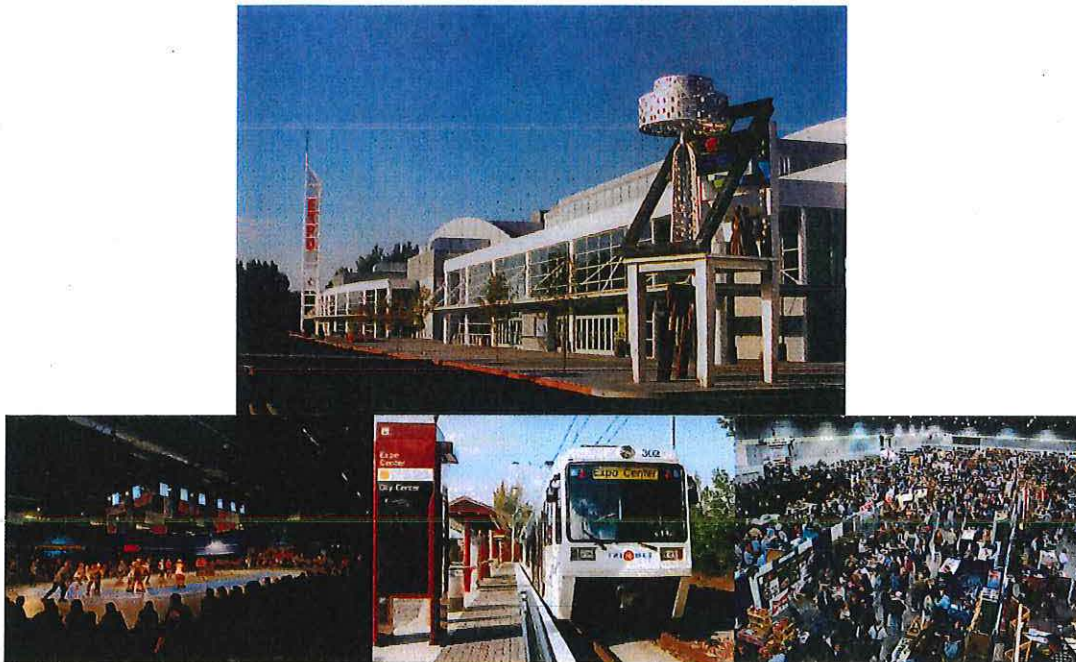


# Expo Center Conditional Use Master Plan

Submitted by Metropolitan Exposition Recreation Commission



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**Approved:**  
June 24, 2011



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## GENERAL INFORMATION

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**Building Operator:** Metropolitan Exposition Recreation Commission (MERC)  
600 NE Grand Avenue  
Portland, OR 97232  
Attn: Expo Center Director

**Current Owner:** Metro<sup>1</sup>

**Document:** Approved Conditional Use Master Plan for Expo Center.

Expo Center is defined as a Major Event Entertainment Use, requiring conditional use review (Chapter 33.920.230).

General attributes of the planned facilities:

- Approx. 522,510 gross square feet building space
- Height: 70.0 feet to top of parapet
- 120 events per year
- 354 event days
- 26.3 employees (FTE)<sup>2</sup>
- 756,000 annual attendance
- 15,000 peak attendance (per day)
- 2805 parking spaces

**Location:** The Expo site is located in North Portland, on N. Marine Drive, near the I-5 interchange. The site is bordered on the north by the Columbia River, on the east by I-5, on the south by environmental resource areas located on the Port of Portland's Vanport Wetlands site, and on the west by N. Force Avenue and private industries.

Several other recreation / events facilities are located in this vicinity: Portland International Raceway (PIR), Heron Lakes golf course, Portland Meadows racetrack, and Delta Park athletic fields.

**Site Size:** Approximately 53.4 acres<sup>3</sup>

**Zoning:** General Industrial 2 (IG2). As a Major Event Entertainment Use, Expo Center is allowed in this zone as a conditional use. The site also has a design overlay zone (d), and an aircraft landing overlay zone (h). The area of the Expo site located north of Marine Drive is also covered by an environmental conservation (c) overlay zone.

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<sup>1</sup> The Expo Center site is owned by Metro, and the facilities are operated by MERC as part of the regional portfolio of major events / entertainment venues.

<sup>2</sup> Some of these employees are not physically located at the Expo site

<sup>3</sup> Within proposed Expo site boundary

**Environmental Review:** Environmental review is not required for the proposed Expo development. The portion of the Expo site to be developed under the Master Plan is outside the environmental zone. However, areas near the Expo site - along the Columbia River and in the wetland south of the Expo site - have environmental overlays for conservation (c).

**Other Approvals:** Design review and any necessary adjustments will be obtained by Metro through a separate review process.

**Site Conditions:** The central portion of the Expo Center site is generally flat, at an elevation of approximately 30 feet.

The Expo Center has hosted public events for many years - the first buildings accommodated part of the historic Pacific International Livestock Exposition in 1921-22. Currently, about 45.5 acres of the 53-acre site are developed for exhibition and event uses.

Geotechnical and seismic investigations of the site reveal sub surface conditions will allow further development on the site. Risk to buildings can be reduced if structures are supported on piles.

**Neighborhood Associations:** Kenton Neighborhood Association; within 1000 feet of Bridgeton, East Columbia and Hayden Island Neighborhood Associations

**Business Associations:** Columbia Corridor Association

**Mitigation Summary:** MERC pledges to undertake a comprehensive program of mitigation measures that corresponds with planned development. Mitigation activities are planned to protect the community in the areas of transportation, building design and aesthetics, landscaping and screening, open space, neighborhood livability, physical services such as water supply and sewer, effective stormwater management, protection of designated resources, and compatibility with the facility's environmentally sensitive surroundings. Together, these measures will prevent or limit impacts of Expo development on residentially zoned and other adjacent areas. No housing units will be removed.

**Approved Development:** MERC plans to develop, in phases, upgraded and expanded exhibition and event facilities on the existing Expo Center campus.

The current building area of about 413,450 sf may grow to 522,510 sf.

The Expo site's redevelopment proposed under this Master Plan includes the following projects:

- Expansion and replacement of the existing exhibition facilities — Exhibit Halls A, B and C — with a new exhibition hall that is similar to the Hall D and Hall E design.
- Addition of new meeting rooms and/or ballroom above - and/or adjacent to - the new exhibit hall.
- Relocation/orientation of support services building relocated and oriented to NW corner of the site.



- Redevelopment of the southwest portion of the site (currently vacant), for a multi-function flexible space for outdoor exhibits, surface parking and storage.
- Realignment and redesign of the South Access Drive at the southwest corner of the site, to improve Expo operations and visitor safety. Designed to meet City street standards for storm water treatment, sidewalks and street cross section.
- Stormwater facilities including options such as rain-water garden street, green roof and swales.
- Enhanced pedestrian access from the light rail station to the buildings.
- Modifications to parking lot entry landscaping and signage.
- Site improvements to accommodate flexible outdoor event areas.
- Access to offsite areas including Columbia Slough to the north.
- Installation of public art to meet Metro's percent-for-art requirements and reflect the site's history.
- Elevated pedestrian link across Marine Drive to enhance pedestrian connections to the riverfront and trail system.

The location of proposed Expo development is shown in Figure 4-2.

These improvements were approved via LU 11-102970 CU MS. This decision will expire June 24, 2021. To utilize this approval, building permits must be obtained prior to the expiration date.

***Prior Approval Conditions:***

Prior conditions of approval which apply to Expo development at this site were established under LU 11-102970 CUS (HO 4110007), LU 01-00036 CU MS, LUR 96-00202 CU DZ AD and LUR 99-00815 CU DZ AD.

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# 1. SUMMARY

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The Metropolitan Exposition Recreation Commission (MERC) proposes to redevelop, in phases, the Portland Metropolitan Exposition Center - also known as Expo Center.

Since approval of the Expo Conditional Use Master Plan (CUMP) in 2001, some changes have occurred including the opening of the TriMet MAX Interstate (Yellow) Line serving the site, and the transfer of both the MAX station to - TriMet - and an identified environmental reserve - to the Port of Portland.

Other opportunities have emerged as well, especially the expanded use of stormwater best practices and green building, which can help mitigate anticipated impacts. This CUMP document describes the anticipated development, as required by CHAPTER 33.820 of the City of Portland's *Planning and Zoning Code*.

## 1.1 Project History

### Overview

The Expo Center site is located in North Portland, on N. Marine Drive, west of the 1-5 interchange. The site is bordered on the north by the Columbia River, on the east by I-5, on the south by environmental resource areas on the Port of Portland's Vanport Wetlands site, and on the west by N. Force Avenue and private industries. Historically, the site served as a detention facility for Japanese-Americans during WWI and is adjacent to the site of the shipbuilding community of Vanport (See Section 3).

Several other exposition / recreation facilities are located in this vicinity: Portland International Raceway (PIR), Heron Lakes golf course, Portland Meadows racetrack, and Delta Park ball fields. Figure 1-1 depicts the Expo Center site vicinity.

The Center has hosted public events for many years. The original buildings were constructed in 1921-22 to house West Coast livestock expositions, and were home to auctions and top regional rodeos. There was no known development on the site prior to 1921. During World War II, the Expo Center was used as a detention facility - known as the Portland Assembly Center -to gather Japanese-Americans prior to their transport to internment camps in Idaho and California. In 1959, the Oregon Centennial Exposition and International Trade Fair was held on the site.

In 1965, Multnomah County purchased the property, remodeled and renamed the facilities the "Multnomah County Exposition Center." In 1969, the Expo Center site became the home of the County Fair and other events.

In the late 1970s, the County demolished a number of barns and refurbished the complex. These improvements, combined with a favorable rate structure and plentiful parking, generated growth of consumer and tradeshow bookings— the Expo Center's core business. Today, public expositions hosted by Expo Center include antiques, autos, boats, collectibles, home and garden, recreation, sports, trade shows and special events.

Expo Center was owned and operated by Multnomah County until 1994, when management was transferred to the Metropolitan Exposition Recreation Commission (MERC), with ownership transferred to Metro in 1996. The Expo site is now owned by Metro, with its exhibition events facilities operated by MERC, a public commission of Metro. MERC also manages a portfolio of regional events facilities, including the Oregon Convention Center and Portland Center for the Performing Arts.

Preliminary planning for Expo Center redevelopment has been underway for several years. Key projects were identified in a 1998 concept plan: "Expo; Vision for the Future." Hall D was the first project to be completed under the concept plan. MERC first Conditional Use Master Plan was approved in 2001.

The Expo Center's facilities provide important region-wide community services that benefit Portland area citizens and support a wide variety of local businesses. The Expo Center is Oregon's largest exhibition and event facility. Nearly 500,000 patrons visit Expo annually at consumer shows, trade shows and other

events, attracting visitors to Portland and contributing to the metro area economy. Expo is a stable northwest employer, providing an estimated 24 (FTE) jobs. Total employment for Expo related activities is much higher including hundreds of local jobs provided through event producers, exhibitors and suppliers.

The economic benefits of the Expo Center have been quantified through surveys and research on spending patterns associated with operations and events at the Center and include:

<u>Category</u>	<u>FY 2008</u>	<u>FY 2009</u>
Direct Spending	\$21,883,000	\$20,413,000
Indirect/Inducted Spending	\$15,290,000	\$14,971,000
Total Spending	\$37,173,000	\$35,384,000
Fiscal Impacts	\$1,584,000	\$1,343,000
Total Employment (FTE)	420	400

### **Need for New Exhibition / Event Facilities**

Expo Center is being redeveloped primarily in response to growing demand for column-free, accessible, climate-controlled space to accommodate consumer shows and other public exhibitions, trade shows and other events. Expo's Hall E opened in 1997, in time to accommodate the prestigious "America's Smithsonian," the first traveling exhibition of Smithsonian artifacts, celebrating the Museum's 150-year anniversary. Hall E's completion signaled a change in the nature of Expo Center's business and a corresponding demand by users for higher levels of service. The Smithsonian event, and subsequent show schedule has demonstrated that with the new building, Expo Center can attract significant exhibits that bring in tourist dollars, create jobs, and provide enriching community benefits. Hall D opened in 2001. Since the opening of these improved facilities, producers of current and possible future events have expressed interest in upgraded and expanded facilities at Expo that will meet the same quality standard established with Halls D and E.

Another objective for the Expo Center redevelopment is to provide more flexible spaces which are better suited to accommodate meetings of different sizes. Currently, most of Expo's events are consumer / public shows. These shows are concentrated in the fall / winter/ spring months. There are fewer summer events at Expo.

The new flexible meeting spaces to be built under the Master Plan will increase the Center's year-round appeal, extending Expo's capability to host multiple, simultaneous events of all sizes, especially in off-peak months.

Under the Master Plan, Expo's *peak attendance* — currently averaging up to 14,361 per day for the largest events — is expected to increase by 4.4% to 15,000. However, the *number of events* is projected to grow by 12% upon completion of the planned improvements. *Annual attendance* is also anticipated to increase — by 19% (see Chapter 3).

### **Columbia River Crossing Project (CRC) Impacts**

While many of the needs that were identified in 2001 remain - or have increased - to support redevelopment of the Expo Center, additional issues are in effect at this time. The most significant of these emerging needs is the expected development of the Columbia River Crossing (CRC) project. This will include expanded capacity of Interstate 5, a redesigned interchange with Marine Drive in the Expo vicinity, an improved set of local street connections, and extension of light rail from the current terminus at Expo Center to Hayden Island and Vancouver, WA.

Metro and Expo Center staff have coordinated closely with the CRC project team and it has been determined that no ramps serving the CRC system will bisect the Expo Center site. That said, there are other aspects of the preliminary designs which potentially impact the Expo property including:

- Vehicle access to Marine Drive from Expo property
- Onsite parking along Marine Drive and the eastern perimeter of the site
- Local street network changes
- LRT station location/access

Due to parking impacts from CRC, there may be a need to consider structural parking to replace lost surface parking spaces.

Given the lack of specific design information and uncertain project schedule, the CRC design elements have not been incorporated as changes in this CUMP. Metro and Expo staff expect to continue to work cooperatively within the CRC design process to resolve these items with the intent of assuring that the long-term viability of Expo Center is maintained.

## **1.2 Future Development**

To meet the need for new exhibition / event facilities, the Master Plan outlines a comprehensive program for redevelopment of the Expo Center campus. Much of the proposed development involves upgrading and replacement of the existing facilities. This redevelopment of the Expo site began with construction of Hall E (1997) and replacement of Hall D in 2001.

Section 4 provides a summary of the actors that will influence future development at Expo Center. While there is no timetable for completion of the approved redevelopment, some or all of these projects may be completed over the next decade. This section includes:

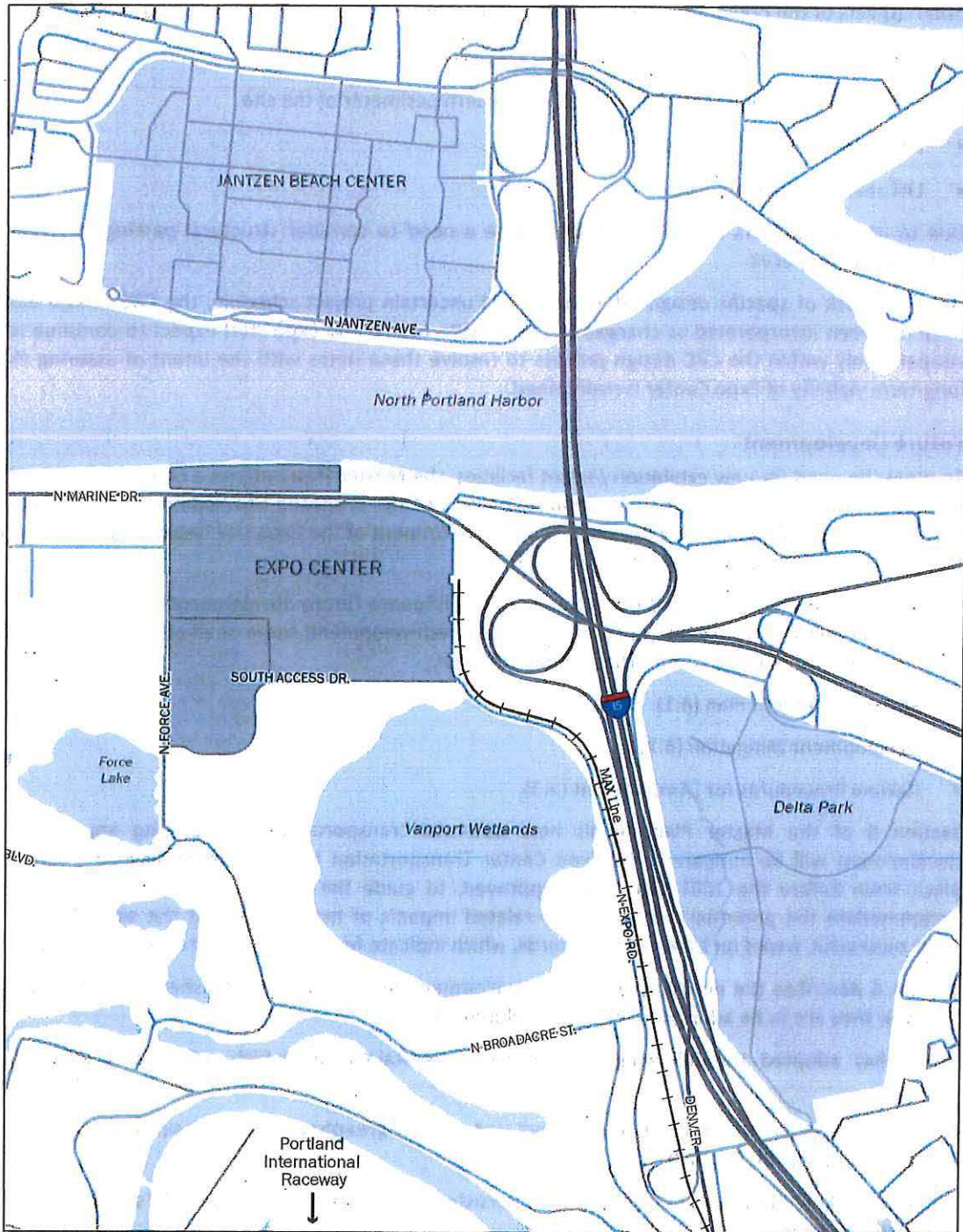
- Site Development Plan (4.1)
- Development Mitigation (4.2)
- Review Procedures for Development (4.3)

Section 5 of the Master Plan details how potential transportation and parking impacts of Expo development will be mitigated. The Expo Center Transportation Management Plan (TMP) has been in place since before the 2001 CUMS was approved, to guide the operations of the Expo Center, and accommodate the potential transportation-related impacts of major events at the site. This plan has been successful, based on Expo Center records, which indicate few complaints or operational issues.

Section 6 describes the environmental site development requirements established for the Expo vicinity and how they are to be addressed in Expo development.

Metro has adopted the following goals regarding sustainability, which will inform the mitigation strategies.

- Greenhouse gas emissions: Reduce direct and indirect greenhouse gas emissions (CO<sub>2</sub>e) 80 percent below 2008 levels by 2050.
- Toxics: Eliminate the use or emissions of persistent bioaccumulative toxics (PBT's) and other priority toxic and hazardous substances.
- Waste: Recover all waste for recycling or composting, and reduce overall generation of waste.
- Water: Reduce water use 50 percent below 2008 levels.
- Habitat: Metro's parks, trails and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health. Metro's natural areas are healthy, functioning ecosystems.



**EXPO MASTER PLAN**

Figure 1-1  
Vicinity Map



## 2. EXPO CENTER SITE

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### 2.1 Expo Center Boundaries

The Expo Center site is located in North Portland, on N. Marine Drive, near the I-5 interchange. The site is bordered on the north by the Columbia River, on the east by I-5, on the south by environmental resource areas on the Port of Portland's Vanport Wetlands site, and on the west by N. Force Avenue and private industries.

Several other exposition / recreation facilities are located in this vicinity: Portland International Raceway (PIR), Heron Lakes golf course, Portland Meadows racetrack, and Delta Park ball fields.

The Expo site boundary is shown in Figure 2-1. The Expo Center site boundary was established through the prior (2001) Master Plan, and has been revised through a land transfer since the adoption of that plan: the land designated as an Environmental Reserve in the earlier adopted CUMS was transferred in 2003 to the Port of Portland. Also in 2003, the land for the MAX station was transferred to TriMet. These two transfers reduced the site to 53.4 acres, 49.2 on the main site and 4.21 acres for the riverfront site north of Marine Drive. The entire Expo Center site is under single ownership.

The Expo Center site is large enough to accommodate all of the expansion approved in the Master Plan. All Expo development will be inside the current site boundary.

### 2.2 Long-Term Growth

Long-range plans for Expo Center growth, beyond this ten-year Master Plan, are not known in detail. However, long-term expansion of Expo facilities is not envisioned to extend onto adjacent parcels, beyond the current site boundary. While the CUMP is approved for a 10-year time frame, Metro has prepared a longer-term development vision for the property that anticipates higher density use of the site over time (Exhibit E).

### 2.3 Site Conditions

The Expo Center site is located near the Columbia River and Columbia Slough. This area was historically part of an extensive, interconnected complex of shallow lakes, low-lying sloughs, marshes, and other wetlands associated with the floodplain of the Columbia and Willamette Rivers. Originally, the Expo Center site was an isthmus between the banks of these wetlands and the Columbia River. An 1888 USC&GS map identified the Expo site as prairie, with areas of riparian forest.<sup>4</sup>

Portions of the Expo site have been filled over the years. The fill raised the elevation of the central area of the site up to about 28 to 30 feet above mean sea level.

Figure 2-1 provides an aerial photograph of the site.

#### Floodplain Status

The Columbia River flood plain is established by the Federal Emergency Management Agency (FEMA) at an elevation of 12.4 feet<sup>5</sup> in this vicinity. The Expo development site is approximately 17.6 feet above the flood level.

Figure 2-2 shows the location of the floodplain in the vicinity of Expo. A FEMA map revision (March 1999) removed this site from the 100-year floodplain.

#### Geotechnical Investigation

In conjunction with the 2001 CUMS application, MERC conducted two geotechnical investigations of the site to evaluate subsurface conditions and provide design parameters for the Hall E and Hall D

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<sup>4</sup> Natural Resources Management Plan for Peninsula Drainage District No. 1, 1997

<sup>5</sup> City of Portland Datum

development. The site is typically mantled with 10 to 20 feet of dredged sand fill which is underlain by naturally occurring alluvial silt and sand. This silt and sand is underlain by gravel below a depth of 115 to 120 feet.

### **Grading Plan**

For future development, the building finished floor elevation has been established at an elevation of 30 feet. The central portion of the Expo site is essentially flat. Soil materials, placed in accordance with the recommendations contained in the Geotechnical Report, will be used to bring the future building sites to this elevation. The site will be graded to slope gradually away from the buildings. Some re-grading will take place in the southwest corner of the Expo site, to provide a stable, relatively flat site for realignment of the South Access Drive, and construction of the multi-function area.

### **Seismic Hazard Study**

A site-specific hazard study was performed in conjunction with the 2001 CUMS for the property in accordance with Section 2905 of the Oregon Structural Specialty Code. The project site is located in seismic zone 3 in the Uniform Building Code (1997).

Results of the geotechnical investigation indicate a significant risk of liquefaction-induced settlement during a major seismic event. However, due to the predominately silty nature of the soils beneath the site and the distance of the site from a free face, the risk of lateral spreading at the site is low. The potential for damage from earthquake-induced fault displacement or landslides, or damage by tsunamis and/or seiches at this location is minimal, due to the site's elevation and distance from coastal areas. The seismic risk to buildings can be reduced or eliminated if the structures are supported on piles.

### **Hydrogeology**

The Expo site's hydrogeology was also analyzed in conjunction with the 2001 CUMS. Interpretation of CPT Piezocone soundings indicates a groundwater depth of 15 to 17 feet. Perched groundwater may also occur during wet periods at various locations on-site.

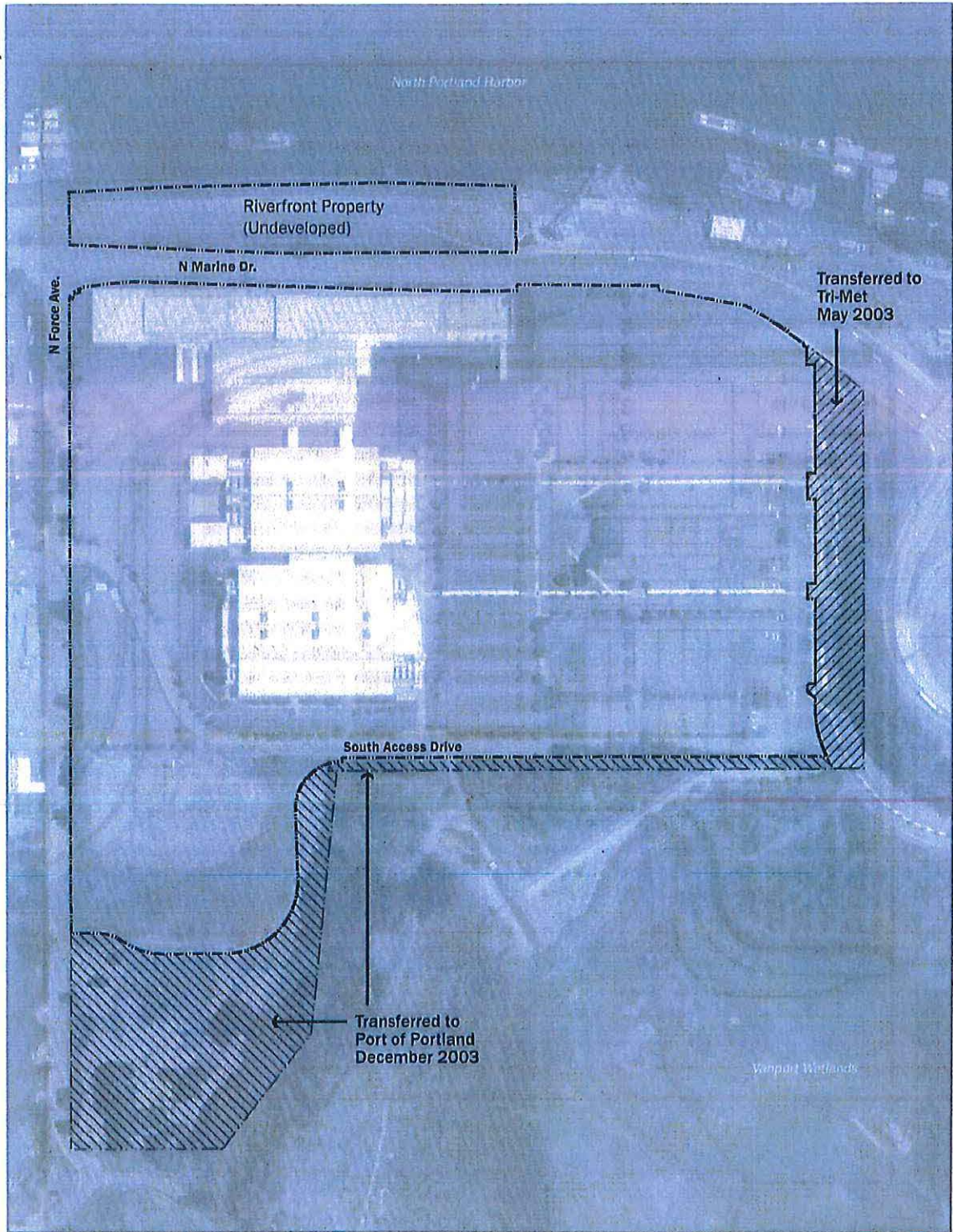
### **Regionally Significant Industrial Land Designation**

Metro has designated the Expo site and surrounding area as Regionally Significant Industrial Land. This designation limits the scale and types of non-industrial uses, and restricts zoning code changes to the site.

### **Multnomah County Drainage District**

It is understood that new policies for the drainage of stormwater to the north of the site may be forthcoming. At this time, the exact nature of those policy changes cannot be confirmed. As noted in Section 6, development under this plan is expected to significantly reduce the volume of stormwater flowing to this area.

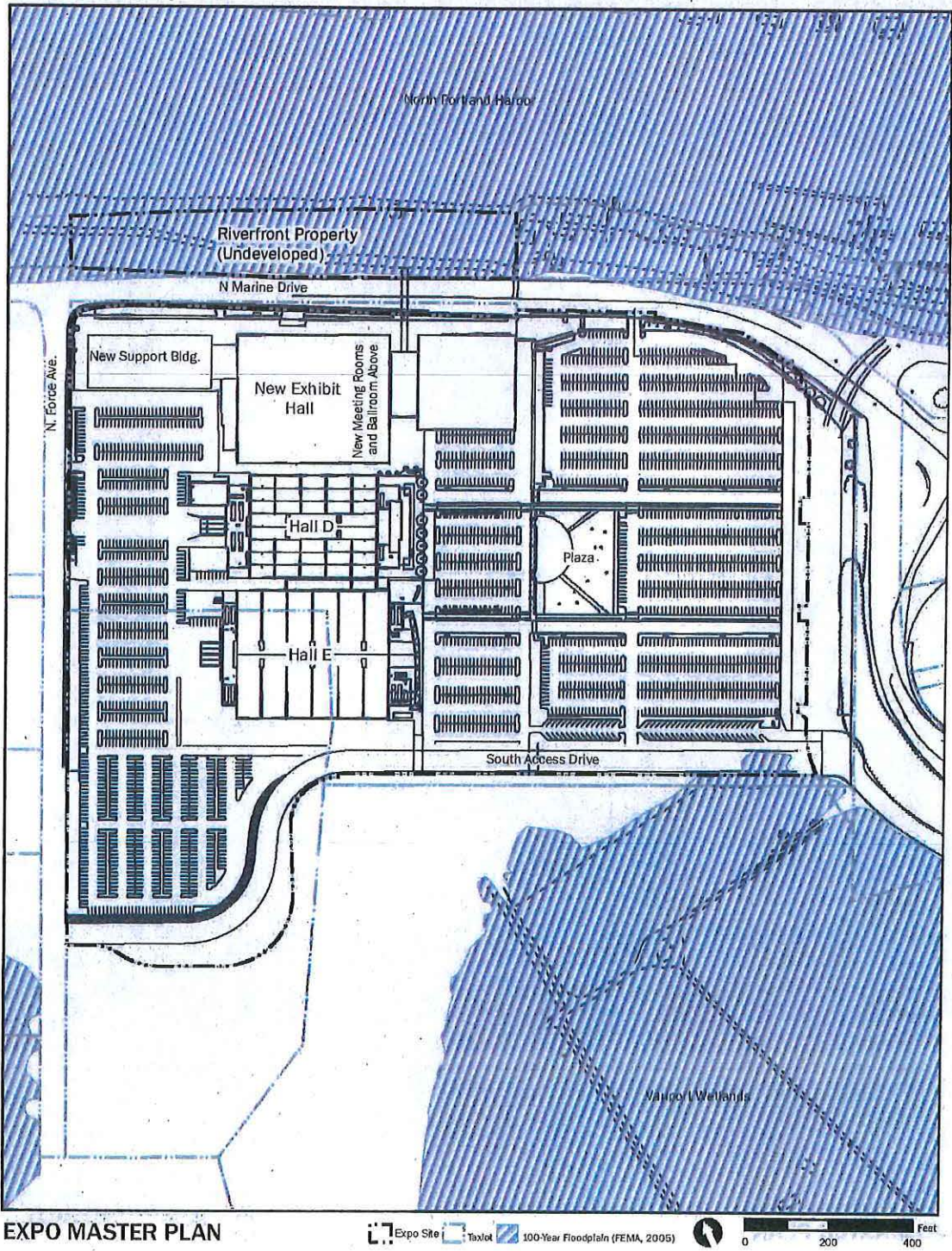




**EXPO MASTER PLAN**

Figure 2-1  
Aerial View: Expo Site Area





**EXPO MASTER PLAN**

Figure 2-2  
100-Year Floodplain

### 3. EXPO CENTER USES AND FUNCTIONS

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This section reviews the development history for the Expo Center site, its present uses, and anticipated future uses.

#### 3.1 Present Uses

The Expo Center is Oregon's largest consumer and trade show facility, and one of the largest on the West Coast. Today, Expo hosts nearly 500,000 visitors annually, and has at times been close to 600,000; it is expected that attendance will return to this higher figure, as the economy improves. About 100 events take place annually at Expo's facilities - including public expositions for antiques, autos, boats, collectibles, home and garden, recreation, sports and trade shows, and special events. Table 3-1 shows attendance for Expo Center's largest events and Table 3-2 shows the attendance by event type.

**Expo Table 3-1  
Expo Center's Major Events / Attendance, FY2010**

Event	Days	Attendance <sup>6</sup>
Pacific NW Sportsmen's Show & Sport Fishing Boat Show	5	45,200
America's Largest Christmas Bazaar	6	28,100
Portland Auto Swap Meet	3	25,200
Portland Home and Garden Show	4	21,000
Portland SkiFever and Snowboard Show	3	17,600
Catlin Gabel School Rummage Sale	4	15,500
Portland Boat Show	5	14,200
Adidas Fall Clearance Event	4	14,100
America's Largest Antique and Collectible Show	3	12,700
2010 Energy Trust Better Living Show	3	11,800
America's Largest Antique & Collectible Show	3	11,400
Portland Metro RV Dealers Present the Spring RV Show of Shows	5	10,800
America's Largest Antique & Collectible Show	3	10,600
Collectors West Gun and Knife Show	3	8,300
2010 Rose City Classic Dog Show	4	7,800

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<sup>6</sup> Attendance is estimated for some events.

**Table 3-2  
Expo Center Events — Current and Proposed**

Visitors / Attendance <sup>7</sup>	Current <sup>8</sup>	Average 2010-2020
Peak Event (5-day total)	45,020	45,200
Peak Event (per day)	14,361	15,000
<b>Annual (total)</b>	<b>420,616</b>	<b>500,000</b>

Events (annual)		
Consumer/ Public	58	60
Miscellaneous	17	25
Meeting	15	15
Trade Shows	7	6
Catering	1	4
<b>Total</b>	<b>98</b>	<b>110</b>

<b>Event Days<sup>9</sup></b>	225	250
<b>In/Out Days</b>	190	210

### 3.2 Approved Uses

*The mission of the Portland Metropolitan Exposition Center (Expo Center) is to provide multi-purpose public assembly facilities that serve the regional Portland community through the following:*

- *Provide adequate facilities and services for consumer and trade shows and public exhibitions;*
- *Ensure competitive rates for facility rentals and event services;*
- *Continue to improve and upgrade the property to service the current and future shows and the patrons attending these events;*
- *Generate maximum financial return and economic benefits for the Metropolitan Region and the State through trade show business and mega-exhibits.*

Approved uses for the site are related to Expo's mission to provide multi-purpose exhibition and event facilities that serve the entire Portland metropolitan region. Also approved for the Expo site are a number of closely affiliated accessory and temporary uses.

It is expected that some adjustments to the site layout may be required to accommodate future development of the Columbia River Crossing (CRC). However, the nature of those requirements are not known and will be influenced by final design of that project. As noted earlier, it is assumed that the site will not be bisected by CRC access ramps, although some right-of-way may be needed along the northern and eastern site edge.

No development is proposed for the riverfront area north of Marine Drive, excepting potential improvements to the pedestrian network to enhance access, and to enhance linkages with other pedestrian and bicycle systems in the City, such as the 40 mile loop. These enhanced connections could take the form of a pedestrian signal at Marine Drive, an overhead crossing in conjunction with Expo development or other urban design solutions. Such improvements will necessitate close coordination with the CRC.

Access drives through the site will be maintained and operated as internal drives, due to Expo Center's need for controlling access to the site. When not hosting functions, the major north-south internal drive will generally be opened to local circulation.

<sup>7</sup> Peak events are NW Sportsmen's Show (5-day total) and Portland Auto Swap (3-day event)

<sup>8</sup> Note: 2010 total attendance

<sup>9</sup> Example: a calendar day with four events = 4 event days.

**Table 3-3  
Expo Center— Event Trends (2005-10)**

	Events	Event Days	In / Out Days	Attendance
<b>FY 2005-06</b>				
Consumer Public	53	149	138	427,623
Miscellaneous/Other	24	31	23	33,721
Meeting	15	28	5	1,127
Tradeshow	5	6	8	5,727
Catering	3	3	3	2,136
Convention	2	2	2	650
<b>Total</b>	<b>102</b>	<b>219</b>	<b>179</b>	<b>470,984</b>

<b>FY 2006-07</b>				
Consumer Public	47	139	127	413,302
Miscellaneous	22	32	25	38,842
Meeting	15	16	1	1,195
Tradeshow	6	8	10	20,713
Catering	3	3	4	2,501
<b>Total</b>	<b>93</b>	<b>198</b>	<b>167</b>	<b>476,553</b>

<b>FY 2007-08</b>				
Consumer / Public	47	146	137	429,124
Miscellaneous	41	65	54	72,012
Meeting	9	10	0	720
Tradeshow	5	6	9	5,323
Catering	5	7	3	2,962
<b>Total</b>	<b>107</b>	<b>234</b>	<b>203</b>	<b>510,141</b>

<b>FY 2008-09</b>				
Consumer / Public	56	169	161	407,717
Miscellaneous	24	42	22	32,208
Meeting	19	20	1	1,607
Tradeshow	7	11	12	6,930
Catering	3	4	2	2,344
Convention	1	3	2	3,199
<b>Total</b>	<b>110</b>	<b>249</b>	<b>200</b>	<b>454,005</b>

<b>FY 2009-10</b>				
Consumer / Public	58	169	155	373,000
Miscellaneous	17	27	23	36,512
Meeting	15	16	1	1,282
Tradeshow	7	12	11	8,822
Catering	1	1	0	1,000
<b>Total</b>	<b>98</b>	<b>225</b>	<b>190</b>	<b>420,616</b>

### **Exhibition and Event Facilities**

The Expo Center's mission - to *provide multi-purpose public assembly facilities that serve the regional Portland community* - guides proposed uses for the Expo Master Plan. In the future, Expo uses will continue to be consistent with Expo's mission, and will closely parallel the present uses. As envisioned in the Master Plan, consumer and trade shows will continue much as today. In addition, new, flexible meeting spaces will be developed to accommodate a growing number of meetings and conferences. These smaller events will supplement Expo's large consumer and trade shows, and mega-events, enabling Expo Center to host more simultaneous events, year-round.

Current and future facilities to serve Expo's primary mission include:

- Exhibition halls to accommodate consumer shows, trade shows, retail sales and other large public gatherings
- Meeting rooms that host public and private meetings, banquets, and conferences, auxiliary events during major shows and miscellaneous events of all sizes
- Lobby areas that provide for public entry and display, and also hold smaller gatherings.
- On-site kitchen / commissary to serve Expo public assembly facilities

### **Accessory / Other Uses**

Current and future facilities on the Expo site accessory to the Expo Center's primary mission to provide regional exhibition and events facilities include:

- Food services/concessions
- Lounge
- Event-related retail sales
- Administrative offices for MERC and Expo employees.
- Landscaping and open space
- Maintenance activities / facilities
- Utility corridors
- Indoor and outdoor storage
- Loading docks and delivery areas
- Parking for official vehicles
- Parking for Expo employees, exhibitors and visitors
- Vehicle wash area
- Vehicle storage
- Access to TriMet light rail station (MAX)
- Park-and-ride lot supporting MAX station
- Shuttle bus stops
- Signage and displays for visitors
- Public art
- Potential renewable energy production facilities, such as photovoltaic or other solar panels, wind turbines, etc. These would be subject to height limits. Wind turbines would be coordinated with neighboring facilities to minimize any risk to local species.
- Stormwater treatment, infiltration collection, and storage facilities.

Metro and MERC are currently in discussions with the Port of Portland to identify potential opportunities for environmental interpretation facilities on Expo Center property. No specific facilities have been identified at this time.

All of these above uses / activities are allowed as accessory uses under Chapter 33.920.230, are permitted in the IG2 zone, or are consistent with other chapters of the City Code.

**Table 3-4  
Expo Planned Development: Facts and Figures**

	<b>Current</b>	<b>Approved</b>
<b>Site Size (acres)</b>	53.4	53.4
<b>Building Area</b>		
Building Footprint (sf)	413,450	522,510
Height (feet) <sup>10</sup>	70.0	70.0
<b>Employees</b>		
Full-Time	12	14
Part-Time (FTE)	9.43	10
Total	24	21.4
<b>Parking Spaces</b>	2,883	2,883
<b>Residents</b>	0	0

**Temporary Uses**

Temporary uses are defined as those which have a limited duration or occur seasonally, rather than on a continuing basis. They do not result in permanent improvements.

Three temporary uses are planned:

- 1) As a regular part of Expo Center programming, many events throughout the year utilize a portion of the site outdoor areas for exterior display and events in conjunction with programming of interior facilities. These program elements do not require permanent improvements. Events using a portion of the parking area will be addressed through the Expo Center's Transportation Management Plan process (TMP).
- 2) As the Expo facilities are constructed and improved, the site will experience construction activities which may require the use of temporary structures such as trailers or modular offices, staging areas for construction and public utility installation, and parking and storage to accommodate the construction process itself.
- 3) Also during construction, Expo may need to erect on-site temporary, weather-protected exhibit space.

These and any other temporary activities on the Expo site will comply with the conditions of approval for the Master Plan. Any temporary projects or activities located within an environmental overlay zone will be subject to the regulations for permanent uses regardless of their duration.

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<sup>10</sup> Top of parapet.

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## 4. DEVELOPMENT

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### 4.1 Site Development Plan

The Master Plan anticipates that Expo facilities will be redeveloped over a ten-year period to meet growing regional demand for public assembly space, as funding becomes available to finance Expo improvements.

The starting point for future Expo Center development is Expo's existing facilities (see Figure 4-1). Much of the approved development involves upgrading and replacement of the existing facilities. This redevelopment of the Expo site began with construction of Hall E (1997) and Hall D (2001). Facilities development under this master plan will center on replacement of existing Halls A, B, and C with a facility similar in scale to Hall E, as well as a ballroom facility, either as a stand-alone facility or integrated into the new Hall, as an upper floor. In addition, a support building in the northwestern corner of the site is needed to support operations. See Figure 4-2a and 4-2b for a site plan of these anticipated developments.

Some growth is also anticipated on the Expo Center campus. Long-term expansion at the site may ultimately bring Expo to 522,510 gross square feet — representing a 26 percent net increase in floor area.

The Expo site's redevelopment proposed under this Master Plan includes the following projects:

1. Expansion and replacement of the existing exhibition facilities — Exhibit Halls A, B and C — with a new exhibition hall that is similar to the Hall D and Hall E design (previously approved).
2. Addition of new meeting rooms and ballroom above - and/or adjacent to - the new exhibit hall (previously approved).
3. Relocation/orientation of support services building relocated and oriented to NW corner of the site.
4. Redevelopment of the southwest portion of the site (currently vacant), for a multi-function flexible space for outdoor exhibits, surface parking and storage (previously approved).
5. Completion and realignment of the South Access Drive at the southwest corner of the site, to improve Expo operations and visitor safety, and to connect to Force Avenue (previously approved).
6. Stormwater facilities including options such as rain-water garden street, green roof and swales.
7. Enhanced pedestrian access from the light rail station to the buildings.
8. Modifications to parking lot entry landscaping and signage.
9. Site improvements to accommodate flexible outdoor event areas.
10. Access to offsite areas including Columbia Slough to the north.
11. Installation of public art to meet Oregon's one-percent-for-art requirements and reflect the site's history.
12. Elevated pedestrian link across Marine Drive to enhance pedestrian connections to the riverfront and trail system.

The following sections provide further detail: planned Expo development; sub-areas of the Expo site to be developed; and phasing of development projects.

### **Planned Development**

Development plans for Expo buildings call for:

- Expansion and replacement of the existing exhibition facilities — Exhibit Halls A, B and C — with a new exhibition hall (“Hall C”) that is approximately 165,00 SF, similar to the contemporary Hall D and Hall E design and physically connected to the other halls.
- Addition of new meeting rooms and/or ballroom adjacent to and/or above the new exhibit hall.
- Replacement of the west exhibit hall with a support services building.
- Total development in the Expo Master Plan is estimated to be 278,330 gross square feet (gsf). Because most of the new facilities are replacing existing outmoded buildings, this development represents a net increase of 109,060 gsf.

Expo development outside the buildings will include:

- Redevelopment of the southwest portion of the site (currently vacant), for a multi-function flexible space for outdoor exhibits, surface parking and storage.
- Completion of the realignment of the South Access Drive at the southwest corner of the site, to improve Expo operations and visitor safety.
- Replacement of a portion of the on-site parking which will be lost due to upgrading and expansion of Expo facilities, compliance with site development standards, and realignment of the South Access Drive. Changes in the parking quantities are addressed in Section 5.
- Additional covered pedestrian walkways to inter-connect Expo’s facilities, and also to link Expo event facilities to the MAX station.
- Installation of public art to meet Oregon’s percent-for-art requirements, and to recognize the site’s natural and cultural history.
- Creation of a potential green street/stormwater facility in the area east of the Expo buildings.

The new and replacement exhibit / meeting facilities will be developed in the central portion of the Expo site. The new support building will be constructed in the northwest corner of the Expo site. Replacement parking facilities are planned for the site’s southwest corner.

Figures 4-2a and 4-2b provide alternate site plans that show the location of planned development under the Master Plan.

The only significant development to occur on land that is currently undeveloped will be in the southwest corner of the Expo site. Approved development in this area includes realignment of the Expo Center’s South Access Drive and construction of replacement parking (412 spaces). Figures 4-3a and 4-3b provide details of Expo’s plans for development of the southwest parcel.

The finished floor for Expo buildings has been established at an elevation of 30 feet. Expo building heights are currently estimated to reach a maximum 70 feet above the first floor to top of parapet (elevation 91.5 feet) for development under the Master Plan.

**Table 4-1  
Expo Planned Development<sup>1</sup>**

<b>Use</b>	<b>Approved Area (GSF)<sup>2</sup></b>
<b>North Exhibit Hall</b>	<b>144,800</b>
Exhibit Hall	108,000
Lobby	9,500
Support Spaces	27,300
<b>Connectors</b>	<b>26,040</b>
Hall D/North	12,140
Hall D   Hall E	13,900
<b>New Northeast Meeting Rooms</b>	<b>52,350</b>
Divisible Meeting Space	28,800
Lobby	11,250
Support Spaces	12,300
<b>New North Hall Meeting Rooms</b>	<b>19,140</b>
Divisible Meeting Space	10,800
Lobby	3,390
Support Spaces	4,950
<b>New Northwest Support Building</b>	<b>36,000</b>
<b>Total Area</b>	<b>278,330</b>

<sup>1</sup>Note: Figures are estimates shown at completion of conceptual design phase

<sup>2</sup>GSF = gross square feet

**Expo Development Sub-Areas**

The Expo Center site encompasses five development sectors - or "sub-areas". The Master Plan includes the character of development will vary among six sub-areas described below, summarized in Table 4-2 and illustrated in Figure 4-4.

Sub-Area I —Access, Public Parking: This large sub-area along the Expo Center's eastern border (17.9 acres) includes:

- Expo site's main entry
- MAX light rail station, along with park-and-ride facilities
- Public parking: for automobiles, trucks and RVs; and parking control facilities
- Occasional use for outdoor exhibitions: display and demonstration of heavy equipment, vehicles, mobile homes, etc.
- Entry signage
- Landscaping and open space

Primary vehicle access to Sub-Area I is from N. Expo Road.

Sub-Area II - Exhibition, Events: The central portion of the site (14.8 acres) contains the major event entertainment uses:

- Exhibit halls
- Meeting rooms / conference facilities
- Ballroom
- Paved, programmable outdoor exhibition areas
- Public parking (when outdoor exhibition areas are not in use)
- Administrative offices
- Kitchen / commissary
- Restaurant / lounge
- Concessions
- Other accessory and support facilities to serve the Expo Center's primary uses

Primary access to Sub-Area II to from N. Expo Road, via the driveways in Sub-Area I.

Sub-Area III — Exhibitor Services, Loading: The "back side" of the Expo Center at Expo's western border (11.1 acres) provides access and support for exhibitors, vendors and staff:

- Exhibitor entry
- Loading docks and bays
- Exhibitor and staff parking
- Exhibitor services
- Storage and staging areas
- Maintenance shops
- Vehicle wash area
- Support facilities to serve exhibitors and fulfill Expo Centers primary uses
- Public parking (when parking areas aren't needed to serve exhibitors and staff)

Primary access to Sub-Area III is from N. Force Avenue

Sub-Area IV - Multi-Function Area: A portion of the Expo Center's southwest parcel (5.3 acres) will be developed as a flexible multi-use area, accommodating outdoor exhibition space, storage, and supplemental parking resources for exhibitors and the public. New parking in this area will replace a portion of the parking resources expected to be lost to site landscaping, new exhibit / meeting halls, the new Marine Drive interchange and local streets.

Primary access to Sub-Area IV will be from N. Force Avenue and Expo's South Access Drive.

Sub-Area V – Riverfront: The northernmost portion of the Expo site (4.2 acres) - located north of Marine Drive, on the banks of the Columbia River - will remain undeveloped during the life of this Master Plan. It currently serves as an outdoor recreation trail and dike managed by the Peninsula One District.

No vehicle access is allowed to Sub-Area V.

**Table 4-2  
Expo Development Sub-Areas**

<b>Sub-Area</b>	<b>Acres</b>	<b>Uses (Summary)</b>
I. Access, Public Parking	17.9	Expo site's main entry, public parking, MAX station
II. Exhibition, Events	14.8	Major indoor/outdoor exhibition and events facilities
III. Exhibitor Services, Loading	11.1	Exhibitor access, loading services, parking
IV. Multi-Function Area	5.3	Flexible resource for exhibitors and public
V. Riverfront	4.2	Undeveloped

### **Bicycle and Pedestrian Facilities**

An extensive network of bicycle and pedestrian facilities serves the entire Expo site. The site area north of Marine Drive includes a multi-use trail that is part of the Portland 40-mile loop. This bike trail system is overseen by a non-profit organization committed to its development with support of Portland Parks and Recreation and other organizations. Key elements of current and planned bicycle facilities include:

- Bicycle lanes / paths / trails which will provide bike access to the Expo site from all directions
- On-site bicycle directional signs
- Weather-protected and / or secure bicycle parking located close to the main visitor / employee entrances
- Employee lockers and showers to accommodate Expo staff members who commute by bicycle

Key elements of the Expo Centers pedestrian system will include:

- Weather-protected exterior pedestrian connections between all exhibit and meeting halls
- An integrated-design 'green street' in the area between the Expo halls and the parking area, to connect the site north and south and enhance the pedestrian experience
- Sidewalks connecting Expo exhibit halls with on-site parking areas
- Connecting links that allow pedestrians to reach nearby 40-Mile Loop trail segments

Figure 4-5 shows the location of Expo's existing / approved bicycle and pedestrian facilities. These bicycle/pedestrian improvements already exist on-site or will be developed to implement this Master Plan.

### **Light Rail Transit**

TriMet's Interstate MAX (Yellow Line), provides direct service to downtown Portland. This line is expected to ultimately be extended to Hayden Island and Vancouver, Washington. The land for the MAX station was transferred to TriMet in 2003 and TriMet's system expansion plans are not expected to require additional land from the Expo Center.

### **Access and Operations**

Access drives through the site are not public roads. They are managed to allow access through the site during periods when events do not require the closure of the entire site. However, during Expo Center events, operations require that the site be connected and secured, allowing entry only to vendors and paid attendees.

### **Development Phasing**

The Master Plan details all known Expo development projects. Some or all of these projects may take place over the next decade. The sequence of development and probable schedule have not been set, and will be determined by factors including: priorities to meet emerging needs of Expo clients; coordination

with schedule for future events; availability of funds to undertake Expo improvements; and coordination with the CRC project. While the CUMP is approved for a 10-year time frame, Metro has prepared a longer-term development vision for the property that anticipates higher density use of the site over time (Exhibit E).

### **Conditions Associated with New Development**

Prior to issuance of building permits for any new buildings such as the Support Building, New Exhibit Halls, or New Meeting Rooms as shown on the approved site plan, the following must also be completed as a condition of the Hearings Officer's decision (Exhibit A) on File No. Lu 11-102970 CUMS (HO 4110007):

1. A continuous, separated walkway, at least 10 feet wide, must be constructed to connect the new building(s) to North Marine Drive and the existing Exhibit Halls.
2. Signs must be installed, readable to persons travelling on bicycles, directing bicyclists onto the Site from South Access Drive to the Exhibit Halls.
3. Within three years of final occupancy of a new building on the Site, or as determined by the City Engineer as a component of the CRC project, sidewalk improvements along the North Marine Drive frontage must be constructed to meet the requirements of the City and ODOT.
4. No loading activities are allowed along the Site's North Marine Drive frontage, either on the Site or within the public right-of-way.
5. Retain the barriers at the eastern-most approach to North Marine Drive until the time that frontage improvements are completed per Condition B.3, at which time the driveway must be closed. A permit from the Portland Bureau of Transportation is required to close the approach.
6. Provide an additional 421 parking spaces on the Site. The parking spaces may be located entirely within the southwest corner, as illustrated in Figures 6-4a and 6-4b, or disbursed elsewhere on the Site. A separate building permit is required for the new parking area(s).
7. Reconstruct the existing sidewalk along North Force Avenue from North Marine Drive to the current terminus of the sidewalk, to the satisfaction of the City Engineer. Extension of the sidewalk corridor, constructed to the satisfaction of the City Engineer, is required at the time new parking spaces are developed in the southwest corner of the Site.

Additionally, Metro must obtain access permits from ODOT for the continued use of the existing approaches onto North Marine Drive.

As a condition of the 2011 Conditional Use Master Plan approval, Metro was required to establish a public easement along the existing east-west public access through the Site along South Access Road. This easement, (Exhibit B) was prepared and recorded on 12/6/11. If the access easement must be modified in the future to accommodate new parking spaces in the southwest corner of the site, the South Access Drive must be realigned along the Site's southern property line. A new public access, construction and utility easement must be established and recorded to reflect the new alignment. The new public access, construction and utility easement must be 50-foot wide to accommodate the future public right-of-way improvements associated with the CRC Project. The Applicant must extend the existing driveway and provide a new connecting to North Force Avenue in relation to the realignment, and the existing curb cut/connection to North Force Avenue must be closed.

## 4.2 Expo Center Development Mitigation

### Appearance and Design Compatibility

The Expo Center site is covered by a design (d) overlay zone, and Expo development projects require design review under Chapter 33.825 of the City of Portland Planning and Zoning Code. The approval criteria for this Code Chapter (33.825.055) require that the applicant show the proposal complies with design guidelines for the area. Additionally, Chapters 33.140.215 and 33.254.080 regulate setbacks, landscaping and screening, to ensure the site design will be compatible with Expo's surroundings.

To ensure that the Expo Center continues to meet the requirements of the Zoning Code and the general goals of Portland's Comprehensive Plan:

- Any facilities visible from adjacent industrially zoned properties will be designed so they do not significantly alter the overall industrial character of the area. The scale, type, and appearance of Expo facilities will remain consistent with nearby industrial uses.
- Expo development will meet or exceed Code requirements for open space, setbacks, landscaping and screening.

### Open Space, Setbacks, Landscaping and Screening

Open space, setbacks, landscaping and screening will be used as another method to help mitigate potential development-related impacts on the Expo site.

The following outlines specific requirements for setbacks, landscaping and screening, and describes how they will be addressed at the Expo site for approved development.

**Open Space:** The maximum allowable building coverage in an IG2 zone is 85% of site area. Expo development will comply with this standard. The northernmost parcel, on the banks of the Columbia River, will remain undeveloped.

**Setback Distance:** Required minimum building setbacks in an IG2 zone are 25 feet from a street lot line, and no required setback for lot lines abutting I (industrial) or OS (open space) zones (Chapter 33.140.215).

Chapter 33.140.245 regulates setbacks and landscaping requirements for an IG2 zone. Setbacks for exterior display are 10 feet from a street or OS zone, and no required setback abutting I zones. Setbacks for exterior storage are 25 feet from a street or OS zone, and no required setback abutting I zone. Expo development will adhere to these setback requirements.

**Landscaping and Screening:** City of Portland screening requirements are intended to screen unsightly features that detract from the appearance of an area. Expo will meet and exceed all applicable screening requirements of Chapters 33.140.235, 33.140.245, 33.248.020, 33.266.130, and 33.266.310, which cover the following:

- Garbage collection areas: Screening to L3 or F2 standard.
- Mechanical equipment: Any mechanical equipment on the ground will be screened to the L3 or F2 standard. Rooftop screening requirements apply only when abutting residential zones. This requirement does not apply to Expo.
- Parking: Parking areas abutting streets will be landscaped/screened to at least the City of Portland's L2 landscape standard (with a 10 foot setback). Parking areas abutting an OS zone will be landscaped to an L3 standard with a 10 foot setback.
- Parking lot interior landscaping: All new parking areas will meet or exceed the P1 standard and contain at least 45 square feet of interior landscape for each parking space.

- Exterior storage areas: Storage areas abutting a street will be screened to the L3 standard or the L2 plus F2 standards, with a 25-foot setback. Where abutting an I zone, storage areas will be screened to at least the F1 standard, with no setback required. Where abutting an OS zone, storage areas will be screened to at least the L4 standard with a 10 foot setback, or to the L3 standard with a 25 foot setback.
- Exterior display areas: Exterior display areas will be screened to the L1 standard, with a 10 foot setback from street lot line, or to the L3 standard with a 10 foot setback where abutting an OS zone.
- Loading areas will comply with the minimum standards for setbacks and perimeter landscaping set forth in Chapter 33.266.310 (Table 266-7).

Table 4-3 summarizes landscape requirements for the City of Portland's L1 and L3 standards. For major event entertainment uses in IG2 zones, the City of Portland has minimum landscaping requirements of 15%. The allowed site coverage is 85%. The City of Portland encourages landscaping for development in all zones, even when not required, to help soften the effects of built and paved areas. Landscaping also helps reduce the effects of stormwater runoff by providing a surface into which stormwater can infiltrate.

The City of Portland recognizes the value of landscaping to:

- Preserve and enhance Portland's urban forest
- Reestablish vegetation to improve aesthetics, health, and wildlife habitat
- Establish a pleasant visual character
- Promote compatibility between land uses by reducing impact on abutting uses
- Unify development, and enhance public and private spaces
- Promote retention and use of native vegetation
- Aid in energy conservation by providing shade and shelter
- Restore natural communities through re-establishment of native plants

Consistent with these goals for landscaping and screening, the site design for the Expo Center includes an extensive vegetative buffer and landscaping and screening. Wildlife habitat will be supported, native plants protected, and open space preserved on, and adjacent to the Expo site. The Expo landscaping and screening will meet or exceed all pertinent requirements.

Easements: As a condition of the 2011 Conditional Use Master Plan approval, Metro has recorded an easement (see Exhibit B) along the length of privately-owned South Access Road.



**Table 4-3  
City of Portland Landscaping Requirements**

Requirements	L-1 General Landscaping		L-3 High Screen
	Area Less Than 30 Ft. Deep	Area 30 Ft. or Deeper	
<b>Purpose</b>	Standard landscape for open areas; where distance is used to separate uses and landscaping is required to enhance the area between.	Standard landscape for open areas; situations where distance is used to separate uses or development and landscaping is required to enhance the area in-between.	Used where visual separation is required.
<b>Trees</b>	One large tree per 30 linear feet, one medium tree per 22 linear feet or one small tree per 15 linear feet.	One large tree per 30 linear feet, one medium tree per 22 linear feet or one small tree per 15 linear feet.	One large tree per 30 linear feet, one medium tree per 22 linear feet or one small tree per 15 linear feet, as needed to provide a tree canopy over the landscaped area.
<b>Shrubs</b>	None required.	Either two high shrubs or three low shrubs per 400 square feet.	Enough high shrubs to form a screen 6 feet high and 95% opaque year around. [Note: a 6 foot high masonry wall may be substituted for the shrubs — trees and ground cover plants are still required.]
<b>Ground Cover</b>	Plants must fully cover the remainder of the landscaped area.	Plants must fully cover the remainder of the landscaped area,	Plants must fully cover the remainder of the landscaped area.
<b>Location of Vegetation</b>	Not specified.	Not specified.	If applied along street lot lines, the screen or wall must be placed along the interior side of the landscaped area.
<b>Other</b>	Shrubs and trees may be grouped.	Shrubs and trees may be grouped.	Shrubs and trees may be grouped.

Source: City of Portland Planning & Zoning Code, Chapter 33.248.020, 2010

## Neighborhood Livability

Protecting neighborhood livability is one of the most important goals of the Expo Master Plan. The next sections describe safeguards which will be in place to ensure livability.

Chapter 33.262 of the City Zoning Code sets standards for Off-Site Impacts, and identifies specific impacts which must be addressed. To fulfill these requirements, the Expo site design also incorporates the following measures to prevent off-site nuisance impacts — such as noise, vibration, odor, litter, glare — which might otherwise harm neighborhood livability.

**Noise:** The City of Portland's noise standards are stated in Title 18-Nuisance Abatement and Noise Control. The Oregon Department of Environmental Quality also regulates activities located near noise sensitive uses: dwellings, religious institutions, schools and hospitals.

To help control any potential noise impacts on nearby uses, Expo is located on an industrial site, away from residential and other noise sensitive uses. The design of Expo facilities encloses noise-producing activities inside structures. The only routine noise-generating uses which may be audible off-site are construction activity and air quality control systems.

To mitigate these potential noise impacts, Expo air quality control systems will be screened from neighboring uses. The systems have been noise-tested and determined to not impact off-site uses. Temporary construction noise will be closely monitored, with work restricted to daytime hours.

Some outdoor events at Expo also use a public address system for announcements and/or music. Any such uses will be controlled within the City of Portland's Title 18 requirements.

**Vibration:** The City of Portland does not allow continuous, frequent or repetitive vibrations which exceed a 0.002g peak. Exceptions are made under the Code for temporary construction, vehicles leaving the site, and vibrations lasting less than 5 minutes.

With the above exceptions, Expo Center development will not produce any vibrations that exceed the City standards.

**Odor:** City standards prohibit continuous, frequent or repetitive odors. An odor detected for less than 15 minutes per day is exempt. There will be no significant Expo odor impacts on neighborhood livability.

**Litter:** Vehicles coming to the Expo site are expected to include employee and visitor automobiles, shuttle buses, TriMet buses and light rail, large and small delivery trucks, and public agency vehicles. These vehicles and their passengers typically generate small amounts of litter. The Expo facility operations generate litter that is contained within the site.

To ensure that Expo litter does not represent a nuisance, the Expo site and landscaping, and adjacent public areas are maintained and patrolled for litter by Expo Center staff. Also, adequate trash and recycling receptacles are provided throughout the facility.

**Glare:** The City of Portland defines glare as... "illumination caused by all types of lighting and from high temperature processes such as welding (Chapter 33.262.080). City standards restrict glare which illuminates adjoining properties. Lighting or other glare sources may not illuminate adjoining properties in excess of 0.5 foot candles of light. Strobe lights are not allowed.

To mitigate glare, outdoor lighting at the Expo site will be designed to meet City standards. Special care will be taken to buffer the adjoining habitat areas from Expo lighting. Exterior light fixtures will control and limit illumination around the outside of the facility to provide the necessary light, but cut off the light before it reaches the environmental zones. Parking will be buffered from the environmental overlay zones, to keep vehicle traffic and lights away from the environmental areas. Additional requirements for the adjacent e-zones will also be met. There will be no exterior strobe lights. Standard protective measures will be taken to shield welding and other glare-producing construction activities.

Expo facilities' reflective surfaces will be located on the interior of the site. The facility walls that face nearby streets or sensitive environmental areas are virtually windowless with a non-reflective finish. The largest glazed areas are at the public entry of exhibit halls and in administrative offices. The majority of this glazing will be along the east face of the buildings, away from the predominant sun exposure. Light reflection from these windows will not cause disruptive or intrusive glare.

**Vector Control:** Multnomah County's Vector Control Program will be responsible for controlling rodents and mosquitoes at the Expo site.

**Dust and Mud:** Expo Center exhibitions and events do not generate dust or mud. However, construction on the Expo site is expected to produce dust and mud. Operational procedures will include steps to reduce dust and mud on the site, and to minimize dust and mud on adjacent streets from vehicles entering or leaving the site. During construction, measures will also be taken to prevent on-site erosion, and to ensure that sediments do not leave the site.

The Expo Center will continue its current practice of clearly delineating for contractors, in all construction contracts, the contractors' responsibilities for dust and mud controls. MERC then oversees contractor performance. This practice has proven to be highly effective in eliminating off-site impacts. Stormwater best practices established by the City of Portland and the LEED rating system will also be required for contractors.

### **Public Services**

The conditional use approval criteria for major event entertainment uses (Chapter 33.81 5.21 5) require that public services for transportation, water supply, police and fire protection, sanitary waste disposal and stormwater disposal are capable of serving the approved development at the Expo site, and are acceptable to the Bureau of Environmental Services.

Plans are in place to provide all of the necessary public services to accommodate Expo development. The adequacy of transportation services is evaluated in Exhibits C and D. Other key public services are discussed below. The Expo site utility plan is shown in Figure 4-6.

**Water Supply:** The primary source of water supply for Expo Center will continue to be: potable water supplied by Portland Water Bureau, to be used for drinking, sanitary facilities, landscape irrigation and fire protection. Potable water is supplied via an existing 12-inch water main in N. Marine Drive, and four 3-inch water service connections at N. Force Avenue.

The Expo Center expects to investigate – in the process of project development – the feasibility of incorporating rainwater capture into one or more development projects, with captured water to be used for appropriate non-potable uses, such as cooling system make-up water, irrigation, toilet flushing, etc. Such uses would be as allowed by plumbing codes and other permitting requirements.

In the past, a portion of Expo's irrigation needs have been met with groundwater supplied in the northwest corner of the site. Under the Master Plan, Expo's groundwater well will be capped, and the pumphouse removed. Any long-term irrigation needs will be met with potable water captured and stored rainwater or greywater.

The Expo campus will have a network of 8-inch water mains throughout the developed portion of the site, for potable water supply and fire protection, these water supply lines will be maintained by Expo and the Bureau of Fire, Rescue and Emergency Services.

According to Water Bureau and Fire Bureau staff there will be adequate water supply to meet Expo growth needs — for domestic water and fire flows — for Master Plan build-out.

MERC and the Expo Center also take an active role in water conservation measures, as required by the City of Portland's building code, to limit water consumption waste, MERC's successful water conservation efforts will continue for Expo Center redevelopment. To conserve water, MERC will install low flow fixtures throughout the new Expo facilities, and will landscape the Expo site wherever possible using drought-tolerant native plant species.

Police and Fire Protection: The Expo Center is located within the existing boundaries of the City of Portland. Police protection is provided by Portland's Bureau of Police, and fire protection is provided by the Bureau of Fire, Rescue and Emergency Services. According to these bureaus, current service levels are adequate to meet demands of future Expo development. Expo Center provides on-site security for most events.

The Expo site is served by two fire stations located within five miles of the site: one on Syracuse Street in St. Johns, north of the St. Johns Bridge; and one on Hayden Island, just east of 1-5 at the Jantzen Beach interchange. Fire protection needs at the Expo site will also be limited by on-site fire monitoring and control equipment, as well as by on-site personnel to participate in fire safety and fire control activities, consistent with the Expo Center emergency plans.

Sanitary Sewers: Sanitary sewers serving the Expo site are connected to the City of Portland's existing sewer main located in N. Marine Drive, via a 12-inch gravity sanitary line running northwest from the site. According to Bureau of Environmental Services staff, the City's current and planned wastewater collection and treatment capacity is adequate to meet the requirements of Expo site development, through Master Plan build-out. Future facilities will investigate green building best practices to reduce both potable water demand and sanitary waste production, including waterless urinals, reclaimed rainwater for toilet flushing, and similar improvements.

Solid Waste Disposal: Solid waste generated at the Expo Center includes: paper, newspaper, cardboard, glass, plastics, tin and construction debris, and quantities of miscellaneous office and kitchen and food waste. These solid waste products are segregated and stored on-site, then transported off-site for recycling or disposal.

MERC, Expo and Metro take an active approach to solid waste reduction and recycling. Currently Expo recycles paper, newspaper, cardboard, glass, plastics, and construction debris. The current rate of diversion from landfill as a result of these programs is over 40%<sup>11</sup>. These ongoing waste reduction and recycling programs will continue and grow in conjunction with Expo Center redevelopment. No solid waste *disposal* will take place on the Expo Center site.

### **Stormwater Management**

The City of Portland is a leader in sustainable stormwater management practices. The Expo Center is committed to managing its stormwater in a sustainable way to reduce water quality impacts to adjacent environmental areas.

Project Area Description: The Expo Center redevelopment is located on a 53-acre site, located south of N. Marine Drive, within the Columbia Slough watershed. The existing Expo site covers a total area of approximately 48.8 acres with the riverfront property of 4.22 acres, for a total of 53.02 acres. Approximately 34.6 acres (71%) is impervious surfaces. The remaining 14.1 acres (29%) is pervious areas such as open space and parking lot landscaping. Table 4-4 below summarizes square footage for each of these areas:

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<sup>11</sup> Fiscal Year 2009-10, per Expo records

**Table 4-4  
Existing Conditions**

<b>Impervious Surfaces</b>	<i>Square Feet</i>	<i>Acres</i>	<i>% of Total</i>
Building / Roof Area	441,172	10.1	19.1%
Sidewalks, Driveways, and Parking	1,153,904	26.5	50.0%
Riverfront Parcel Pavement	8,360	0.2	0.4%
SW Parcel Pavement	-----	-----	-----
<b>Subtotal of Impervious Surfaces</b>	<b>1,603,436</b>	<b>36.8</b>	<b>69.5%</b>

<b>Pervious Surfaces</b>	<i>Square Feet</i>	<i>Acres</i>	<i>% of Total</i>
SW Parcel	235,024	5.4	11.1%
Riverfront Parcel	148,456	3.4	7.0%
Open Space / Landscape Area	323,175	7.4	14.0%
<b>Subtotal of Pervious Surfaces</b>	<b>706,655</b>	<b>16.2</b>	<b>30.5%</b>

<b>Total Project Area</b>	<b>2,310,091</b>	<b>53</b>	<b>100%</b>
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The approved changes include a new exhibit hall and parking lot in the SW corner of the site. The new building footprint will increase the overall roof area of the site to approximate 10.6 acres. The overall pavement area will be expanded to approximately 27.9 acres, with the addition of a new 4.1 acre parking lot in the southwest corner of the site. Approximately 20.5%, or 10 acres, of the site will remain as pervious surfaces. Table 4-5 below summarizes the approximate square footage of each area.

**Table 4-5  
Approved Conditions**

<b>Impervious Surfaces</b>	<i>Square Feet</i>	<i>Acres</i>	<i>% of Total</i>
Building / Roof Area	461,736	10.6	20.0%
Sidewalks, Driveways, and Parking	1,080,288	24.8	46.8%
Riverfront Parcel Pavement	8,360	0.2	.4%
SW Parcel Pavement	179,891	4.1	7.8%
<b>Subtotal of Impervious Surfaces</b>	<b>1,730,275</b>	<b>39.7</b>	<b>74.9%</b>

<b>Pervious Surfaces</b>	<i>Square Feet</i>	<i>Acres</i>	<i>% of Total</i>
SW Parcel	55,133	1.3	2.4%
Riverfront Parcel	148,456	3.4	6.4%
Open Space / Landscape Area	376,227	8.6	16.3%
<b>Subtotal of Pervious Surfaces</b>	<b>579,816</b>	<b>13.3</b>	<b>25.1%</b>

<b>Total Project Area</b>	<b>2,309,091</b>	<b>53</b>	<b>100%</b>
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Existing Stormwater Drainage System: The drainage system for the site is divided into two separate systems (See Figure 4-7). The northern portion of the site which includes the existing Halls A, B, and C, and surrounding pavement drains west and north, and connects to the public storm system in N. Force Ave. and N. Marine Drive. Existing catch basins and downspouts along the south side of Hall A-C drain west to the public system in N. Force Ave. The roof downspouts and catch basins located along the north side of Hall A-C flow north to the public storm system located in N. Marine Drive. Both public storm pipes in N Force Ave and N Marine Drive flow north and discharges directly to the North Portland Harbor of the Columbia River. Figure 4-6 identifies the location of the existing public services as they relate to the Expo Site. Figure 4-8 shows the location of the existing utilities (water, sewer, and stormwater) within the Expo property.

The remainder of the site drains south to three existing Stormceptors before flowing into the Northeast Drainageway located in the Peninsula Drainage District No. 1. The Northeast Drainageway is located just north of the Vanport Wetlands and flows southwest to the pump station at the southern edge of the Drainage District. The drainage is then pumped into the Columbia Slough. The Columbia Slough has been designated by the Oregon Department of Environmental Quality (DEQ) as a "water quality limited" stream. The Slough is water quality limited from spring through fall for chlorophyll a, pH and phosphorus. The Slough is water quality limited all year for dissolved oxygen, bacteria, temperature, DDE, DDT, dieldrin, PCBs, dioxin and lead due to elevated levels found in fish. DEQ has established Total Maximum Daily Loads (TMDLs) for the Slough which address the water quality limiting pollutants listed above, the specific loads (limits) are outlined in a report developed by DEQ.

Peninsula Drainage District No. 1, south of the Expo site, comprises a special natural resource management area. Development in this area is regulated by the Natural Resource Management Plan (NRMP). Both the Columbia Slough area and Peninsula Drainage District No. 1 are also covered by environmental zones, which abut the Expo site. These zones require approval for most types of development that occur within the e-zone.

Subsurface Conditions: Based on the geotechnical information collected in a report from March of 1996, the majority of the site is covered with previously placed fill soil consisting of silty gravel to a depth of 7.5 to 8.0 feet. Dredge fill soils were encountered across the majority of the site under the fill layer. These soils consist primarily of sandy silts and extend to depths of approximately 10 to 15 feet. The dredge fill soils are underlain by sandy silts and silty sands to a depth of 55 to 114 feet. The NRCS Soil Survey identifies this location as having Sauvie Rafton Urban Land Complex soils. The soil survey characterizes these soils as having moderately high drainage of at least 2 inches per hour.

The geotechnical investigation reported that groundwater was located at a depth of 15 to 17 feet below the surface. But it should be anticipated that perched groundwater may occur during period of wet weather. See Geotechnical Report included in the Expo Center CUMS application.

New Impervious Surfaces: The two main areas that need to be addressed for stormwater management is rooftop runoff from the approved building at the northern edge of the site and the new pavement for the expanded parking lot at the southwest corner of the site. The stormwater runoff from these new impervious surfaces will be managed through the use of vegetated facilities designed per the City of Portland's 2008 Stormwater Management Manual. See Figure 4-9 for stormwater drainage plan. Table 4-6 below summarizes the areas required to manage stormwater runoff. A stormwater drainage report (Exhibit F) has been developed that provides more detailed information on the size of drainage basins and the location of stormwater facilities.

**Table 4-6**  
**Impervious Surfaces Required for Stormwater Management**

<b>Impervious Surfaces</b>	<i>Square Feet</i>	<i>Acres</i>
New Building / Roof Area	214,534	4.9
Roof Area converted to Pavement	8,000	.18
SW Parking Lot	179,891	4.1
<b>Total</b>	<b>402,425</b>	<b>9.2</b>

New Roof: The total roof area of the new exhibit hall will be approximately 214,209 square feet (4.9 acres) in size compared to the previous exhibit hall roof size of 194,131 square feet (4.45 acres). Drainage from the new exhibit hall roof will discharge via the existing 24" concrete pipe in N. Force Ave. to the Columbia River. Roof runoff that is discharged directly to the Columbia River is exempt from flow control requirements per Section 1.3.1 – Infiltration and Discharge. Roof runoff from the new exhibit hall is required to meet the pollution reduction requirements per Section 1.3.3 – Pollution Reduction.

An Expo Center Stormwater Report (Exhibit F) outlines the pollution reduction infiltration facilities for management of stormwater from the new roof and surrounding pavement area. Two infiltration planters will manage the pollution reduction needs of the new roof to meet the Hierarchy Category 3 requirements. It should be noted that the stormwater management plans provided are only conceptual for purposes of meeting the requirements of the CUMS approval process. The City has noted that the plans can be altered at the time of building permit review as long as the changes are consistent with BES stormwater management requirements and they do not impact requirements from other City bureaus.

Both METRO and MERC are interested in pursuing sustainable stormwater management strategies for the approved building to limit the volume of runoff flowing into the Columbia River. A green roof concept will be considered during the design phase of the building. A green roof would provide pollution reduction and flow reduction for the runoff. A green roof option would significantly reduce flows into the storm pipe in N. Force Ave. and eventually the Columbia River.

Other solutions for management of the stormwater may be the use of a linear green street swale. This swale would carry roof runoff south, away from the N. Force Ave. storm pipe, to the Peninsula Drainage District No. 1. This solution would also significantly reduce flows into the storm pipe in N. Force Ave. and eventually the Columbia River. A final option may be applying for DEQ exemption from pollution reduction requirements for the roof runoff.

New Building Pavement: Two areas of impervious rooftop from the existing building are to be converted to pavement and landscape area. (See Figure 4-9). The total roof area converted to pavement surfaces is approximately 8,000 square feet (.18 ac). This pavement surface adjacent to the new building will fall under Category 3 of the Stormwater Infiltration and Discharge Hierarchy since the overflow from these facilities will discharge directly into the Columbia River. Management of runoff from the pavement will be required to meet pollution reduction requirements.

New SW Parking Lot: Runoff from the new parking lot in the southwest corner of the site falls under Category 3 of the Stormwater Infiltration and Discharge Hierarchy since the overflow from these facilities will discharge directly into the Peninsula Drainage District No. 1 via an existing outfall located just east of the SW parking area (See Figure 4-7).

The parking lot will be designed to meet current interior and perimeter landscaping requirements. The stormwater management system will be integrated within the new interior landscape through the use of stormwater basins, per typical detail SW-140, in the 2008 Stormwater Management Manual. The stormwater management report included in this master plan shows the location and sizes of the facilities for the new parking area.

Two options for the layout of the southwest parking lot have been provided. The first option (Figure 4-3a) provides a typical parking lot layout that meets all the current parking lot standards and interior landscape requirements. The Option 2 parking lot layout (Figure 4-3b) was developed to provide a flexible use space to allow for parking and exhibit space as necessary. Option 2 meets all the current parking lot standards and includes the total square footage needed to meet the interior landscaping and stormwater management requirements.

Voluntary Stormwater Retrofits: Both METRO and MERC are committed to renovating the Expo Center site in a sustainable way to reduce impervious surfaces whenever possible and increase vegetated cover to cool the site, increase habitat, and manage stormwater. There are additional stormwater management retrofits that could be constructed to further reduce the pollutant loading and flow volume of water entering the Peninsula Drainage District. Some of these retrofit opportunities may include parking lot swales, green roofs, green streets, and pervious pavements. Further design and cost analysis for these retrofits will be done in the future when funding opportunities and partnerships are found. Figure 4-10 identifies approximate locations for the voluntary retrofit projects.

## **Hazardous Substances**

Hazardous materials are regulated under the state fire and buildings codes. The City of Portland's Zoning Code does not directly regulate hazardous substances.

Handling of hazardous substances on the Expo site will be consistent with the requirements of these codes, which allow the use of hazardous materials in a manner that conforms to the intent of the specific zones while maintaining public safety and protecting the environment. These sections set limits on the quantities of materials that can be stored in indoor or outdoor control areas of a given building or site. Due to the large number of substances addressed and the periodic update of the applicable codes, project designers should refer directly to published codes for these limits. The hazardous substances categories are defined in the Code of Federal Regulations (CFR), Title 49, parts 100 to 177 (October 1983).

No hazardous substances will be produced in bulk quantities on-site at Expo. No hazardous substances will be stored on-site in bulk amounts. Any other hazardous substances on the Expo site will be stored in amounts that are allowed outright by the applicable codes.

Consistent with the requirements of Chapter 33.254.020, hazardous wastes (as defined by OAR 340.100 to 110) will not be disposed on the Expo site.

## **Protection of Designated Resources**

Plans for Expo Center development also establish measures for the protection and enhancement of environmental, scenic, historic or cultural resources which have been inventoried by the City of Portland and determined to be significant.

Environmental Resources: Significant environmental resources located near the Expo site include the Columbia River, Columbia Slough, and the Peninsula Drainage District No. 1 Natural Resources management area. While much of the Columbia Corridor area has been traditionally devoted to industrial uses, over the past decade the City of Portland and other groups have increasingly recognized the significance of the low-lying Slough environment as a unique urban resource for water fowl and wildlife habitat, interpretation, recreation and other uses. Peninsula Drainage District No. 1 includes remnants of the vast Columbia River floodplain, part of what once was a maze of channels and sloughs, shallow lakes, ponds, marshes and forests — which supported thriving fish and wildlife communities.

Expo development plans acknowledge the significance of the Slough and lakes environment, and outline measures for its protection and enhancement. Section 6 of this report describes environmental buffering and enhancements.

Scenic Resources: There are no designated scenic resources on the Expo Center campus which require protection. However, several environmental and recreational assets located nearby the Columbia Slough, Columbia River, Delta Park, and 40-Mile Loop trail — share some of the same qualities of the City's designated scenic resources. Expo development plans protect these resources through a program of environmental reserves, as outlined in Section 6.

Historic and Cultural Resources: There are currently no designated historic or cultural resources on the Expo site, although the expedition journals of Lewis and Clark show they camped near the site in November 1805. Also, the Columbia Corridor area where the Expo site is located is known to have numerous culturally significant sites, and cultural artifacts have been discovered on neighboring sites.

### **4.3 Project Review Procedures for Expo Development**

The Expo Center's approved Conditional Use Master Plan identifies development anticipated in the next development phase, extending over a ten-year period.

The following outlines project review procedures which will apply to future Expo development identified in this master plan, and projects that may be needed that are not addressed by this plan. Project review procedures are shown in Table 4-7.



Area neighborhoods will be notified of development as it occurs under this Master Plan, as well as any major projects not included at that time. Notification will be through the recognized neighborhood and business district associations, mailings to interested citizens, and other channels as part of the land use review process.

### **Required Compliance**

Expo development will comply with:

- The detailed aspect of uses, development and site improvements listed in this approved Conditional Use Master Plan.
- The *Hearings Officer Conditions of Approval* for File No. LU 11 – 102970 CUMS (HO 4110007 – Exhibit A).
- *Development standards* contained in the base zone which is General Industrial 2 (IG2) described in Chapter 33.140 of the City of Portland's Planning & Zoning Code and other development requirements such as those implemented through the BES Stormwater Management Manual and BDS Building Code.
  - Design Review approval as described under Chapter 33.825 of the City of Portland Planning and Zoning Code. The design (d) overlay zone applies to the entire Expo Center site. Metro will apply for design review as individual projects are ready to proceed. Approval criteria for design review are listed in Chapter 33.825.055. Expo Center is located in the Albina Community Plan, adopted July 1993. Design Review or review with Community Design Standards is required for certain projects per Section 33.420.055 and 33.825.025.2.f. This site is subject to Community Design Guidelines. If the project is eligible to use the Community Design Standards, Standards in Section in Section 33.218.150 apply.

### **Potential Reviews**

Additional reviews may also be required:

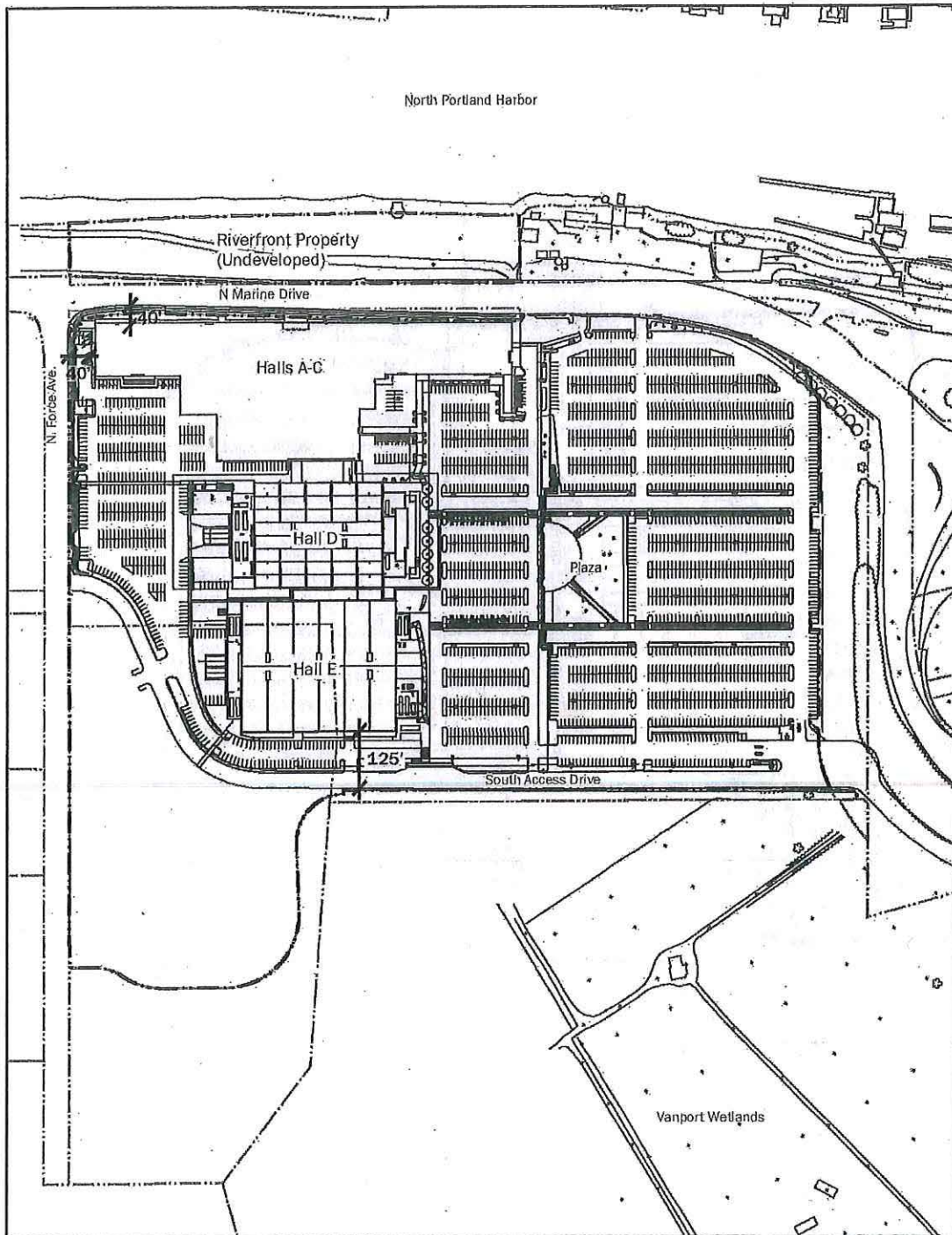
- *Environmental review* may be required if any future project is located within an environmental overlay zone. At Expo, the Environmental Conservation Zone (Figure 4-11) covers the northernmost portion of the site along the banks of the Columbia River. The approved Plan contains no major development in this area, although improved access could include access to a pedestrian overpass. Should development plans change, Planning and Zone Code Sections 33.430.140-170 must be addressed. Environmental review is also required when an applicant wishes to fine-tune the zone boundary based on a detailed environmental study.
- A Master Plan Amendment will be required if proposed uses or improvements are not consistent with detailed aspects of this approved Plan and will be subject to review under Chapter 33.820.080 of the City of Portland Planning & Zoning Code. The procedure for reviewing development depends on how the proposal affects the use of, or the development on, the site. Thresholds and procedures are shown in Table 4-8. Chapter 33.815.040 Subsection A outlines the procedures for proposals that affect the use of the site while Subsection B outlines procedures for proposals that affect the development. Proposals may be subject to either or both of these subsections. These sections identify which changes are allowed by right and which require either adjustments, modifications or additional conditional use review.
- If adjustments to zoning code development standards are necessary to implement specific projects, Metro will seek these approvals, under Chapter 33.805, at the time these projects are ready for review. Adjustment requests are reviewed through a Type II procedure. Approval criteria for adjustments are set forth in Chapter 33.805.040.

**Table 4-7  
Project Review Procedures for Future Expo Development**

<b>Review</b>	<b>Applicable Code</b>	<b>Approval Criteria</b>	<b>Procedure</b>
Design Review	33.825	33.825.055	Design review will occur as projects are ready to proceed
Adjustments	33.805	33.805.040	Application will be made for any necessary adjustments as projects are ready for review
Environmental Review	33.430	33.430.250 33.430.850	Environmental review will occur for any project located in the environmental overlay zone.
Master Plan Amendments	33.820	33.820.050	Projects not included in the approved Expo Master Plan may trigger amendment thresholds and procedures, as shown in Table 10-3.

**Table 4-8  
Expo Master Plan Amendments — Development Review Procedures**

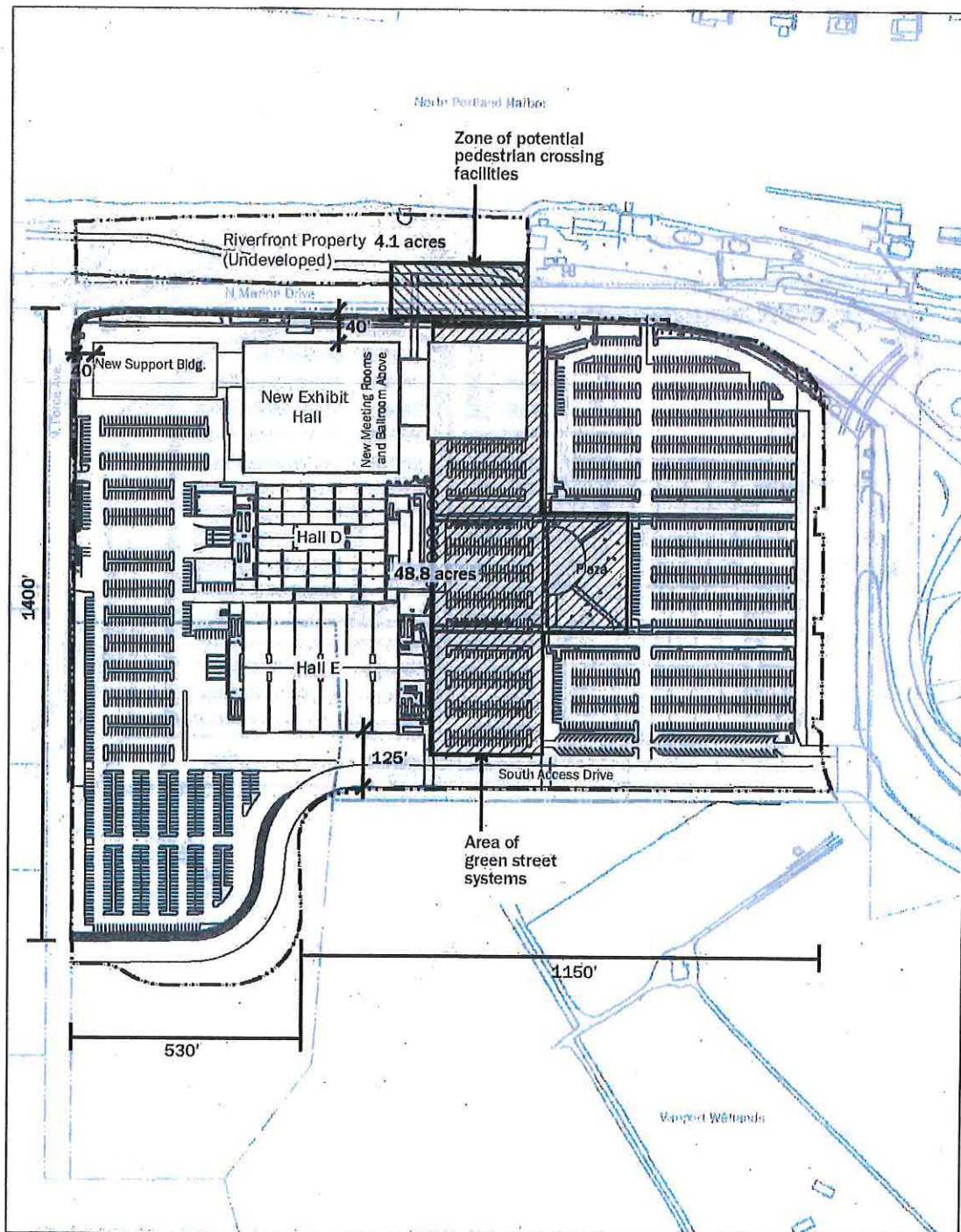
<p>Projects not included in the approved Expo Master Plan will be subject to provisions of Chapter 33.820. The following thresholds and procedures apply for Expo Center Master Plan amendments — required for any use or development that is not in conformance with the Plan.</p> <p><b>Type III Review</b></p> <p>Consistent with the Code requirements, the following proposals will be <i>reviewed through a Type III procedure</i>:</p> <ol style="list-style-type: none"> <li>1. Development outside the approved Master Plan boundary, or changes in the boundary.</li> <li>2. Proposals that increase the number of peak day Expo event patrons by more than 10 percent over the projected volumes approved in the Master Plan.</li> <li>3. New uses which draw more people to the site, unless they replace other uses resulting in no net increase in visitors.</li> <li>4. Increase in the overall floor area beyond that projected in this CUMS greater than 10 percent.</li> <li>5. Permanent increases or decreases greater than 10 percent in the number of approved parking spaces.</li> <li>6. Uses or development which were reviewed but denied because they were found to not be in conformance with the plan.</li> <li>7. Any development on the site that is within 400 feet of the master plan boundaries.</li> </ol> <p><b>Type II Review</b></p> <p>Except as provided above, all other Master Plan amendments will be processed through a Type II review.</p>
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**EXPO MASTER PLAN**

Figure 4-1  
Expo Site Plan - Existing Facilities

Expo Site Textlot 0 200 400 Feet  
GREENWORKS SCRA

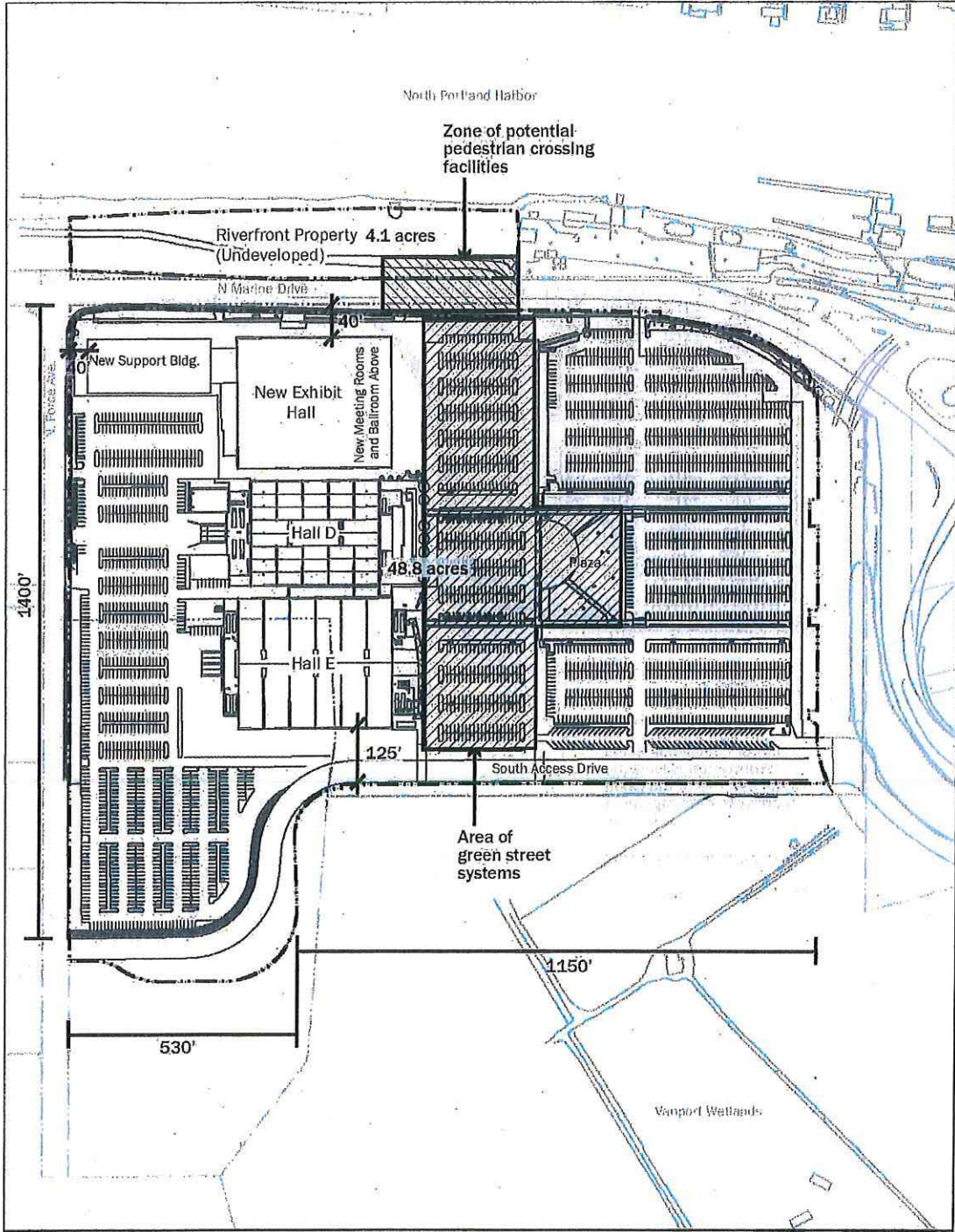


**EXPO MASTER PLAN**

Figure 4-2 a  
 Expo Site Plan - Planned Development and Development Areas  
 Option 1 - Ground Level Ballroom

Expo Site 
 Taxi 
 
 0 200 400 Feet



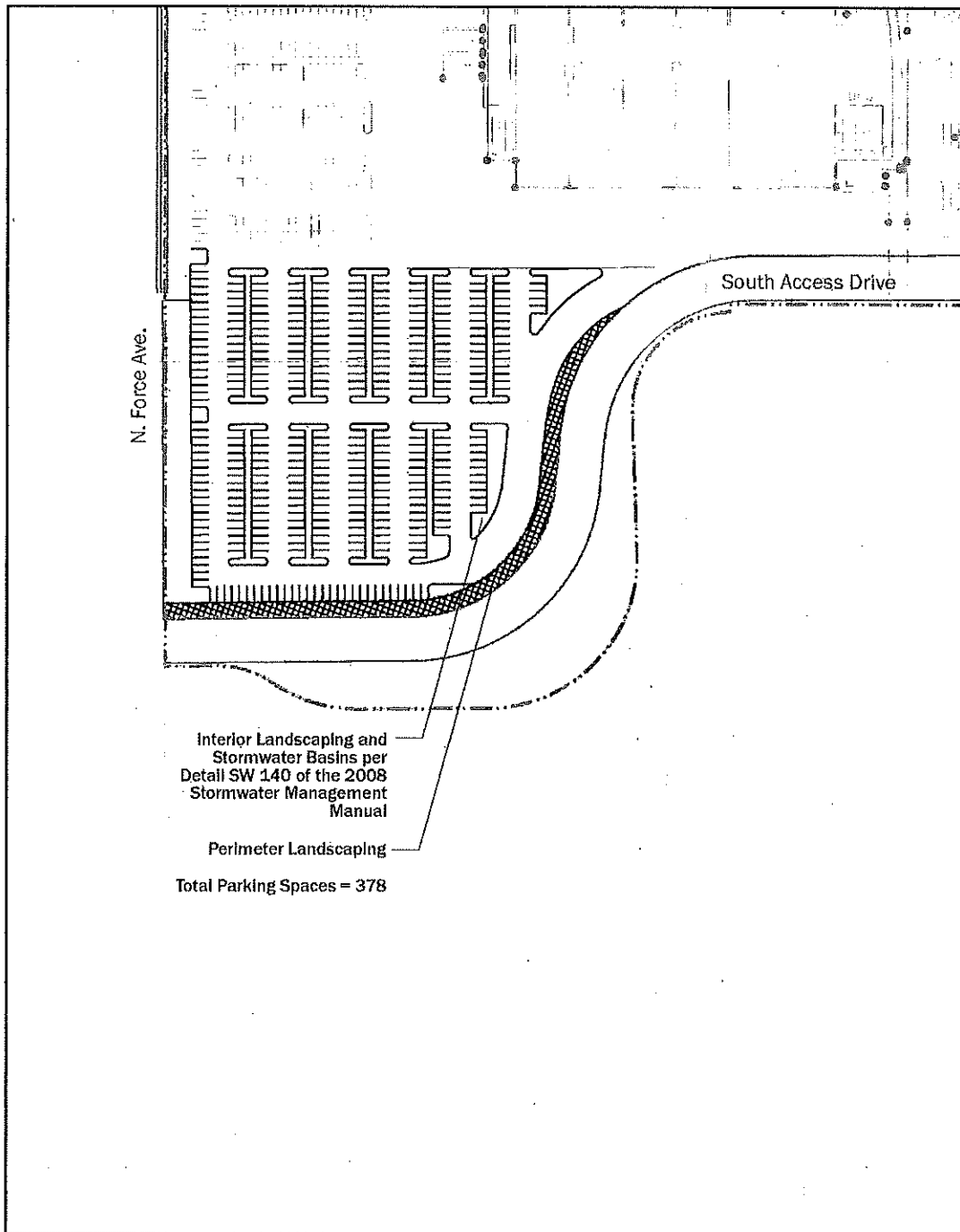


**EXPO MASTER PLAN**

Expo Site   
  Taxlot   
   
 0    200'    400'    Feet

Figure 4-2 b  
 Expo Site Plan - Planned Development and Development Areas  
 Option 2 - Second Level Ballroom

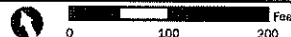


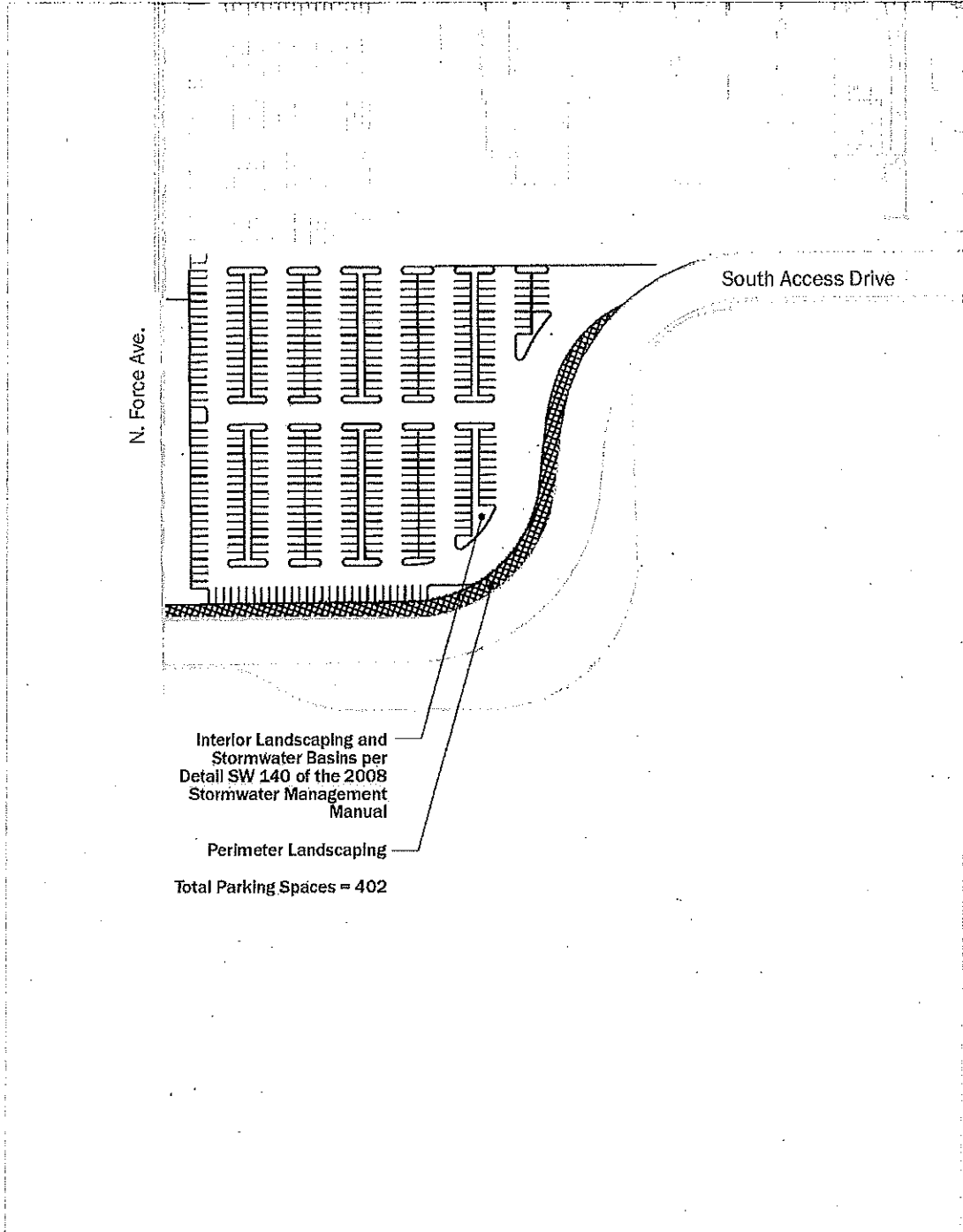


**EXPO MASTER PLAN**

Figure 4-3a

SW Multi-Functional Area Layout Plan  
 Option 1: Full Interior Landscaping Layout





N. Force Ave.

South Access Drive

Interior Landscaping and  
Stormwater Basins per  
Detail SW 140 of the 2008  
Stormwater Management  
Manual

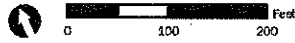
Perimeter Landscaping

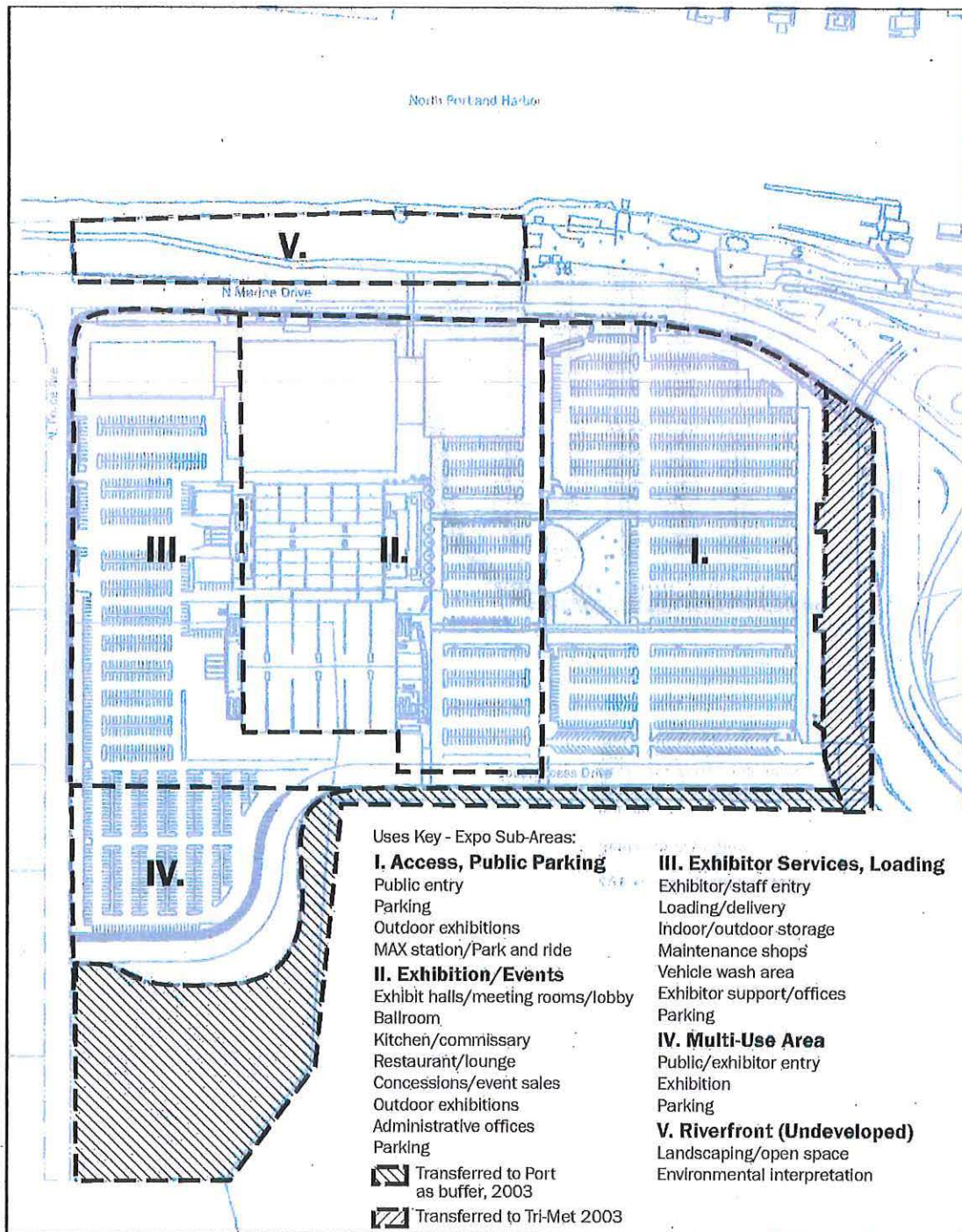
Total Parking Spaces = 402

**EXPO MASTER PLAN**

Figure 4-3b

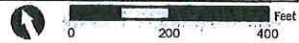
SW Multi-Functional Area Layout Plan  
Option 2: Providing Clear Event Set-up Areas



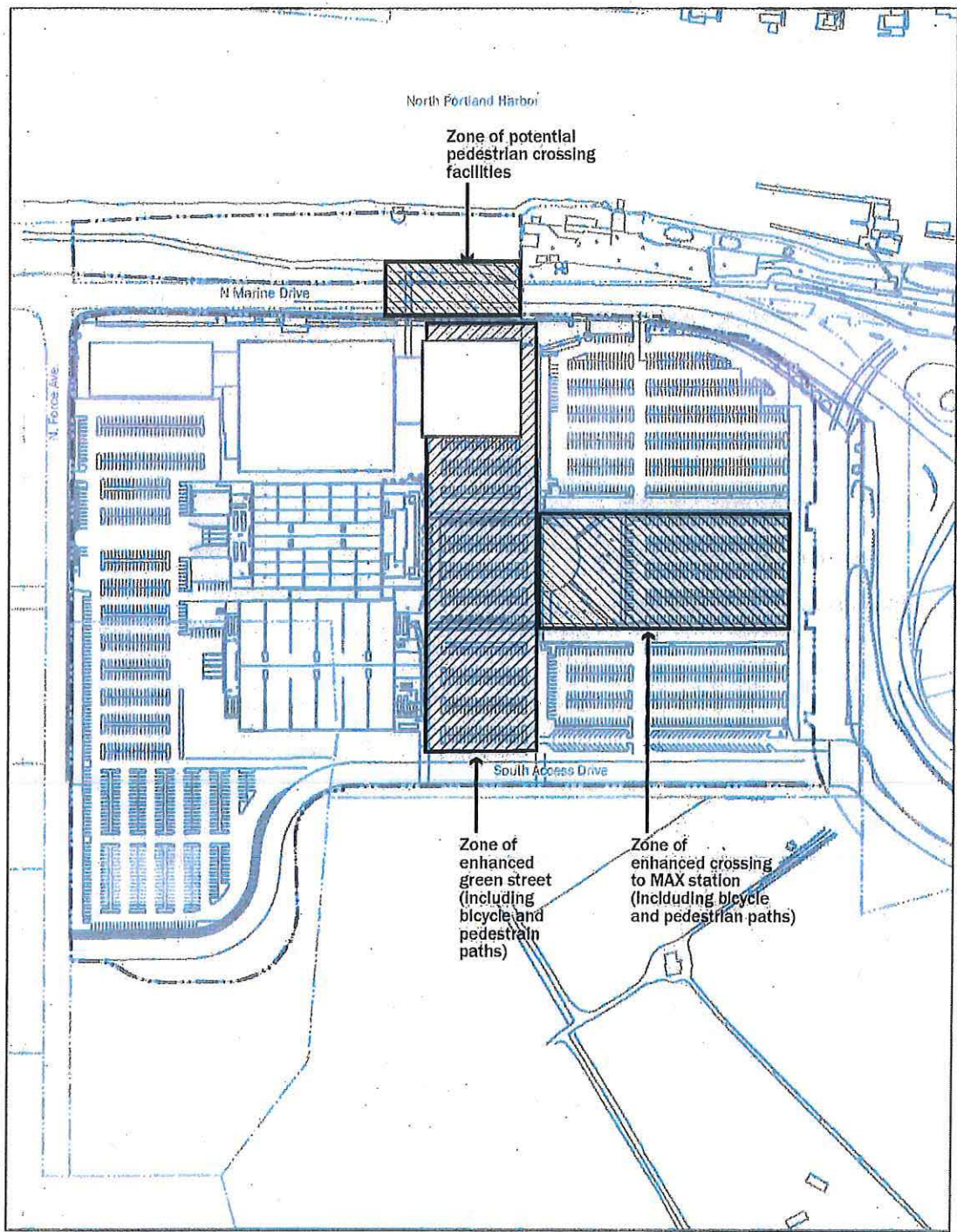


**EXPO MASTER PLAN**

Figure 4-4  
 Expo Development Sub-Areas





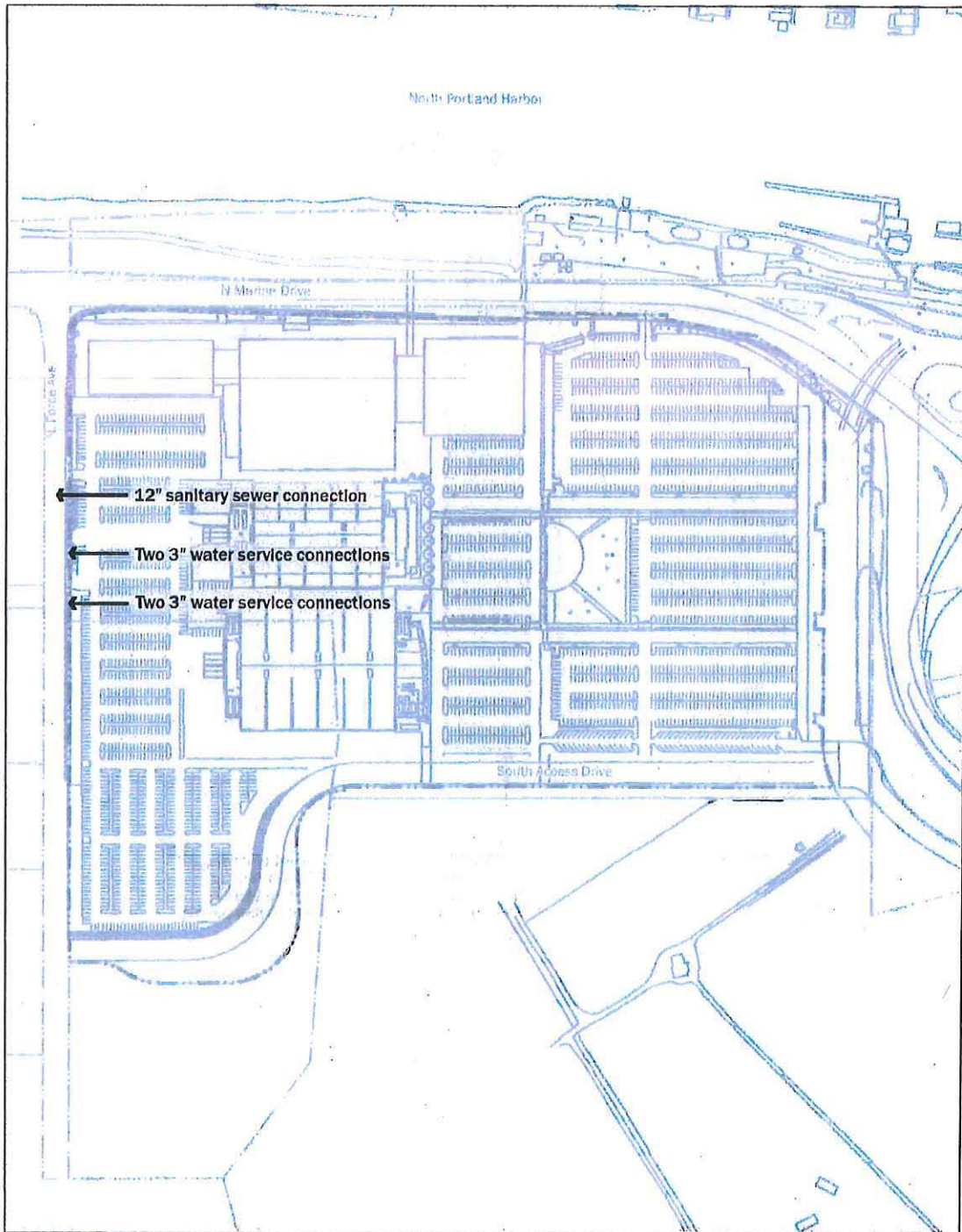


**EXPO MASTER PLAN**

Figure 4-5  
Pedestrian and Bicycle Improvements

0 200 400 Feet

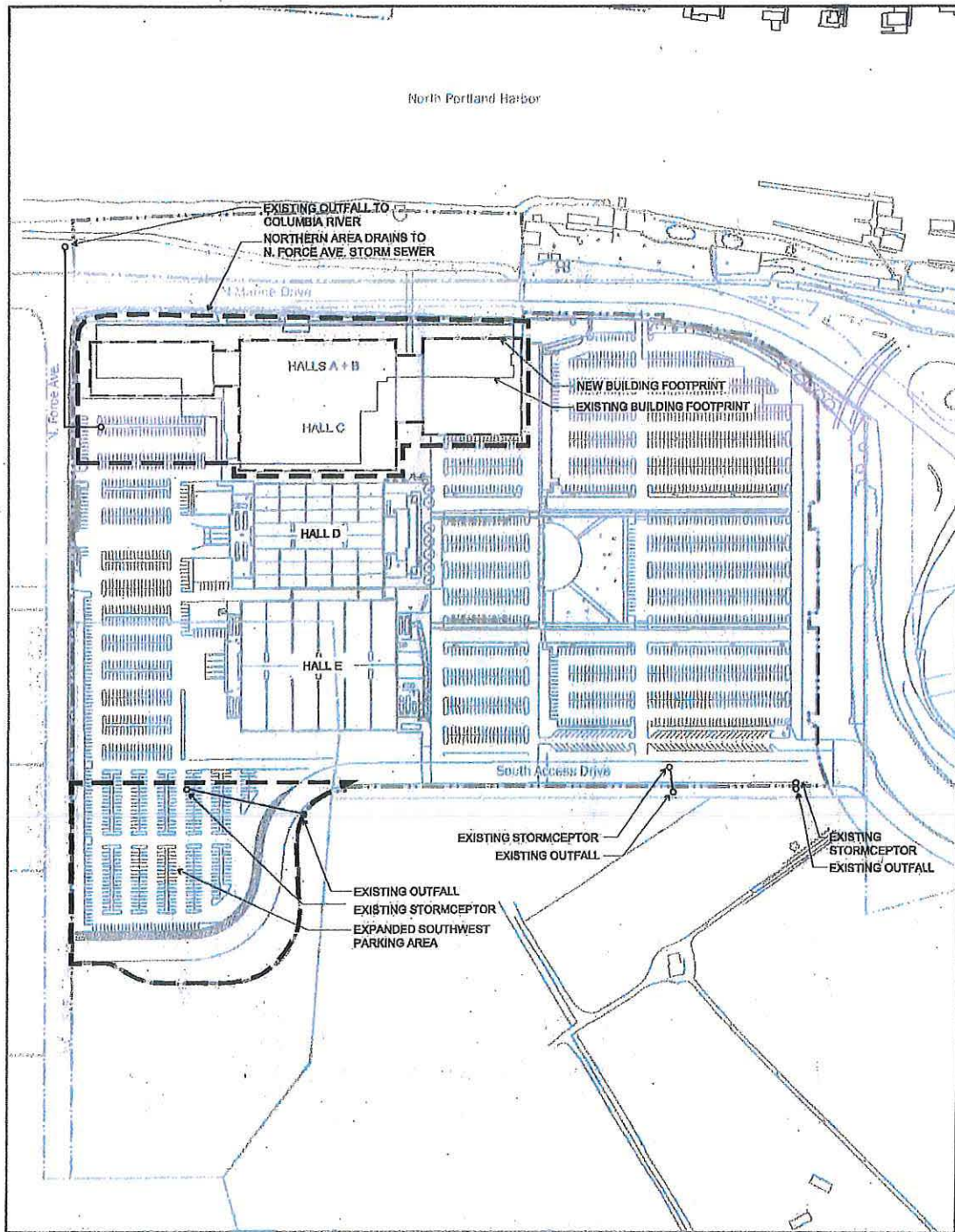
GREENWORKS GEA



**EXPO MASTER PLAN**

Figure 4-6  
Expo Utility Plan



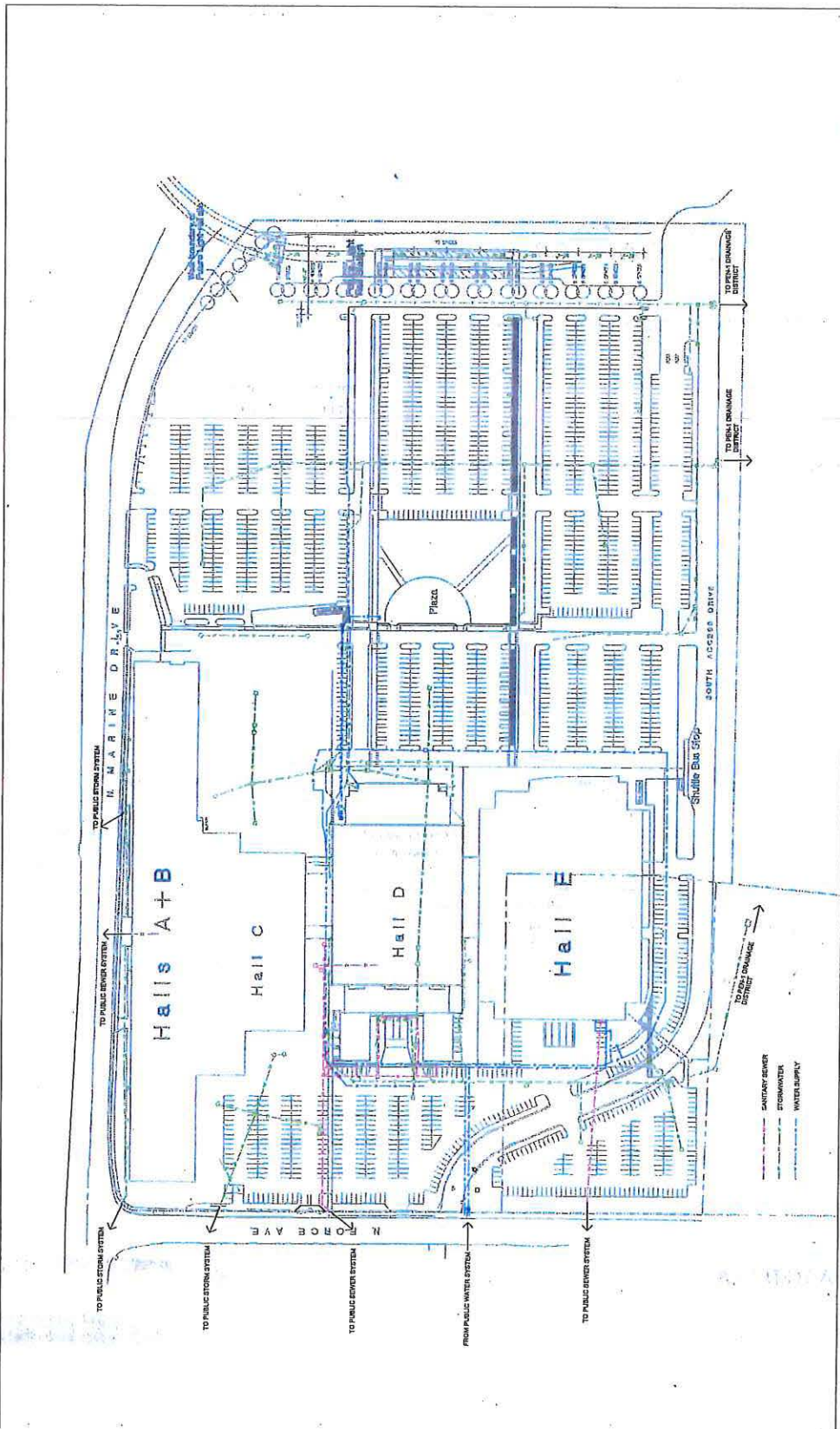


**EXPO MASTER PLAN**

Figure 4-7

Drainage Boundaries Plan

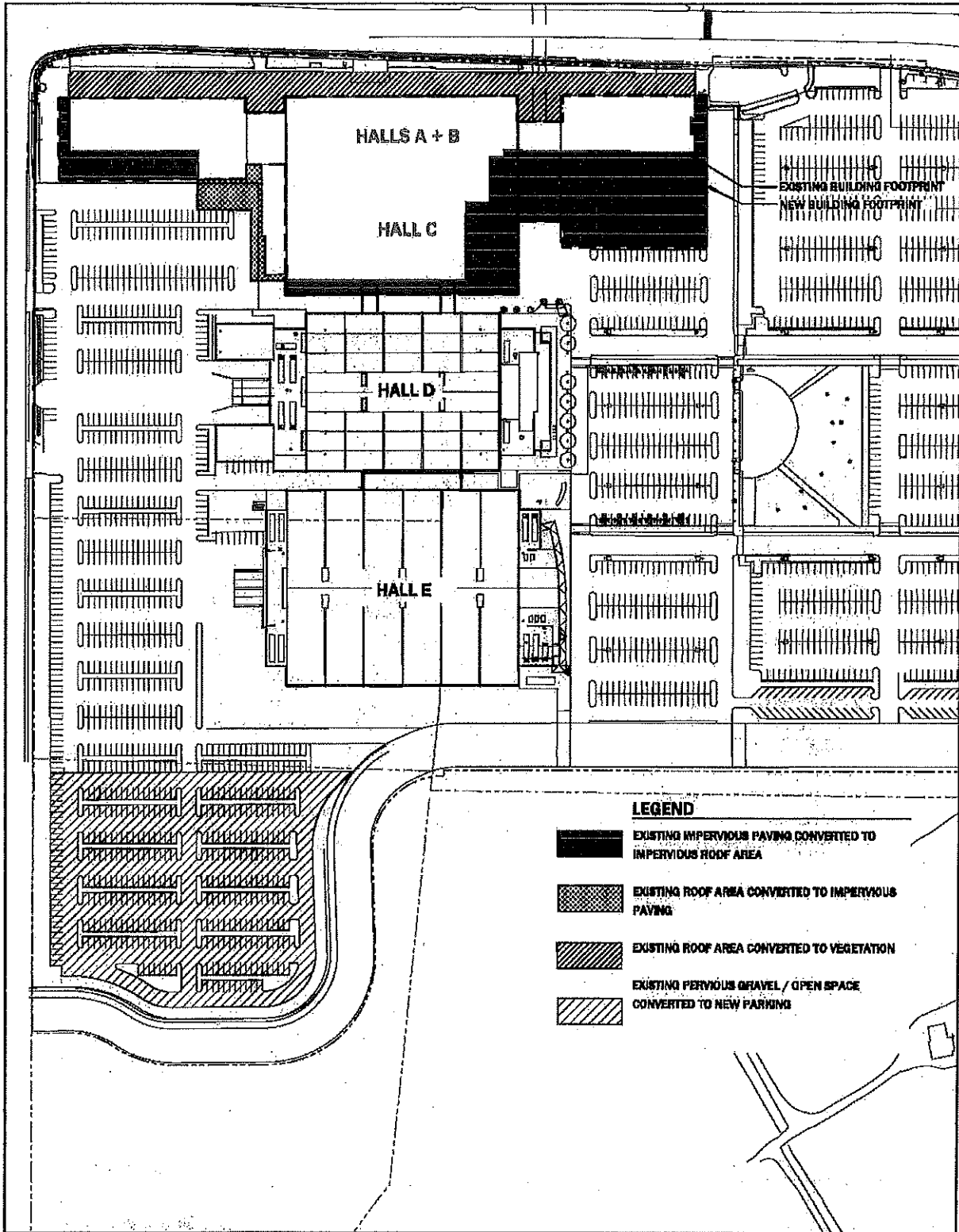




This plan was drawn for informational purposes only, and was based on information from the following documents:

1. Expo Center As-Built Drawings - Dated Jan. 13, 2000
2. N. Forbes Ave Roadway Improvements Construction Drawings - Dated 1998
3. N. Marine Drive Roadway Improvements Construction Drawings - Dated 1992

**EXPO MASTER PLAN**  
 Figure 4-8  
 Existing On-site Utilities Plan



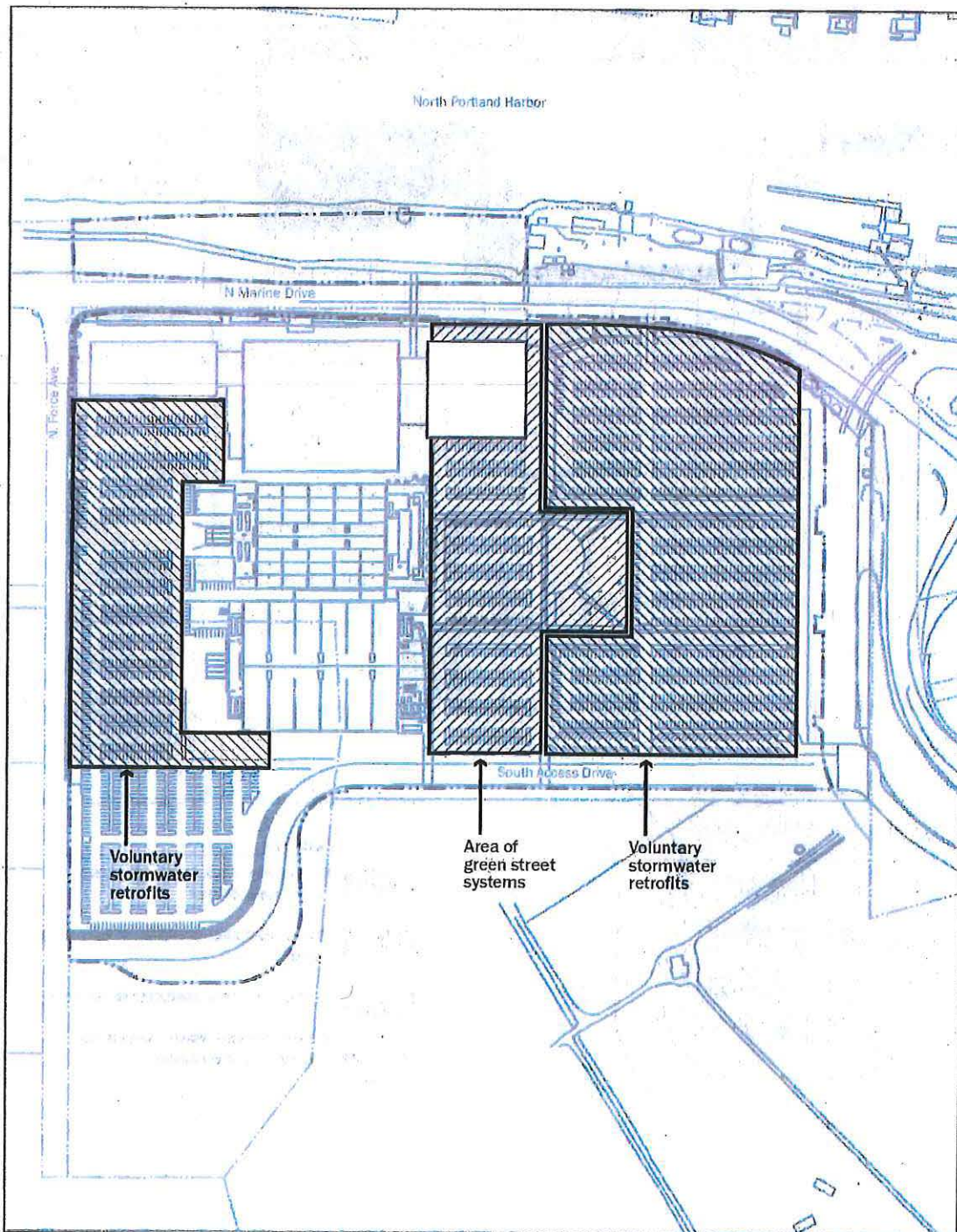
**EXPO MASTER PLAN**

Figure 4-9

**Stormwater Management Diagram  
Feb. 2011**

Expo Site Tsdot 0 100 200 Feet



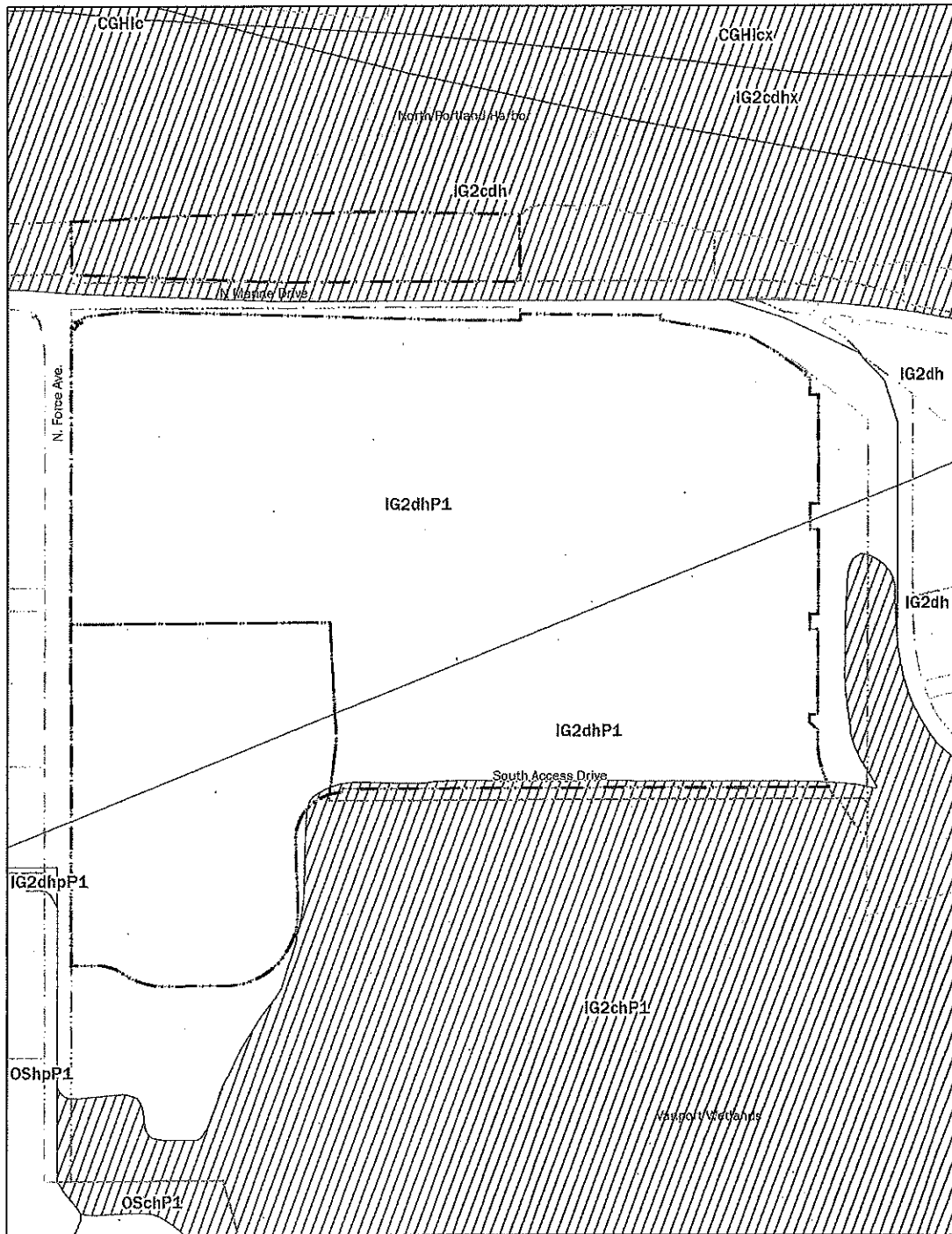


**EXPO MASTER PLAN**

Figure 4-10

Areas of Voluntary Retrofit





**EXPO MASTER PLAN**

Figure 4-11

Conservation Overlay Zones

Expo Site Boundary     Taxlot       Feet  
 Conservation Overlay Zone  
 Zone Boundary

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## 5. TRANSPORTATION AND PARKING

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MERC is not planning any additional buildings beyond those planned and approved initially in the 2001 Expo Center Conditional Use Master Plan and updated in this 2011 Master Plan.

Transportation recommendations were developed based on current understandings of Expo Center traffic and parking demands in comparison with the Traffic Impact Analysis and Management Plan (TIAMP) prepared by Kittelson & Associates, Inc. (KAI) dated November 2000. Exhibit C contains the 2001 approved Transportation Demand Management Program and Transportation Management Plan for Events (Exhibit D) contained in the 2000 TIAMP.

### 5.1 Transportation Management Plan Amendments

Based on a review of Transportation Management Plan measures in the 2000 TIAMP, these measures still apply for current and planned conditions at the Expo Center, with three minor modifications described below.

#### Victory Boulevard Signal Improvements

After 2001, a traffic signal was installed at the I-5 northbound ramps/Victory Boulevard intersection. The signal reportedly operates well within acceptable standards, and provides sufficient capacity even during special events at the Expo Center. Hence, traffic control/flagger measures prescribed in the November 2000 TMP are herein revised to eliminate the need for traffic control personnel at this intersection during events of greater than 5,000 daily attendees.

#### Diminished Parking Supply

The second revision necessary to be made to the 2000 TMP relates to events that diminish the capacity of Expo parking (eg. Swap Meet allows use of Expo parking for exhibitions, and thus, space is unavailable for attendee parking). It was recommended that Expo identify the number of parking spaces to be eliminated for such events, and adjust the TMP threshold accordingly, based on auto occupancy of 2.0 persons per car.<sup>12</sup>

Table 5-1 below shows those events that had less parking supply than the full on-site supply during the July 2009 – June 2010 event year. There were ten events during 40 event-days in this period that had diminished parking capacity. As shown, the Portland Auto Swap has the greatest reduction in on-site supply, and hence is most likely to be reliant on off-site parking supply. All other events held during time period had full use of Expo parking capacity.

The need for off-site parking facilities is more likely to be triggered for those events with diminished parking capacity. Hence, Expo should account for this reduced parking supply by assuming that, at an auto occupancy of 2.0 persons per car, the daily attendance TMP thresholds will be more quickly met. For example, for the Antique and Collectible Show, 290 parking spaces are displaced due to activities related to the event. Accordingly, the attendance TMP thresholds should be adjusted from 3,500, 5,000, and 7,500 to 2,900, 4,400, and 6,900. These revised thresholds are calculated as:

$$\begin{aligned} \text{Revised Threshold} &= [\text{Threshold Daily Attendance}] - [\text{Displaced Spaces} \times 2] \\ &= 3,500 - (290 \times 2) \\ &= 2,920 \text{ rounded to } 2,900 \end{aligned}$$

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<sup>12</sup> For example, if the Swap Meet eliminates 1,000 of the 3,012 available parking spaces, then the TMP threshold would be adjusted downward by 2,000 expected attendees (assuming 2.0 persons per car) to determine the appropriate traffic and parking management measures to be employed.

**Table 5-1  
Expo Events With Displaced On-Site Parking**

EVENT	DATES	ATTENDANCE	PARKING SPACES DISPLACED
Antique & Collectible Show	July 10-12, 2009	12,682	290
Portland Kennel Club	July 17-19, 2009	945	714
Fall RV & Van and Home & Garden Show	Sept. 10-13, 2009	10,572	290
Autumn RV Show of Shows	Nov. 12-15, 2009	6,573	163
Portland Boat Show	January 13-17, 2010	14,240	163
Rose City Classic Dog Show	January 20-24, 2010	7,765	1,037
Northwest Agricultural Show	January 26-28, 2010	4,616	163
Pacific Northwest Sportsmen's Show	Feb. 10-14, 2010	45,165	163
Spring RV Show of Shows	March 10-14, 2010	10,799	163
Portland Auto Swap	April 9-11, 2010	25,175	2,289

**Additional Satellite/Shuttle Parking**

The third revision to the TMP is to identify the Portland International Raceway and Portland Meadows as Event Entertainment Use sites where Expo overflow satellite/shuttle parking is allowed. Expo or event organizers must schedule the use of these sites and verify that there is no conflict or overlap in events at the sites.

**5.2 South Access Road**

This Master Plan illustrates South Access Road located entirely on Expo Center property. Metro is currently in discussion with the Port of Portland to identify potential property ownership exchanges which would allow realignment of South Access Road farther to the south to reduce Expo parking impacts and provide additional property for the Vanport Wetlands environmental area while meeting the Hearings Officer's criteria that the roadway be located entirely on Expo property. These discussions are preliminary, and will be refined as part of the future Columbia River Crossing project planning effort.

**5.3 Columbia River Crossing Project**

Over the past two years, Metro and Expo staff have participated in the Columbia River Crossing (CRC) design process. Preliminary plans have identified potential impacts the Expo property including Marine Drive access, onsite parking along Marine Drive and the eastern perimeter, local street network changes and LRT station location/access. Given the lack of specific design information and uncertain project schedule, the CRC design elements have not been incorporated in this CUMP. Expo staff will continue to work cooperatively within the CRC design process to resolve these items with the intent of assuring that the long-term viability of Expo Center is maintained.

## 6. ENVIRONMENTAL COMPATIBILITY

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As detailed in the earlier sections, the Expo facilities approved under this Master Plan, their uses and appearance, are consistent with the character of the zone and nearby industrial uses.

The Expo Center, however, also adjoins sensitive environmental resource areas. Special care has been taken to ensure the design and operations of the Expo facilities will also be compatible with their natural surroundings.

This section describes environmental site development requirements established for this vicinity, and how they will be addressed for Expo development. Environmental enhancements proposed for the Expo site are outlined that may contribute to future on-site habitat restoration.

### 6.1 Natural Resources Management Plan for Peninsula Drainage District No. 1

The Expo site is adjacent to the northern boundary of the Peninsula Drainage District No. 1 natural resources management area. This natural area is governed by a *Natural Resources Management Plan* (NRMP), adopted by Portland City Council in 1997. Under the NRMP, the portions of the natural resource area closest to the Expo Center are designated for wetland enhancement and restoration, water quality polishing, flood storage, wildlife habitat, passive recreation and interpretation.

The NRMP anticipates three principal types of potential impacts which may be caused by development located adjacent to sensitive natural areas: 1) human intrusion; 2) stormwater runoff; and 3) visual / noise impacts. The following describes how such impacts will be avoided and / or mitigated for Expo development.

- *Human intrusion* can be disruptive to wildlife or natural systems. The NRMP calls for eliminating access to sensitive habitat areas. Under Expo development plans, there will be no direct access proposed for sensitive habitat areas.
- *Stormwater runoff* from development can impact wetlands. In Portland, the Bureau of Environmental Services is responsible for implementing extensive federal and state regulations which govern stormwater runoff. Stormwater flows from the *developed portion of the Expo site* will be collected, treated on-site, and piped to an existing, permitted outfall which will discharge at the southern boundary of the site. The NRMP anticipates the use of the adjacent wetlands for further polishing of Expo stormwater flows. Stormwater from the *realigned South Access Drive* will also be collected, treated, and discharged to an existing, permitted stormwater outfall.
- Visual/noise impacts are indirect, but can still have an effect on sensitive habitat areas and wildlife interpretive activities. Problems may include lighting, noise, and unaesthetic views. Under Expo development plans, all of these potential problems will be averted. The proposed setbacks and screening will help block any unappealing views. Lighting and noise will be mitigated for the entire site, as described in Section 4.2 (Neighborhood Livability).

### 6.2 Inventory and Analysis of Columbia Corridor

Another pertinent City of Portland environmental policy document covers a larger natural resources management unit known as the "Columbia Corridor". The Columbia Corridor is part of the historic flood plain of the Columbia River, a natural geographic unit containing similar geologic and biological characteristics all along its length.

General boundaries covered by the City of Portland's *Inventory and Analysis* are NE 185th Avenue on the east, the Columbia River to the north, the confluence of the Willamette and Columbia Rivers to the west, and Columbia Boulevard to the south. Expo Center is located within these boundaries, in the "West Columbia" subarea.

The purpose of the *Inventory* is to:

- Identify and assess wildlife, wetland and water body resources in the area.
- Evaluate the consequences of preserving, protecting or developing the resources.
- Recommend protective measures where needed.

Sensitive sites and protective measures identified in the Columbia Corridor Inventory are incorporated in the NRMP for Peninsula Drainage District No. 1.

### **6.3 Environmental Enhancements for Expo Site**

To better achieve the objectives of the NRMP and also address other applicable public policies, several environmental enhancements are anticipated for the Expo site. These enhancement projects are designed to separate and buffer the site from the adjoining natural areas, improve the overall appearance of the facility and site, prevent off-site environmental impacts, promote community benefits of the Expo site, and restore and support native vegetation and habitat where appropriate.

Areas of environmental enhancements identified at the Expo site:

- On-site stormwater retention and treatment
- Landscaping and screening
- An existing environmental reserve

#### **On-Site Stormwater Management**

MERC has prepared a stormwater management report for the expanded Expo facilities that will reduce stormwater runoff rates and retain on-site a portion of the stormwater collected there. The remaining stormwater will be treated on-site before it is discharged to the environment. Stormwater management techniques, including parking lot landscaping, stormwater planters and infiltration basins, will be used on-site to reduce runoff rates while increasing the filtration of pollutants and sediments. These techniques can also increase groundwater recharge, reduce stormwater temperature, and minimize impacts to the surrounding environmental zones. The stormwater management report can be found in Exhibit F.

#### **Landscaping and Screening**

Development under the Expo Master Plan will include landscaping and screening to meet all applicable City of Portland site development standards for landscaping, screening and street trees.

#### **Existing Environmental Reserve**

MERC previously transferred a 6.3 acre environmental reserve to the Port of Portland for management. This environmental reserve helps screen and buffer the Expo facilities from the adjacent natural areas and will also help support wildlife habitat for a variety of species that use this area for shelter and food.