touted as highly successful in terms of its overall cultural and economic impacts. In the Carolinas, old textile mills are being converted into centers for other industrial activities, as the states' economy transitions toward a post-textile era. Areas of the Pacific Northwest are also adapting to new economic realities; it's increasingly common to see lumber mills and fishery buildings being redeveloped for condominium and offices use.

Old flour mills are also being adapted innovatively. In Denver, buildings from the 1920s-era Pride of the Rockies Flour Mill have been converted to residential use, offering river and city views. In Minneapolis, the acclaimed Mill City Museum opened in 2003 at the former home of General Mills. It chronicles the history of milling and provides interactive, hands-on exhibits. The museum combines modern elements with remnants of the original eight-story structure. For this project, the construction challenges and costs were increased by fire damage that gutted the mill in 1991. Nevertheless, the museum project managed to innovatively use remnants of the former structure, including flour bins, milling machinery, the rail corridor, and the freight elevator. Now called the Flour Tower, the freight elevator offers a 12-minute ride that interprets the historic sights and sounds of milling. The mill complex surrounding the museum has been adapted to serve a variety of needs, including public and private office space, residential lofts, and a large open-air courtyard.

On a local level, there is precedent in Portland for adaptive reuse of mill properties. Portions of the Albers Brothers Milling Co, located just south of Centennial Mill on NW Naito Parkway, was renovated in the late 1980s by H. Naito Properties. In spite of the cost (estimated at \$3-5 million at the time), it was considered a

Centennial Mill Historic Preservation Assessment

worthwhile undertaking because of the property's prime riverfront location in an area that was becoming increasingly attractive for downtown development.

The Centennial Mill Framework Plan process should explore these and other examples for creative approaches to preserving and reusing the site's most significant buildings and features. With foresight, the adaptive reuse of Centennial Mill could act as a significant catalyst for the ongoing revitalization of Portland's riverfront.

Findings and Recommendations

Given the site's array of physical and financial development constraints, the desire to address multiple policy objectives, and a large number of unknown factors, it is difficult to clearly recommend a specific preservation program at this time. However, the following findings and recommendations should guide the Centennial Mill planning process, with the understanding that they may need to be revisited and refined as new information is obtained and public objectives for the site are clarified:

1. **Centennial Mill is a significant cultural resource that should be preserved.** The Centennial Mill site as a whole is almost certainly eligible for listing on the National Register of Historic Places. As a prominently sited, essentially complete and intact milling complex, it stands as a uniquely valuable historic *site*, distinct in that regard from Albers Mill and Olympic Mill. Within the context of evaluating redevelopment options, its historical and architectural values would be maximized by a development program that retains and renovates all or most of its functionally and physically connected structures. However, a number of factors make that outcome unlikely, including: the difficulty of adapting specialized industrial buildings to new uses; the apparent physical deterioration of many structural elements; competing objectives (such as provision of open space); and economic challenges. Alternatively, renovating and adapting a subset of the mills' buildings and structures as part of a multi-objective redevelopment program still has the potential to communicate important elements of the mill's industrial character and rich historical associations.
2. **The relationships between the mill's structures and its surroundings are important.** The complex's three primary functions—milling, grain storage, and product storage—are clearly expressed in its structures, their relationships to each other, and their connections to rail, street and river transportation systems. Their very interconnection poses major redevelopment challenges if individual structures are to be preserved in isolation. Consideration should be given to schemes that retain a “core” of structures that preserves the mill's most character-defining features and portrays as complete a picture of its functional operations and history as possible. An example would be the Flouring Mill, one of the warehouses and one of the grain elevators.
3. **The historical evolution of the mill is also important.** Its structures and physical layout reflect its history as a working industrial site over nearly a century. The facility is not “frozen” in any particular period and many of its physical alterations have acquired historical significance in their own right. That said, the mill's major development phases should be considered in developing preservation options and may assist in prioritizing structures for renovation and reuse.
4. **The Mill's architects and builders are significant in Portland and West Coast architectural history.** Their contributions should be considered in evaluating preservation and redevelopment options.
5. **The Flouring Mill (1910) and the Feed Mill (1928) are particularly significant buildings.** They were the operational heart of the facility and remain among its most distinctive physical structures. They most succinctly embody the mill's historical significance and convey its industrial character and should be

Centennial Mill Historic Preservation Assessment

prioritized in developing a preservation and redevelopment scheme. Future site planning and any new structures on the site should respond sensitively to these structures and their context.

6. **The site's milling machinery and other specialized structures, such as the Blending Bins and the bi-level wharf, notably contribute to its significance as part of Portland's industrial heritage.** Efforts should be made to preserve, integrate and interpret representative examples of these uniquely valuable artifacts on-site as part of the redevelopment program. Their cultural value is increased by preserving and interpreting them in their historical context.
7. **Important architectural elements, industrial artifacts and documents should be salvaged.** If not incorporated into the redevelopment program, the mill's buildings should be deconstructed and its materials (e.g. large-dimension old-growth fir) reused architecturally off-site. In addition, unique and/or representative examples of important architectural elements and milling equipment should be salvaged and relocated to one or more heritage repositories (such as the Architectural Heritage Center or OMSI) or other appropriate site. The corporate records, photographs and other documents relating to the mill's history and operations that are currently scattered in several, environmentally unstable parts of the mill and at the Portland Development Commission should be placed in a single off-site location (to assist in further site documentation) and eventually transferred to an appropriate archival repository (such as the Oregon Historical Society or the Special Collections Library of the University of Oregon).
8. **The Mill's engineering, architecture and history should be thoroughly documented.** Because all of the mill's structures will be either extensively altered or demolished, it is critical to record and document, through narrative, graphic, and photographic means, the engineering, construction methods, functions, technologies and history of the site as a complete industrial complex. Significant work has already been accomplished in this regard, but these efforts should be augmented by additional research and consolidated into a report that follows the Secretary of the Interior's Standards for Architectural and Engineering Documentation ("HABS/HAER Standards") and made available to the public. This research is also needed to determine with more specificity the mill structures' most significant and defining architectural elements to assist in evaluating preservation and redevelopment options.
9. **There are existing precedents for historically-sensitive redevelopment of large historic industrial sites.** Nationwide, there is a large and growing roster of successful adaptive reuse projects involving historic industrial buildings. The Centennial Mill Framework Plan process should explore these examples for creative approaches to preserving and reusing the site's most significant buildings and features.

Centennial Mill Historic Preservation Assessment

VI. Sources Consulted

“Centennial Mills: Description of Improvements,” n.d.

Creative Coalition of Portland, “The Centennial Mill Initiative,” n.d.

Heritage Investment Corporation, Register of Historic Places Nomination Form for Albers Brothers Milling Company, Portland, Oregon, [c. 1984].

kpff Consulting Engineers, “Centennial Mill Feasibility Design Study: Conceptual Structural Improvements,” October 10, 2001.

Portland City Council, Resolution No. 36320, May 25, 2005.

Portland Development Commission, “Report of the Centennial Mill Review Committee on Future Options for the Property,” May, 2004.

SERA Architects and Ann Fulton, “Cultural and Historic Analysis: Centennial Mill,” prepared for the Portland Development Commission, October 2, 2001.

Shelman, David, National Register of Historic Places Nomination Form for Balfour-Guthrie Building, Portland, Oregon, July 20, 2001.

www.nationaltrust.org/news/docs/20040930_awards_millcity.html

Zisman, K., J. Koler, et al, National Register of Historic Places Nomination Form for Olympic Cereal Mill, Portland, Oregon, January 23, 1989.

Additional Sources :

“The Balfour-Guthrie Company.” [C. 1970]. Pamphlet on history of the firm in America, 1869-1969. Copy at Oregon Historical Society.

Jackson, W. Turrentine. *The Enterprising Scot: Investors in the American West after 1873*. Edinburgh: Edinburgh University Press, 1968.

Slayton, Amy E. *Reinforced Concrete and the Modernization of American Building, 1900-1930*, Baltimore: Johns Hopkins University Press, 2001.

CROWN MILLS
FLOUR AND FEEDS
PORTLAND, OREGON



CITY OF PORTLAND ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204-1912 ■ Sam Adams, Commissioner ■ Dean Marriott, Director

Memo

Date: 2/28/06
To: Mark Ragget, Karl Lisle, Steven Shain
Cc: Linda Dobson, Jim Middaugh, Virgil Adderly, Scott Turpen, Emily Hauth
From: BES Sustainable Stormwater Management Program and ESA Program
RE: BES Assessment and Vision for the Centennial Mills site

Portlander's appreciate and value the quality of the natural environment. And so it follows, they appreciate the integration of nature with their urban surroundings, providing natural system benefits, beautification and enhanced livability.

New impervious surfaces such as rooftops and paved areas result when developing the urban landscape. When it rains, these surfaces increase the volume and speed of stormwater runoff that contributes to flooding and erosion, pollutants carried into our rivers and streams, loss of natural habitat, and combined sewer overflows. Through innovative and creative design, the Centennial Mills site can redevelop in a manner consistent with urban density and intensity but also with attention to environmental quality.

Ratepayer dollars in the amount of \$950,000 were used to help finance the purchase of the Centennial Mills site in 2000 (Ordinance 174177). BES's contribution is intended to foster the construction of innovative stormwater management and fish habitat restoration projects. Given the riverfront location, the desired quality of development and the public visibility of the site, significant attention should be given to creating a showcase design that fully integrates stormwater into the site development, recognizing it as a resource and maximizing creative opportunities with a sensitivity to the river resource location.

Toward this end, BES seeks innovative, onsite sustainable stormwater management techniques in the planning and development of the Centennial Mills site. Sustainable stormwater management techniques mimic natural systems to treat and improve the quality and reduce the quantity of stormwater leaving the site. These creative solutions also enhance urban wildlife habitat, reduce energy use, and improve the aesthetics of the built environment. Additionally, they help developer's meet regulatory requirements and can save on construction costs and infrastructure fees. Innovative stormwater management and conveyance techniques may include the following design concepts:

- Maximize onsite stormwater management while reducing the amount of impervious area.
- Acknowledge stormwater as a resource, integrating it with site design.
- Potentially gain LEED points (e.g. stormwater retention and treatment and capture for greywater re-use or heating & cooling system).
- Turn site constraints into opportunities.
- Manage runoff from other sources.
- Provide interactive and educational opportunities for onsite stormwater management.
- Create a system that brings stormwater full circle and closes the hydrologic loop through capture, filtering, evapotranspiration, infiltration and reuse.
- Make a seamless connection with the river and fish.

BES also is interested in identifying and implementing projects that enhance the quality and quantity of habitat available for populations of salmon listed under the Endangered Species Act. In that regard, BES suggests that where possible, design efforts consider the following:

- Increases in the amount of shallow water area (less than 10' deep).
- Creation of gently sloping banks and alcove or off-channel habitats.
- Placement of large wood, boulders and other material in shallow water areas to create more complex habitats and to provide resting and rearing opportunities for juvenile salmon.
- Native vegetation in close proximity to the river.
- Treatment of any stormwater run-off from the site prior to it entering the river.
- Clean-up of any in-water contamination near the project site.
- Avoidance of additional pilings, dolphins, seawalls and other in-water structures where possible.

Please refer to the restoration vision document provided earlier for additional details and concepts for opportunities at the site.

Also, please note that any in-water work, or work involving federal funds, will trigger a range of local, state and federal permit obligations. BES' ESA Program is willing and able to assist PDC and other parties in understanding likely permit requirements, preparing permit application materials, and in working with the City's Permit Streamlining Team. Finally, depending on the circumstances and timing of redevelopment activities, the ESA Program may be able to provide assist in identifying and obtaining grant or other funds to assist with restoration-related activities.

Site conditions:

- No sanitary sewer service exists on the site (begins at NW 9th and Northrup, in Naito Parkway); any new sanitary system will likely require pumping through a new forcemain to the nearest sanitary connection (NW 9th & Overton or Naito & Northrup) assuming sufficient available capacity.
- The Tanner outfall will have no CSO events after December 2006; it will discharge stormwater only.
- Storm pipes exist on the north and south side of the site and drain to the Tanner outfall.
- Stormwater must be treated for water quality before discharge off site.
- The City/BES retains easements over the existing Tanner Creek outfall pipe for maintenance purposes and an abandoned sewer line for support of redevelopment.
- The Westside CSO Tunnel or "Big Pipe" is in Naito ROW approximately 120' deep.
- Soil conditions on site should be researched as well as any potential pathways for contaminant migration; potential ground improvements have been made near the Quimby shaft.
- Burlington Northern maintains a boom around the Tanner outfall.



Courtyard infiltration basin at Buckman Heights Apts.



Ecorooftop on Hamilton West Apartments



Stormwater planters to underground rainwater harvesting system

WRDA Willamette Restoration Projects

12/2/2004

Project Name: Project Zeller, Clark
Centennial Mills **Contacts:**

Project Background

General description of the project:

The demolition or reconfiguration of Centennial Mills provides opportunities to restore banks, floodplain and shallow water habitat, and potentially to create off-channel habitat. The lower section of Tanner Creek can be daylighted to provide valuable cool water confluence habitat. There are a number of changes throughout the Tanner Basin as part of CSO and stormwater efforts with which this project should coordinate. The site is within the River District Urban Renewal Area.

Objectives and anticipated benefits of the proposed restoration actions:

Reconfigure banks to create high quality floodplain, banks and shallow water habitat. Vegetate floodplain and banks. Create off channel confluence habitat where Tanner Creek connects to the Willamette. Restore and improve shallow water habitat. Increase the amount of large wood.

Is the project part of a restoration plan or specifically cited in a watershed plan?:

No. Pearl District Development Plan does call for conversion to a park, which provides restoration opportunities.

Site Information

Approximate River Mile: 11.4

Site Context - describe the general reach conditions in which the site occurs:

The western portion of this reach is a broad sloping terrace that rises to the base of the Tualatin Mountains, over a mile from the river. This reach consists of a highly modified channel and bank. It is adjacent to a historically industrialized area, which has modified bank habitats and nearshore areas. Wharves and piers that extend out from the channel and bulkheads and riprap revetments armor the riverbank. Active dredging has produced a uniform channel with little diversity. In addition, development has removed most of the connections between the few remaining pockets of forested upland habitat and the river bank.

Is the site identified as a resource site in the Willamette River Inventory? If so, provide Site #:

No.

Is the site within a Natural Resources Management Plan area? Indicate which plan if so:

No.

Comprehensive Plan designation and zoning:

EXdg

Is the site presently vacant, for sale, or have a use or facilities that are no longer utilized?:

Yes. Centennial Mills is being considered for demolition or redevelopment.

Site Owner(s):

City of Portland Portland Development Commission

Approximately what percentage of the site is covered by impervious surfaces?:

~85-90%

Describe any existing structures on the site (e.g., buildings, roads, parking lots, fences):

Centennial Mills, Horse Barn

Are there any outfalls discharging along the banks? Identify by number where known, and indicate condition:

CSO Outfall 11 (separation planned by 2006); 11 private outfalls that drain the Centennial Mills site that were permitted under NPDES when the ADM

Milling Company operated at the site. BES Source Control has additional info on these discharges..

Is the site a DEQ ECSI site? Is there any other information to indicate that the site is contaminated:

Not an ECSI site. Outfalls may be source of contamination to shallow water sediments.

Restoration Constraints:

Community desire for a park dedicated to human uses, conflicts between the horse barn and daylighting or off-channel habitat creation, possible contamination at CSO outfall

Are there any site hazards?

Aging building.

Ecological Information

Unique Features of the site that deserve mention:

The possible demolition of the mill and conversion to a park provide a lot of opportunity to restore habitat, and possible flexibility in accommodating it. Tanner Creek provides a lot of possibilities for creating highly valuable habitat. The site has a significant amount of floodplain. Habitat areas are sparse in this area.

What key species are known to use the site or area?:

salmon, avian wildlife, resident fish.

Nearby habitats that this site could connect to under current or restored conditions:

The site is relatively isolated, but conversely could provide rare habitat in an area with few other opportunities.

Are wetlands present on the site?

Is part or all of the site within the updated FEMA floodplain?

Is part or all of the site within the area inundated by the 1996 flood?

What types of vegetation are present on the site?:

None

What types of habitat are present? :

Little existing habitat other than provided by the river and riprap.

Bank Composition

Pilings	65%
Vegetated Riprap	28%
Unclassified Fill	7%

What are some of the the key degraded conditions that compromise ecological function at the site?

Hardened Banks
Loss of Riparian Vegetation
Lack of Wood
Water Quality/CSO
High Human Use
Disconnected or Filled Floodplains
Toxics in Water Column, Sediments or Soils

Historical Information:

The Willamette bottomlands that once served as a confluence for several Tualatin Mountain streams, including Tanner Creek, that are now mostly piped. The banks have undergone changes and consist of fill deposited in the early part of the 20th century in order to accommodate the commercial and industrial uses of the growing city. Several lakes located on the west side of the river provided open water and wetland habitat for fish and wildlife prior to being filled.

Information References:

Willamette River Inventory; GIS data analysis. "Pearl District Developer Plan" October 2001 at http://www.pdc.us/pdf/dev_serv/pubs/pearl_district_devel_plan.pdf.

Visioning for Centennial Mills Redevelopment

Potential for creating off-channel habitat fed by Tanner Creek (location and feasibility determined through further analysis).

Treat stormwater discharge before routing to off-channel habitat and Tanner Creek outfall.

Provide opportunities to restore banks, floodplain, and shallow water habitat, and create off-channel habitat where possible.

Re-route and daylight the end of Tanner Creek to create valuable cool water confluence habitat. Exact configuration is dependent on site development plans.

Revegetate as much of the floodplain as possible.

Text

NW NAITO PKY





City of Portland
Bureau of Development Services
Land Use Services Division

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MEMORANDUM

Date: March 13, 2006
To: Mark Raggett, Bureau of Planning
From: Mark Walhood, BDS - Design Team
Phone number (503) 823-7806
Re: CENTENNIAL MILLS ZONING "ASSESSMENT"

As requested, below is a brief summary of zoning and land use procedures to be addressed with any redevelopment (or significant alterations) at the Centennial Mills site (1362 NW Front Ave. - R141440). Because we haven't reviewed a specific project nor done a full 'plan check' on a specific development, please understand additional issues may arise depending on the eventual project (i.e. additional modifications, adjustments, land use reviews, etc.). Please let me know if you have any questions on the summary information below.

ZONING:

EXdg (Central Employment base zone with both design and river general greenway overlay zones), Central City plan district, Public Recreational Trail (Primary Greenway Trail).

LAND USE REVIEWS:

A **Greenway Review** is required for most exterior alterations at the site (see 33.440.310 and 33.440.320 for triggers and exemptions). The approval criteria for a greenway review are found at 33.440.350, and include by reference the Greenway Design Guidelines and the Lower Willamette River Wildlife Habitat Inventory, which are separate documents. Potential issues and standards to be aware of include the following:

- Multiple plans are required for the greenway review application, beyond what is usually called for in a design review, for example. You'll need an existing conditions site plan, a development proposal site plan, and a construction management site plan. See 33.440.345.A for specific requirements;
- The greenway setback is 25 feet deep at this site, and begins at the "top-of-bank" (see environment-related definitions in Chapter 33.910);
- Uses and development in and riverward of the greenway setback must be river-dependent or river-related (see Chapter 33.910 for definitions). Anything other than river-dependent or river-related uses or developments in the greenway setback would require a Greenway Goal Exception, which are very expensive and difficult to approve. For more information on the goal exception see Chapter 33.440, especially the goal exception criteria at 33.440.360;
- Because the site is designated with the Primary Greenway Trail, redevelopment will ideally include a new trail along the river. Generally speaking, trail design, alignment and improvements are determined by Portland Parks and Recreation and Portland Transportation during the land use review process. Trail standards and regulations at Chapter 33.272 would apply;
- Note that the City of Portland land use review process is not well "linked" with any necessary state or federal reviews (i.e. Superfund, DEQ, NMFS, DSL, etc.). Approval of the project by one agency does not necessarily preclude or guarantee approval by the others. Generally speaking, the greenway review criteria and standards often require additional elements (landscaping, trails, etc.) that will not be required by the state or federal agencies;
- Greenway Design Guidelines. The key "discretionary" criteria in the greenway review process address how buildings and developments relate to the greenway setback area (Issue A), how public access and trail improvements are provided (Issues B and F), how

the riparian habitat will be enhanced (Issue C), and how you intend to stabilize the riverbank (Issue D).

A **Design Review** is required for new development or exterior alterations to this site in the Central City plan district (see 33.420.041 and 33.420.045 for triggers and exemptions). At this site, the approval criteria are the *Central City Fundamental Design Guidelines* and the *River District Design Guidelines*. Major redevelopment or new buildings are likely to require a Type III Design Review, which requires a staff recommendation but final approval via a public hearing before the Design Commission. See Section 33.825.025.A for the review procedure triggers (what is a Type II versus Type III request, etc.). Type III reviews also require a mandatory Pre-Application Conference.

Through the design review, development standards that are not use-related may be requested through a Modification through Design Review (i.e. to loading standards or ground floor windows, etc.). One excellent process that can provide early feedback regarding the “approvability” of the design review is a Design Advice Request, through which a project receives early feedback from the Design Commission.

DEVELOPMENT STANDARDS:

The use and development standards of the base zone and plan district must be met or adjusted/modified, in addition to any additional regulations in the code. Key chapters to review and a selection of key standards to be aware of early-on include the following:

Central City plan district (33.510):

- The site is in the River District Subdistrict and NW Triangle Subarea (Map 510-1);
- The site has a 2:1 FAR (Map 510-2);
- The site has a 100’ height limit, and is not eligible for either the general or housing height bonuses (Map 510-3);
- The site is in the residential bonus target area (Map 510-4). Because of this designation, the residential bonus option must be used before any other bonus. A bonus FAR of 1.5 to 1 from the residential bonus option must be earned before the project qualifies for other bonus options (33.510.210.B.5);
- The site is within the required residential development area (Map 510-5). New development must include at least one dwelling unit per 2,900 square feet of net site area (33.510.230.A-D). An adjustment (not a modification) could be requested to this use-related standard;
- Because the site is over 40,000 square feet and in the NW Triangle Subarea, at least 30 percent of the area over 40,000 square feet must be devoted to open area (33.510.245);
- Because the site is between NW Front and the River in the NW Triangle Subarea, at least 25 percent of the width of the site must be maintained as a view corridor or corridors. Buildings over 35 feet in height must be set back from the Greenway setback line 1 foot for every 1 foot of height above 35 feet. The maximum building dimension (length or depth) is 200 feet. Public access for pedestrians between the trail and NW Front must be available and clearly posted. See 33.510.250.A-C for more details; and
- The site is in the River District 1 parking sector (Map 510-8). General parking regulations, including a discussion of the various parking types, is found at 33.510.261. Parking regulations specific to this sector are contained in Section 33.510.265. Depending on the amount and type of parking proposed, a Central City Parking Review may or may not be required. Note that standards addressing stall/aisle dimensions, bike parking, loading, and landscaping for parking lots are found in Chapters 33.266, Parking and Loading and 33.248, Landscaping and Screening.

Central Employment base zone (33.140):

- Because of a lack of abutting residential zones, there are no minimum building setbacks (33.140.215). Along the waterfront side, the greenway setback becomes the de facto setback. Because NW Front Avenue is a Transit Street, the maximum transit street setback applies (at least 50% of the length of the ground level street-facing façade must be within 10’ of the street lot line);
- The Central City plan district pre-empts base zone regulations regarding height and FAR, so these standards of the base zone are not relevant;

- For building coverage, a maximum of 100% of the site area is allowed to be covered by buildings per the base zone (33.140.220). Note that the open area requirements, trail requirements, and greenway setback regulations must also be met, so in effect getting 100% coverage is unlikely to meet all applicable criteria and standards;
- The ground floor window standard must be met (33.140.230, 33.510.220);
- Screening standards for any trash and recycling areas and mechanical equipment must be met (33.140.235);
- The pedestrian standards require a 6 foot-wide walkway system between the building and the street, as well as to other areas of the site, that is hard-surfaced, at least 6' wide, and illuminated for night-time use (33.140.240); and
- The transit street main entrance standard must be met (33.140.242).

LAND USE HISTORY:

There is only one past case at the site. Under case file LU 00-00319 DZM GW, modifications to the site associated with the Mounted Police Unit were approved through a Design Review and Greenway Review. A modification was also approved to allow only 12% of the site frontage to be occupied with view corridors. The approval was granted based on the approved site plans and elevations, and included the paddock structure, a pedestrian path and sidewalks, landscaping and lighting. Conditions of approval were imposed regarding retaining accessible, clearly-signed public access to the greenway trail, as well as shielding of the paddock light fixtures to avoid light "spillover" beyond the paddock.

HISTORIC RESOURCE INVENTORY LISTING:

The site is not listed on the City's Historic Resource Inventory (HRI), and therefore no demolition review would be required (33.445.520). Even if it was listed on the HRI at some point in the future, it would be automatically and immediately removed from the HRI if we receive a written request to do so from the property owner (33.445.510).

Centennial Mills Framework Plan:
Permitting Assessment
Floodway / floodplain issues
DRAFT February 9 2006

- The property is located within the Flood Hazard Area. Accordingly, development will be subject to the flood hazard regulations of the Oregon Structural Specialty Code and Portland City Code section 24.50.
- The riverbank portion of the property is located within the Floodway. Development within the Floodway is prohibited unless a hydraulic “no-rise” analysis demonstrates that no increase in the 100-year flood elevation will result.
- A small portion of the site is within the FEMA designated 100-year floodplain, but much of the site was inundated in the 1996 flood. The base flood elevation, based on the 1996 flood, is 31.1 feet City of Portland datum.
- Residential use structures must have the lowest floor, including basements, elevated at least 2 feet above the base flood elevation. Below-grade parking garages are considered basements and are thus prohibited below the base flood elevation in residential use structures.
- Non-residential and mixed use structures may be dry-floodproofed. In mixed use structures, all residential use areas must be at least 2 feet above the base flood elevation. Dry-floodproofed means below one foot above the base flood elevation the structure is watertight, with walls substantially impermeable to the passage of water, having structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
- Any fill placed on the site below the base flood elevation must be balanced by an equal amount of soil material removal below the base flood elevation in order to preserve the flood storage capacity of the floodplain.
- Due to the potential for liquefaction of the soils (in a seismic event) on the riverbank, ground improvements as part of new development may be required
- As per the FEMA flood insurance program, improvements to existing structures within the Flood Hazard Area are considered a “substantial improvement” if the value of the improvements exceed 50% of the structure’s value – if the structure’s value is \$6m, then improvements to that structure can not exceed \$3m without being considered a substantial improvement. A substantial improvement requires that the entire structure be brought into compliance with current flood hazard regulations. (MPU improvements at CM did not cross this threshold; there is another precedent of a grocery store remodeling on an existing wharf on Hayden Island)
- CM likely to be designated as a “special site” in accordance with PCC 10, limits on seasonal construction possible

Sam
Adams
Commissioner

April 14, 2006

Susan D.
Keil
Director

To: Mark Raggett, Bureau of Planning

Eileen
Argentina
System
Management

From: April Bertelsen, Transportation Planning

Don
Gardner
Engineering &
Development

Subject: Centennial Mill Site Transportation Assessment Memo

Sam M.
Irving, Jr.
Maintenance

The following memorandum provides a summary of transportation issues related to redevelopment of the Centennial Mill site. It includes an assessment of the existing conditions, relevant transportation policy, and current and planned transportation investments. Supporting materials, including policy street classification maps by transportation mode, are provided in an appendix.

Paul
Smith
Planning

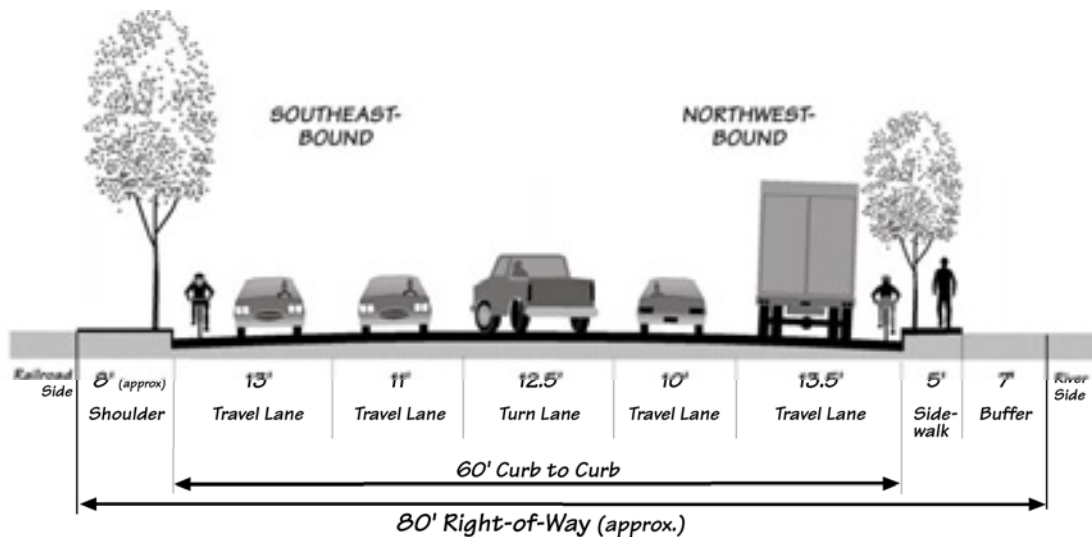
The conclusion describes various analysis triggers based on potential re-development scenarios and outcomes. Essentially, redevelopment of the Centennial Mill site may result in off-site impacts by generating more demand on the transportation system. It will be necessary to conduct transportation modeling and traffic analysis if it is determined that the various redevelopment scenarios may result in significant transportation system impacts. The analysis may include macro and micro traffic model simulation. The size of the study area for this analysis will depend upon the redevelopment scenario. A redevelopment scenario that serves the local neighborhood will require a small study area within the River District. A redevelopment scenario that includes a regional attraction will have greater impact on regional facilities, such as the freeway system and portals into the River District, thus necessitating a larger study area. Impacts on the transportation system would require mitigation. Depending upon the impact, mitigation may range from sidewalk and pedestrian improvements, transportation demand management to increasing capacity for vehicle traffic.

Existing Conditions

NW Naito Parkway and River District Street System

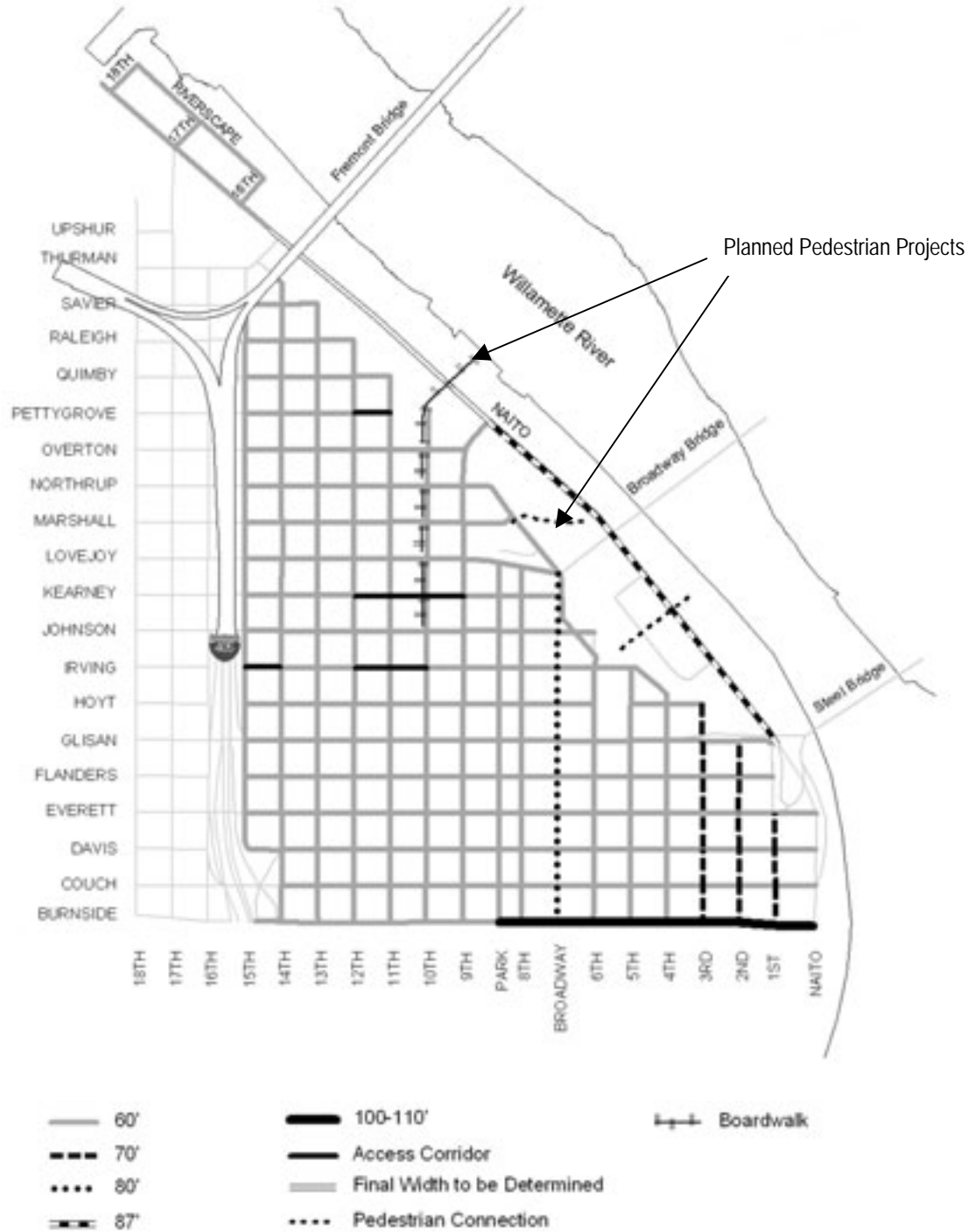
Centennial Mill is located on the eastern edge of the River District adjacent to the Willamette River. It is along NW Naito Parkway between NW 9th Avenue and the Fremont Bridge. The segment of Naito Parkway between the Fremont Bridge and the signalized intersection at 9th Avenue consists of two travel lanes in each direction, a center turn lane and a sidewalk on the east side of the street that varies from 5 feet to 6 feet in width. There is currently no on-street parking, no bike lanes and no sidewalk on the west side of the street in this segment. The segment of Naito Parkway between NW 9th Avenue and the Broadway Bridge has one travel lane and bike lanes in each direction, a center turn lane, parking on both sides of the street, a 12-foot sidewalk on the west side of the street and a 5-foot sidewalk on the east side of the street. There is a transition between these two segments south of 9th Avenue, where for approximately 400 feet a southbound travel lane is dropped and a northbound travel lane is added. The diagram below illustrates the existing street cross-section.

Figure 1.
Existing Cross-section of Naito Parkway between 9th Avenue and the Fremont Bridge



The Centennial Mill site has limited access to the neighborhoods to the west of Naito Parkway. The main rail line runs parallel to Naito Parkway on the west side, presenting a barrier between the emerging neighborhood of the Pearl District to the west and Naito Parkway, Centennial Mill and the Willamette River to the east of the railroad tracks. Access between the Centennial Mill site and the Pearl District is provided primarily at the signalized intersection of Naito Parkway and NW 9th Avenue near NW Overton. A pedestrian and bicycle connection is provided to the south of Centennial Mills by a pedestrian bridge crossing over the rail tracks between Union Station and The Yards residential development. The next closest street access points into the neighborhoods to the west are at NW Thurman to the north and NW Everett and NW Davis further south. The following map illustrates the street system in the vicinity of the Centennial Mill site.

**Figure 2.
River District Street System – Existing and Planned**



Current Traffic Operations and Conditions

Naito Parkway serves as a portal between the River District, Central City and Northwest Portland. Other important portals in the River District include Burnside, the Steel Bridge, the Broadway Bridge, Thurman St, the Glisan and Everett couplet, and the 14th Ave and 15th Ave Couplet for access to and from the I-405.

The street system in the immediate vicinity of the Centennial Mill site functions well, carrying traffic volumes below capacity. Based on traffic counts collected in early summer of 2003, the average daily traffic volume on Naito Parkway northwest of 9th Avenue was approximately 4,700 vehicles and the PM peak hour volume was approximately 650 vehicles. The last available counts on NW 9th Avenue are in 2001. At that time, the average daily traffic volume on NW 9th Avenue, south of Naito Parkway, was approximately 3,100 vehicles, with a PM peak hour volume of approximately 150 vehicles. Not accounting for train crossings of NW 9th Avenue, the signalized intersection of NW 9th Avenue and Naito Parkway has operated at about a level of service "B." Train crossings of 9th Avenue result in traffic queues. However, the reserve capacity approaching the intersection allows for recovery without significant impact to the transportation system. There has been a significant amount of new development since the last traffic counts were taken. It will be necessary to collect new counts to more accurately understand current traffic conditions.

The Centennial Mill Site is not well served by public transit. The #16 Busline – Front Ave/St Johns runs along Naito Parkway. TriMet provides commuter transit service between North Portland and Downtown Portland with the #16 Busline. It runs approximately every 30 minutes in the morning and evening peak on Mondays through Fridays. The route begins at the Expo Center MAX Station and travels through St. Johns, across the St. Johns Bridge, along NW St. Helens Road, transitions to Front Ave/Naito Parkway until NW Davis.

Current Transportation Policy

Existing transportation policy relevant to Naito Parkway and the broader River District street system is primarily located in the Portland Transportation System Plan (TSP). Policy and projects in the TSP are consistent with the Regional Transportation Plan (RTP). The following sections provide a summary of pertinent policy.

Portland Transportation System Plan

In the Portland Transportation System Plan (TSP), Naito Parkway is intended to serve a multi-modal function. The policies and street classifications supporting this multi-modal function in the TSP are aspirational. They are intended as 'balancing' policies that should be looked at together to determine whether an activity achieves the optimal balance. This would apply to a streetscape project on Naito Parkway.

There are many over-arching policies in the TSP that would also apply to proposing streetscape changes to Naito Parkway, including Policy 11.10 Street Design and Right-of-way Improvements. This policy is to design improvements to existing and new transportation facilities to implement transportation and land use goals and objectives. One of the objectives of this specific policy is, when changes to a right-of-way are proposed, to consider the overall

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capacity impacts to the immediately affected street, as well as potential area-wide capacity impacts. The portal function of Naito Parkway and its role in overall system capacity must be balanced with its more local and multi-modal functions, as expressed through the transit, bicycle and pedestrian street classifications on Naito Parkway.

Naito Parkway, formerly known as Front Avenue symbolizes the historic evolution of Portland, from the stump town in its early days to the current modern city. With the historic change in the city, so did the transportation role of this street change. The most significant change occurred in the early 1970's with the completion of the I-5/405 Freeway Loop, the completion of the Downtown Plan and the decision to remove Harbor Drive, replace it with a waterfront park and rebuild Front Avenue. With the adoption of the Downtown Plan, a transportation goal was set to discourage through traffic from using downtown streets in order to create a more pedestrian oriented downtown. As a *Traffic Access Street* in the TSP, Naito Parkway is not intended for through-traffic that does not have a trip beginning or end in the Central City District. However, Naito Parkway is carrying through-traffic with both an origin and destination outside the Central City District. While not necessarily consistent with its traffic modal classification, it is acknowledged that this is a current function of Naito Parkway and also a factor in balancing the multiple aspirations for Naito Parkway. The Naito Parkway Project to the south, currently under construction, addressed similar issues regarding the long-term traffic role of the ramps to and from the Morrison Bridge. This project recognized that a more long-term transportation strategy will be needed to address this issue.

Currently, Naito Parkway does not have a freight classification in the TSP or RTP. However, Naito Parkway has been identified as an important facility by the freight community, including representatives from the City's Freight Advisory Committee and industrial property owners in Northwest Portland. There is interest in designating Naito Parkway with a Freight designation. Though it is not known how far south that designation may extend in the future. Further discussions of freight designations in the Central City are anticipated during the current update of the Central City Transportation Management Plan.

The modal classification maps for the District are provided in Appendix A. Naito Parkway has the following modal street classifications:

Traffic Access Street – intended to provide access to Central City designations, distribute traffic within a Central City district, provide connection between Central City districts and distribute traffic from the Regional Trafficways and Major City Traffic Streets for access within the district. Traffic Access Streets are not intended for through-traffic with no trip ends in the district.

Transit Access Street – intended for district-oriented transit service serving main streets, neighborhoods and commercial, industrial and employment areas.

City Bikeway – intended to serve the Central City, regional and town centers, station communities and other employment, commercial, institutional and recreational destinations.

Pedestrian District – Intended to give priority to pedestrian access in areas where high levels of pedestrian activity exist or are planned, including the Central City.

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City Walkway – intended to provide safe, convenient and attractive pedestrian access to activities along major streets and to recreation and institutions; provide connections between neighborhoods; and provide access to transit.

Major Emergency Response Route – intended to serve primarily the longer, most direct legs of emergency response trips.

Community Main Street Design – design to accommodate motor vehicle traffic, with special features to facilitate public transportation, bicycles and pedestrians.

There is an **off-street path** designated along the west bank of the Willamette River in the Portland Transportation System Plan.

Regional Transportation Plan

Naito Parkway has the following modal designations in the Metro 2004 Regional Transportation System Plan (RTP):

Collector of Regional Significance in the regional motor vehicle system.

Regional Corridor On-street Bikeway in the regional bicycle system.

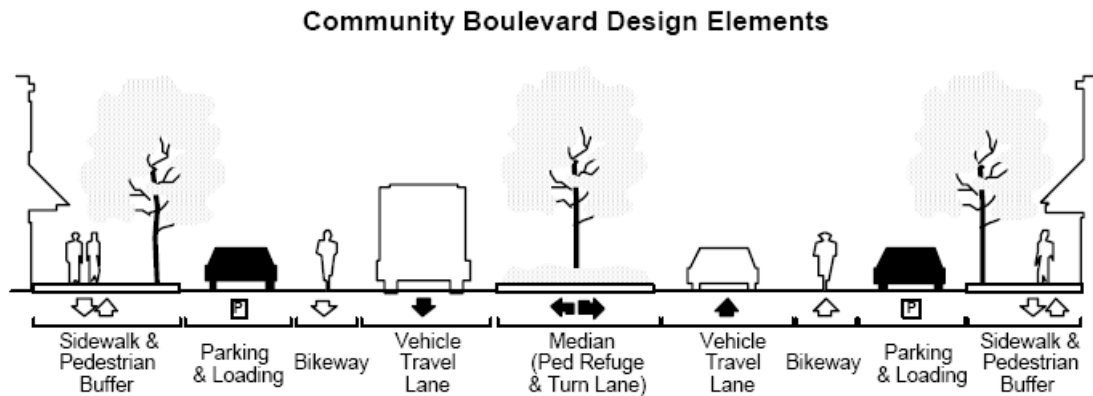
Multi-use Facility with a Pedestrian Transportation Function in a **Pedestrian District** in the regional pedestrian system.

The off-street path designated along the west bank of the Willamette River in the Portland TSP is designated a **Regional Trail** in the Regional Transportation System Plan.

Naito Parkway is designated a **Community Boulevard** in the RTP. Community boulevards mix motor vehicle traffic with public transportation, bicycle and pedestrian travel where dense development is oriented toward the street. These facilities are designed for low motor vehicle speeds and usually include four vehicle lanes and on-street parking. Fewer vehicle lanes may be appropriate in some situations, particularly when necessary to provide on-street parking. Community boulevards have many street connections and some driveways, although combined driveways are preferable. Where appropriate, center medians offer a pedestrian refuge and allow for left turn movements at intersections.

Community boulevards are designed to be transit-oriented, with high-quality service supported by substantial transit amenities at stops and station areas. Pedestrian improvements are also substantial, including broad sidewalks, pedestrian buffering, special street lighting and crossings at all intersections with special crossing amenities at major intersections. Community boulevards have striped or shared bikeways and some on-street parking. These facilities also serve as secondary freight routes, and may include loading facilities within the street design. Loading facilities should occur on side streets, where feasible. Figure 4 illustrates a typical cross-section of a community boulevard.

**Figure 3.
RTP Typical Cross-section of a Community Boulevard**



Source: Metro

Updated River District Right-of-way Standards

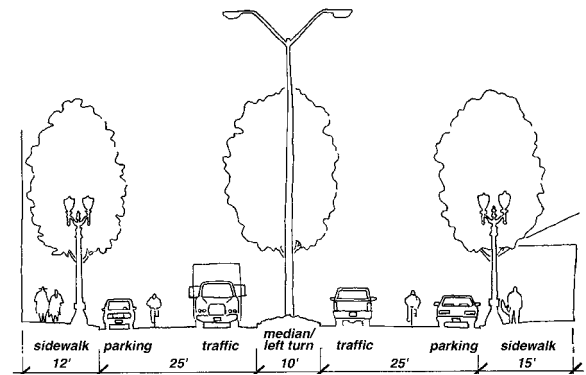
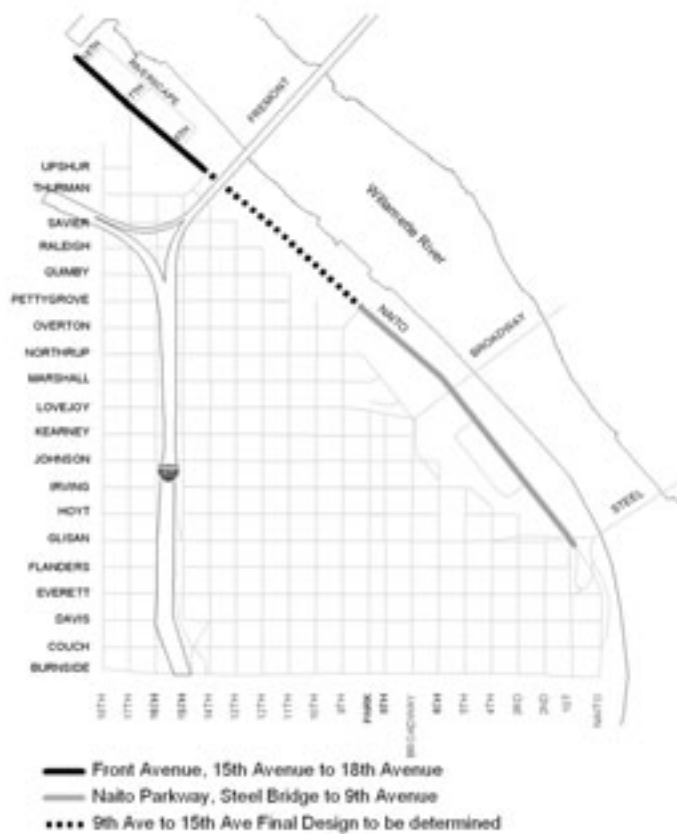
The Updated River District Right-of-Way Standards: Framework Plan, Performance Criteria and Design Standards guide both public and private improvements in the River District's public rights-of-way. Naito Parkway is classified as a Special Function Street in the Updated River District Right-of-way Standards. The planned right-of-way widths and street cross-sections for various segments of Naito Parkway are illustrated in Figure 2. The planned right-of-way width for the section of Naito Parkway between 9th Avenue and 15th Avenue has yet to be determined.

**Figure 2.
Framework Plan for Naito Parkway from the
Updated River District Right-of-way Standards**

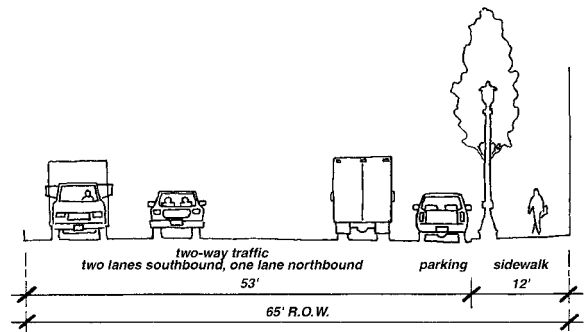
	1.4.12 Naito Parkway Steel Bridge to 9th Avenue	1.4.13 Front Avenue 15th to 18th Avenue
Right-of-Way	87 ft.	65 ft.
Roadway	60 ft. including median	53 ft.
Sidewalks	15 ft. east side 12 ft. west side	12 ft. east side none west side
Curbline	Straight; median curbline varies at left turn refuges	Straight
Circulation	Two-way Two lanes + turn lane	Two-way Three lanes + turn lane
Parking	Allowed both sides	Allowed east side

9th Ave to 15th Ave final design section to be determined.

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Naito Parkway – Steel Bridge to 9th Avenue



Front Avenue – 15th to 18th Avenue

Portland Zoning Code, Title 33

The centennial Mill site is located in the Central City Plan District and thus redevelopment of site is subject to the regulations of Chapter 33.510, including the Central City parking regulations. The site is within the River District 2 Parking Sector. There is no minimum on-site parking requirement. Maximum parking limits depend upon the proposed use and may require approval through a Central City Parking Review.

Railroad Crossings

Railroad crossings are reviewed and approved by the Rail Division of the Oregon Department of Transportation (ODOT). The current policy of the ODOT Rail Division is to maximize safety by minimizing the number of at-grade railroad crossings. Their prerogative is to close existing crossings and not introduce new crossings. Therefore, obtaining approval for new at-grade crossings will be very challenging and likely unsuccessful. Approval of new above-grade crossings may be more feasible.

Current and Planned Transportation Investments

Current Transportation Improvement Projects

The Portland Office of Transportation is constructing a streetscape improvement project on Naito Parkway between SW Market and NW Davis. The improvements include reconstruction of the center medians, on-street parking along the west side of the street, bike lanes and improved pedestrian crossings. Construction is currently underway.

Future Transportation Improvement Projects

The following transportation improvement projects are listed in the Portland Transportation System Plan:

- **NW 10th Avenue (Overton – Naito Parkway): Pedestrian Bridge** (TSP Project #20005)
Construct pedestrian bridge along 10th Ave alignment to connect over railroad tracks.
Estimated Cost: \$2,500,000 (Implementation expected in Years 1 – 5)
- **NW Marshall (9th Ave – Naito Parkway): Pedestrian Bridge** (TSP Project #20069)
Construct pedestrian bridge along 10th Ave alignment to connect over railroad tracks.
Estimated Cost: \$3,000,000 (Implementation expected in Years 1 – 5)
- **Naito Parkway (Broadway Bridge – north of Terminal One): Street and Pedestrian Improvements** (TSP Project #20070)
Construct streetscape improvements including pedestrian amenities
Estimated Cost: \$3,250,000 (Implementation expected in Years 1 – 5)

The Naito Parkway Street and Pedestrian Improvement project is also listed in the Metro Regional Transportation Plan.

The future cross-section of NW Naito Parkway between 9th Avenue and the Fremont Bridge is undetermined. It will be defined at the time that the Portland Office of Transportation conducts a streetscape plan for Naito Parkway identified in the above TSP project. Naito Parkway is likely to be similar to the typical Community Boulevard cross-section identified in the RTP and illustrated above. However, it may be necessary to retain two travel lanes southbound on Naito Parkway, or at a minimum provide a right turn lane approaching the 9th Avenue intersection adjacent to the railroad to allow for vehicles turning right to queue while trains are crossing 9th Avenue.

Potential Outcomes

Potential Transportation Analysis Requirements:

Redevelopment of the Centennial Mill site may result in off-site impacts by generating more demand on the transportation system. It will be necessary to conduct transportation modeling and traffic analysis if it is determined that the various redevelopment scenarios may result in significant transportation system impacts. The analysis may include macro and micro traffic model simulation. The size of the study area for this analysis will depend upon the redevelopment scenario. A redevelopment scenario that serves the adjacent neighborhood will require a small study area within the River District. A redevelopment scenario that includes a regional attraction will have greater impact on regional facilities, such as the freeway system and portals into the River District, thus necessitating a larger study area. Impacts on the transportation system would require mitigation. Depending upon the impact, mitigation may range from sidewalk and pedestrian improvements to increasing capacity for vehicle traffic.

Potential Redevelopment Scenario: Uses that serve the adjacent neighborhoods are proposed on the Centennial Mill Site.

Required Analysis/Work:

- Traffic impact analysis for a small study area likely to include Naito Parkway, 9th Ave, Overton, Thurman and the connecting signalized intersections.
- Determine appropriate mitigation.
- Cost estimate.
- Determine if the traffic volumes are consistent with current policy and whether a policy update is warranted.
- Propose recommended amendment to the TSP (through the CCTMP update process) for policy changes or additional projects.

Potential Redevelopment Scenario: A regional attraction is proposed on the Centennial Mill Site.

Required Analysis/Work:

- Traffic impact analysis with a large study area that will likely include the freeway loop and portals to Downtown and the River District.
- Determine appropriate mitigation.
- Cost estimate.
- Determine if the traffic volumes are consistent with current policy and whether a policy update is warranted.
- Propose recommended amendment to the TSP (through the CCTMP update process) for policy changes or additional projects.

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Potential Redevelopment Scenario: A change to the street cross-section on Naito Parkway is desired.

Required Analysis/Work:

- Traffic impact analysis.
- Determine if it is consistent with policy and whether a policy update is needed through CCTMP update. (Negotiate with broader stakeholders.)
- Determine if the proposal fits within the project description for the Naito Parkway (Broadway Bridge – north of Terminal One): Street and Pedestrian Improvements Project listed in the TSP and TRP
- Design streetscape.
- Cost estimate.
- Seek funding.

Potential Redevelopment Scenario: A legislative change to the current zoning that results in an up zoning of the site

Required Analysis/Work:

- Traffic capacity analysis to determine system impact of increased traffic demand from the density increase, particularly to any ODOT facility.
- Identify mitigation improvement projects.
- Determine if the traffic volumes are consistent with current policy and whether a policy update is warranted.
- Propose recommended amendment to the TSP (through the CCTMP update process) for policy changes or additional projects.

Potential Redevelopment Scenario: New at-grade crossing of the existing railroad tracks

Required Analysis/Work:

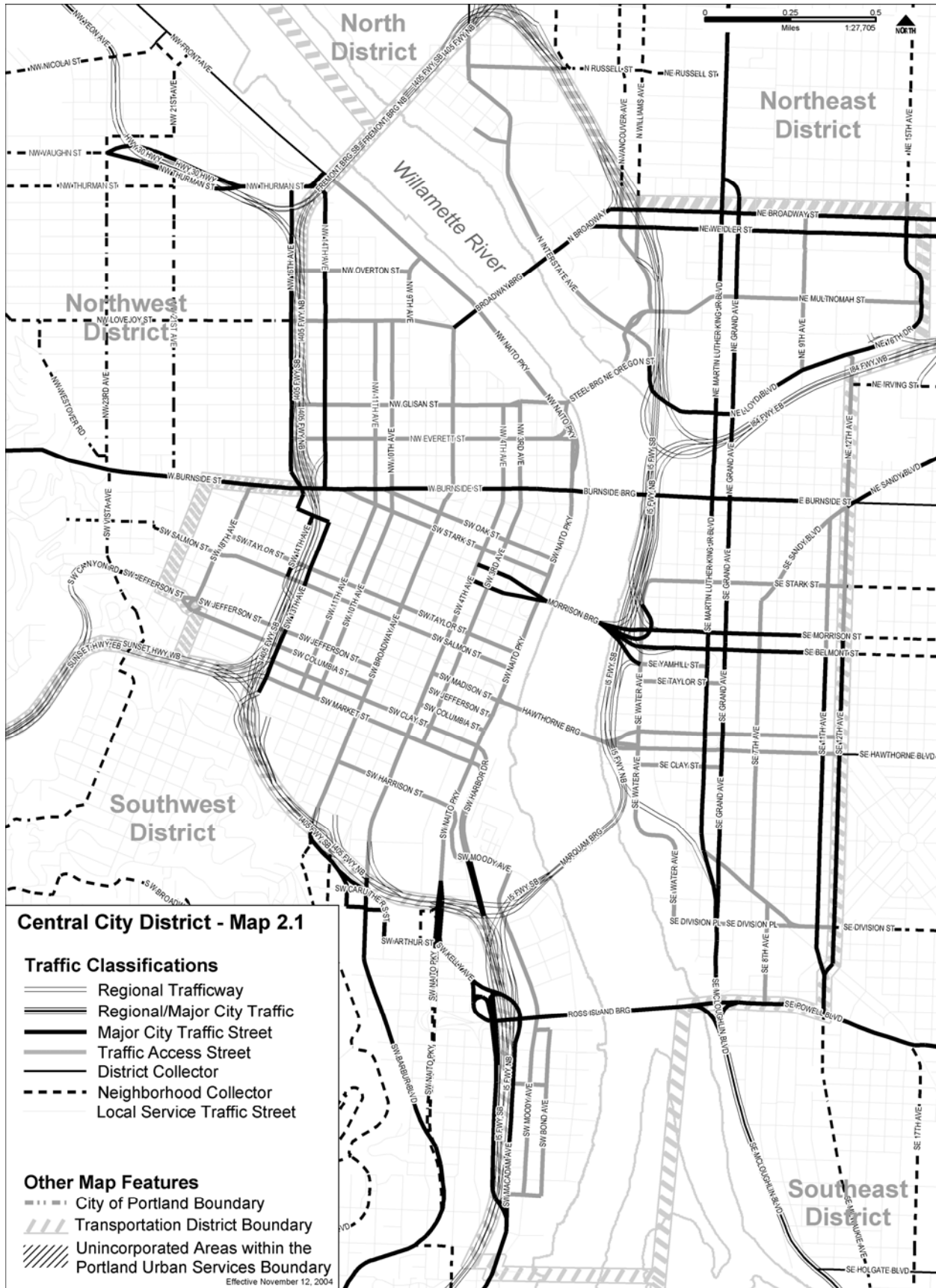
- All railroad crossings must be reviewed and approved by the Rail Division of the Oregon Department of Transportation (ODOT). As stated above, the current policy of the ODOT Rail Division is to maximize safety by minimizing the number of at-grade railroad crossings. Their prerogative is to close existing crossings and not introduce new crossings. Therefore, obtaining approval for new at-grade crossings will be very challenging and likely unsuccessful. A new at-grade crossing proposal would require extensive negotiations with ODOT and the railroads.

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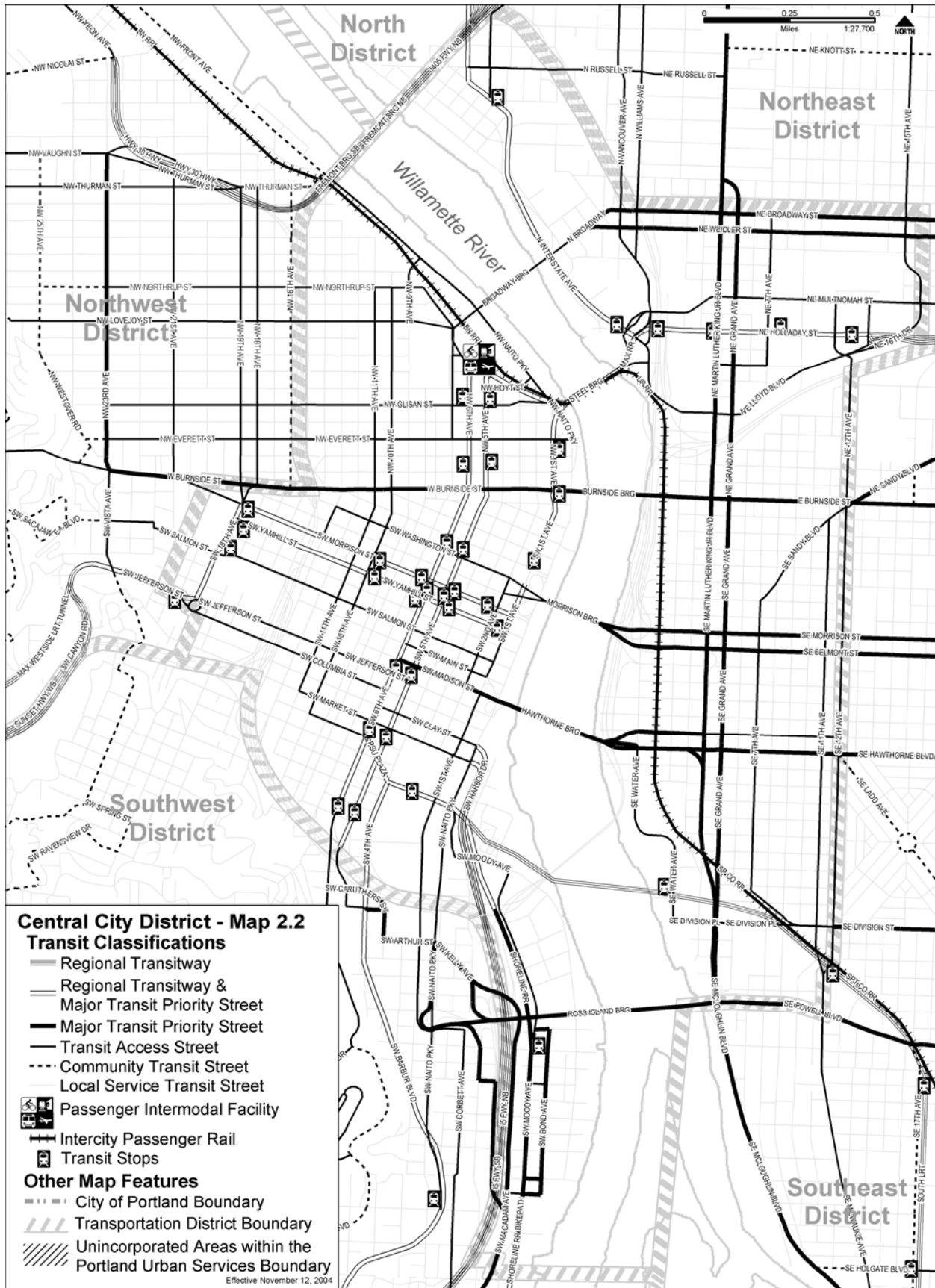
Appendix A
Transportation System Plan Modal Classification
District Maps

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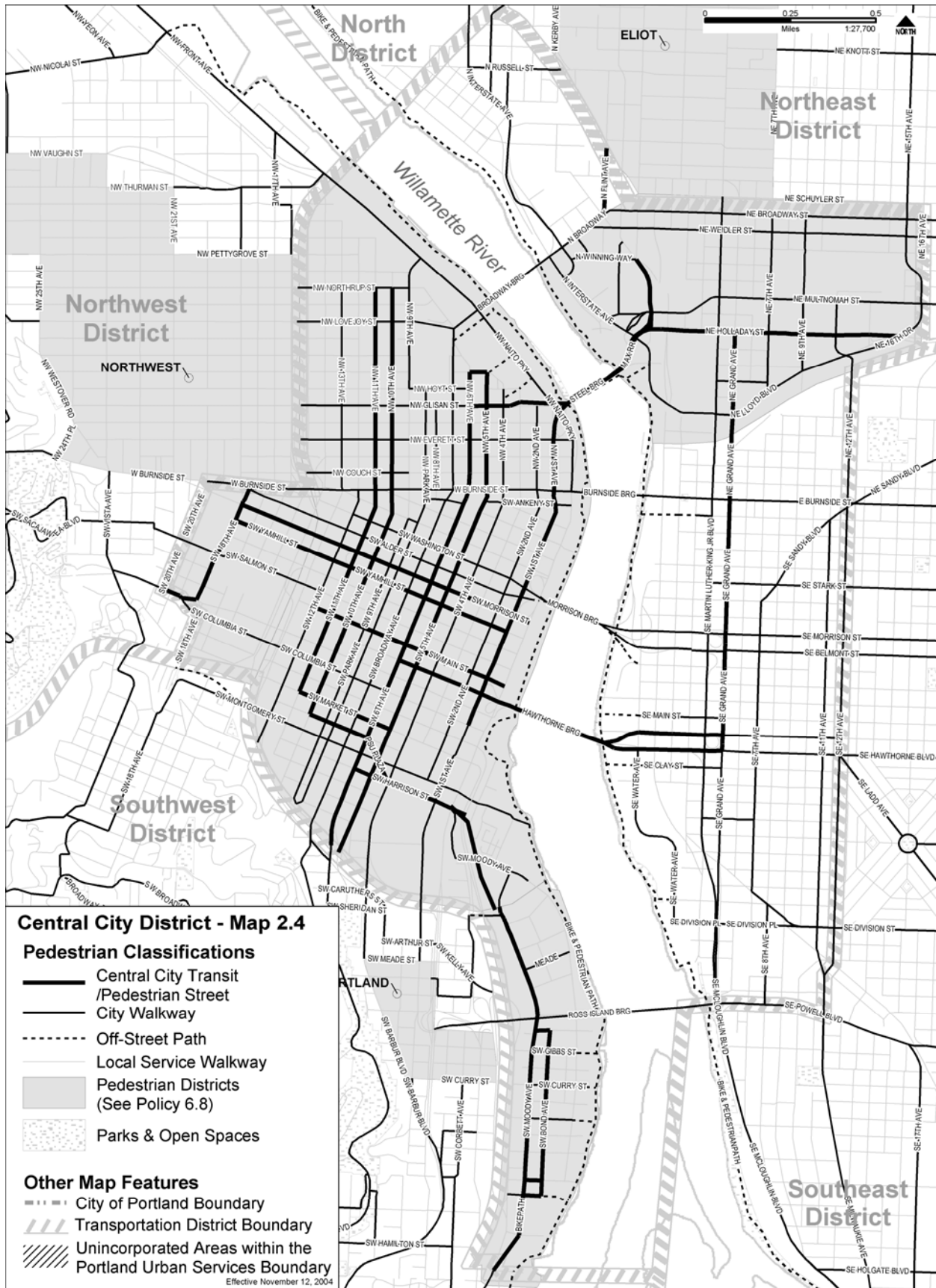
Centennial Mill Site - Transportation Assessment Memo



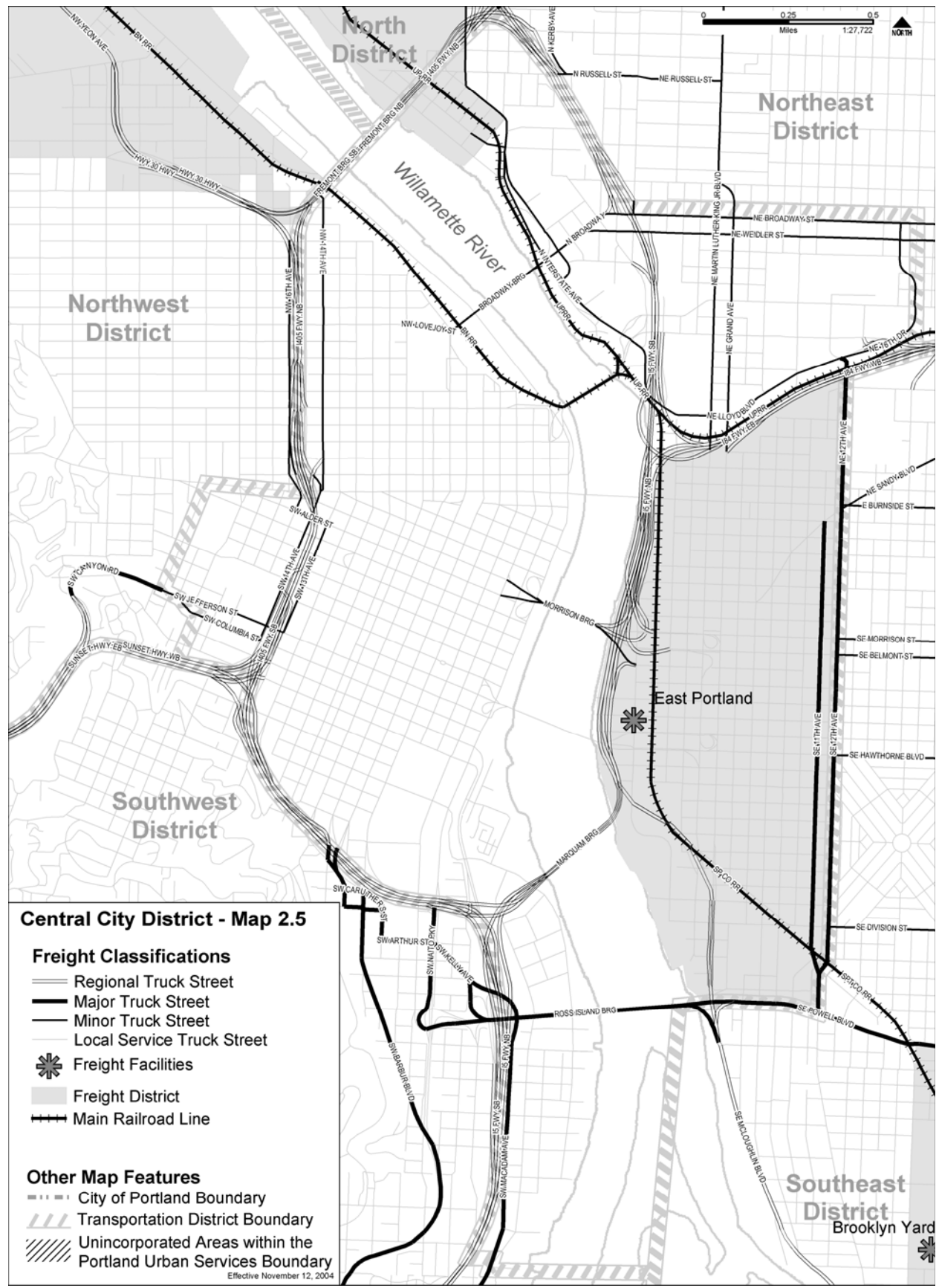
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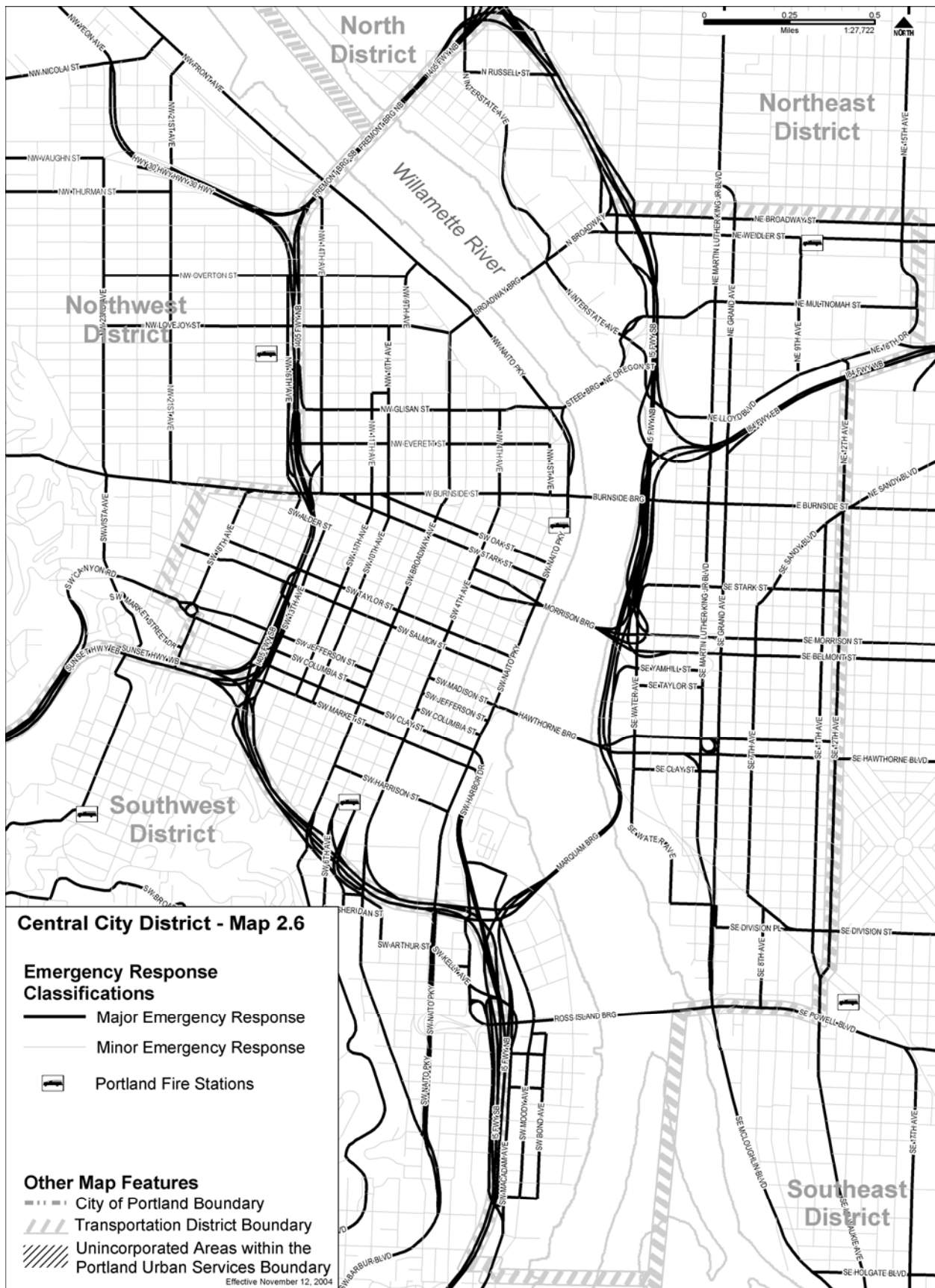
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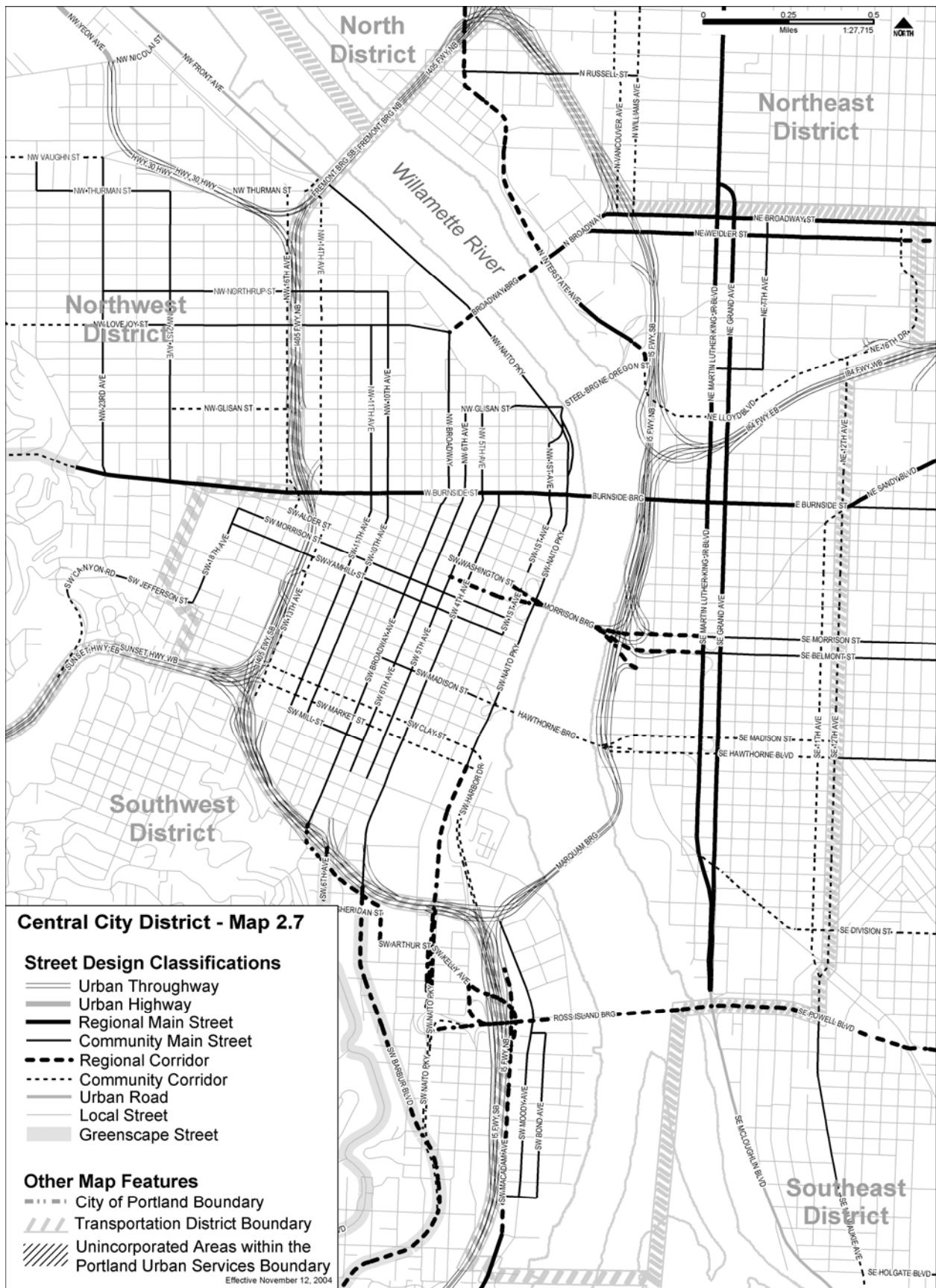
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Centennial Mill Feasibility Design Study Conceptual Structural Improvements

October 18, 2001
(Updated April 13, 2006)

KPFF has conducted a preliminary structural evaluation of the ten buildings within the Centennial Mill facility. The intent of this evaluation was to review the condition of the existing buildings and develop conceptual improvement strategies for seismically strengthening the buildings to comply with the current building code.

Our evaluation was based on the following:

- Walk-throughs of the facility conducted in March 2006, April 2004, and from August through October 2001.
- Drawings provided by PDC and found in the maintenance office at the facility (listed below.)
- Report by KPFF titled "Centennial Mill – Preliminary Structural Evaluation", dated March 8, 1995
- Report by Hart Crowser, titled "Geotechnical Summary – Centennial Mill Due Diligence", dated February 2, 2000
- Report by Kramer Gehlen & Associates, Inc., titled "Centennial Mill – Structural Evaluation", dated February 2, 2000.

The Centennial Mill facility is comprised of ten distinct buildings located on the west bank of the Willamette River between the Broadway and Fremont Bridges, in Portland, Oregon. The buildings were constructed between 1910 and 1940 using various types of concrete and timber construction. Building heights vary from one-story warehouse structures to a seven-story flourmill.

Title 24 of the City of Portland building regulations requires that a building be seismically strengthened to the standards listed in Table 24.85-A (below) when the Occupancy Classification is changed on more than 1/3 of the floor area or the occupant load increases by more than 149 occupants. It is assumed that any work on the Centennial Mills facility will trigger seismic improvements per this table.

TABLE 24.85-A		
Relative Hazard Classification	OSSC Occupancy Classification	Seismic Improvement Standard
5 (Highest)	A, E, I-2, I-3, H-1, H-2, H-3, H-4, H-5	OSSC
4	R-1, R-2, SR, I-1, I-4	OSSC
3	B, M	ASCE 31
2	F-1, F-2, S-1, S-2	ASCE 31
1 (Lowest)	R-3, U	ASCE 31

Where:

- OSSC refers to the *Oregon Structural Specialty Code*, which is based on the requirements of the *2003 International Building Code* (IBC.)
- ASCE 31 refers to the *Seismic Evaluation of Existing Buildings ASCE/SEI 31-03* published by the American Society of Civil Engineers and the Structural Engineering Institute

The ten of the buildings that make up the Centennial Mill facility have perimeter walls that are either common with adjacent buildings for both gravity and lateral support, or have insufficient separation from adjacent buildings to allow the structures to act independently during a seismic event. As a result, no single building can be evaluated seismically without considering the effects from adjacent buildings. These effects will include increased loading on common walls and new strengthening elements attached to these walls; and potential damage to a building due to the movement and/or collapse of an adjacent building.

At this time it is not known which of the buildings in the facility will be reused and which will be demolished. The conceptual strengthening recommendations made in this report may be used for individual buildings, assuming that one or all the surrounding buildings are removed, or they may be used for the entire facility. (Due to the complex nature of the interaction between the buildings, it is recommended that the City of Portland's Bureau of Development Services be consulted early in the process of any partial or complete renovation work.)

The report by Hart Crowser, *Geotechnical Summary – Centennial Mill Due Diligence*, dated February 2, 2000, describes the potential risk for significant damage due to liquefaction, lateral spreading, and slope failure during a seismic event. Addressing these concerns for new structures is possible with methods such as below grade stone columns, which are currently being constructed on the adjacent *Waterfront Pearl* site. However, upgrading an existing structure to withstand these effects may not be economically feasible. It is possible that the existing waterfront piling at the site may have provided enough densification of the soil to reduce the risk of liquefaction, lateral spreading, and slope failure; however, a detailed geotechnical analysis is required to better quantify the risks. It should be noted that most existing bridges and buildings, along the riverfront in Portland are at risk of damage or collapse due to lateral spreading and/or slope instability during a seismic event. Generally this risk increases the closer the structure is located to the riverbank.

General

Braced frames, shear walls and other seismic strengthening recommendations contained in this report are at a conceptual level and outline one possible approach to seismically strengthening the structures. The locations of the braced frames and shear walls will depend on building use and architectural requirements.

The three warehouses along the east side on the facility (B, C & D) will generally require the most extensive repairs and strengthening efforts in any redevelopment program. Of the three, Warehouse C appears to be in the best condition and will require less extensive repairs due to deterioration of the existing timber framing and piling; however, as with the other three structures, adding braced frames at the east edge of the structure will be difficult due to the need to construct the frames over water. One development option for Warehouse C proposes removing the upper levels of the structure above the lower dock level, this option would significantly reduce the amount of seismic strengthening required. If the roof and 40ft of heavy timber framing at the east side of Warehouse C are removed, it is likely that the remaining concrete portion of the building could be seismically strengthened without requiring braced frame or shear wall construction in the river.

Strengthening measures for several of the buildings include recommendations to add reinforced concrete topping slabs to existing concrete floors and add "strong-back" bracing to existing concrete walls. These

recommendations are based on conservative assumptions regarding the strength and reinforcing steel within these existing concrete walls and floors (no existing design drawings are available) and may not be required if materials testing determines that the existing concrete has adequate strength and reinforcing to resist the applied loads.

Along the full length on the east side (riverfront) of the facility there is a two-level 8ft wide timber walkway. This walkway has severely damaged due to decay and apparent ship impact damage, and will require extensive reconstruction or complete removal in any redevelopment option.

Along the west side of the facility there is a metal deck canopy covering the loading dock. This canopy appears to have been added after the original construction and is supported by the west exterior walls of Warehouses A & E, the Flour Mill and Grain Elevator C. If the canopy is to remain, strengthening elements will likely be required to comply with current code requirements for wind and snow loading.

The separation joint between Grain Elevators B and C has shown significant movement since the initial walk-through in 2001. Roofing material between the two structures has completely torn apart exposing the joint to the weather. In April 2004, KPFF and PDC marked the joint width at several locations on the attic floor (up to 6".) During our walk-through in March 2006, it was found that over one-inch of additional movement had occurred. It is not clear if the movement is due to settlement in one or both of the building foundations, or due to movement in the timber grain bin structures.

The Geotechnical Summary prepared by Hart Crowser described settlement damage to the basement slabs-on-grade. This settlement of the basement slabs will continue to be a maintenance issue for the existing buildings.

Prior to beginning design work on any building within the facility, the following survey, inspection and testing work is recommended:

- Perform a complete as-built survey of the buildings to verify information on existing design drawings and collect detailed information where no drawings are available.
- Conduct a thorough inspection of the buildings and pilings to determine the extent of all deterioration, wood decay and damage due to localized overloading and vehicle impacts (forklifts etc.)
- Conduct tests on concrete columns and walls to verify concrete strength, and the size, strength and spacing of reinforcing steel.

Flour Mill

The Flour Mill is a 50ft x 109ft seven-story structure with basement. The building was constructed in 1910 at the same time as the Warehouses A and B, and Grain Elevator A. Design drawings were found for only the lower portion of the initial construction. Fully dimensioned plans and sections, dated 1939, were also found for the upper levels. These later drawings appear to have been prepared for use as background drawings for the design of mechanical systems. The structure consists of full height perimeter concrete walls; a concrete slab-on-grade at the basement level; heavy timber floors supported on timber beams and columns above the first floor and concrete beams and columns below the first floor; and a wood post and beam roof. Above the first floor there are 3'-5" wide x 7'-0" high window openings at 8'-2" spacing along the north and south elevations; and three window openings equally spaced along the west elevation. At the mezzanine level through the fifth level, one full width bay of the floor framing at the east end of the building has been removed and eight vertical steel tanks installed through the floor openings. It is not known when these steel tanks were installed; however, they appear to have replaced eight laminated wood wall "hoppers" that are shown in the 1939 drawings at this location. At the sixth level, a 16ft x 48ft opening has been removed from the floor and various pieces of mill

equipment occupy the opening. The design drawings indicate that the building is supported on timber piles. The north perimeter wall is common with an un-named narrow timber framed warehouse (two-story with basement) and the south perimeter wall is common with Warehouse A. Attached to the east perimeter wall are ten full height laminated wood wall blending bins which in turn are connected to Grain Elevator A. There is a large water tower on the roof.

The structure generally appears to be in good condition. There is some minor deterioration of the level 6 wood floor and roof due to water damage.

The following strengthening approach could be used:

- Add concrete/shotcrete to the inside face of the perimeter walls with new pin-pile foundations. The walls could be constructed with openings to match the sizes of the existing windows.
- Remove the vertical steel tanks and re-install the floor framing at all levels.
- Pour a reinforced concrete topping slab on timber floors at all levels and tie to the perimeter walls with dowels.
- Add plywood sheathing to the top surface of the roof deck, and provide connections between the roof and the perimeter walls to brace the walls for out-of-plane loading. Also, add metal straps to the top of the roof deck to provide continuous ties between the diaphragm chords. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)
- Add bracing to the rooftop water tower as required.
- Remove blending bins at the east perimeter wall, or tie the bins to the floor diaphragms for lateral support. (Also applies to the grain bins at the south perimeter wall – see Warehouse A below.)

Feed Mill (Starch Plant)

The Feed Mill is a 50ft x 83ft four-story structure with basement. The building was constructed in 1928 at the same time as a small two-story warehouse that shortly afterwards was integrated into the northeast corner of Warehouse E. Design drawings were found for the initial construction, dated 1926. Five additional undated drawings were found that show reinforced concrete topping slabs and containment curbs added to the north side of the First through Fourth Floors. The structure consists of full height concrete columns with concrete spandrel beams at the perimeter; a concrete slab-on-grade at the basement level; heavy timber floors supported on timber beams and columns; and a wood post and beam roof. There are clay tile and concrete infill panels at the lower levels of the perimeter concrete frame and windows above the roof levels of adjacent buildings. The design drawings indicate that the building is supported on spread footings. Some time after the original construction, a 16ft x 48ft opening was cut in the center of the second through fourth floors to form a central atrium, and large portions of the floors on the south side of the building were removed for equipment installation. The north perimeter wall is common with Warehouse B; the south and east perimeter walls are common with Warehouse C; and the west perimeter wall is common with Warehouse E.

The structure generally appears to be in fair condition; however, there appears to be significant deterioration in portions of the interior timber framing. This deterioration may be a result of roof leakage and/or the wet processing work that was conducted in this building.

The following strengthening approach could be used:

- Add concrete/shotcrete to the inside face of the perimeter walls with new pin-pile foundations. The walls could be constructed with openings to match the sizes of the existing windows.

- Remove the existing partial area concrete topping slabs and curbs; reconstruct the floor at all equipment openings (not central atrium); pour new reinforced concrete topping slabs on timber floors at all levels; and tie topping slab to the spandrel beams with dowels.
- Add plywood sheathing to the top surface of the roof deck, and provide connections between the roof and the perimeter spandrel beams to brace the walls for out-of-plane loading. Also, add metal straps to the top of the roof deck to provide continuous ties between the diaphragm chords. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)
- Remove all clay tile infill panels from the perimeter frame, or provide “strong-back” bracing.

Warehouse A

Warehouse A is a 50ft x 109ft one-story structure with a basement, and a 25ft x 50ft penthouse at the east end. Eight grain bins extend from inside the building up the north perimeter wall to approximately 40ft above the roof (attached to the south perimeter wall of the Flour Mill). The building was constructed at the same time as the Flour Mill, Warehouse B and Grain Elevator A in 1910, it is not known when the penthouse and four east grain bins were constructed. Design drawings were found for the lower portion of the initial construction and the four west grain bins (dated 1968); however, no drawings were found for the east penthouse addition or the four east grain bins. The structure consists of full height perimeter concrete walls; a concrete slab-on-grade at the basement level; a concrete deck at the first floor level; and a wood roof with timber trusses supported on the north and south perimeter walls. The design drawings indicate that the building is supported on timber piles. The north perimeter wall is common with the Flour Mill, the south perimeter wall is common with Warehouse E, and the east perimeter wall is common with Warehouse B.

The structure generally appears to be in good condition; however, there appears to be some deterioration in the roof framing due to leakage.

The following strengthening approach could be used:

- Add concrete/shotcrete to the inside face of the perimeter walls with new pin-pile foundations. Alternatively, these walls could be eliminated if the strengthening of Warehouse A is combined with the strengthening of Warehouses B and E, and the Flour Mill. The adjacent structures could then provide the lateral support for Warehouse A.
- Pour a reinforced concrete topping slab at the first floor level and tie to the perimeter walls with dowels.
- Add plywood sheathing to the top surface of the roof decks, and provide connections between the roofs and the perimeter walls to transfer in-plane diaphragm shear and brace the walls for out-of-plane loading. Also, add metal straps to the top of the roof deck to provide continuous ties between the diaphragm chords. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)
- Remove the east penthouse or tie to the Flour Mill for lateral support.
- Remove interior masonry walls around boiler room, or brace walls to structure above.
- Remove the grain bins, or tie the bins to the Flour Mill south perimeter wall for lateral support above the roof of Warehouse A.
- Add “strong-back” strengthening to the perimeter concrete walls and the masonry boiler room walls to brace for out of plane loading.

Warehouse B

Warehouse B is a 100ft x 185ft (approx.) L-shaped one-story structure with basement. On the east side, the basement level becomes the lower level of a two-story dock. The building was constructed at the same time as the Warehouse A, the Flour Mill, and Grain Elevator A in 1910. It was originally built in an L-shape around Grain Elevator A and the laminated wood wall blending bins at the Flour Mill; a 60ft x 110ft mezzanine was added between Grain Elevator A and the Feed Mill in 1940. Design drawings were found for the original piling and roof framing; repairs to the lower level floor (dated 1938); the 1940 mezzanine; ship impact repairs to the roof (dated 1965); and roof truss repairs (dated 2000.) The structure consists of a concrete slab-on-grade at the basement level that transitions to an elevated concrete deck for the eastern 120ft of the basement; a heavy timber first floor structure supported on timber columns; and a wood roof with 50 ft long timber trusses spanning in the north-south direction. The timber-framed mezzanine support columns also provide support for the wood roof above. The north edge of the building borders Grain Elevator A for 96ft and Warehouse D for 70ft; the south edge borders the Feed Mill for 83ft and Warehouse C for 100ft; and the west perimeter wall is common with Warehouse A for 50ft. There is an aerial conveyor above the north end of the building extending from Grain Elevator A to the riverfront.

The structure generally appears to be in fair condition above the basement level with deterioration visible in the timber roof, mezzanine and floor framing; however, there is extensive decay in the timber piles at the water line. At several locations the piles have completely separated from the concrete columns and pile caps.

The following strengthening approach could be used:

- Add braced frames and/or shear walls with new pin-pile foundations. New shotcrete walls at the south and west perimeter walls could also form part of the lateral system for Warehouses A and C, and the Feed Mill.
- Pour a reinforced concrete topping slab on the timber floor and elevated portion of the concrete basement floor.
- Add plywood sheathing to the top surface of the roof deck and mezzanine floor, and provide connections between the plywood decks and the perimeter walls to transfer in-plane diaphragm shear and brace the walls for out-of-plane loading. Also, add metal straps to the top of the roof deck and mezzanine floor to provide continuous ties between the diaphragm chords. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)

In addition to the seismic strengthening measures noted above, extensive repairs are required for the piling below the eastern portion of the building.

Warehouse C

Warehouse C is a 200ft x 180ft (approx.) T-shaped one-story structure with basement. On the east side, the basement level becomes the lower level of a two-story dock. It appears that the building was constructed in 1940, however, no design drawings were found for the initial construction. (Design drawings, dated 1938, were found for a two-story "Warehouse C" building with a slightly smaller footprint; however, these drawings do not match the as-built configuration of the building.) Design drawings were found for the repair/reconstruction of piling, floor and roof framing due to ship impact at the north-east corner of the building (dated 1965). The structure consists of full height concrete bearing walls at the west and north edges of the stem of the T-shape and at the north and south ends of the building; a concrete slab-on-grade at the basement level that transitions to an elevated deck for the eastern 90ft of the basement; a concrete first floor structure that changes to a heavy

timber floor at approximately 40ft from the east edge of the building; and a wood roof with timber trusses. (The elevated portion of the basement level consists of 50ft of reinforced concrete deck on the west side and 40ft of heavy timber deck at the riverside.) The west walls of the building are common with Warehouse E for 95ft and the Feed Mill for 50ft; and the north walls of the building are common with the Feed Mill for 83ft and Warehouse B for 100ft.

The west portion of the structure was renovated in 2001 to house the City of Portland's Mounted Patrol Unit (MPU). This renovation was primarily a non-structural upgrade, however, as part of the MPU project, a wood decay inspection was conducted on the roof and roof trusses and all decay areas found in the inspection were repaired. A crack in the west perimeter wall was also repaired.

The structure generally appears to be in good condition with some decay in the timber framing above the basement level and in the timber piling below the lower dock level.

The following strengthening approach could be used:

- Add braced frames and/or shear walls with new pin-pile foundations. New shotcrete walls at the west and north perimeter walls could also form part of the lateral systems for Warehouses B and E and the Feed Mill.
- Pour reinforced concrete topping slab on the first floor and elevated portion of the concrete basement floor.
- Add plywood sheathing to the top surface of the roof deck, and provide connections between the plywood deck and the perimeter walls to transfer in-plane diaphragm shear and brace the walls for out-of-plane loading. Also, add metal straps to the top of the roof deck and mezzanine floor to provide continuous ties between the diaphragm chords. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)
- Add "strong-back" strengthening to the west, north and south concrete walls.

In addition to the seismic strengthening measures noted above, some repairs are required for the piling below the elevated eastern portion of the building; however, these repairs would be significantly less extensive than those required in Warehouses B and D.

Warehouse D

Warehouse D is a 100ft x 160ft (approx.) one-story structure with basement. On the east side, the basement level becomes the lower level of a two-story dock. The building appears to have been constructed two phases beginning with the east side in 1919 and then the west side was added in 1920. Extensive repairs and reconstruction of the foundations were carried out in 1933 and 1939. Portions of the design drawings were found for the 1933 and 1939 foundation repairs. Design drawings for roof truss and floor repairs, dated 1999, were also found. The structure consists of a concrete slab-on-grade at the basement level that transitions to an elevated concrete deck for the eastern 100ft of the basement; a heavy timber first floor structure supported on timber columns; and a wood roof with 50 ft long timber trusses spanning in the north-south direction. The south edge borders the Grain Elevator A for 90ft and Warehouse B for 70ft; and the west edge borders Grain Elevator B.

The structure generally appears to be in fair condition above the basement level; however, decayed timber framing is evident in several locations, apparently due to roof leaks. Below the lower dock level there is

extensive decay in the timber piles at the water line. In several locations the piles have completely separated from the concrete columns and pile caps.

The following strengthening approach could be used:

- Add braced frames and shear walls with new pin-pile foundations. New Braced frames at the transition to Warehouse B could also form part of the lateral system for that structure.
- Pour a reinforced concrete topping slab on the timber floor and elevated portion of the concrete basement floor.
- Add plywood sheathing, metal straps and ties to the top surface of the roof deck. (Note that an evaluation of the capacity of the existing roof framing may require strengthening to support the new plywood weight and comply with current code requirements for snow loading.)

In addition to the seismic strengthening measures noted above, extensive repairs are required for the piling below the elevated eastern portion of the building.

Warehouse E

Warehouse E is a 109ft x 175ft one-story structure with basement. The building was constructed in two phases beginning with the west side in 1921 and then the east side was added in 1928. Design drawings were found for the 1928 addition, a remodel of the south office space and mezzanine (dated February, 1955) and a transformer penthouse (dated July, 1928). The structure consists of full height perimeter concrete walls; a concrete slab-on-grade at the basement level; a heavy laminated timber floor supported on concrete columns; and a wood roof with timber trusses supported on the east and west perimeter walls and timber columns at the center on the building. There are timber-framed mezzanines located at the north (46'x109') and south (40'x109') ends of the building. The mezzanine support columns also provide support for the wood roof above. There is a 19'x30' concrete transformer penthouse at the north end of the building, supported on concrete columns that extend through the north mezzanine to the ground. The north perimeter wall is common with Warehouse A; the east perimeter wall is common with both the Feed Mill for 50ft and Warehouse C for 95ft.

The structure was renovated in 2001 to house the City of Portland's Mounted Patrol Unit (MPU). This renovation is primarily a non-structural upgrade, however, new plywood sheathing and diaphragm chord reinforcing was added to the roof to resist the loading prescribed by the Life Safety Objective of FEMA 178. (Ties for transferring the in-plane and out-of-plane loads between the perimeter walls and roof diaphragm were not installed.) As part of the MPU project, a wood decay inspection was conducted on the roof and roof trusses and all decay areas found in the inspection were repaired. Cracks in the south and east perimeter walls were also repaired.

The structure generally appears to be in good condition. Some deterioration in the north mezzanine floor was found during the decay inspection, it was not clear if this damage was due to chemical spills or roof leakage. The damage was not repaired as part of the MPU project as this floor was not be used in the completed MPU facility.

The following strengthening approach could be used:

- Add braced frames and shear walls with new pin-pile foundations. New shotcrete walls at the north and east perimeter walls could also form part of the lateral system for Warehouses A and C, and the Feed Mill.
- Add plywood sheathing to the top surface of the main laminated timber floor, and the mezzanine floors.

- Provide ties from the roof, floor and mezzanine levels to the perimeter walls to transfer shear loads to the walls and brace the walls for out-of-plane loading.
- Add blocking and straps to the underside of the roof, floor and mezzanine levels to provide continuous ties between the diaphragm chords.
- Add "strong-back" strengthening to the perimeter concrete walls to brace for out of plane loading.

Grain Elevators A, B and C

Grain Elevator A, B and C were constructed in 1910, 1925 and 1929 respectively. Design drawings were found for Grain Elevator C and the foundations of Grain Elevator A. The structures consist of laminated wood walls forming full height grain storage bins supported on closely spaced heavy timber and concrete columns at the basement level. The foundations appear to be founded on timber piles. As noted above, the separation joint between Grain Elevators B and C has shown significant movement since the initial walk-through in 2001. It is not clear if the movement is due to settlement in one or both of the building foundations, or due to movement in the timber grain bin structures.

Due to the close spacing of the storage bin walls, a use for these buildings has not yet been defined; therefore, it is not possible at this time to develop lateral force resisting systems. Options for lateral systems to brace the structures in their current form include adding plywood and metal straps to the storage bin walls and roof; or, installing vertical braced frames and tying the storage bin walls to the frames with new diaphragms or horizontal bracing. Alternatively, the exterior laminated walls and roofs of the structures could be shored and the interior grain bin walls removed and replaced with new framing (timber, steel etc.) The exterior could then be re-attached to the new interior framing as a veneer and the exterior character of the buildings maintained.



PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland

M E M O R A N D U M

MARCH 21, 2006

TO: Steve Shain
Joe Zehnder
Mark Raggett
Janet Bebb

FROM: Henry Kunowski

SUBJECT: Centennial Mill: River District Parks - Greenway Expectations and Aspirations



The redevelopment of the Centennial Mill site offers an exciting opportunity to complete the long-held community vision for the River District parks system, Willamette River connection and Greenway trail links. The Portland River District Park System Urban Design Framework Study by Peter Walker and Partners, 2001 (Framework) builds upon the Tanner Creek Park and Water feature Steering Committee Report, October 1998, both reports were developed through an extensive public participation process. The Framework document sets forth the location, goals, and preliminary program for the open space network in this new and growing neighborhood. The purpose of the Framework is to set in place physical recommendations which not only address the planning objectives in meaningful and memorable ways, but which also generate a high level of community and civic support. The Framework not only establishes design concepts for implementation but more importantly to foster the recognition that the River District will emerge as a great urban neighborhood. The Framework Plan reflects a strong and poetic metaphor of historic Tanner Creek. It acknowledges the deeper meanings of the natural cycle of water collection and storage, the visual relationship between water and land, and the natural and social life that they support. The plan also provides a great variety of spaces, both in terms of use and scale. It reaches out to promote a synergy between civic and private development initiatives. The plan further establishes strong, guiding principles to promote a sense of place. The plan relies on simple elements that are both common and unique to the city.

The Program for the River District Parks is straightforward: First and foremost, the Parks are neighborhood parks, and provide identity and form for a community which is being constructed from the ground up. The parks should enhance opportunities for gathering, contemplation, active recreation and nature experiences. The parks should also foster retail opportunities on the ground level of the adjacent structures. The parks should provide a venue for the Arts community. The artist-based legacy of the Pearl District and proximity of both the Pacific Northwest College of Art and the Portland Institute of Contemporary Art will enrich the life of the River District Neighborhood. Flexibility and variety of use are important. Passive recreation, limited active recreation (no defined play fields) and performance should be accommodated - particularly in the first park, Jamison Square. The parks should provide creative incorporation of water and linkage to a *riverfront park network*.

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Sustaining a healthy park and recreation system to make Portland a great place to live, work and play.

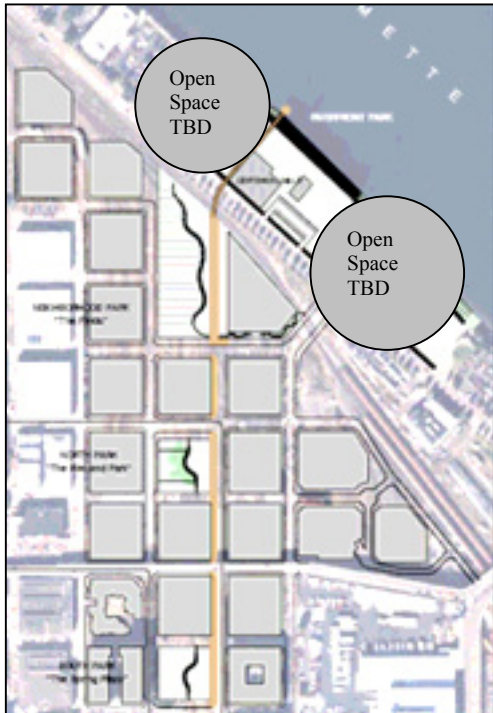


Figure 1: Framework Study concept

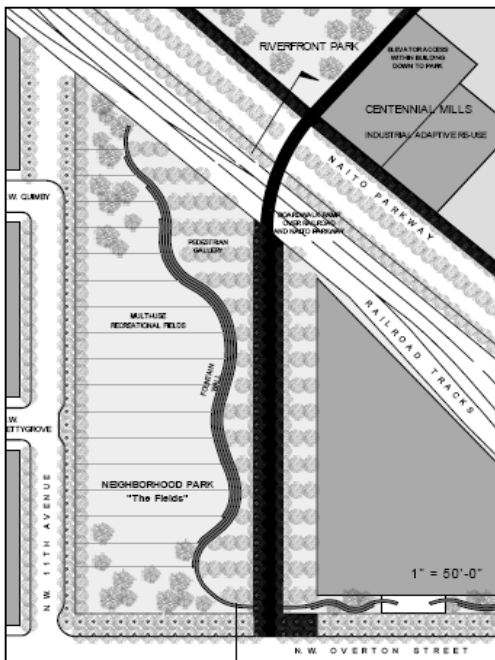


Figure 2: Detail view of the Fields concept

Description of the Concept: The intent of the Framework Plan is to have the individual parks impart a distinct character to its adjacent neighborhood, as well as cumulatively provide an overall image to the entire River District and the city as a whole. It is important that each piece of the composition be identifiable and memorable, both district and city-side, to ensure its long-term stewardship and maintenance. The plan takes queues from both the natural systems and culture of the site and the region. Earth, forest, and water elements interface with agriculture, the past industrial use of the site and the pedestrian scale of Portland's urban core. Three constant elements and four variable elements is the key to the urban design framework plan:

Constant elements occur at each of the Parks and extend to private development: The Boardwalk, The Stone Aquifer and The Pedestrian Gallery

Variable elements define the individuality of the Parks: The Spring, The Wetlands, The Fields, The Riverfront, The spring, the wetlands, the fields and the riverfront are linked together by the **Boardwalk**.

The Fields Neighborhood Park: (from the Framework Study, 2001) The "fields" provides a venue for recreational needs of the neighborhood. This earlier work by Peter Walker & Partners describes the following that will be interpreted and realized by the designer of the Fields. The largest of the three River District parks, the majority of the site is devoted to a relatively flat, grass meadow maintained for passive and informal recreation. Carefully sited masses of bulbs will be naturalized into the meadow for a display of spring color. Taller grasses with seasonal interest, informal tree groves and street tree rows define the perimeter. The meadow play fields symbolize an agricultural condition, without the hydraulic sprinkler system. The modern system is replaced by a series of very shallow, imperceptible irrigation swales, originating from the Stone Aquifer, that "flood" the play fields (before dawn) during dry weather periods.

The parks and boardwalk link suggests the integration of these elements to the neighborhood parks with strong design intent to link the Fields boardwalk to the Centennial Mill site to the north. At the regional Riverfront Park, the sea wall and railing treatment of the water's edge, used elsewhere in the city, is here replaced with a simple grass slope implying direct access to the waterfront. A stone beach protects and stabilizes the shoreline. The river's edge is planted with native riparian species. PP&R does not have property ownership rights or legal interests in the Centennial Mill property except for public access to the greenway.

The Willamette River played a central role in the history and growth of Portland and that of the State as a whole. This vital role has become even more critical in recent times since the river is also seen as an open space, wildlife habitat, and recreation resource and as a key element for fostering a sense of place in the community. The Riverfront Park element of the Centennial Mill Development Plan (CMDP) project is located along the western bank of the Willamette River within the River District Urban Renewal Area and has one of the most exciting design opportunities in Portland today. The Greenway has the potential to reflect the City's commitment to both a high-density urban community and exemplary treatment of the Willamette River's natural resources. To date cities have built seawalls and rip rap edges to protect against rivers and take advantage of rivers visual and recreational qualities without consideration of the rivers natural functions in the environment. This design effort is the next step in the City's commitment to enhance the livability of the River District and to implement the City's commitment to the *River Renaissance* vision. The vision has 5 basic components, these are: 1) Ensure a clean and healthy river for fish, wildlife, and people, 2) Maintain and enhance a prosperous working harbor, 3) Embrace the river as Portland's front yard, 4) Create vibrant waterfront districts and neighborhoods and 4. Promote partnerships, leadership and education.

When seen in its totality the CMDP should provide a harmonious relationship between people and the natural functions of the river, and restore the river's fish and wildlife habitat all through an exemplary Greenway and Riverfront Park design. This design effort should take a very special interdisciplinary consulting team that can synthesize the complexities of the natural, cultural, social and economic environment and give it meaningful form.

A few of the key *Guiding Principals* for the development of the Riverfront Park and Greenway should be those that are articulated in the Framework Study. Other considerations for the Riverfront Park are:

Greenway Trail:

What is the purpose and location of the greenway trail in relationship to the existing trail system and where the trail starts and stops. Does the current configuration of the site require access into the Mill for trail connectivity? The current greenway trail ends at the Broadway Bridge and continues north of the Fremont Bridge.

Riverfront Park Initial Thoughts and Considerations:

- Context of the Riverfront Park in relationship to the River District and Willamette River
- Where the location of the "park" idea and property is currently at the Mill
- Greenway requirements and the existing conditions at the Mill site
- The interface between the Mill, Greenway/Trail and Willamette River
- Access to the water, visual and physical
- View sheds and corridors
- On-site water quality
- Sustainability of design and Operations
- Access from neighborhood, Neighborhood Park and along river and Naito Parkway
- Evaluation of river access for small water craft (shipping channel conflicts?)
- Possible park linkage to the small river bay downstream
- Demonstration of District and on-site water treatment
- Park and Mill complex interface (retail?)
- Public facilities such as museum or library
- From a process perspective, what is needed at this stage of the programming of the Mill site and how will it be carried forward in to the next stage of development?

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Centennial Mills
Urban Design
Framework Plan

Allison Wildman (SERA)
Sergeant David Pool (retired)

Date: April 13, 2006

Allison Wildman visited the MPU facility on NW Naito Parkway and met with retired Portland Police Sergeant Dave Pool, who was the primary contact for the Portland Police Bureau during the MPU relocation process (1999 – 2001). Retired Sgt. Pool now resides in Helena, Montana. The following bullets summarize the information and commentary provided by Sgt. Pool:

- The original MPU facility was located in Delta Park. The Bureau started looking for a new location in the downtown vicinity and, with the assistance of Sam Naito, secured a location at NW 9th and NW Lovejoy in 1989 on PDC property. This location was intended to be a short-term facility because the land was going to be developed. The MPU was housed in this location until 2001.
- In 1998-1999, development pressure forced the Bureau to start looking for a permanent home for the MPU. Unless a viable site was secured, the program would likely disappear. Candidate sites included:
 - Washington Park: near the hairpin turn on Kingston Drive adjacent to the existing soccer field
 - Underneath the Steel Bridge on the east side of the Willamette
 - Northwest 35th and NW Thurman: (*ed. McClay Park?*)
- The MPU did not have any hard and fast site selection criteria. Rather, there were a couple of general needs that had to be fulfilled on the new site:
 - There had to be enough room for a covered paddock where the horses could exercise year-round. Mud was the #1 problem at the 9th and Lovejoy site.
 - The offices had to be within proximity of the horses so the officers could hear and watch the horses from their quarters.
 - The site had to be relatively secure so that the officers could monitor people's interactions with the horses. They didn't want people feeding the horses or touching them without permission or an officer or trainer present. One of the problems at the 9th and Lovejoy site was that the paddock was open to the public on three sides and the officers couldn't monitor the entire space at once.
 - The horses had to be able to relax in their downtime, which meant finding a relatively quiet place for them to be stabled.
- The sites were ultimately rejected for the following reasons:
 - Washington Park: Ultimately the Washington Park site was rejected by the Parks Director at the time, Charles Jordan.
 - Underneath the Steel bridge: Flanked by Interstate 5, the Union Pacific railroad, and the Willamette River, this site was a sub-optimal location for the MPU but a strong candidate because of a tight timeframe to move the existing MPU from the 9th and Lovejoy location. Public and professional outcry against the horses living in this situation and the Friends of the Mounted Patrol essentially eliminated the site as a viable option.
 - Northwest 35th and NW Thurman: never a viable candidate site; this site was mentioned as part of a list of potential locations in the area, including sites in South Waterfront (the current DEA building site and a Zidell property under the Ross Island Bridge).
- Because the existing MPU facility was located on PDC-owned property and was leasing it to the Police Bureau, it was Sgt. Pool's impression that the PDC felt they had a responsibility for the MPU. He said that

the PDC, specifically Bruce Allen, came to the MPU and proposed the Centennial Mills site (purchased in 2000) for the new MPU facility.

- Sgt. Pool and Bruce Allen toured the Centennial Mills site together. Sgt. Pool said that he had a hard time envisioning how everything was going to come together on the site. He had concerns about getting the trailers and trucks to the second floor, where the barn would go, the potential of contaminated materials on the site, and what could be done with the rest of the mill site. He said that Bruce assuaged his concerns by systematically going through each one and offering a solution with the assurance that it could happen.
- Sgt. Pool mentioned that, at points, the rest of the Mill was going to be a number of things: demolished for open space and a park, a restaurant on the pier over the river, residential, and retail. He didn't think that the restaurant would work, mostly because of security concerns. One reason the new MPU facility is so successful is that it was designed to be welcoming yet still maintains a high level of security. Sgt. Pool said that the security gate is mostly to protect the horses and to contain them if they get in a threatening situation.
- The project had several unanticipated setbacks and added costs. The most significant was that the soils were more contaminated than originally thought. The core samples originally taken to test the soil were inaccurate and required more money to treat the contaminated soil. The soil had to be removed, trucked to Woodburn, burned, trucked back to the site, and replaced.
- Sgt. Pool said that he and the Police Bureau did not have a fixed program for the new MPU facility. The program and design was developed by Group MacKenzie, the site architect, who built off the existing conditions at the 9th and Lovejoy facility. Sgt. Pool worked with PDC, the project architect and engineers, and other members of the MPU Relocation Working Group to augment and comment on designs along the way.
- Sgt. Pool said that the site architect did a great job designing the paddock to suit the needs of the MPU, while meeting the strict design requirements of the waterfront design overlay. When fully lighted, the facility can literally be seen across town.
- The paddock has been recently outfitted with a sound system so that trainers can be heard over the traffic and train noise. The sound system also provides simulated environments to acclimate the horses (i.e., the sound of thousands of people clapping or yelling) and train for events that may not happen frequently. A Round Pen was added to exercise horses that do not get along with the other horses and to familiarize new officers with their horses. The Round Pen is adjacent to a small greenspace called "MPU Park," where horses can graze on new grass with their trainer on lead.
- The MPU barn and paddock is owned by the Portland Development Commission and was paid for with PDC funding. The Bureau of General Services provided a project manager that co-managed with PDC's project manager. The Police Bureau funded office equipment and internal furnishings. Sgt. Pool did not know any details about the lease agreement.
- Sgt. Pool said that the MPU facilities at Centennial Mill are world-class and that other Mounted Patrol Units from large cities visit are astounded with the quality of the facility.
- The MPU currently has 9 horses and room for 14.
- The MPU hosts many community groups (particularly schools) and many people from the neighborhood come down to the river to watch the horses.
- A strong recollection that Ann Krohn provides is that Mayor Katz basically told Bruce Allen to find a site and get it built! The "grand opening" was a huge community success and launched a new era for Portland's MPU.

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Allison Wildman (SERA)
Diana Holuka
Portland Bureau of General Services

Date: April 14, 2006

Allison Wildman spoke with Diana Holuka via telephone regarding the lease agreement for the Mounted Patrol Unit at Centennial Mills. The following summarizes information about the lease agreement between the MPU and the Portland Development Commission:

- The current lease is for a 10-year period and expires on December 31, 2010.
- There are two 5-year options to extend the lease at the discretion of the MPU, potentially adding another 10 years to the terms of the agreement. In this case, the lease would expire on December 31, 2020.
- At the end of the lease period, the MPU and the PDC must mutually agree to renew the lease agreement.
- There is no early termination clause in the lease, but if both parties mutually agree that early termination is in the best interest of both parties, the lease can be terminated.
- When asked what would happen if the rest of the Mill site is developed and the development is not conducive to the presence of the horses, Ms. Holuka responded that it is "a political issue and would have to be worked out between the PDC and the mayor."
- The MPU does not pay rent to the PDC. This is an uncommon situation.
- The MPU pays for utilities and maintenance of the site.

