5. FACILITIES PLAN

5. FACILITIES PLAN

The purpose of this chapter is to bring together the program of known facilities needs reviewed in the preceding chapter with the capacity of each campus to accommodate programmatic and facility expansions. Proposed improvements are paced over twenty years to accommodate the realities of funding, logistics and construction.

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 occupyable 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

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.

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 & 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 Phasing

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.

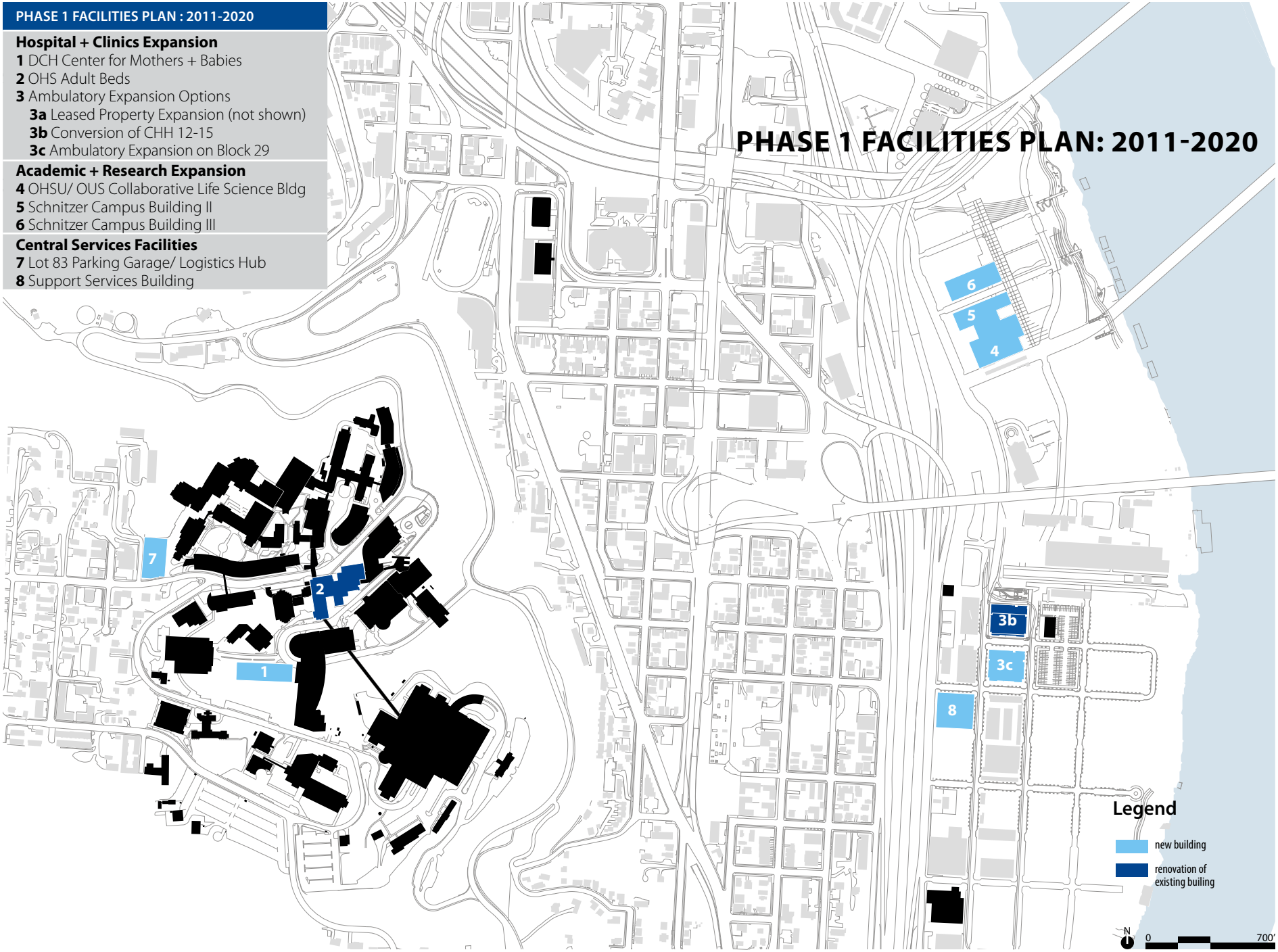
PHASE 1 FACILITIES PLAN: 2011-2020

PHASE 1 FACILITIES PLAN : 2011-2020

Hospital + Clinics Expansion
1 DCH Center for Mothers + Babies
2 OHS Adult Beds
3 Ambulatory Expansion Options
3a Leased Property Expansion (not shown)
3b Conversion of CHH 12-15
3c Ambulatory Expansion on Block 29

Academic + Research Expansion
4 OHSU/ OUS Collaborative Life Science Bldg
5 Schnitzer Campus Building II
6 Schnitzer Campus Building III

Central Services Facilities
7 Lot 83 Parking Garage/ Logistics Hub
8 Support Services Building



Phase 1 Facilities Plan: 2011-2020

HOSPITALS AND CLINICS EXPANSION

The clinical enterprise and demand for both inpatient beds and outpatient services are expected to grow between two and three percent annually during the next decade. As mentioned in the previous chapter, the hospital's inpatient occupancy rate is projected to exceed 85% in FY'11 and hit 90% by FY'15 despite the addition of 30-40 beds during that same period. Accommodating this growth, while also resolving functional and programmatic obsolescence, is the major facility challenge confronting OHSU Healthcare.

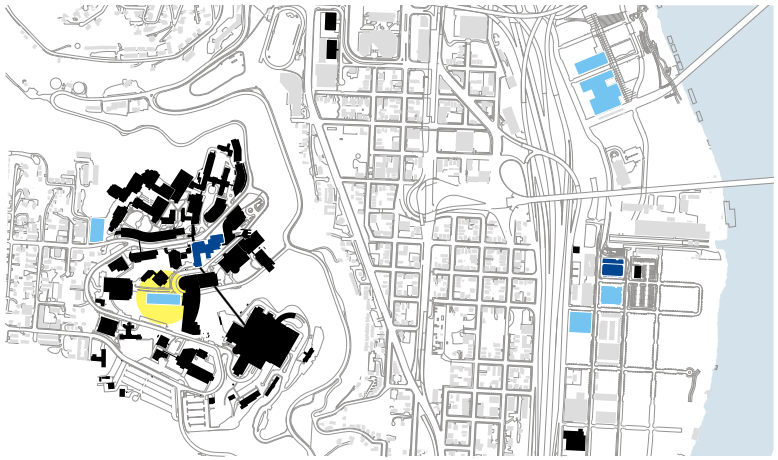
The Facilities Plan recommends that three major sites on the Marquam Hill Campus be reserved for future hospital and inpatient bed expansion. The three sites are the current location of the School of Dentistry, the area immediately north of the Kohler Pavilion, and the parking area and hillside west of Doernbecher Children's Hospital. These sites can collectively accommodate close to a million square feet of hospital expansion and as many as 750 inpatient beds if future facilities are sized to maximize the site footprints and zoning capacity. While it is unlikely that OHSU will ever have the need to grow that large, the three sites should be preserved in the event that future planning efforts conclude that the current hospital has reached functional obsolescence and needs to be phased out of service for inpatient uses. That will not happen during the 20-year timeframe of this plan.

Three major patient care projects are proposed for the first ten years of the Facilities Plan. The first two are interrelated and will likely be implemented as one project. The third project, ambulatory expansion, identifies three options for further study.

1. Doernbecher Children's Hospital Center for Mothers & Babies

Planning for the expansion of Doernbecher Children's Hospital (DCH) is underway in 2011. The revised program of the new Center for Mothers and Babies is a 48 bed Neonatal Intensive Care Unit (NICU) and 36 ante and postpartum beds with 12 to 14 labor and delivery rooms. The site of this expansion is above Doernbecher's current entrance and parking area and portions of the adjacent hillside. This program allows for the centralization of the maternal care unit with fetal diagnosis and therapy, a new NICU with all private rooms, and expanded imaging and pediatric sedation facilities. The expansion also includes a new short stay surgery unit with 24 rooms which allows for the relocation of this service out of Multnomah Pavilion. The expansion on this site could also include space to relocate the clinical labs out of Dillehunt Hall to new and expanded space if resources allow.

Phase 1: 2011-2020 Hospital + Clinics Expansion: DCH Center for Mothers & Babies



Matching the number of available hospital beds to demand from year to year is critical to the success of OHSU's healthcare mission. This plan recommends reservation of three sites on the Marquam Hill Campus to meet this need for future hospital and inpatient beds:

- The School of Dentistry site;
- The area immediately north of Kohler Pavilion; and
- The parking lot and hillside immediately west of Doernbecher Children's Hospital.

The third site is to accommodate the Doernbecher Children's Hospital Center for Mothers and Babies, as pictured above.

2. OHSU Hospital Backfill

As a result of relocating the NICU and Labor and Delivery (L&D) Rooms to the new DCH Center for Mothers and Babies there would be a subsequent remodel to the A, B, and C wings of the 12th floor of the OHSU Hospital (OHS). The relocation of the NICU and L&D rooms frees up space to remodel these areas into 45 adult inpatient med/surge rooms. This remodel is within the existing hospital and will also be supported by existing mechanical, electrical, and hospital support services.

Further, by moving the ante and post partum rooms to DCH the B and C wings of the 13th floor can be repurposed to 29 additional adult inpatient med/surge rooms (this number includes the additional 11 rooms in 13 B wing that are already approved). There would be minimal additional cost for this conversion.

In summary, the hospital will net 74 additional adult med/surge beds due to the backfill of space in OHS resulting from the DCH expansion. The timeframe for this conversion is approximately one year after the DCH project is completed. There is no more affordable option to add additional inpatient bed capacity than to renovate OHS units once maternal and neonatal functions have been moved out.

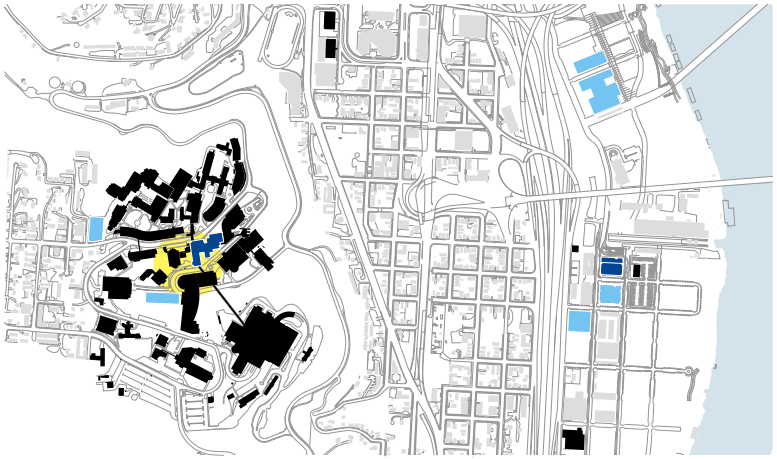
3. Ambulatory Expansion Options

In order to accommodate significant inpatient bed expansion on Marquam Hill over the 20-year life of this plan, ambulatory expansion must continue to occur in South Waterfront and other locations throughout the region. Limited roadway access and insufficient parking significantly restrict future ambulatory expansion on the Marquam Hill Campus. The Patient Care Steering Committee discussed three options to accommodate growth in ambulatory services. These options require further study and must be aligned with the hospital and the Faculty Practice Plan's outpatient clinics business strategy. The three options are listed in order of increasing capital costs.

3a. Leased Property Expansion

The first ambulatory expansion option is to lease space for primary and multi-profession specialty clinics in desirable market locations throughout the Portland and southwest Washington region. Currently, OHSU and Faculty Practice Plan (FPP) have community based sites for oncology, family medicine, orthopedic, pediatric, and ophthalmology services. However, leasing decisions are made at the department level and there is no comprehensive strategy for integrating primary or specialty clinics in OHSU branded facilities with imaging and lab services. OHSU and FPP should explore an aligned business and real estate strategy to collocate services in four or five highly

Phase 1: 2011-2020 Hospital + Clinics Expansion: OHS Backfill



Upon completion of the Doernbecher Children's Hospital Expansion project, the OHS main hospital will have backfill space available for adult inpatient medical/surgical capacity. The 12th floor A, B, and C wings would be remodeled to add private patient rooms. Other remodel opportunities on the 13th and 14th floors B and C wings would take place as well adding 74 adult beds.

visible and accessible leased sites throughout the region. This strategy would require a level of coordination between multiple departments in the hospital and the School of Medicine similar to the effort that resulted in the Center for Health and Healing (CHH).

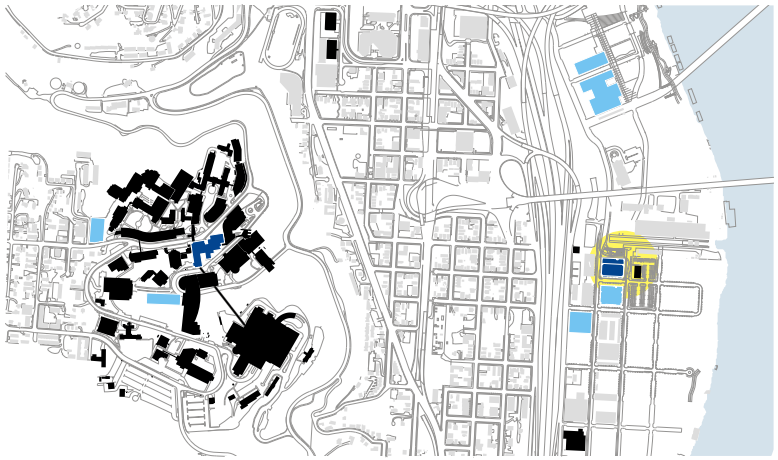
3b. Conversion of CHH 12-15

The second option to accommodate ambulatory expansion is to convert the academic and research floors in CHH to outpatient clinics. The twelfth through fifteenth floors that are now occupied by non-patient care programs comprise about 80,000 square feet. Displacing these occupants to one of the proposed Schnitzer Campus Buildings would be disruptive and expensive as it would require the construction of new space and the relocation of these departments. Further, the project must include the renovation of office and research labs in CHH to clinic space. Nonetheless, adding research and academic programs to a new building has an incremental cost that would likely be cheaper than building a new ambulatory building on the block south of CHH. Further, if the ambulatory space need is significantly less than 200,000 square feet then it makes sense to explore this and the previous leased site options rather than bear the opportunity cost of constructing a small ambulatory building on a site zoned for much higher capacity.

3c. New Ambulatory Building on Block 29

The third option to accommodate ambulatory expansion that is recommended for further study is to construct a new ambulatory tower on the block immediately south of CHH (block 29). The block already has underground parking shared with CHH and from a patient way-finding perspective it makes sense to reserve this site for future ambulatory uses rather than directing patients to multiple parking garages in the South Waterfront Central District. Due to the scarcity of OHSU owned land in this highly accessible area, it is not recommended to build anything less than 200,000 square feet on this site. A second ambulatory tower could absorb the growth of existing clinics in CHH and Physicians Pavilion as well as accommodate the relocation of outpatient services out of Doernbecher Children's Hospital and the Casey Eye Institute so those spaces can be reconfigured for non-outpatient uses.

Phase 1: 2011-2020 Hospital + Clinics Expansion: Ambulatory Expansion



One option for accommodating ambulatory care facilities in the South Waterfront Central District is to convert academic and research floors 12 - 15 in CHH, relocating those facilities to the Schnitzer Campus. Another option is to construct a new ambulatory tower immediately south of CHH on Block 29. A third possibility is to decentralize ambulatory services into multiple leased properties located close to large employment centers of places served throughout the Portland and Southwest Washington region.

ACADEMIC AND RESEARCH EXPANSION

The following three projects are consistent with the programmatic direction from the Academic and Research Steering Committee to implement the Schnitzer Campus Vision. These three buildings represent the first three phases of the new campus and development will begin at the southwest corner of the campus and continue to the north along Moody Street.

If the three projects represent any change to the original Schnitzer Campus Vision, it is that they include more research space than the education focused campus proposed in 2007. The revised vision is for an integrated research and education campus with core research facilities that rival the research facilities on the Marquam Hill Campus. As mentioned in the previous chapter, one of the programmatic recommendations is to limit core research facilities to three locations: Marquam Hill, the Schnitzer Campus, and the Oregon National Primate Research Center (ONPRC). This means that no additional research space will be added to the South Waterfront Central District due to the capital and operating costs of supporting a fourth research core.

At the end of the first decade the new Schnitzer Campus will house the first two years of the School of Medicine's MD program, the Physician's Assistant and Radiation Therapy programs, the entire School of Dentistry, the joint OHSU/OSU College of Pharmacy program, PSU's basic Chemistry and Biology programs, and, potentially, a future School of Public Health jointly offered by OHSU and PSU.

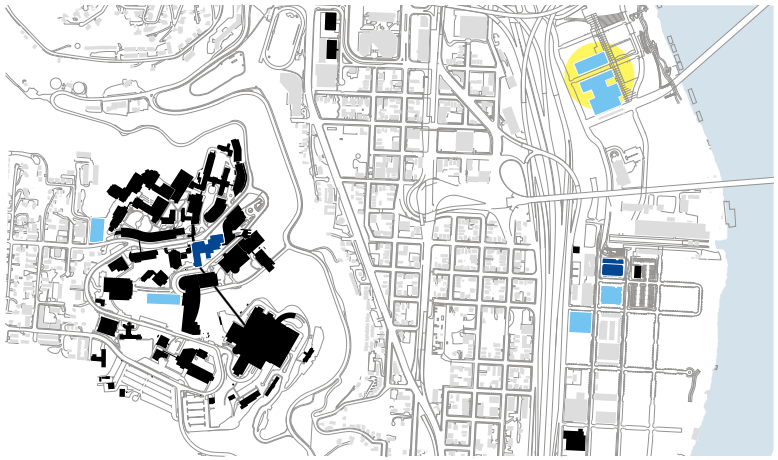
1. OHSU/OUS Collaborative Life Sciences Building

As the first phase of the new Schnitzer Campus, the OHSU/OUS Collaborative Life Sciences Building will set the standard and tone for subsequent phases. As such, careful attention and documentation must be made to ensure a coherent design approach that can be replicated in future phases. The project also represents the first physical manifestation of a strategic alliance between OHSU and the Oregon University System. The success or failure of this project will likely influence whether the two institutions partner on future projects.

The Collaborative Building sits at the southwest corner of the Schnitzer Campus on the 90,000 square foot block bounded to the west by SW Moody Street, to the north by future Meade Street, to the east by the future Campus Promenade, and to the south by the Porter Street transit-way. The project will accommodate student growth in all of the programs that will relocate to the new building:

- OHSU School of Medicine MD Program: 160 students per class year;
- OHSU School of Dentistry DMD Program: 90 students per class year;
- OHSU Physician's Assistant Program: 60 students per class year;
- Radiation Therapy Program: 10 students per class year;
- PSU Undergraduate Chemistry and Biology Programs: 500–seat lecture hall and larger teaching labs to accommodate larger classes;

Phase 1: 2011-2020 Academic + Research Expansion: OHSU/OUS Collaborative Life Sciences Building



The first three buildings on the Schnitzer Campus are planned for construction in the first ten year implementation phase of the plan. First to be built will be the OHSU/OSU Collaborative Life Sciences Building, which will incorporate both teaching and research facilities. Located adjacent to SW Moody Street on the southwest corner of the campus, there will be direct access to light rail, streetcar and bus services on SW Porter Street.

- OSU/OHSU College of Pharmacy PharmD. Program: 90 students for the third year in Portland;

As currently proposed, the Collaborative Building program includes approximately 300,000 gross square feet and 275 parking spaces. In addition to the education programs, the building will house the research labs and offices for the OHSU Center for Spatial Systems Biomedicine (OCSSB).

The OHSU/OUS Collaborative Life Sciences Building is expected to be completed by the fall of 2013. At that time, the programs listed above will relocate to the new building. The spaces that these programs currently occupy on the Marquam Hill Campus and in CHH will be backfilled by other OHSU academic and research programs. Top priority for backfilling these spaces will be to relocate uses from the OGI portion of the OHSU West Campus before that lease expires in December 2013.

2. Schnitzer Campus Building II

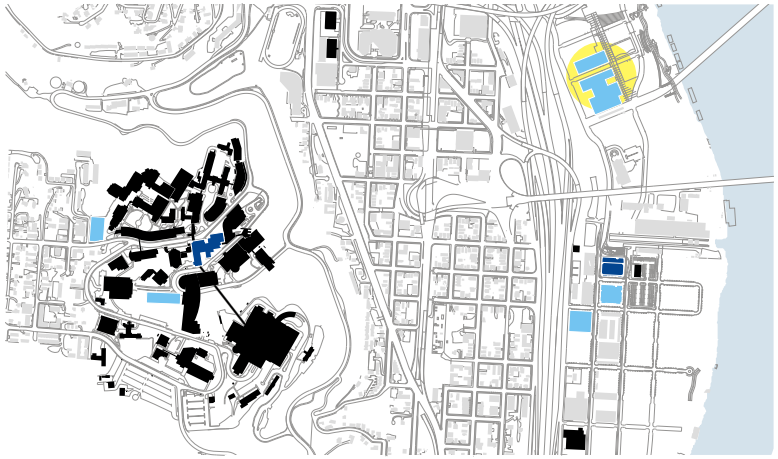
The second building proposed for the Schnitzer Campus shares the same block as the OHSU/OUS Collaborative Life Sciences Building and will be seamlessly connected to that building at the parking and plinth levels. The program for Building II includes the following elements:

- The remaining School of Dentistry programs and services not already included in the Collaborative Building. Specifically, the dental clinic, administration space for faculty and the Dean, and the SOD research labs.
- Up to 40,000 net assignable square feet of unassigned research labs to accommodate research program growth over the next five to seven years. Half of this research space may be left in a shelled state rather than built-out when the building opens since it is intended to accommodate future research growth.
- 200 additional parking spaces to be seamlessly integrated with the 275 phase I parking spaces.

At this time, the total program space is estimated to be about 170,000 gross square feet, not including the parking areas. If this project is approved in the summer of 2011 then the building may be built at the same time as the Collaborative Building with a slightly delayed occupancy date of early 2014.

Two site layout and massing options have been proposed for the second building on the Schnitzer Campus. The first option is a two tower scheme with Building II built on the north half of the block with a shared plinth that connects this phase to the Collaborative Building. The second option is for the Collaborative Building to sit on the entire block footprint with Building II built atop the northern half of the Collaborative Building. Both options are technically and operationally feasible.

Phase 1: 2011-2020 Academic + Research Expansion: Schnitzer Campus Building II



The second teaching and research building to be constructed on the Schnitzer Campus will be immediately north of the first and attached to it at plinth and underground levels. It will include the balance of Dental School facilities and unassigned research labs to accommodate research program growth over the subsequent 5 to 7 years.

3. Schnitzer Campus Building III

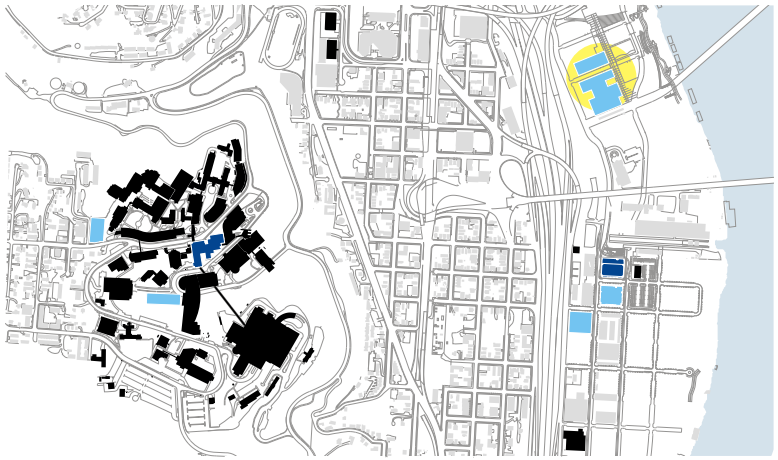
The final academic and research facility proposed during the first decade of the Facilities Plan is a third phase of the OHSU Schnitzer Campus. This building is proposed to be located on the site adjacent to Building II and immediately north of future Meade Street. This block is intended to accommodate two buildings and Building III must be designed to accommodate a second building on the site.

The program for Building III is less detailed at this time, but it is envisioned as a research building that could accommodate the Center of Emphasis growth of the Knight Cancer Institute. While originally proposed for Block 33 in the South Waterfront Central District, the site of this proposed research facility was moved to the Schnitzer Campus for three reasons:

- As discussed above, this plan recommends limiting core research facilities to three locations: Marquam Hill, the Schnitzer Campus, and the ONPRC. It is too expensive to build and operate a fourth research core in the Central District. While Block 33 is only a quarter mile south of the Schnitzer Campus, imaging and Comparative Medicine facilities will be incorporated into Schnitzer Campus Buildings and extending those services to Block 33 would be a challenge.
- The second reason for loca ng this proposed research building on the Schnitzer Campus is due to the programmatic adjacencies of research space in the first two Schnitzer Campus Buildings (the Collaborative Building and Building II). If Building III research space is built for the Knight Cancer Institute, for example, there will likely be Knight investigators already housed in the first two buildings. While the original vision was to relocate all Knight Cancer Institute staff and programs into one building, in all likelihood resources will prevent a new building large enough to accommodate the entire program. Spreading the Knight across two or three adjacent building on the Schnitzer Campus is preferable to spreading staff and researchers between two campuses.
- Finally, Building III may include additional office and classroom space to accommodate a new OHSU/PSU School of Public Health. The Academic and Research Steering Committee has stated that this proposed school should be located on the Schnitzer Campus rather than any other potential location.

Schnitzer Campus Buildings II and III should be designed to accommodate connections below future Meade Street. The City of Portland prohibits above grade crossings of public streets (i.e. sky bridges). Therefore, it makes sense to anticipate a future connection below Meade Street to allow researchers in Building III to access research space and core facilities in the Collaborative Building and Building II.

Phase 1: 2011-2020 Academic + Research Expansion: Schnitzer Campus Building III



The space program for the third building is less precisely defined than those for Buildings I & II, but it is expected to include substantial research space as well as classrooms and faculty offices. It may also include a new OHSU/PSU School of Public Health. This building will be north of Buildings I & II and separated from them by the future Meade Street, connecting Moody Street to River Parkway and the waterfront.

CENTRAL SERVICE FACILITIES

Central services at OHSU don't grow or expand for their own sake, but to better serve the University's three missions: patient care, research and education. Two major central service projects are proposed for the first decade of the Facilities Plan; however, neither of these projects is currently in the University's ten year financial plan. Therefore, new partnership and revenue opportunities must be explored to make these critical projects a reality.

1. Lot 83 Parking Garage/Logistics Hub

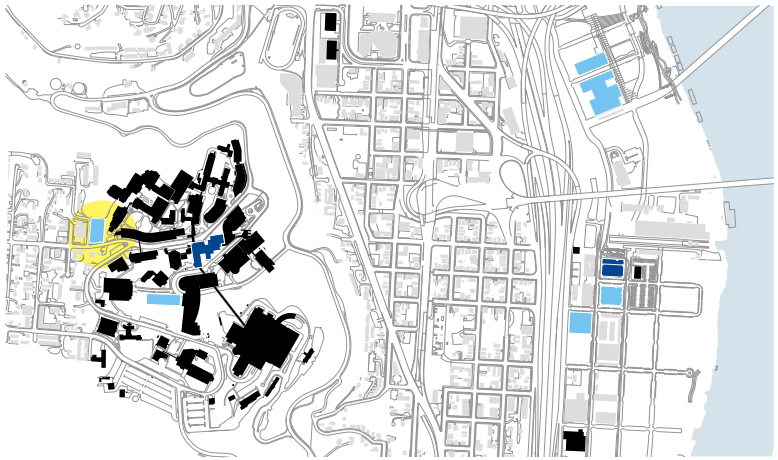
OHSU has the code entitlement for approximately 530 additional parking spaces on the Marquam Hill Campus. Any additional spaces above that number will require a campus-wide transportation impact study and a more discretionary approval process. Further, the parking garage must be submitted for approval prior to August 1, 2012 and OHSU would realistically have three to five years to build the garage once it is approved.

It is recommended that OHSU design and submit for approval a parking garage on the site of Lot 83, the surface parking lot located west of the Auditorium Building (Old Library). This site may accommodate a garage with as many as 500 parking spaces, but the net increase would be closer to 400 due to the loss of 90 existing spaces on Lot 83. To remain consistent with the Marquam Hill Plan's vehicular circulation site development concept, the parking spaces in the new garage should be limited to staff permit parking and an equivalent number of permit parking spaces located in the Canyon, Campus Drive or Casey Eye parking garages should be converted to patient and visitor parking. This change would emphasize Campus Drive as the primary patient and visitor entrance while Sam Jackson Park Road remains the employee and student entrance to campus.

If possible, the first floor of this garage should be designed to replace Dock 4 and related logistics space. In interviews with logistics staff, they voiced concern with the age, size and condition of the existing Dock 4 and their vision for a larger logistics hub to serve the north side of campus. While the Lot 83 site is constrained, the design of the new garage should be studied to determine whether the space can accommodate a parking garage with space and freight access for a new dock and logistics hub. This may require cars to enter and exit on the west side of the proposed garage from SW 9th Avenue while the driveway on the east side of the garage would be limited to truck and freight access.

Discussions with logistics staff confirmed that the ideal location for a new Logistics Hub is Dock 8 in the hospital (OHS), but additional space adjacent to that dock is not available. Further, simply rebuilding Dock 4 on its current location is not feasible because the site footprint is too small and it would conflict with the future parking garage. The Facilities Plan Steering Committee explored the possibility of building a standalone logistics hub somewhere else on campus, but that project was

Phase 1: 2011-2020 Central Service Facilities: Lot 83/ Logistics Hub



The demand for central services grows in proportion to patient care, education and research, and a new logistics center is needed on the Marquam Campus. The recommendation is to locate it on Block 83 with a parking structure above it to accommodate displaced parking from the site and approximately 400 additional parking spaces. At ground level, Dock 4 and related logistics space would be replaced with larger facilities capable of serving the whole northern part of the campus.

not embraced as a priority for funding. Instead, the direction from the Steering Committee was to try to incorporate a logistics hub into another project.

2. Support Services Building

OHSU currently leases 130,000 rentable square feet (rsf) in three buildings located downtown and in the South Waterfront for central service staff and programs (this does not include the remaining space in ADP for two non-central service programs). In addition to these leased sites, the OHSU Foundation leases 25,000 rsf in downtown and University Medical Group (UMG) Billing leases 25,000 rsf in the Lloyd Center. Together, this leased space portfolio of OHSU and OHSU-affiliated entities totals 180,000 rsf across five buildings. At the current rate of leased space growth, that square footage will likely increase to about 200,000 rsf over the next three to five years.

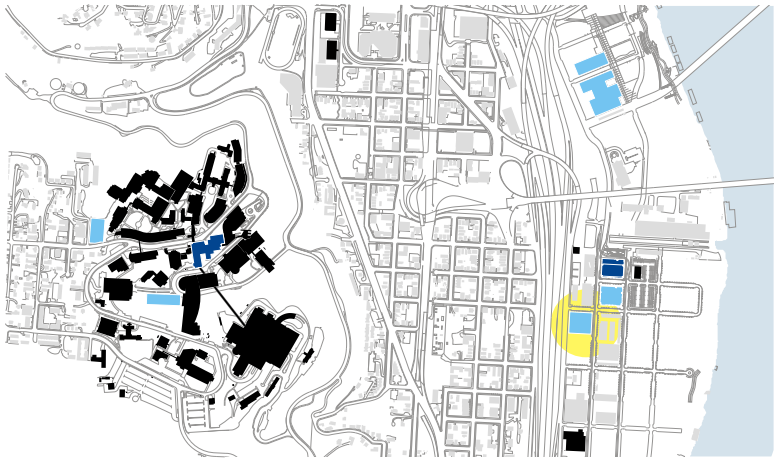
In the past two years, OHSU has attempted to synchronize the termination date of its central service leases so they all end on the same date: June 30, 2017. The rationale is to preserve the opportunity to centralize all of these uses in one location. The Foundation and UMG Billing have expressed interest in participating in this effort if it makes financial sense for both organizations.

One option to explore is releasing a Request for Proposals in the summer of 2013 to the development community to collocate OHSU central services, the OHSU Foundation and UMG Billing in one leased building. Private partners can submit proposals to accommodate these uses in an existing building located in downtown Portland or South Waterfront or propose a DBOM (design, build, own and maintain) a new building anchored by OHSU on Block 33 in the Central District.

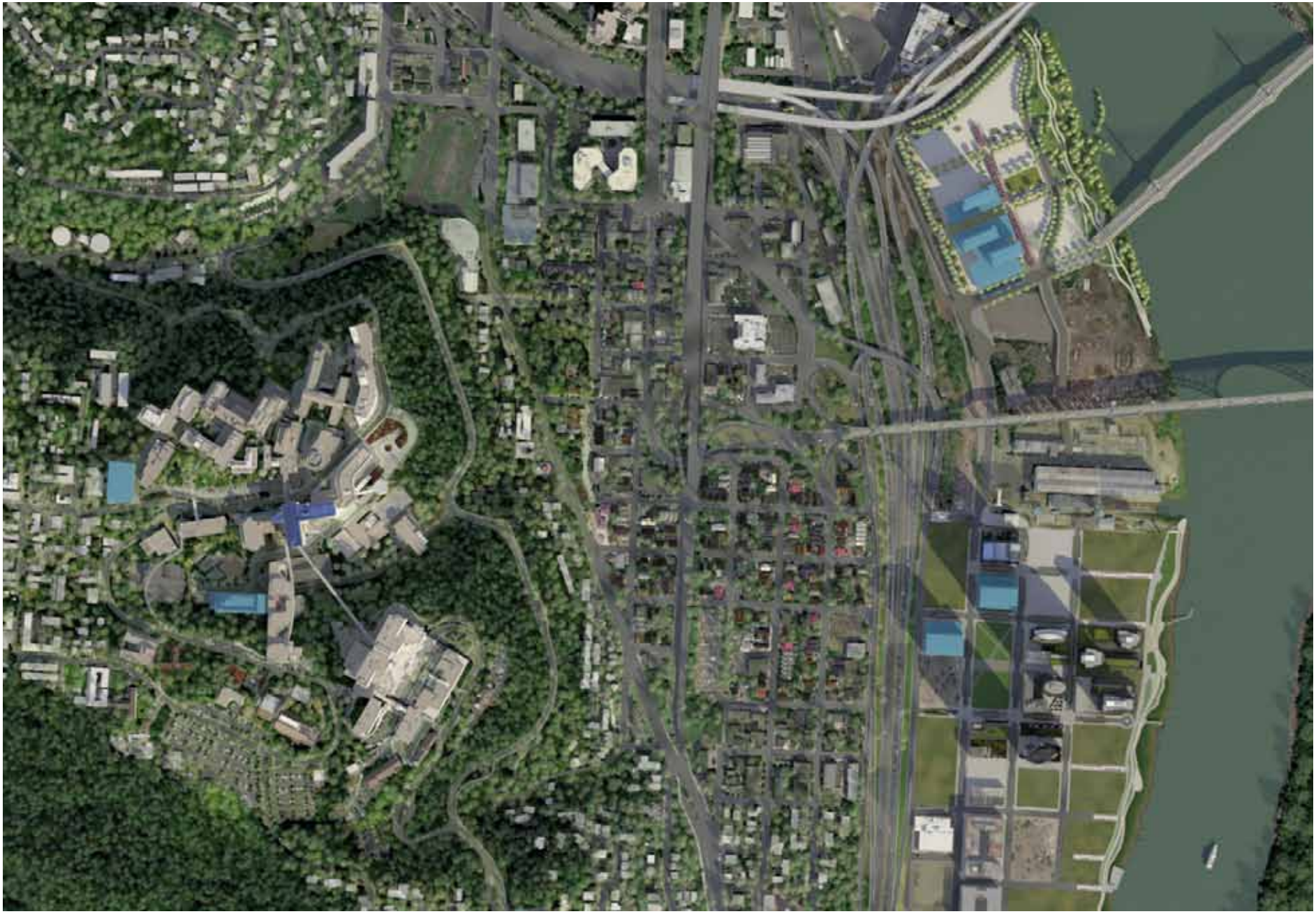
Block 33 is an ideal location for a Support Services Building due to its proximity to Marquam Hill by way of the tram and the Schnitzer Campus by way of foot and streetcar since it is only a quarter mile to the north. The site is also close to the conference space in CHH and it is highly visible from I-5.

Either option requires extensive analysis to determine if it makes financial and operational sense to collocate these uses in one building or simply to extend their current leases. Further, the program for a Support Services Building should include central service departments that are in aging buildings on the Marquam Hill Campus or in the Marquam Plaza and Marquam II Buildings if by doing so buildings with extensive deferred maintenance costs can be demolished or surplused back to the State of Oregon.

Phase 1: 2011-2020 Central Service Facilities: Support Services Building



A new Central Services building on Block 33, southwest of Block 27 in the South Waterfront Central District would replace rented facilities in several locations in central Portland. This location is favored by its proximity to CHH, the Schnitzer Campus, and the Marquam Hill Campus via the aerial tram.



AERIAL VIEW OF OHSU CAMPUS IN 2020

AXONOMETRIC VIEW OF OHSU CAMPUS IN 2020

Phase 2 Facilities Plan: 2021-2030

The second decade of the Facilities Scenario is less detailed than the first due to the fact that it is difficult to predict programmatic needs and financial resources ten years out. Nonetheless, it is a useful exercise to project facility needs during the second half of the plan in order to inform critical path decisions that need to be made to facilitate future projects. As mentioned previously, we know with certainty that this scenario will not be followed in the exact manner and sequence described here. This plan is intended to provide a flexible framework for development rather than specific development recommendations.

HOSPITALS AND CLINICS EXPANSION

New Patient Tower

The keystone patient capacity expansion project for the second decade of the plan is the creation of a new patient tower on the School of Dentistry site. Development on this site could yield up to two patient towers, seven floors each, at 32 beds per floor for a possible inpatient bed capacity of 448. The podium for these two towers would house relocated Emergency Department, Dietary, Café and food service, Diagnostic & Treatment, and other ancillary spaces from the OHSU Hospital. This would open up OHS and the Hatfield Research Center (HRC) for backfill opportunities.

A new patient tower on this location is not a new idea. First proposed in the late 1990s, and formerly referred to as the "High Tech Tower," this site has been identified and reaffirmed as the best location for a new tower to either add inpatient bed capacity or to replace the beds in OHS if the hospital is ever phased out in the future due to its physical and functional obsolescence. The location is ideal for a number of reasons:

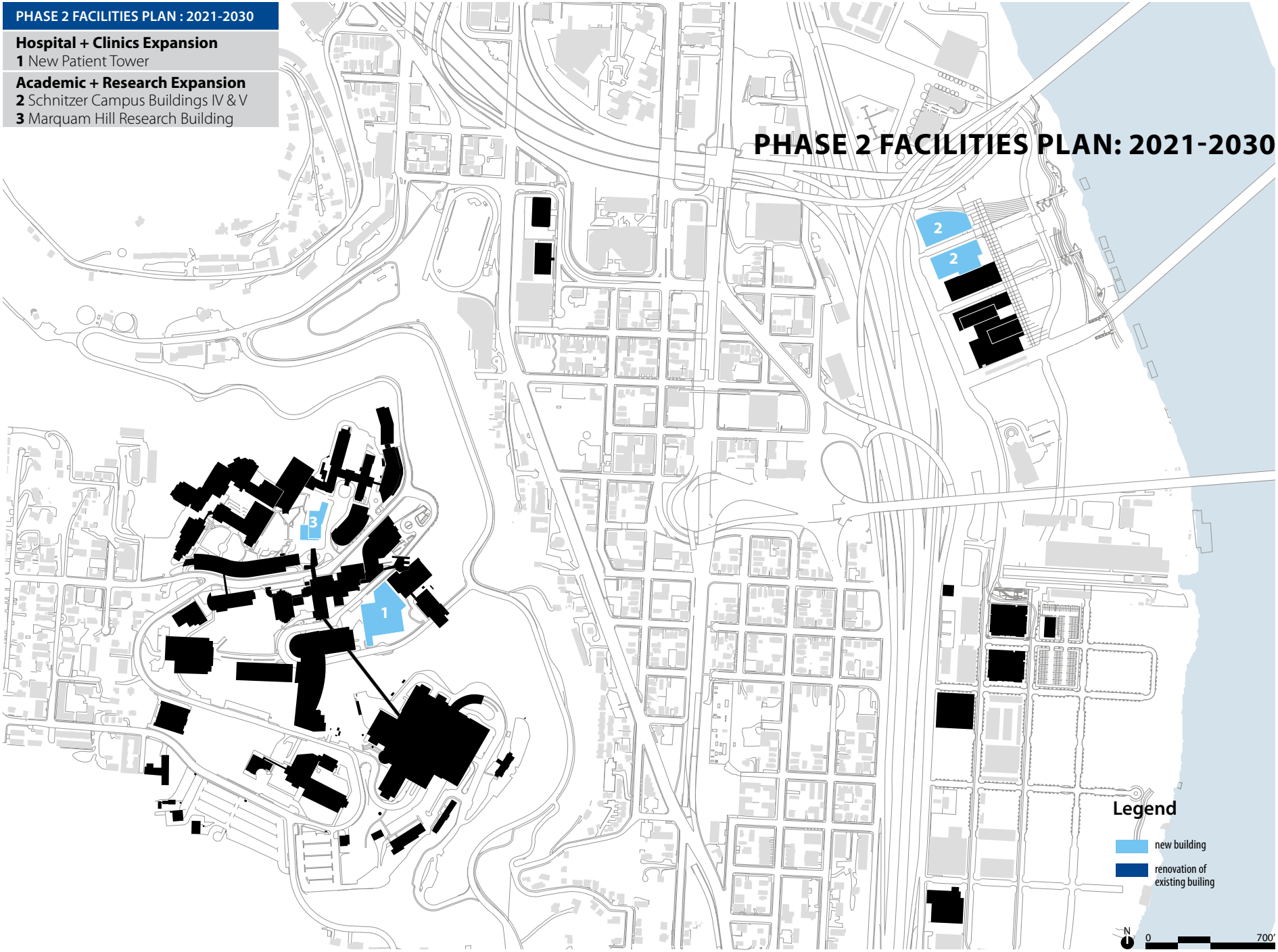
- With the construction of Schnitzer Campus Building II, the School of Dentistry will finally relocate off of the Marquam Hill Campus which frees up a large development site immediately adjacent to the hospital and the Kohler Pavilion (KPV).

PHASE 2 FACILITIES PLAN: 2021-2030

PHASE 2 FACILITIES PLAN : 2021-2030

Hospital + Clinics Expansion
1 New Patient Tower

Academic + Research Expansion
2 Schnitzer Campus Buildings IV & V
3 Marquam Hill Research Building



- The School of Dentistry site has a footprint and zoning capacity to accommodate a very large building and the site is located on relatively flat land with adequate room for construction staging. It is the only location on campus with enough room to accommodate as many as fourteen 32-bed nursing units of a similar size and layout to KPV 10.
- The proximity of the site to both OHS and KPV allows for direct connections between the three buildings at the 6th, 9th and 10th floors of OHS and KPV. These floors will connect to the 10th, 13th and 14th floors respectively of the new tower.
- A new patient tower located on this site is consistent with the Marquam Hill Plan which envisions patient care activity fronting Campus Drive rather than Sam Jackson Park Road. This project further emphasizes Campus Drive as the main entrance to campus for patients and visitors.
- It is unlikely that parking can be incorporated below the tower due to shallow soil depths before hitting basalt rock. However, the patient tower site is immediately adjacent to two parking garages: the Campus Drive and Casey Eye parking structures. Many of these parking spaces can be converted to patient and visitor parking with an equivalent number of spaces off of Sam Jackson Park Road converted to employee permit parking.

It is unclear at this time whether OHSU will have the financial resources and market justification to add up to 448 new inpatient beds. Even if this site can accommodate that many beds, a future patient tower can certainly be built with only one tower or smaller towers to add fewer beds. As mentioned earlier, these inpatient beds may not all represent new beds, but could allow for the phasing out of nursing units in Multnomah Pavilion and OHS.

Finally, the construction of a new patient tower and the subsequent backfilling of vacated space in HRC and OHS will permit the hospital to completely vacate Multnomah Pavilion, Sam Jackson Hall and Dillehunt Hall. If so, then this plan recommends the demolition of both Sam Jackson and Dillehunt Halls. The School of Medicine departments will also have to relocate out of Sam Jackson and that may be possible when space is added or backfilled due to construction of the various Schnitzer Campus Buildings and the Support Services Building. The goal is to clear the Sam Jackson/Dillehunt site for a future research building adjacent to the Biomedical Research Building (BRB).

Phase 2: 2021-2030 Hospital + Clinics: New Patient Tower

Strategically located across Campus Drive from the Hospital and Kohler Pavilion, the site of the School of Dentistry is large enough to support two new nursing towers and about 448 inpatient beds. The new towers could connect to the two neighboring buildings at three levels, allowing close coordination of functions. Completion of this new building will enable vacation of Multnomah Pavilion, Sam Jackson Hall and Dillehunt Hall.

ACADEMIC AND RESEARCH EXPANSION

Schnitzer Campus Buildings IV & V

The direction from the Academic and Research Steering Committee is to plan for a new building on the Schnitzer Campus every five years so the campus is fully built-out over 25-30 years. Accordingly, the second decade of this scenario proposes two additional building on the new campus: Schnitzer Campus Buildings IV and V. At this time, no specific program for these buildings has been committed to, but the following options should be evaluated:

- OHSU School of Nursing;
- OHSU/PSU School of Public Health (if not already accommodated in Building III);
- School of Medicine Masters Degree Programs;
- Allied Health Programs (those programs not already included in Building I);
- Academic and Student Affairs;
- The offices of the Deans and Provost.

Schnitzer Campus Building IV will share the same block as Building III which is bounded by SW Moody Street to the west, future Arthur Street to the North, the future Promenade to the east, and future Meade Street to the south. Schnitzer Campus Building V is located across Arthur Street and immediately to the north of Building IV.

Phase 2: 2021-2030 Academic + Research Expansion: Schnitzer Campus Building IV & V

Buildings IV and V will continue the line along SW Moody Street. Building IV will complete the block between Meade and Arthur Streets, while Building V will be north of Arthur. Between them, these two buildings will accommodate the balance of academic facilities as well as some research space.

MARQUAM HILL RESEARCH BUILDING

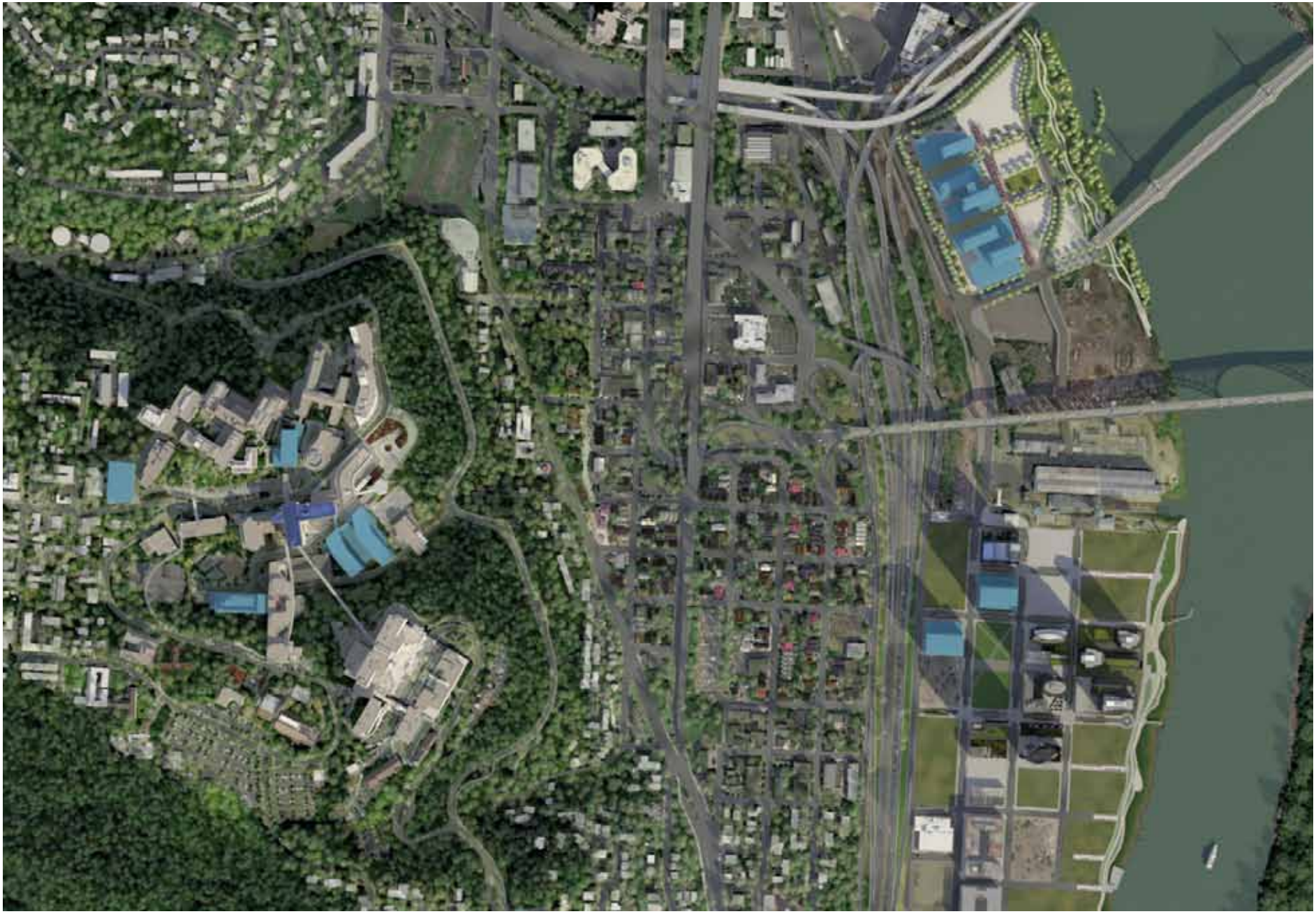
The current site of Sam Jackson and Dillehunt Halls is recommended to be preserved as the site for a major research building. This location represents one of the final remaining sites on the Marquam Hill Campus for a research facility that can be connected to the existing chain of research buildings that extends from the Center for Research on Occupational and Environmental Toxicology (CROET) in Richard Jones Hall to the BRB. Demolition of Sam Jackson and Dillehunt Halls is predicated on two critical path actions:

- All patient care activity must be moved out of Sam Jackson and Dillehunt Halls and Multnomah Pavilion. As long as patient care is occurring in these buildings then the existing internal connection from OHS will need to remain in place which makes demolition of Sam Jackson impossible as it provides the connection point for all four buildings.
- In addition to patient care activities, School of Medicine departments and faculty offices must be removed from Sam Jackson Hall. This is possible as new buildings are constructed on the Schnitzer Campus over the next 20-years. Some departments could be relocated to the Schnitzer Campus and others can remain on Marquam Hill in space left vacant by relocated programs. The existing School of Nursing represents a great opportunity for backfill that could free up space in Sam Jackson Hall and other buildings.

The program of the new research building is unclear, but the site is well served by core research facilities such as imaging and comparative medicine that occupy space in the BRB. When Sam Jackson and Dillehunt Halls are replaced by a new research building, there will be a great opportunity for campus repair. As the new building is designed, open space around it can be shaped and landscaped to improve way-finding, capitalize on views, and raise the quality of the campus experience. This opportunity is discussed in chapter 6: Marquam Hill Campus Placemaking.

Phase 2: 2021-2030 Academic + Research Expansion: New Research Building

Removal of Sam Jackson Hall and Dillehunt Hall following completion of the new patient tower will create the opportunity to reconnect campus landscape and circulation and to site a new research building at a highly visible location on the Marquam Hill Campus in close proximity to BRB and the Medical Research Building.



AERIAL VIEW OF OHSU CAMPUS IN 2030

AXONOMETRIC VIEW OF OHSU CAMPUS IN 2030

West Campus

The following West Campus facilities projects are listed separately rather than under the first and second phase of the facilities scenario because, with the exception of the first project, the timing of these projects is less certain. The current West Campus Concept Development Plan (i.e. conditional use plan) for the ONPRC was approved by the City of Hillsboro in 1998 and extended through 2018. It is recommended that the Plan be updated in the 2014-2015 timeframe in order to adjust to changing research and facility needs and in light of recent changes around the West Campus.

1. Relocate Back-Up Data Center

Information Technology Group (ITG) currently has its current back-up data center located on the former Oregon Graduate Institute (OGI) campus in the Bronson Creek Building. With the termination of the lease with Wakefield Capital at the end of 2013, the data center must be relocated to OHSU owned land. ITG has identified the ONPRC portion of the West Campus as a suitable location and selected a site with ONPRC leadership at the northeast corner of the property. Phase one funding was allocated in FY10 and these funds have been carried over as project planning has proceeded into site selection and schematic design. The intent is to begin construction in late FY12 and the project completed in FY13.

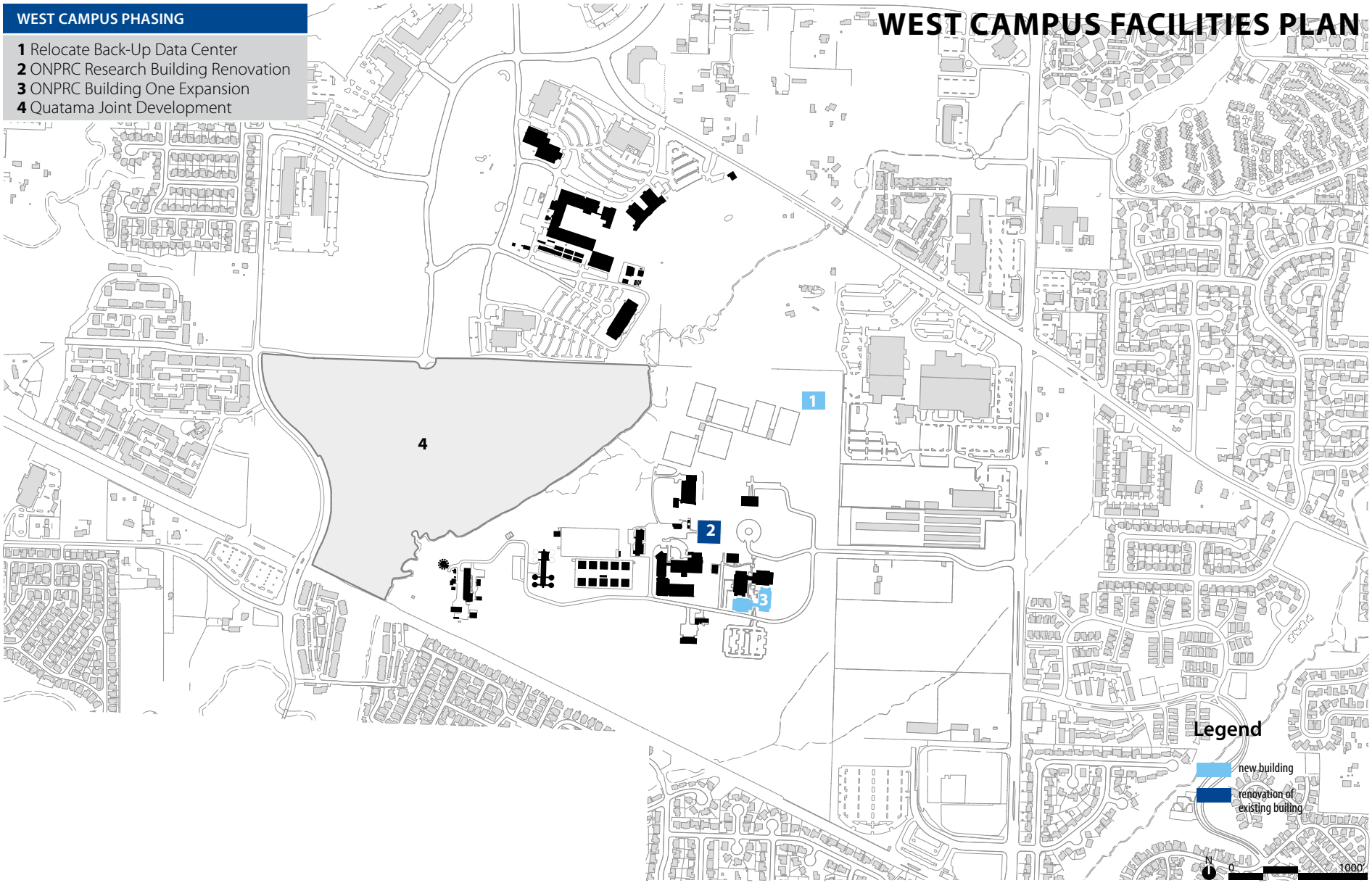
2. Oregon National Primate Research Center Research Building Renovation

The ONPRC Research Building was built in 1962 and much of the space was recently vacated when ONPRC researchers moved into the former NSI space in Building One. The 49 year old building is approximately 45,000 sf and requires significant seismic, mechanical and cosmetic upgrades to continue as a viable research facility. A study was recently completed to determine whether to complete minimal upgrades to extend the useful life of the building, undertake a full renovation of the building, or tear down the building and construct a new facility. The final decision was to complete a full renovation with phase one starting in FY12 with seismic and structural improvements. That portion of the project is approved, but future phases are dependent upon additional capital allocation decisions in FY13 and FY14. If all phases of the project are funded and the project completed in FY14 then this research space will meet the needs of the ONPRC for the next five to seven years.

WEST CAMPUS FACILITIES PLAN

WEST CAMPUS PHASING

1 Relocate Back-Up Data Center
2 ONPRC Research Building Renovation
3 ONPRC Building One Expansion
4 Quatama Joint Development



3. ONPRC Building One Expansion

Once the Research Building renovation is completed, the next major facility priority for ONPRC and the Vaccine & Gene Therapy Institute (VGTI) will be expansion of Building One which houses VGTI and ONPRC investigators. The West Campus Concept Development Plan (CDP) includes the expansion of that building to the south with two additional wings to form a square with a large courtyard in the middle. If the addition mirrors the design and size of the existing building then it will add approximately 90,000 square feet of research and administrative space. The timing of this project is unknown, but it is unlikely to be funded in the first ten years of the Facilities Plan. When the CDP is updated, the expansion of Building One should be the first project approved under the new plan.

4. Quatama Joint Development

West of ONPRC and across Bronson Creek are two large undeveloped parcels owned by OHSU that total approximately 54 acres. The site is known as Quatama as it lies adjacent to TriMet's Quatama light rail station. OHSU currently leases the site to a local farmer to grow grass seed. This keeps the property taxes in a farm deferral status which lowers the cost to OHSU and the site is essentially land banked until the University determines the best use for the property.

The City of Hillsboro is currently engaged in the third phase of the Amberglen Community Plan that will result in a change to the zoning code to encourage a more urban character of development. The allowed densities will be increased and design guidelines will be adopted to encourage urban blocks, structured parking, mid to high rise development and amenities such as open space and generous pedestrian and bicycle facilities. The area may also be designated a corridor for a high capacity transit project that branches off the existing light rail line and extends north to serve Tanasbourne and new urban expansion areas to the northwest.

OHSU should plan to retain ownership of the Quatama parcels and seek a private development partner to develop the site under a ground lease arrangement. The development team must have the capabilities, track-record and financial capacity to develop the site over 10 to 15 years in a manner that is consistent with the Amberglen Community Plan and sensitive to the privacy and buffering concerns of the ONPRC. An analysis of the business opportunity will need to determine fair market value of the site with the goal that the annual ground lease payments meet or exceed the expected market rate of return if the land were sold and the proceeds invested.

Other Projects

These final projects were all identified as worth including in the Facilities Plan, but lacked a financial strategy to be implemented. Further study of each project is recommended with the intention of developing a viable financing and implementation strategy or removing the projects from the plan.

RONALD MCDONALD HOUSE

Doernbecher Children's Hospital maintains a critically important partnership with the Ronald McDonald House Charities of Oregon and Southwest Washington to operate the Ronald McDonald West House located adjacent to Doernbecher. The 16-room facility was built in 1942 as an Inn and it has significant facility needs and too few rooms to meet the demand of parents and families of patients at OHSU and Shriners Hospital. OHSU funded some improvements in FY10 that extended the life of the House, but the leadership of the RMH Charities has stated that a plan to replace and expand the facility needs to be approved in the next five years. They hired an architect to design a new facility that would be built on the West House's current site with a larger facility that doubles the total rooms available. The RMH Charities' new operating model is to seek capital funding from their healthcare partners so they can dedicate all of their fundraising to operating the facilities.

OHSU LODGING FACILITY

During the Facility Plan Steering Committee meetings, two separate needs for a lodging facility near OHSU were identified:

- The School of Nursing plans to expand their online education model to include more students from outside the metro region who cannot take advantage of the School's partnership with Eastern, Southern and Western Oregon Universities. These students will take many of their classes from home, but will need to come to the OHSU campus for one or two week-long intensive sessions with SON faculty and classmates. One challenge of implementing this pedagogic model is the lack of dorm-style lodging facilities on or near the Marquam Hill Campus to accommodate these students affordably.
- The Hospital has indicated a need for lodging for non-pediatric patients and their families. OHSU serves patients from throughout the state and southwest Washington and many of them must arrive the day before a surgery or major procedure. Further, some patients need to remain near OHSU for days and sometimes weeks at a time to receive outpatient services. Finally, some patients have longer recovery times in hospital nursing units because their physicians want them to remain

close to OHSU for another day or two of observation. Some of these patients may be able-bodied enough to stay in a lodging facility and thereby free up a scarce inpatient bed if the facility was close by and the cost potentially covered by insurance.

The Steering Committee confirmed that a lodging facility, while important, should not be built or operated by OHSU nor built on OHSU land. However, if a facility can be built and operated by a private or non-profit entity on land adjacent to the lower Tram terminal in the South Waterfront Central District, then that would help serve the two needs identified above while limiting OHSU's risk and financial participation.

BLOCK 33 PARKING GARAGE

A 1,700 car parking garage was once planned for Block 33 to serve OHSU's growth in the South Waterfront Central District. That plan was cancelled during the recent recession when OHSU halted and reevaluated all facility projects. While a large parking garage on that site will likely be necessary in the future, the need does not exist today and original assumptions about OHSU funding a garage of that magnitude need to be revisited. In the meantime, the University plans to extend the life of the Schnitzer parking lot that is set to expire on January 1, 2013. If a Support Services Building is built on Block 33 in partnership with a private developer then that project should include a large on-site parking facility to accommodate the parking required for those employees.

MAJOR BUILDING-WIDE RENOVATIONS

Finally, three buildings were regarded by the Steering Committee as possessing some historical significance: Mackenzie Hall, OHSU Auditorium (Old Library), and Multnomah Pavilion. These building all have major deferred maintenance needs and rank high (i.e. poor) on the Facilities Condition Index, but they are not included in the potential building demolition list. Each building should be scheduled for complete renovations if it is going to be used and well maintained for another generation. However, when all potential facility projects were reviewed by the Steering Committee, the renovation of these buildings was not listed high enough to warrant their inclusion in the 20-Year Facilities Scenario described earlier. Further, a major remodel and reconstruction of these buildings would displace existing occupants and programs, and there are few convenient locations to which they could be relocated.

Other Projects: Ronald McDonald House

This image shows the approximate massing of a new facility at the Ronald McDonald West House's current site. This design doubles the total number of rooms available for RMH Charities.

Potential Building Demolition

Every facility plan calls for the demolition of obsolete and poorly maintained buildings and virtually without exception those recommendations are ignored. Hospitals and universities are always short on space and when new facilities are built it is simply too easy to backfill vacant space with growing programs. In the past twenty years, only one building was demolished on the Marquam Hill Campus. The old residence hall was torn down to make room for Kohler Pavilion and the new alignment of Campus Drive.

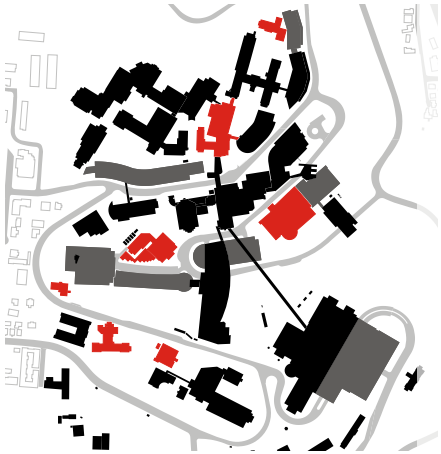
Eight buildings on the Marquam Hill Campus have been identified for potential demolition as part of this Facilities Plan:

- School of Dentistry;
- Emma Jones Hall;
- Modular Building;
- Campus Services Building;
- Building Twenty-Eight;
- OHSU Student Center;
- Sam Jackson Hall; and
- Dillehunt Hall.

Further, two buildings located off the Hill, Marquam Plaza and Marquam II, are listed as buildings which may be surplused back to the State of Oregon or be redeveloped as private bioscience incubator space when OHSU staff and programs have been relocated elsewhere.

These ten building were included on this list for three reasons. First, the buildings are in very poor condition with significant deferred maintenance needs. Second, none of the buildings is deemed to be of historical significance warranting its preservation. Finally, there is a rational plan for relocating current occupants when new facilities are constructed so that use of these buildings can be phased out within the next ten years. An example of this is the School of Dentistry building, which can be demolished when the staff, students and programs are relocated to the Collaborative Building and Building II on the Schnitzer Campus.

Potential Marquam Hill Building Demolition



Careful analysis of all the buildings on the Marquam Hill Campus has led to the conclusion that the potential of the sites created by the demolition of eight functionally obsolete buildings far outweighs the value of refurbishing them. Accordingly, the plan recommends their removal as the activities that occupy them are relocated. Campus improvements and new buildings will take their places.

Quality Control of Building Design & Construction

Adherence to a consistent set of design guidelines is the surest way to ensure that both buildings and open spaces on each OHSU campus uphold the values of the institution. The Outline Design Guidelines that follow are not comprehensive in their reach, but establish important values and intentions for every new building and attendant campus improvement in which OHSU invests.

CAMPUS FACILITIES DESIGN GUIDELINES

Building Siting & Orientation

- Acknowledge established geometries and relationships of site and nearby structures.
- Capitalize on views, daylight, solar access and prevailing summer breezes.
- Respect setbacks and view corridors.
- Respond to significant natural and man-made features.
- Site and configure all facilities to be universally accessible.
- Address active outdoor areas, such as walkways, with active building frontages.
- Site and configure buildings to respect solar access to neighboring structures and spaces.
- Orient buildings to maximize beneficial solar gain and usable daylight, while minimizing glare and summer heat gain.
- Locate outdoor seating with respect to sun, shade, views and breezes at different times of day and season.

Building Scale & Access

- Relate architectural scale primarily to human scale, especially at ground level elevations.
- Limit blank and highly reflective walls and favor transparency to increase visual interest and provide overviews of walkways for safety, especially at ground level .
- Separate and screen service access from pedestrian conflicts.
- Make primary building entrances conspicuous and provide safe and direct access for pedestrians.
- Provide bicycle storage near, but clear of building entrances.
- Light walkways sufficiently for facial recognition but avoid sharp contrasts in lighting levels.
- Relate way-finding to sightlines and lighting for day and night legibility.

Building Massing & Materials

- Encourage architectural diversity while maintaining compatibility with nearby structures and open spaces.
- Avoid use of temporary structures on campus.
- Use roof forms to screen rooftop equipment effectively.
- Use durable materials that require little maintenance.
- Coordinate the scale, style and color of signage with circulation routes, sightlines, lighting and architecture.
- Use renwable, recycled, and low environmental impact materials and systems.

Building Stewardship & Sustainability

- Design buildings to anticipate future repurposing.
- Achieve seismic stability with core and perimeter structures to maximize flexibility of internal space configuration.
- Select finish materials and colors that conserve energy and minimize thermal movement.
- Create building that maximize conservation of water and energy use.
- Evaluate systems and materials on life cycle costs rather than initial capital costs.
- Select tree species and locations relative to their eventual influence on the energy loads of nearby buildings.
- Use buildings and landscapes to detain, treat and re-use stormwater.
- Use locally sourced materials where feasible.
- Use materials with low embedded energy and high recycled content.
- Continue to monitor and commission energy conserving systems through the life of each building.
- Undertake construction projects in the spirit with which LEED, the Living Building Challenge, and other such design guidelines were intended.
- Evaluate resource demands of a building project within the context of overall campus supply and demand and seek opportunities for combined infrastructure.