



**Working Harbor Reinvestment Strategy:**  
Investment Recommendations for the City of Portland,  
Portland Development Commission and Port of Portland

Final Report, Discussion Draft  
April 11, 2008



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<http://www.portlandonline.com/planning/index.cfm?c=42540>

# INTRODUCTION

The Working Harbor Reinvestment Strategy is a 10-year program of public investments by the City of Portland (City), Portland Development Commission (PDC), and Port of Portland (Port). The Working Harbor refers here to the industrial districts along the deepwater shipping channel in Portland (Northwest, Linnton, Lower Albina, Swan Island, and Rivergate). The reinvestment strategy was prepared as an economic development component of the River Plan North Reach. The River Plan is being developed as a comprehensive, multi-objective area plan for the land along the Willamette River in Portland.

Portland's working harbor is a West Coast trade gateway and Oregon's largest seaport, where the state's primary channel, rail, pipeline, and highway infrastructure comes together. It is also the region's largest heavy industrial area and a cluster location for some of the region's largest industries in metals and equipment manufacturing and interregional distribution. However, these older industrial districts are challenged by competitive pressures from changing global market conditions, tightening land supply, aging infrastructure, and other constraints upon industrial retention, expansion and development.

The reinvestment strategy was developed to address two primary objectives. The first is public-private partnership, to leverage private industrial reinvestment and support competitiveness in the harbor industrial districts through public investments in land (brownfield redevelopment, port terminals, urban renewal), infrastructure (roads, rail, channel, water, sanitary sewer, stormwater), and workforce. The second objective is to support intergovernmental coordination, identifying economic development priorities among the broad range of potential local government investments in these districts by the City, Port, and PDC.

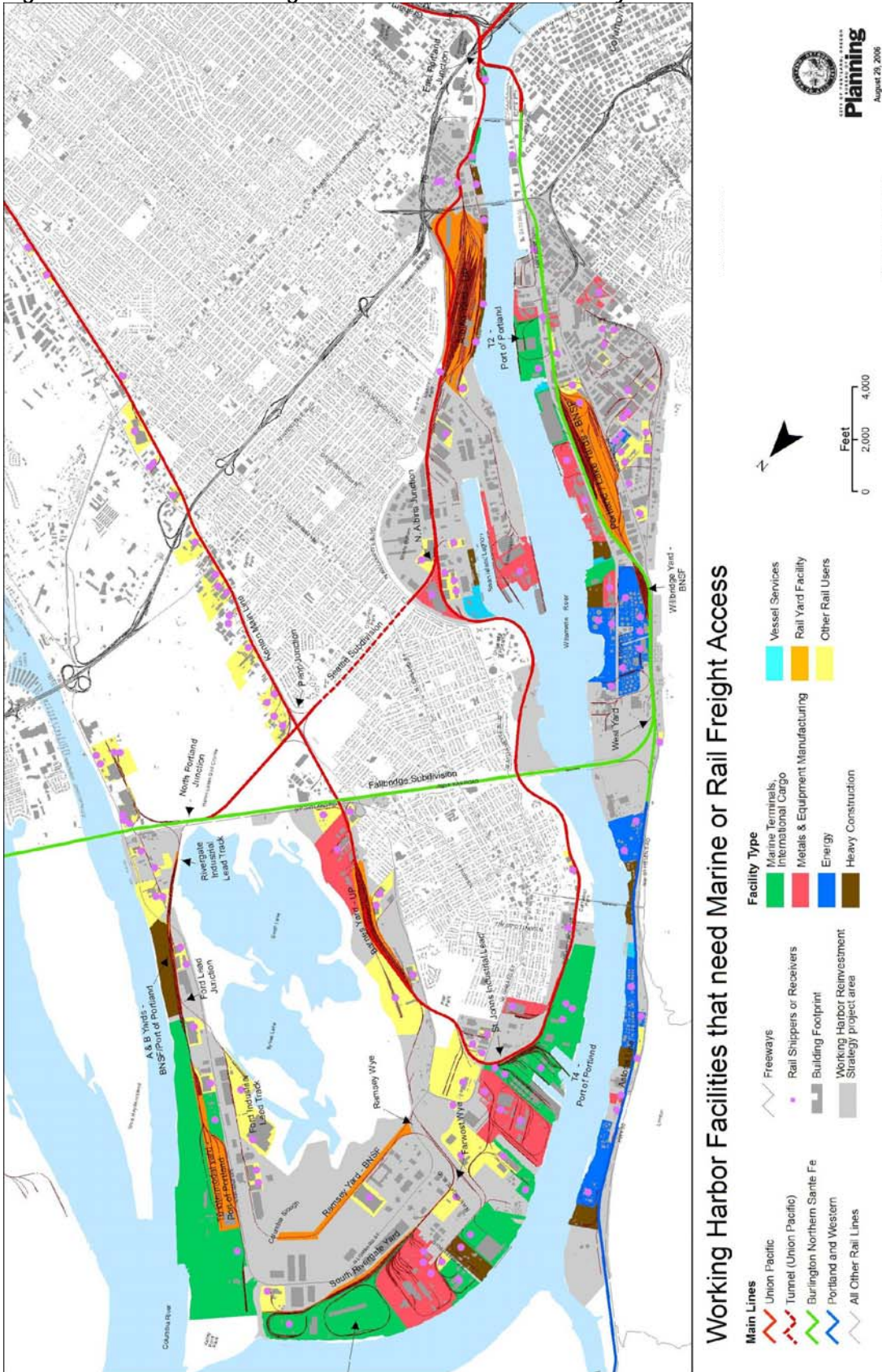
The reinvestment strategy was developed by a team of City bureau, Port, and PDC staff. Phase 1 included interviews with a cross-section of harbor area industry leaders on investment priorities. Phases 2 and 3 included development constraints analysis of vacant sites; 2030 forecast refinements; district infrastructure needs analysis on transportation, water, sanitary sewer and stormwater systems; and economic development prioritization analysis. Products are included as appendices. Public and stakeholder involvement included stakeholder and intergovernmental committee meetings at project milestones, open houses, and extensive River Plan public outreach efforts.

# CONCLUSIONS

1. **The working harbor has a healthy climate of private investment that takes advantage of its distinctive industrial assets.**
  - **Continuing industrial investment** - Manufacturing was the highest growth sector of the Portland metro economy from 2003 to 2005, generating two-year GDP (gross domestic product) growth of 39 percent and fueling recovery from the 2001 recession. The Working Harbor is one of the dynamic locations of that growth. Industry has invested about \$440M on 36 harbor area sites since 2004, such as Evraz Oregon Steel Mills, UPS, U.S. Barge, Schnitzer Steel, Canpotex, Union Pacific, and Columbia Sportswear.
  - **Unique industrial location** - Low industrial vacancy rates confirm what real estate brokers have explained, that close-in industrial locations are widely preferred in this region, unlike many other cities. Industry leaders acknowledge that multimodal transportation access is the area's unique ongoing location advantage. As shown in Figure 1, most of the land in the diverse harbor industrial districts is used by industries that need marine, rail or pipeline access (46 marine loading sites, 92 rail shippers, and 10 petroleum terminals).

- **Using land more intensively** – Responding to the tightening land market in the Working Harbor, industry is expanding creatively on less land. Examples include investment in moving more inventory faster, 24-7 operations, expanding onto a group of nearby sites when one larger site is not available, and developing on constrained brownfields and steep sites.
  - **Long-term growth forecast** – Employment in the Working Harbor is projected to grow by 5,800 jobs between 2005 and 2015 and an estimated 800 acres will be affected by development or redevelopment.
2. **Local government is generally meeting its essential investment role in the growth capacity and productivity of the Working Harbor, with some exceptions.**
- **Constraints in older districts** – Interviews with harbor area industry leaders have identified many area deficiencies that could constrain significant industrial investments, particularly rail and road congestion bottlenecks and tightening land supply (see Appendices 1-2).
  - **Ample infrastructure capacity overall, with exceptions** – The Working Harbor is generally an area of ample, high capacity infrastructure. Project studies have modeled the area's infrastructure needs and found that existing street, water, sanitary sewer, and stormwater systems are adequate to meet forecast growth, except for a few deficiencies that can be addressed by planned improvements and a few recommended new projects identified below (see Appendices 4-6). The area's overcommitted freight rail system and concentration of unoccupied brownfields are notable exceptions, which warrant further analysis and strategic investment.
  - **Broad public investment program underway** – Identified deficiencies and planned investments exceed available budgets, especially transportation investments. However, most of the economic development priority projects identified in Table 1 are funded or on the financially constrained projects list of the final draft Regional Transportation Plan and expected to be funded in the next 10 years.
  - **Workforce development needs being addressed by other organizations** – Hiring low/mid skilled industrial workers has been a particular challenge for many growing firms and large employers with retiring workers. However, in the short term, responsive workforce development efforts are already underway at many levels outside of local government, including state employment and training agencies, community colleges, school districts, industrial associations, social service organizations, and temporary services.
3. **Economic development priorities can be identified among capital projects in traded sector districts like the Working Harbor, to build growth capacity and competitive advantages.**
- **Economic development priorities in traded sectors** – The Regional and Oregon Business Plans (2006, 2007) focus attention on traded sector clusters as the priority of economic development efforts. Traded sectors are firms that compete in international markets, bring income into regions, and tend to drive regional economies. Clusters are specializations of regional economies, such as high tech and metals manufacturing. Districts with high concentrations of traded sector and regional service businesses, such as Portland's Working Harbor, Columbia Corridor, and Central City, represent priority locations for economic development.
  - **Industry priorities in transportation and land** – Asked to rank public investments from a hypothetical \$100 budget to support industrial investment, interviews with 60 area industry

Figure 1. Portland's Working Harbor and Multimodal Industry Clusters



leaders allocated on average \$39 to transportation, \$24 to land development, \$14 to utilities, \$14 to workforce, and 8 to other investments.

- **Project selection criteria** - Project consultants for transportation infrastructure recommended and applied the following economic development prioritization criteria for selecting projects: project costs/developable acre served; business priorities (identified among top three project priorities in business interviews); improved access to 20+ acres vacant sites; or improved interregional access (regional or priority truck streets or regional rail or marine infrastructure).

## RECOMMENDATIONS

1. **Recommended capital projects** – Implement the capital improvements projects identified in Table 1 and Figure 2 as economic development priorities by 2018 or as specifically recommended. These planned projects, some outside the project area, were selected as short-term (10-year) investments that improve competitiveness or expand development capacity in the project area.
2. **Other short-term recommendations for further study** (not included in Table 1) – Implement the following project development studies by 2013. These studies respond to identified deficiencies that are not addressed by currently planned improvements or programs.
  - a. **Harbor REDI brownfield redevelopment** (PDC lead) – Analyze and prepare recommendations to implement National Brownfield Association symposium recommendations (October 2007) to overcome barriers to redevelopment on the concentration of brownfield sites in the Working Harbor.
  - b. **Additional rail projects** (PDOT and Port lead in coordination with Metro and ODOT)
    - i. Prepare a small shipper rail strategy to maintain and improve access to the rail system for the nearly 100 smaller shippers in Working Harbor (e.g., third party switching, new reload facilities, favorable short line leasing).
    - ii. Investigate the feasibility of adding a new regional rail yard to accommodate growth and relieve congestion at Albina Yard.
  - c. **Site access and circulation improvements** (PDOT lead) – Create a funding source for relatively small projects to address freight deficiencies or improve industrial site access. Examples of recommended improvements to consider:
    - i. Conduct a local circulation study in the Northwest Industrial District to develop strategies for improving access between NW Yeon Avenue and NW Front Avenue in the vicinity of NW Nicolai Street.
    - ii. Evaluate the potential for an advance warning system on NW Front Avenue to divert traffic during train crossings.
    - iii. Conduct a local circulation study in the Linnton area to evaluate the potential for combining accesses and improving safety on US 30.
    - iv. Evaluate cost-benefit of city acquisition and improvement of Time Oil Road.
    - v. Evaluate the feasibility of extending NW 26th Avenue south of NW Yeon Avenue to improve access to properties in that area.
    - vi. Evaluate the feasibility of extending N Bradford Street through the T-4 property to connect with N Terminal Road.

**Table 1: Recommended economic development priority projects**  
(highest priority projects are highlighted)

<i>Map</i>	<i>Project (TSP#)</i>	<i>Improvement</i>	<i>Cost (\$M)*</i>	<i>Funding**</i>
<b>Highway</b>			103	
H1	I-5 Delta Park (30023)	Widen to 6 lanes	73	Constrained, 2008-17
H2	I-5 at I-84 to Greeley (20067)	Acquire R/W and preliminary engineering to widen, modernize freeway and ramps, improve area access	30	Constrained, 2018-25
H3	I-5 Columbia River Crossing (30020)	Local share of Alternatives Analysis currently underway	TBD	1
<b>Streets</b>			86.3	
S1	Yeon/US 30 (Nicolai to St Johns Bridge) ITS (60023)	Interconnect signals and install CCTV and variable message signs.	0.885	Constrained, 2008-17
S2	Going (Interstate-Swan Island) ITS (expand 30015)	Interconnect signals; install CCTV cameras, message signs, and "smart" signal to better allocate green time.	0.95	Constrained, 2008-17
S3	Lombard/St. Louis/Ivanhoe Improvements (30057, 30071)	Realign intersections to reinforce truck movements on truck streets, improve traffic, pedestrian circulation.	1.51	Funded, MTIP
S4	Widen Lombard (T-6 to Rivergate) (30036)	Widen N Lombard, add signal at Ramsey	34.5	Constrained, 2008-17
S5	Columbia Blvd (I-205 - Burgard) ITS (30008)	CCTV and changeable message signs at intersections	0.42	Constrained, 2008-17
S6	Rivergate ITS (30072)	Real time info connect to ODOT's highway ITC systems.	0.48	Constrained, 2008-17
S7	Burgard-Lombard Street Improvements (30080)	Widen to two lanes with center turn lane, bike lanes, and sidewalks	17.2	Constrained, 2008-17
S8	Leadbetter Extension/ Overcrossing (30031)	Street extension and rail overcrossing (Marine Drive loop)	11.2	Constrained, 2008-17
S9	Columbia Blvd / N Portland Rd (30070)	Improve intersection to reinforce truck street movements and minimize neighborhood cut-through	0.7	1
S10	US 30 access in Willbridge area (expand 60018, 60018)	Construct alternative BNSF crossing to US 30 in Willbridge area.	16.5	1
S11	Going/Greeley Climbing Lane, Interchange (30016)	Redisign Going/Greeley interchange, construct climbing lane on Going.	2	1
<b>Bridge</b>			184.0	
B1	Going Street at Swan Island (30013)	Replace weight restricted bridge over UPRR.	4	Constrained, 2008-17
B2	Lombard at Burgard (30068)	Replace weight restricted bridge.	24.9	Constrained, 2008-17
B3	Denver Viaduct (30010)	Reconstruct viaduct to improve truck access to I-5 (part of Delta Park project).	46	Constrained, 2008-17
B4	Lombard at Columbia Slough (30067)	Strengthen bridge and add sidewalks and bike lanes.	9.8	Constrained, 2008-17
B5	West Hayden Crossing (30053)	Construct a new bridge to Hayden Island.	99.3	Constrained, 2008-17
B6	North Willamette Crossing Study (2004 RTP#4016)	Increase priority in Regional Transportation Plan to study need for new US 30 to Rivergate bridge.	TBD	Priority
<b>Marine</b>			152.6	
M1	Columbia River Channel Deepening (10002)	Deepen the river channel to serve larger container ships	150.6	Constrained, 2008-17
M2	Willamette River Channel Maintenance Dredging	Maintenance dredging as recommended in Dredge Materials Management Plan.	2	Funded, FY2009 budget

Table 1, continued

Map	Project (TSP#)	Improvement	Cost (\$M)*	Funding**
<b>Rail</b>			257.6	
R1	Kenton Line Upgrade (40085)	Upgrade to double track, new sidings.	25.4	3
R2	Vancouver Yard Bypass	Construct bypass track on west side of Vancouver Yard and W 39th bridge.	115	funded, WDOT
R3	Ramsey Rail Complex (30064)	Construct six tracks and one mainline to improve bottlenecks and storage capacity	20.6	Constrained, 2008-17
R4	Marine Drive (Rivergate W) Crossing, Phase 2 (30039)	Construct grade-separated rail crossing at Rivergate West entrance	13.6	Constrained, 2018-25
R5	Penn Junction Realignment and Overcrossing (expand 30055)	Grade separation, track realignment, double-tracking, and signal upgrades to improve capacity.	26	2
R6	UP Line Connection (Brooklyn Line Graham Line) (20093)	Add rail connection between the Brooklyn and Graham Lines to increase rail capacity.	15	1
R7	N Portland Junction Rail (30065)	Accommodate higher rail speeds	9.2	2
R8	So. Rivergate Yard Expansion Ph. 1 (30047)	Expand railroad yard to increase T-5 bulk capacity	7.09	1
R9	Terminal 5 Unit Rail Loop #4 (30078)	Construct two additional loop tracks to increase rail storage	2.8	1
R10	BNSF Line at Columbia Bridge Track Improvements (30063)	Improve rail track conditions on approaches to Columbia River rail bridge to increase track speeds.	8	2
R11	UP Line Upgrade, Albina to E Portland (expand 20094)	Upgrade track to increase north-south speeds, extend to Willsburg Jct.	8.8	1
R12	Barnes to T-4 track (30062)	New dedicated track for T4 through Barnes Yard	1	1
R13	Cathedral Park Quiet Zone	Control rail crossings to improve neighborhood livability and enable T-4 and auto import growth.	5.1	Constrained, 2008-2017
<b>Water</b>			7.3	
W1	Burgard Loop Main	12" main along Simmons Rd or 16" along Burgard	0.55	Priority***
W2	Linnton Parallel Main	Extend parallel main as needed for site development	6.75	As needed
<b>Sanitary Sewer and Stormwater</b>			14.0	
SS1	Shipyards Pump Station	Upsize Shipyards Pump Station near Burgard Rd.	2.7	2010-2014
SS2	Marine Drive Pump Station	Upgrade old mechanical & electrical equipment, increase capacity to meet current & future demand.	0.42	2008-2012
SS3	Oregonian Pump Station	Upgrade old mechanical & electrical equipment, increase capacity to meet current & future demand.	0.3	2010-2014
SS4	Lombard Pump Station	Install second electrical feed and control equipment.	0.46	2008-2012
SS5	NW Neighborhoods BCC Support Projects	Repair and replace old pipes and provide new capacity in combined system that will bring flows to the Balch CSO Consolidation Conduit (BCC).	8.6	2008-2012
SS6	Guilds Lake Pump Station	Install second electrical feed and control equipment, address impacts of Portsmouth Forcemain on	0.5	2008-2012
SS7	Mocks Bottom Pump Station	Upgrade old mechanical & electrical equipment, increase capacity to meet current & future demand.	1	2008-2012
SS8	Portland Harbor Superfund Project	Investigation, remediation to meet City/Port obligations	TBD	Priority
<b>Total Project Costs (except regional projects, i.e., highways, Vancouver Yard)</b>			\$ 586.8	

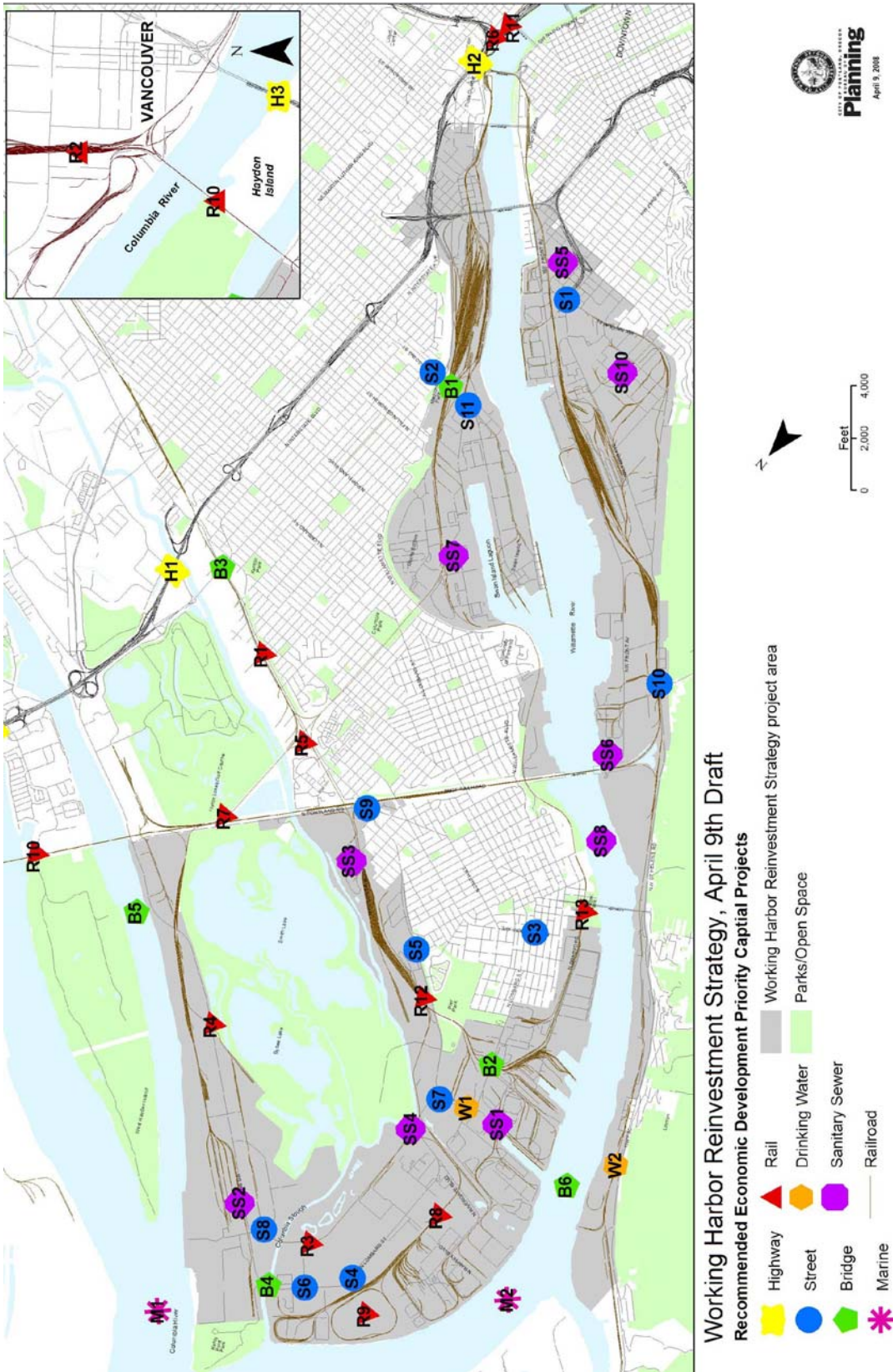
\* Estimated project costs (\$millions in 2007) from Draft Regional Transportation Plan, December 2007 and Portland Freight Master Plan.

\*\* "Constrained" represents inclusion on the Regional Transportation Plan financially constrained project list. Numbers represent funding priority in Freight Master Plan.

\*\*\* Track opportunities to combine project with Burgard Street improvement (TSP#30080).



Figure 2. Recommended Economic Development Priority Projects



- d. **Industrial stormwater rates** (BES lead) – Evaluate alternatives and recommend a stormwater rate structure in large-site industrial areas to more accurately reflect payment for City services used. Current rate assumptions are inconsistent with typical conditions in industrial areas, where 56 percent of land is on sites 20 acres or larger, a high share of stormwater is retained on-site, and streets cover a relatively small share of land.
3. **Unresolved issues that need further attention.** The reinvestment strategy proposes a short-term public investment agenda. In analyzing local systems deficiencies, however, the following long-term issues have been identified that warrant further attention.
  - a. **Freight rail funding** (no resolved lead) – Growth in rail demand nationally is outpacing the ability of capital-intensive private railroads to expand capacity. Interviews with Working Harbor industry leaders indicate that rail system improvements are the most pressing investment need to maintain the Working Harbor’s competitiveness as a seaport and heavy industrial center. Connect Oregon funding administered by Oregon Department of Transportation (ODOT) is the primary current public source for freight rail funding, but this statewide program does not match the scale of capacity needs in the “Portland Triangle” rail hub area (concentrated in the City of Portland), especially given the dispersed needs and financial challenges of Oregon’s short line rail system. The Ports of Portland and Vancouver are also making substantial rail investments, focused on the specific needs of their marine terminal tenants. The Regional Transportation Plan has allocated limited funding to freight rail relative to other modes, focusing on Port-led projects and neighborhood livability (Cathedral Park Quiet Zone). Alternative freight rail funding sources aimed at regional economic competitiveness are needed to address short-term and long-term capacity needs in the Portland Triangle and access needs of small shippers who represent large employment impacts. Another barrier to securing adequate funding to leverage priority rail projects is the lack of clear agency responsibility or a lead role to do so, among PDOT, the Port, Metro, or ODOT. PDC and the Bureau of Planning also have potential planning and implementation roles.
  - b. **Brownfield redevelopment** (PDC/BES lead) – As land-locked Portland nears buildout on vacant lands annexed in recent decades, brownfields are becoming an increasingly importance share of our land supply for employment growth. Additionally, productive reuse of the hundreds of Portland brownfields is integral to the region’s compact development goals. The Brownfield Greenfield Cost Comparison Study (2003), evaluating industrial development feasibility on sites in the region, found a significant financial gap in brownfield redevelopment feasibility without public intervention and a competitive disadvantage with greenfield sites. PDC is developing the Harbor REDI project which holds promise for redeveloping the concentration of harbor area brownfields and overcoming the specific critical constraint of in-water liability. BES administers the Portland Brownfield Program, focusing on environmental assessments and technical and regulatory assistance in commercial areas, without adequate funding to address larger industrial sites. However, industrial brownfield redevelopment issues citywide continue to lack adequate funding and programmatic responses, including financially “up-side-down” (infeasible) sites, small sites with complex constraints, and high transactions costs for investors new to brownfield redevelopment.
  - c. **Transportation funding shortfall** (PDOT lead for City projects) – Over 70 planned transportation projects respond to deficiencies identified in harbor area business interviews. Of these projects, only 21 have identified potential funding sources. The primary transportation funding model of gas tax revenues is not keeping pace with

transportation needs as the city grows. The regional Cost of Congestion Study (2006), considering a substantially larger transportation funding agenda, found that the economic costs of congestion from not doing those additional projects in our transportation-dependent economy would significantly exceed their project costs, reducing regional competitiveness and potential job creation. Improvements to the current transportation funding model are needed to more efficiently meet transportation demand and consider economic competitiveness in funding allocation, not only for City projects but also for regional (Metro) and state (ODOT) projects.