



1. EXECUTIVE SUMMARY

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This chapter establishes the basis for a coordinated twenty-year facilities plan for the four campuses on which Oregon Health & Science University (OHSU) operates: the Marquam Hill Campus, West Campus, South Waterfront Central District & Schnitzer Campus. A primary purpose of the plan is to bring OHSU facilities into congruence with its mission. Evolution of the institution is addressed briefly, and recent plans for various campus improvements are reviewed. A year-long planning process produced a clear vision of future facilities needs, drawing on the expertise of a wide range of OHSU faculty and staff members. Goals and guiding principles were established; organizing themes and constraints for each campus were identified. The planning effort resulted in specific scenarios – which can be characterized as firm yet flexible plans for sequential improvement of facilities – for implementation within ten and twenty year horizons.

Basis of the Plan

MISSION, FOUNDATION AND GOVERNANCE

The purpose of this twenty year facilities plan is to bring Oregon Health & Science University (OHSU) facilities into congruence with its mission, which can be summarized as follows:

- Educate tomorrow’s health professionals, scientists, engineers and managers in top-tier programs that prepare them for a lifetime of learning, leadership and contribution.
- Explore new basic, clinical and applied research frontiers in health and biomedical sciences, environmental and biomedical engineering and information sciences and translate these discoveries, wherever possible, into applications in the health and commercial sectors.
- Deliver excellence in health care and emphasize the creation and implementation of new knowledge and cutting-edge technologies.
- Lead and advocate for programs that improve health for all Oregonians, and extend OHSU’s education, research and health care missions through community service, partnerships and outreach.

OHSU is the largest research institution in Oregon, with approximately 2,500 medical, dental, nursing, science and engineering, allied health students enrolled, and another 1,000 in training programs. OHSU employs approximately 13,000 people, making it the largest employer in Portland and the fourth largest in Oregon. OHSU traces its origins to the University of Oregon Medical

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OHSU entry signage

School, founded in 1887 and one of the oldest medical schools west of the Mississippi River. OHSU was established as a freestanding academic health sciences university in 1974 when the Oregon Legislature mandated the combination of the University of Oregon Medical School, University of Oregon School of Dentistry, and University of Oregon School of Nursing. When it was established, OHSU also included OHSU Hospital, Doernbecher Children's Hospital, and the Child Development and Rehabilitation Center. At that time, OHSU was one of eight units within the Oregon University System and was governed by the Oregon State Board of Higher Education. Since 1974, OHSU has grown to include several research institutes and smaller research and clinical centers, a number of allied health training programs, and a series of multi-disciplinary units.

In 1995, OHSU became an independent public corporation, and its governance became vested in the OHSU Board of Directors. As a public body, OHSU retains close ties to the State. The OHSU Board is appointed by the Governor and confirmed by the Senate. In addition, that portion of the OHSU budget that comes from the state general fund appropriation must be submitted to the Legislature through a budget request to the State Department of Administrative Services, which is the same process as with public agency requests.

OHSU's 116-acre main campus, the Marquam Hill campus, is located on the West Hills immediately south of downtown Portland. Most of the developable land, about 70 acres, has been developed. OHSU's 263-acre West Campus in Hillsboro comprises three parts: the Oregon National Primate Research Center, the former Oregon Graduate Institute (OGI), and the Quatama property. Included on the West Campus are the School of Medicine Department of Biomedical Engineering and the Vaccine and Gene Therapy Institute. In 2006, OHSU sold the former OGI campus to Wakefield Capital under a leaseback arrangement that expires at the end of 2013.

In 2002, OHSU, in collaboration with several other entities, purchased approximately eight acres near the Willamette River in Portland to be OHSU's next area of growth. Construction of the 400,000 square foot Center for Health and Healing was completed in 2006 on part of this land, known as the South Waterfront Central District, to house physician practices, outpatient surgery, a wellness center, research labs, and educational space. A streetcar provides transit service to the area, and an aerial tram transports passengers to and from the top of Marquam Hill.

In 2004 the Schnitzer family donated a 19-acre parcel of riverside property that will allow OHSU to build a future education and research campus just north of the South Waterfront Central District. OHSU's School of Nursing also operates campuses in Ashland, Klamath Falls, Monmouth and LaGrande, Oregon.

RECENT CAMPUS PLANS

Although several planning studies of OHSU campuses and facilities have been undertaken during the past decade, none has resulted in adoption of an official long-range facilities plan to guide future growth and development. Recent planning efforts have, however, successfully shaped near-term development of the University:

- In 2003, the City of Portland adopted the Marquam Hill Plan. This was a special-district plan that provides a regulatory framework and clear entitlements for institutional expansion on the campus while also protecting adjacent residential areas, parks and natural areas.
- Planning efforts conducted between 1998 and 2002 led to the University's expansion on the South Waterfront, the construction of the Portland Aerial Tram, and the development of over one million square feet of new buildings (the Kohler Pavilion, the Center for Health and Healing, and the Biomedical Research Building). Although these studies were grouped under the title "OHSU 30 Year Plan" the plan was never adopted as such and is no longer used to guide facility planning.
- OHSU has developed a vision and development framework for the Schnitzer Campus, in which all three of the University's schools and the joint program in Pharmacy with Oregon State University (OSU) will be accommodated, providing a unique interdisciplinary environment for the education and training of health care professionals. The framework plan anticipates that

the development of the campus will be phased over the next two decades and will comprise over two million square feet of new education and research facilities.

Conspicuously absent is an integrated, long-range plan to guide the spatial distribution of programs and activities across OHSU's four campuses at Marquam Hill, West Campus (in Washington County), South Waterfront Central District and the Schnitzer Campus. The Plan which follows provides an overall view of existing and planned programs and activities, and the facilities needed to accommodate them. It begins by examining long established functional zones on the Marquam Hill Campus. It has since been determined that academic programs should be concentrated on the Schnitzer Campus, enabling a reconfiguration of facilities on the other three campuses. This will relieve pressure on the Marquam Hill Campus where many non-academic facilities compete for scarce space.

The Plan includes recommendations for reassessment of functional adjacencies, and for phased renovation or replacement of aging facilities. Recommendations rely on the recently completed facilities condition assessment which catalogues and prioritizes deferred maintenance needs across the Marquam Hill Campus. A list of other reference documents is included in the Appendix.

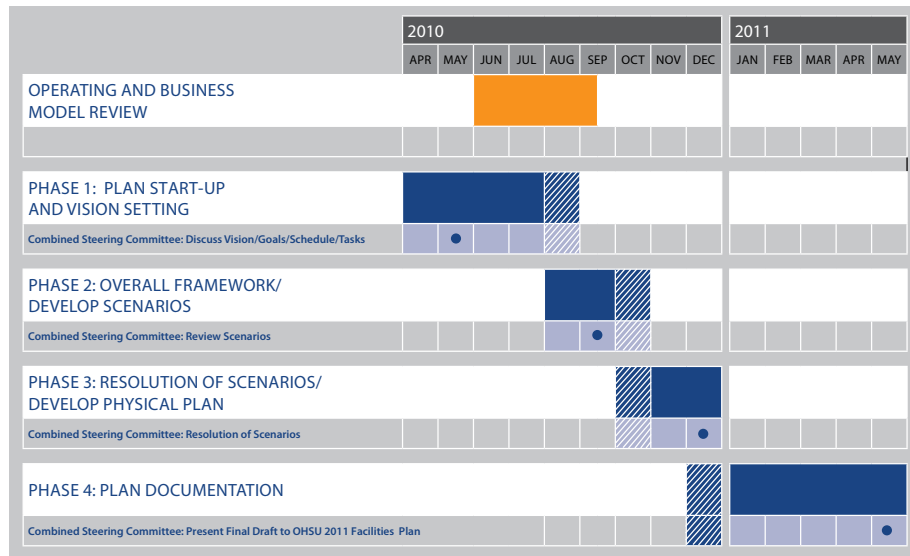
The Plan refers to the floor areas and other attributes of buildings using a number of different terms, such as GSF (gross square feet), FCI (facilities condition index) etc. These are explained in the Appendix under 'Definition of Terms'.

PLANNING PROCESS

A sound planning process may be the most important part of any planning exercise; without an inclusive approach to the collection of information and sharing of emerging ideas, consensus may be difficult to achieve. OHSU developed a comprehensive committee structure to provide continuity and campus-wide representation. The planning process included faculty, staff, administrators, and others.

The year-long planning process was divided into four major phases: Visioning, Framework + Scenarios, Resolution, and Documentation. The Visioning phase included data collection,

interviews and meetings, physical analysis of existing conditions, and subsequent discussion of vision, goals, schedules and tasks. The Framework + Scenarios phase developed and reviewed possible scenarios and approaches for organizing campus programs. These were reviewed with the various Steering Committees. The Resolution phase reviewed feedback from the prior phase and combined the best approaches into a preliminary plan and subsequently into a final plan. This portion of the process allowed users to test and refine specific recommendations of the plan. Finally the Documentation phase included the creation of the final graphics, refinement of text, and the production of this document.



Project Schedule

Vision

An optimally designed physical environment for health care, teaching and research is envisioned for each OHSU campus. The relationship between natural and built environments will differ significantly between campuses since they occupy fundamentally different places. On the Marquam Hill Campus, the vision is of a place conducive to thoughtful innovation in research as well as a place of health and healing. To achieve this, easy communication between collaborative departments and activities must be achieved, suggesting careful re-assessment of proximity needs. Movement through the campus should be a pleasurable experience, drawing enjoyment from built spaces and open spaces alike, navigating with ease by day and after dark. Service and other vehicular movements should be designed for efficiency, yet impinge little on pedestrian circulation. Parking should be convenient yet inconspicuous. Campus access by means other than driving alone should predominate. The

conspicuous virtues of the campus should be capitalized upon fully: memorable views, the forest setting, and a heritage that includes some fine buildings.

A primary objective of the Plan is to provide a clear guide for OHSU site decisions and capital planning for each campus over the next twenty years. Plan recommendations must therefore be practical, fiscally sound, and sufficiently flexible to accommodate inevitable and unforeseeable changes. The vision presented in this Plan is one of progressive improvement and creation of facilities that will enable the institution to reach the new heights to which it aspires in health care, teaching and research. The Vision 2020 Strategic Plan puts a new emphasis on integration, collaboration, sustainability and accountability. These values underlie the vision and recommendations presented in this Plan. The vision is summarized in the project goals and guiding principles that follow.



View to city of Portland from Marquam Hill Campus

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Marquam Hill Campus Expansion 2003 - 2007

Project Goals & Guiding Principles

Each of the five project goals that follow is expanded upon by principles that will guide design towards goal achievement.

GOAL 1: RECOMMENDATIONS OF THE PLAN MUST BE ACHIEVABLE.

Both physical and financial feasibility often depend on specific timing, and all must be aligned to make each project achievable. To this end, the facilities plan must be aligned with business and strategic goals, and coupled to a realistic financing strategy; facilities improvements must be implementable with minimal disruption of other campus activities, and should be phased accordingly. Investments in facilities must be sustainable, so debt burden and operating costs must be carefully considered. Facilities investment decisions should be based on life-cycle costs rather than on initial capital costs.

GOAL 2: FUNCTIONS OF THE UNIVERSITY MUST BE FULLY INTEGRATED WITH ONE ANOTHER.

Each improvement must be consistent with OHSU's strategic overview, and must be coordinated with both existing and planned improvements. For example, coordination of functional adjacencies between facilities will foster collaboration between people and programs. In some instances, telecommunication will be sufficient to integrate efforts, in others, physical proximity will be necessary, and for some, impromptu face-to-face

meetings may be important to stimulate interaction between programs and disciplines. The consequences of both collocation and separation of facilities should be considered, as should the potential of open space and informal gathering places to promote integration through interaction. The attributes of each potential site for a facility should be evaluated for its potential ability to further integration between programs and functions of the institution.

GOAL 3: THE PLAN MUST BE SUFFICIENTLY FLEXIBLE TO ACCOMMODATE CHANGE.

It is inevitable that unforeseen facilities needs will arise. To accommodate change, facilities planning, timing and design must be intrinsically flexible. Eventual adaptive reuse of buildings should be anticipated in the design of new structures, systems and spaces. The plan should be implementable through various phasing and sequencing scenarios. Consideration should be given to use of modular components that can be changed or upgraded with minimal disturbance to operations.

GOAL 4: THE PLAN MUST ACHIEVE BALANCE BETWEEN COMPETING INTERESTS.

Each campus occupies a different physical setting, and must establish an appropriate relationship with its surroundings to enhance environmental sustainability, protect natural resources,

and maintain harmony with neighbors while fully meeting program needs. In some instances, the internal program of a building may be at odds with its surroundings, and a balance must be found between internal and external demands. Such balance will depend on the contribution of each component of the campus: buildings, open spaces and other improvements; and each is to be designed with this balance in mind.

GOAL 5: CAMPUSES AND BUILDINGS MUST BE UNIVERSALLY ACCESSIBLE.

The design of campus buildings and open spaces must of course satisfy the requirements of the Americans with Disabilities Act by removing barriers to physical access. Design should also enable easy navigation of the campus through clear sightlines, good signage and lighting, and creation of a series of distinct places around the campus. Priority should be given to safe and convenient circulation on foot by keeping vehicle routes separate from pedestrian ways wherever possible.

Organizing Themes & Constraints

The organizing themes at each campus relate to natural setting, functional access, and the need for continuous change. Constraints relate to the size and configuration of each campus, the uses of adjacent properties, campus access, topography, geology, micro-climate and limitations imposed by development regulation. Themes and constraints affecting the planning of each campus may be summarized as follows.

THE MARQUAM HILL CAMPUS

Organization of the Marquam Hill Campus is dominated by topography and its influence on the siting and orientation of the earliest buildings, which chose the largest and flattest sites to which road access could be built economically. Successive buildings followed the same logic, leading to the appearance of an organic scatter of buildings. Some order is imposed on this layout by the sinuous roads that wind up the hillside, dividing the campus into sub-districts. The steep margins of the campus are forested, and the woodland provides a sense of enclosure of the campus, separating it from nearby residential communities. A third organizing force is the sweep of distant views from northeast to south. These influence the orientation of buildings on the campus to capture the best views available from each site.



Marquam Hill Campus

Campus size and topography combine to impose the greatest constraints to development of the Marquam Hill Campus. 40% of the 116 acre campus is unbuildable, mostly because the land is too steep. The elevation at the ground floor of buildings varies by as much as 200' across the campus, complicating circulation and service access between them. Conforming buildings to wildly variable topography has imposed unusual cost on construction and logistics.



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Another set of constraints relates to access. Until the aerial tram was completed, the Marquam Hill Campus was only accessible via Terwilliger Blvd, Sam Jackson Park Road and Gaines Street; all limited capacity streets that also serve nearby residential neighborhoods. Terrain, geometry and neighborhood impacts make increases in the capacity of these streets practically infeasible, so available capacity has been apportioned among those who rely upon them. One result is an upper limit on the number of parking spaces that the campus may provide. Any increase in

people using the campus – including patients and visitors as well as students and employees – must therefore carpool, bike or walk (very few trips are within walking distance) or travel by public transit or the aerial tram. Parking is regulated by the City of Portland which administers a number of other development restrictions including maximum building heights which vary with topography. These and other regulations relate to agreements for protection of natural resources and nearby residential neighborhoods as well as controlling other physical parameters such as development massing and landscape requirements.

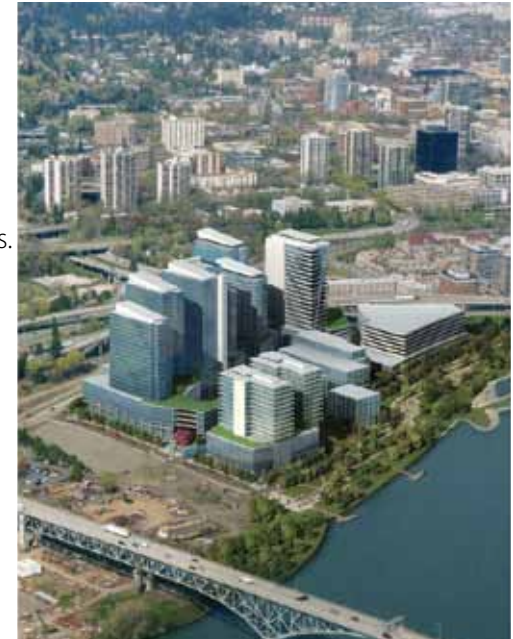
SCHNITZER CAMPUS VISION

Primary organizing influences for the Schnitzer Campus framework plan are the size and configuration of the relatively flat 19 acre site, views across the river, and solar access. The orientation to east and south suggested by these is reinforced by the proximity of freeway structures to the north and west. The campus will form the northern terminus of the South Waterfront street system, and access will be primarily from Moody Street on the West or from the future light rail station on Porter Street which comprises the southern boundary of the campus. An unusual feature of the site is that the grade of all future public streets that bound the campus will be up to 14' above existing ground level. This presents the opportunity of locating building entries at this level with parking or other uses below, and of sloping the site down towards the river.

The organizing theme of the framework plan is to arrange buildings in two ranks parallel to the river with a landscaped central promenade between them which is closed at the north by a building that masks the freeway structures of the Marquam Bridgehead. Functionally the theme is academic and research bringing the three schools (Medicine, Dentistry, Nursing) from the Marquam Hill Campus together with the joint OHSU/OSU School of Pharmacy program and allied teaching programs offered in partnership with the Oregon University System.

Constraints to development of the Schnitzer Campus are the freeway structures to the north and west. Also the fixed entry points of Bond Street and River Parkway into the campus constrain the location of buildings and limit automobile access. Building siting is further constrained by the alignment of Moody Street to the west, and a greenway setback between River Parkway and the river on the east. Much of the existing ground level is at or below the hundred-year flood level, and any occupiable space must be at least two feet above that flood level.

Another constraint which pertains primarily to the cost of construction concerns soil conditions. Most structures will require deep pilings, and in many locations, pilings will penetrate capped contaminated soils. Unlike the Marquam Hill Campus, there are no sensitive land uses nearby other than the river and its closely regulated ecology.



From Schnitzer Campus Vision

SOUTH WATERFRONT CENTRAL DISTRICT

The theme of the South Waterfront Central District is connectivity. It marks the intersection between the Marquam Hill Campus, to which it is connected by the aerial tram, and the Schnitzer Campus to which it is connected by future Bond Street, Moody Street and the streetcar line. Though standing alone now, the landmark Center for Health & Healing building will eventually be linked to the Schnitzer Campus by a series of developed city blocks. It can be expected that the other OHSU owned blocks of the South Waterfront Central District will complement and reinforce the landmark character of the existing building, although its prominence from the freeway may be diminished by future development to the west.

The most striking constraint to the South Waterfront Central District is the grid of streets that define the city blocks of which it is composed. These effectively determine the orientation and maximum footprint of building on each block. River views are limited by high-rise towers ranged along the Greenway, but upper floors of the existing building enjoy good views in all directions.



South Waterfront Central District

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WEST CAMPUS

The 263 acre West Campus differs from the other OHSU campuses in its suburban setting and spacious configuration. Twelve miles west of the Portland campuses, West Campus is made up of several adjacent properties including the Oregon National Primate Research Center (ONPRC) and the former Oregon Graduate Institute (OGI). The campus is bounded to the south by the Westside light rail line, with housing beyond. To the northwest is the 220 acre Amberglen Business Park. Bronson Creek divides the campus diagonally from northeast to southwest, separating the western 54 acres of undeveloped land identified as the Quatama property, with the Quatama light rail station at its southwest corner.

A 1998 Concept Development Plan (i.e. conditional use plan) provides a framework for ONPRC expansion for the next decade, detailing the location of service roads, parking, animal facilities and future research buildings. The future of the Quatama parcel to the west and across Bronson Creek from the ONPRC is potentially a site for joint development. The City of Hillsboro has adopted the Amberglen Community Plan that proposes denser development of the land and a design framework that contemplates a more urban character with mid to high rise residential development. A light rail extension may branch off the current Blue Line to connect to Tanasbourne and areas to the northwest.



© Jeffrey Schilling

West Campus, Cooley Science Center

Campus Framework

The Campus Framework and Facilities Scenarios focus future investment on the four campuses and are predicated by seven specific objectives. The objectives were derived from a series of meetings with OHSU faculty and senior staff, and represent a consensus among them on current priorities.

OBJECTIVES

1. Preserve development capacity on Marquam Hill for future inpatient bed expansion.
2. Link building expansion directly with building disposition and backfill.
3. Implement the Schnitzer Campus Vision and plan for one new facility every five years in order to build out the campus in 20-30 years.
4. Preserve land in the Central District for ambulatory expansion and OHSU support services.
5. Focus research activities on three campuses: Marquam Hill, West and Schnitzer. Limit future research growth in the South Waterfront Central District.
6. Greatly reduce leased space costs by vacating the former OGI Campus in 2013 and all support service leases by 2017.
7. Seek opportunities for progressive “Campus Repair” on the Marquam Hill Campus by developing complementary relationships between buildings and adjacent open spaces, reinforcing safe and convenient circulation throughout the campus.

20 Year Facilities Scenario

The 20-year facilities scenario is intended to provide a framework for the growth and development of OHSU and each campus. It is called a scenario rather than a plan because specific elements and the timing of implementation will inevitably change. Nonetheless, the intent of the scenario is to identify a logical path forward for programmatic and capacity expansions and the resulting impacts on campus development and support infrastructure. The following projects are representative of feedback received by the Steering Committees and other stakeholders who participated in the Facilities Plan process as summarized in chapter four.

The facilities scenario is divided into two ten year periods, years 2011 through 2020 and 2021 through 2030. The first decade is intended to provide more detail and represent projects that have already been discussed and vetted. While not all of the projects have been approved, they should be familiar to most stakeholders and consistent with the University's ten year financial plan.

The second decade is much less detailed and more speculative than the first. These projects are more likely to change, but they were identified through the steering committee process and in many cases were listed as priorities, but they were pushed out to the second decade due to resource limitations. Nonetheless, the second decade of the scenario helps inform the sequence of events that must happen in the near term to prepare sites and allow for phased expansion of programs.



OHSU IN 2030

Plan Implementation

Long-range planning at OHSU is an occupational challenge. The University is constantly evolving with new employees and faculty recruits bringing new ideas to bear on ways to better fulfill the healing, discovery and education missions of OHSU. Further, as the recent economic recession demonstrated, exogenous factors can have an enormous impact on the growth and development of the campus as they force us to reexamine our plans when circumstances change. Therefore, the most important characteristic to ensure the success of this Plan is flexibility.

The intent of the Plan is to create a framework that will guide the growth and development of OHSU's campuses, but is flexible enough to accommodate changes when projects are modified, delayed or cancelled. The plan implementation section focuses solely on Phase I projects since identifying action steps for projects that are more than a decade out requires a high degree of speculation about future circumstances and resources that are impossible to predict.

This Plan will be updated internally every two years by the OHSU Campus Planning, Development and Real Estate Department with the goal of undertaking a major update once every decade.

Phase 1 Plan Budget

Only the eight major facility projects of the Phase I Plan are summarized below. The total estimated cost of the OHSU portion of these projects is \$516.5 million which represents about half of OHSU's total forecasted capital expenses for 2011-2020. This figure does not include a budget for ambulatory expansion as the

project is unknown at this time. Three ambulatory options have been identified for further study. The proposed Support Services Building is also listed without a budget as this project is primarily a leased space strategy, but will likely require capital for furniture and equipment.

PHASE 1: MAJOR PROJECTS	BUDGET	COMMENTS
OHSU/OUS Collaborative Life Sciences	\$100MM	Amount does not include \$80MM of OUS funds. Total project is \$180MM.
Schnitzer Campus Building II	\$105MM	School of Dentistry & Research
DCH Center for Mothers and Babies	\$155MM	
OHSU Hospital Backfill	\$21MM	OHS 12 backfill
Lot 83 Parking Garage	\$15.5MM	Amount does not include logistics space
Ambulatory Expansion	TBD	Three options for further study
Support Services Building	TBD	Lease strategy. No capital budget available.
Schnitzer Campus Building III	\$120MM	Preliminary placeholder in CFO's 10-year financial plan
Subtotal	\$516.5MM	

Phase 1 Plan Schedule

The following schedule identified the anticipated start and end dates for the eight major projects of the Phase I Plan. The start date includes pre-development planning and design. The end date is the projected occupancy date.

PHASE 1: MAJOR PROJECTS	START DATE	END DATE
OHSU/OUS Collaborative Life Sciences Building	Underway	FY14
Schnitzer Campus Building II	Underway	FY14
DCH Center for Mothers and Babies	FY12	FY15
Lot 83 Parking Garage	FY12	FY16
Ambulatory Expansion	FY13	TBD
Support Services Building	FY13	FY17
OHSU Hospital Backfill	FY14	FY16
Schnitzer Campus Building III	FY14	FY17