

SECTION I

SUMMARY

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A. Proponent/Project Location

The proposed *Master Plan Seattle Campus* is sponsored by the University of Washington. The Seattle campus of the University of Washington encompasses an area of approximately 694 acres (the University owns approximately 643 acres within the campus boundaries). The north boundary of the campus is roughly N.E. 45th Street; the south boundary: Union Bay/Lake Washington Ship Canal/Portage Bay; the east boundary: N.E. Surber Drive/Union Bay; and the west boundary: 6th Avenue N.E. (beneath the I-5 bridge).

B. Background Information

Historical Perspective

The University of Washington was founded in 1861. Classes at the Territorial University began November 4, 1861. The University was a Territorial University because Washington had not been granted statehood; that would not occur for another 28 years. The Territorial University of Washington was the first public institution of higher learning on the West Coast. The University's first campus was a 10-acre area¹ in wilderness roughly six blocks north of what was then "downtown" Seattle. That original site is now located near the center of Downtown Seattle.

By the late 1880's and early 1890's, the University's downtown location and facilities were no longer adequate and the campus was moved to its current location. The first building on the University's new campus, known then as the Administration Building (currently Denny Hall), was built in 1895². Campus facilities, infrastructure and enrollment have continued to grow over the past 106 years.

University Programs and Statistics

The University of Washington is a fully accredited, publicly-funded regional institution of higher education. The University's academic program is divided into 17 schools and colleges, including approximately 124 academic departments and degree programs. The University's Libraries system is one of the largest research libraries in North America.

¹ The campus included an 8.5-acre parcel that was donated by Arthur Denny and a 1.5-acre parcel that was donated by Charles and Mary Terry and Edward Lander (Johnston, 1995). The boundaries of the 10-acre area extended roughly from what is now Union St. on the north to Seneca St. on the south and from the mid-block alley between Third and Fourth avenues on the west to the mid-block alley between Fifth and Sixth avenues on the east. The University has retained ownership of the land; key buildings that are currently located on this property include: Four Seasons Olympic Hotel, IBM Building/Fifth Ave. Plaza, Rainier Square & Tower, Skinner Building, Puget Sound Plaza, Cobb Building, Financial Center, and the Four Seasons Olympic Hotel Parking Garage.

² Cornerstone laid July 4, 1894; building occupied – 1895 (Johnston, 1995).

Statistics for the Seattle campus, as of autumn 1999³, include the following:

- student enrollment (full-time and part-time) was approximately 35,100 students;
- approximately 14,400 (full-time and part-time) faculty members supported the University's academic programs; and
- University staff (full-time and part-time) totaled approximately 6,000.

Within the campus boundaries, the University has approximately 255 permanent and temporary buildings⁴ that total an estimated 14.9 million sq. ft. of area. These buildings vary in size from approximately 300 sq.ft. to 500,000 sq.ft. They also vary in age from 106 years (Denny Hall and the Observatory) to the present.

Master Planning

Two conceptual master plans have been prepared for the Seattle campus, based on the 1983 *City-University Agreement*⁵. The University's current master plan is the second of these two master plans and is known as the *General Physical Development Plan (GPDP)*⁶. The *GPDP* was completed in September, 1990 and adopted by the University's Board of Regents and the Seattle City Council in May 1992. In approving the *GPDP*, the Regents and City Council endorsed a framework for development of 43 projects involving nearly 2.8 million sq.ft. of floor area, associated with new academic building space, and 1,750 parking spaces.

In 1998, a new *City – University Agreement* was adopted.⁷ Consistent with that Agreement, cognizance of the fact that the 10-year duration associated with the existing *GPDP* was nearing expiration, and recognition of the amount of growth that is projected for the campus in the next ten years, in mid-1998 the University initiated preparation of a new master plan. Comprehensive goals and policies to guide future campus growth were developed, including the University's mission statement, results of a visioning process, the University's previously adopted goals, and input from within the University community. Development of the proposed *Master Plan Seattle Campus* has involved active participation from faculty, staff, and students of the University; residents and businesses in surrounding neighborhoods; representatives of local government; and people that use the University's services and programs.

³ UW, 2000a.

⁴ Permanent buildings are those that are designed and constructed in accordance with standards adopted by the University of Washington. Temporary buildings are intended to meet short-term facility needs; examples include trailers, mobile offices, prefabricated buildings, or modular structures where the quality of construction and materials is lower than normal University standards.

⁵ UW, 1983.

⁶ UW, 1992.

⁷ UW, 1998a.

C. Description of Proposed Action and Alternatives

Proposed Action

Overview

The *Proposed Action* is a new *Master Plan* for the University of Washington's Seattle Campus. Whereas the existing *GPDP* is relatively specific in terms of identifying academic uses or programs for certain areas of the campus, the *Master Plan Seattle Campus* is more conceptual and identifies possible development sites without regard to academic use or program. The proposed CMP is consistent with the 1998 *City – University Agreement* and includes the following:

- goals and policies to guide campus development for the ten-year period of 2002 – 2012;
- proposed development of approximately 3 million sq.ft. consisting of 60 potentially-developable sites; proposed development may include demolitions, remodeling, renovations and new construction;
- potential addition of new open spaces;
- modification of the University's Transportation Management Plan (TMP) to provide
 - additional opportunities for alternative modes of travel to and from the University;
 - pedestrian, bicycle and vehicular circulation changes;
 - addition of several potential parking garages and elimination of some surface parking areas; amount of parking would continue to remain at or below the parking cap of 12,300 spaces;
- potential future vacation of portions of 2 streets, 4 alleys and 3 aerial street vacations; and
- development standards (e.g., land use designations, height limits, setbacks, etc.).

Potential Development by Campus Area

As indicated above, a total of 60 building sites could be developed on campus under the proposed *Master Plan Seattle Campus*. The following is an overview of the development potential by campus area.

Central Campus – Approximately 53% of the total development capacity is in the *Central Campus* area. There are 26 potentially-developable sites with a total potential development capacity of about 4,428,600 sq.ft. Two development projects, the Gates Law School (New Law School Building) and Phase 2 of the Electrical Engineering/Computer Science building, are currently undergoing review. Approximately 382,564 sq.ft. would be demolished to accommodate full development within this campus area.

West Campus -- Approximately 29% of the total development capacity is in the *West Campus* area. There are 16 potentially-developable sites with a total potential development capacity of about 2,360,400 sq.ft. Approximately 183,800 sq.ft. would be demolished to accommodate full development within this campus area.

South Campus -- Approximately 13% of the total development capacity is in the *South Campus* area. There are 12 potentially-developable sites with a total potential development capacity of about 1,149,500 sq.ft. In this campus area, two development projects are currently undergoing review/construction, including the University of Washington Medical Center Surgery Pavilion and the Biosciences facility. Approximately 199,700 sq.ft. would be demolished to accommodate full development within this campus area.

East Campus -- Approximately 5% of the total development capacity is in the *East Campus* area. There are 14 potentially-developable sites with a total potential development capacity of about 390,750 sq.ft. In this campus area, four development projects are currently undergoing review, the IMA Expansion, the Indoor Practice Facility, Conibear Crew House, and Blakely Village. Approximately 72,900 sq.ft. would be demolished to accommodate full development within this campus area.

Open Space Changes

New proposed and enhanced open spaces are proposed for each of the campus areas. In the *Central Campus*, additional open spaces/enhanced open spaces are proposed for the northwest corner of campus proximate the New Law School Building, the potential Link University District light rail station, in the vicinity of the Burke Museum, and the area east of the Observatory; the area immediately west of Guthrie and Architecture halls; the courtyard west of Johnson Hall; and the area between Architecture and Guthrie halls. In the *West Campus*, new/enhanced open space is planned south of Terry – Lander and east of Henderson Hall, south of Gould Hall and in the vicinity of the north terminus/loops associated with the University Bridge. In the *South/Southwest Campus* new areas of open space are planned east of the Bryant Building/Bryant Building Annex and in the vicinity of University parking lot S1; eight areas of enhanced open space are planned for this area of campus. In the *East Campus*, one large enhanced open space is planned in the vicinity of the IMA Building and between the University parking lot and the recreational fields.

Circulation Changes

Circulation changes would include the following:

- Vehicle improvements are planned for portions of Stevens Way and N.E. Campus Parkway, and Walla Walla Road in the *East Campus*.
- Three new cross-campus pedestrian connections are proposed. The longest would link the *South/Southwest Campus* waterfront with the *East Campus* natural area via a new Portage Bay Vista pedestrian bridge over N.E. Pacific St. and a new pedestrian bridge over Montlake Blvd. N.E. A second major new cross-campus connection would link the Burke Gilman Trail in *West Campus* and the north-end of Sound Transit's proposed potential Link Light Rail Portage Bay Station to the area north of the Atmospheric Sciences/Geophysics Building. The third major new cross-campus pedestrian connection would connect portions of the

South/Southwest Campus located east and west of 15th Ave. N.E. along Skamania Lane. Additional pedestrian connections are proposed to improve circulation within each of the campus areas.

- Bicycle circulation improvements are proposed on the *Central Campus* along Pend Oreille Road; in the *West Campus* in conjunction with changes along N.E. Campus Parkway and along Brooklyn Ave. N.E.; and in the *South/Southwest Campus* along the waterfront.
- Several transit circulation changes are proposed in conjunction with bus stops along Stevens Way on *Central Campus*. The most significant changes, however, would occur in connection with Sound Transit's proposed potential Link light Rail University District and Portage Bay stations. Possible new bus layover locations have also been identified.

Parking Changes

Consistent with the *GPDP*, total parking on-campus will remain at or below 12,300 spaces. In the *Central Campus*, seven existing surface parking areas are expected to be replaced by structured parking/underground parking. In addition, an underground parking structure is planned in Rainier Vista, west of Wilcox and Roberts halls. In the *West Campus*, 12 existing surface parking areas are expected to be replaced by structured parking in conjunction with new buildings and one new below-grade parking structure is proposed. In the *South/Southwest Campus*, two parking changes are proposed; in addition, three potential development sites would contain structured parking in conjunction with a new building at those locations. In the *East Campus* area, replacement surface parking is planned in conjunction with existing surface parking lot E10, located immediately west of the Stadium.

Potential Street, Alley and Aerial Vacations

The *Master Plan Seattle Campus* identifies nine potential future street, alley and aerial vacations (or skybridge authorizations) that may occur during the timeframe of the *Master Plan*. All of the vacations are potential -- none are imminent and none are essential to implementation of the *Master Plan Seattle Campus*. The *Master Plan* indicates that the vacations are aimed at creating a better campus design and not to significantly increase development capacity; each is included in the *Master Plan* for disclosure purposes only – to identify the range of alternatives that may be pursued during the life of the plan; no petitions or applications are pending. No *Master Plan* amendment would be required unless a street vacation proposal is made, which is outside the range of alternatives that are discussed in the *Master Plan Seattle Campus*.

Development Standards

The *Master Plan Seattle Campus* proposes modifications and/or clarification concerning the following development standards.

- Boundaries
- Building Setbacks
- Burke-Gilman Trail
- Definitions
- Demolitions
- Density -- Gross Square Footage
- Development Review
- Ground Floor Uses
- Height Limits
- Landscaping and Open Space
- Leasing and Acquisition
- Light and Glare
- Modulation
- Noise
- Odors
- Parking Quantity
- Parking Space Dimensions
- Pedestrian Street
- Signs
- Telecommunications Equipment
- Temporary Buildings
- Uses

Alternatives

No Action Alternative

It is assumed that the population increases of roughly 3,000 to 4,000 new students and 5,000 additional faculty and staff over the lifetime of the *Master Plan Seattle Campus* would occur. This alternative would not include the physical improvements that are proposed as part of the *Master Plan*. However, it is anticipated that approximately 300,500 sq.ft. of new campus development could still occur (approximate amount of unused *GPDP* square footage remaining); such development would occur as long as proposed projects are consistent with development projects that were approved in the *GPDP* but not yet built.⁸

Without new on-campus construction to meet increased space demand, it is anticipated that the University would seek opportunities to more-intensively utilize existing campus space and maximize lease space. The 1998 *City -- University Agreement* established a lease limit of 550,000 gross sq.ft. within designated areas surrounding the University; at present, the University leases approximately 423,659 sq.ft. (balance remaining: 126,341 sq.ft.). If the University's space needs cannot be fully met by more-intensive utilization of existing campus space and through maximization of the amount of lease space within the designated areas, then the University would lease additional space outside the designated areas.

Campus open space would be more intensively used; vehicle, pedestrian and bicycle circulation would be more congested; and the utilization rate of on-campus parking would be maximized. More-intensive utilization of existing campus space would require increased Legislative funding for maintenance and operation of existing capital facilities.

⁸ Except for projects that have been replaced with other built space through the City/University minor amendment process, as identified in the City-University Agreement.

Decentralization/Open Space

As with the *No Action Alternative*, it is assumed that population increases of roughly 3,000 to 4,000 new students and 5,000 additional faculty and staff would occur over the lifetime of the *Master Plan*. To meet the University's needs over the time period of the *Master Plan*, this alternative would involve development of a lesser amount of on-campus space (for purposes of this analysis, it is assumed to be 50 percent), together with expansion of programs and capital facilities at off-campus locations in the Seattle area. The University would seek opportunities to maximize the utilization of existing campus facilities.

For purposes of this alternative, it is anticipated that roughly 1.5 million sq.ft. of new development would occur on-campus with an additional 1.5 million sq.ft. of demand accommodated through a combination of expansion at off-campus locations and leasing additional space proximate to the Seattle campus. For purposes of this alternative, it is assumed that the existing limitations on leasing proximate to the University – 550,000 sq.ft. -- would remain. The University presently leases 423,659 sq.ft. of building area; the net balance of leasable space remaining, therefore, is 126,341 sq.ft.⁹ This amount of building area constitutes approximately 8.4% of the 1.5 million sq.ft. of additional off-campus demand. The balance – roughly 1.4 million sq.ft. of additional space -- would need to be accommodated at locations in the Seattle area outside the designated leasing area. Space that is leased by the University at these locations could either include space in existing buildings or newly-developed space. Any new space that is built would conform to the use and development standards of the City's zoning district in which the property is located.

While this alternative would result in decentralization, it would likely result in fewer open space improvements (as outlined relative to the *Proposed Action*) and fewer circulation and parking improvements than those included as part of the *Proposed Action*. While the focus of this alternative would be to lessen on-campus development and retain as much existing open space as possible, it would also result in regional dispersal of environmental impacts and, in some instances, potentially greater impacts than would occur in conjunction with the *Proposed Action*.

No Street or Alley Vacations

This Final EIS alternative is provided pursuant to City policy when potential or proposed street or alley vacations are included as part of the *Proposed Action*. As noted with regard to the *Proposed Action*, the *Master Plan* does not include any proposed vacations. All vacations that are noted are potential future vacations and included for disclosure purposes and to identify the range of alternatives that may be pursued during the term of the *Master Plan Seattle Campus*. None of the vacations are imminent and none are essential to implementation of the *Master Plan*. No *Master Plan* amendment would be required unless a street vacation proposal is made, which is outside the range of alternatives that are discussed in the *Master Plan Seattle Campus*.

Street and alley vacations included in the *Proposed Action* are intended to consolidate property for a more effective development, to provide increased public benefits, and to improve pedestrian circulation. Under this alternative, none of the proposed street, alley or aerial vacations would occur. As with the *No Action Alternative*, it is assumed that population increases of roughly 3,000 to 4,000 new students and 5,000 additional faculty and staff (and related demands) would occur over the next 10 years.

⁹ 550,000 – 423,659 = 126,341 (Source: 2000 Annual Report)

The overall potential building density on the Seattle Campus without the identified vacations would be less than with the identified potential vacations, particularly in the *South/Southwest* and *West Campus* areas. Visual impacts associated with the potential aerial plaza and potential skybridge over NE Pacific Street and the potential skybridge over Montlake Boulevard would not occur.

Lifting of Lease Limit

This alternative, while similar in some respects to the *Decentralization/Open Space* alternative (described earlier) assumes that the existing limitation on leasing proximate to the University campus is removed. As noted with regard to the *No Action Alternative*, the 1998 *City -- University Agreement* established a lease limit of 550,000 gross sq.ft., limiting the amount of building area that the University can lease within designated areas. At present, the University leases 423,659 sq.ft. of building area in these areas, resulting in a net balance of leasable space remaining of 126,341 sq.ft.¹⁰

With removal of the existing limitation on leasing by the University of Washington, the University could lease additional building space within the University District. The University would also not be limited in their ability to lease building space from private developers or under public/private partnerships. Any new buildings that are developed in the University District would conform to the use and development standards of the City's zoning district in which the property is located¹¹ and would be subject to the City's Design Review process, including the *University Community Design Guidelines*.¹² The University's ability to lease additional building space could provide incentive for private developers to re-develop properties with the intent of leasing to the University. Lifting the leasing lid would also increase the potential for development of private buildings designed and built specifically for lease and use by the University (public/private partnership).

As with the *Decentralization/Open Space* alternative, fewer on-campus open space improvements and fewer circulation and parking improvements would result. However, with proximity of off-campus facilities to the campus, greater opportunities for coordination with University facilities and programs would be afforded. For example, Transportation Management Plan programs, including the U-PASS, could be implemented at the University's off-campus locations in the University District to limit vehicle trips.

¹⁰ 550,000 – 423,659 = 126,341

¹¹ The use and development regulations of the City's *Land Use & Zoning Code* (Title 23, Seattle Municipal Code) incorporate provisions of the *UCUC Plan*.

¹² DCLU, 2000.

D. Environmental Impacts

The following table summarizes the significant impacts identified in this environmental analysis. Impacts associated with the four alternatives are discussed relative to those associated with the *Proposed Action*. This summary is not intended to be a substitute for the complete discussion of each element that is contained in *Section III*.

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Earth</u>	<ul style="list-style-type: none"> Development would require the excavation of approximately 750,000 cubic yards of earth over the planning period. Approximately 70 to 80 percent would be transported to an off-campus disposal site, and the remaining amount used as backfill. Fill material for site preparation and landscaping would be imported to the campus during development. The total amount of impervious area on campus would increase by approximately 55,000 sq.ft. 	<ul style="list-style-type: none"> Earth-related impacts would be expected as development under the existing GPDP occurs. The amount of excavation, and subsequently earth impacts, would be significantly less than under the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> The amount of new impervious surfaces would be reduced and about half the amount of cut and fill volumes would be required. More open space would be retained. Overall, on-campus earth-related impacts would be reduced under this alternative. Decentralization could lead to an increase in off-campus development activity and earth-related impacts. 	<ul style="list-style-type: none"> A reduced amount of new impervious surfaces would be developed. Fewer street and alley vacations would slightly reduce cut and fill volumes. 	<ul style="list-style-type: none"> New University -related buildings in the University District would require earthwork. Earthwork would be as described in the UCUC Plan Environmental Checklist.
<u>Air</u>	<ul style="list-style-type: none"> The <i>Proposed Action</i> would result in localized short-term increases in particulates, carbon monoxide and nitrogen dioxide on and around construction sites. Vehicle emissions from University-related traffic would not be expected to affect ambient 	<ul style="list-style-type: none"> The level of construction-related air quality impacts would be less than under the <i>Proposed Action</i>. Increased vehicle volumes could cause greater impacts to air quality on campus. 	<ul style="list-style-type: none"> The reduction in planned development would reduce temporary, construction-related air quality impacts by approximately half. Decentralization could increase on- and off-campus vehicle activity and the presence of 	<ul style="list-style-type: none"> Temporary construction-related impacts to air quality would be more limited. Operational impacts would be similar to those described for the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> Temporary off-campus construction-related impacts to air quality. Occupation of new buildings in the University District would increase traffic – although University TMP measures could be implemented to reduce traffic.

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Air, cont.</u>	<p>concentrations of air pollutants or result in violations of existing 8-hour air quality standards.</p> <ul style="list-style-type: none"> The combustion of additional natural gas and fuel for energy would contribute to cumulative air quality impacts. 		related air contaminants.		<ul style="list-style-type: none"> Air quality conditions would be as described in the UCUC Plan Environmental Checklist.
<u>Water</u>	<ul style="list-style-type: none"> The <i>Proposed Action</i> would improve shoreline areas in the South and East Campus areas. Increases in new impervious surfaces would result in increases in stormwater runoff quantity and frequency, and increase the potential for erosion of shoreline and benthos. An increase in storm water runoff volumes could increase phosphorus, chlorophyll-a, and temperature levels of receiving waters. The transparency of these waters could decline. Development in East Campus could have direct and/or indirect impacts on wetlands. 	<ul style="list-style-type: none"> Because less development would occur under this alternative, impacts would be reduced somewhat. Water quality impacts would be expected to occur to some extent as the University population increases. Impacts would primarily be related to vehicle impacts. 	<ul style="list-style-type: none"> A reduced amount of new impervious surfaces would be established. Overall, on-campus impacts to water resources and water quality would be reduced under this alternative. This alternative could lead to an increase in off-campus development activity, and the need for additional off-campus stormwater drainage facilities and/or capacity. 	<ul style="list-style-type: none"> Without street and alley vacations, the potential for erosion and an increase in stormwater runoff volumes would be reduced. Wetland impacts would be similar to that described for the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> New or relocated drainage facilities in the University District could be required. Stormwater conditions would be as described in the UCUC Plan Environmental Checklist.
<u>Plants and Animals</u>	<ul style="list-style-type: none"> Development would affect lawns, trees, and shrubs, including both 	<ul style="list-style-type: none"> Because less development would occur under the GPDP, 	<ul style="list-style-type: none"> More vegetated open space would be retained. 	<ul style="list-style-type: none"> Impacts to plants and animals would be similar to that described 	<ul style="list-style-type: none"> The pace of development, and corresponding impacts

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Plants and Animals, cont.</u>	<p>native and ornamental species. The following impacts to existing specific areas of open space would occur.</p> <ul style="list-style-type: none"> The International Friendship Grove and a mixed planting of trees in the median of Campus Parkway could be removed. Vegetated open space could be created on the site of the existing fish ponds, and the fish ponds relocated. Potential impacts to fish habitat could occur due to sedimentation, turbidity, other changes in water quality (primarily during construction), and shoreline alteration. Development activities have the potential to impact aquatic species and ESA listed salmon and trout. Perimeter terrestrial habitat in Central Campus would be affected by the <i>Proposed Action</i>. 	<p>fewer impacts to plant and animal communities would likely occur.</p> <ul style="list-style-type: none"> Open spaces could be subjected to more intensive use; vegetation and wildlife habitat could be disturbed. 	<ul style="list-style-type: none"> On-campus impacts to plant and animal communities and individual species would be reduced under this alternative. Impacts could be displaced, leading to an increase in off-campus development activity. 	<p>for the proposed <i>Proposed Action</i>.</p>	<p>to plants and animals, could increase.</p> <ul style="list-style-type: none"> Plants and animals impacts would be as described in the UCUC Plan Environmental Checklist.
<u>Energy and Natural Resources</u>	<ul style="list-style-type: none"> The total estimated amount of energy required to develop 3 million square feet on campus would be 4,170 x 10⁹ Btu. Total energy demand associated with the 	<ul style="list-style-type: none"> Increased energy demand impacts would occur with development under the GDPD and as the University population increases. Off-campus development activity 	<ul style="list-style-type: none"> The demand for on-campus energy would be reduced by about half. Some infrastructure improvements may not be required. This alternative could 	<ul style="list-style-type: none"> With less building area, energy demand on campus would be slightly lower than that projected for the <i>Proposed Action</i>. Infrastructure improvements under 	<ul style="list-style-type: none"> The pace of development in the University District could increase and demand for energy could also increase.

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Energy and Natural Resources, cont.</u>	<p>operation of 3 million square feet would amount to an estimated 772×10^9 Btu per year. The overall peak winter energy demand would be 10,200 kW.</p> <ul style="list-style-type: none"> • Significant portions of the distribution cabling system and building electric service equipment would need to be replaced/expanded to provide for new and renovated facilities. With improvements, the existing distribution system on campus would be adequate to support the projected increases in consumption. • The proposed development of 3 million square feet would require a new emergency power source and central system expansion. • New chiller capacity for new construction in the North, West South and Southwest areas and new distribution piping would be required. • One boiler in the steam generation system and selected piping within the condensate return system would require replacement. 	<p>and an increase in energy demand could occur in association with projected population growth.</p>	<p>lead to an increase in off-campus energy demand.</p>	<p>this alternative would likely be similar to that under the <i>Proposed Action</i>.</p>	

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<p><u>Environmental Health</u></p> <p><u>Environmental Health, cont.</u></p>	<ul style="list-style-type: none"> An increase in the use of hazardous materials would occur over the planning period, depending on the amount of additional research and patient care. Risk to human health would not be expected to significantly increase. Average noise levels for phases of construction range from 76 Leq to 89 Leq, 50 feet from the source. Construction noise could disrupt teaching and research activities and cause disturbances to residential areas. Over the planning period, operational noise impacts in addition to those existing would not be expected to occur. 	<ul style="list-style-type: none"> Remaining development planned for in the GPDP would likely lead to some construction-related noise impacts. The management of and impacts from hazard waste management would not likely change significantly from existing conditions. 	<ul style="list-style-type: none"> On-campus risks to environmental health would be reduced under this alternative. Construction-related noise impacts on campus would be reduced by about half. The potential for impacts from hazardous waste and noise could affect a broader, off-campus area. Overall environmental health impacts would be reduced under this alternative. 	<ul style="list-style-type: none"> With less building area, risks from hazardous materials and localized noise impacts could be reduced. Overall environmental health impacts would not likely differ significantly from that under the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> The amount of building area dedicated to patient care in the University District could increase. The pace of development activity in the University District could increase and construction-related noise could increase.
<p><u>Land and Shoreline Use</u></p>	<ul style="list-style-type: none"> Approximately 3-million sq.ft. of building area and up to 11 acres of new open space would be developed on campus. Depending on which sites were developed, the amount of area in building footprint and open space would increase, and the amount of area in surface parking would decrease. 	<ul style="list-style-type: none"> The distribution and character of land uses on the campus would remain similar to existing conditions. Because campus population increase would still occur, existing campus buildings and open spaces would be more intensively utilized. The potential for building demolition would be less than 	<ul style="list-style-type: none"> Less building development would occur on the campus than under the <i>Proposed Action</i>. Because campus population increase would still occur, existing campus buildings and open space would be more intensively utilized than under the <i>Proposed Action</i>, but at a lower level than under the <i>No</i> 	<ul style="list-style-type: none"> The existing roadway system on the Seattle campus would remain. Building and open space development associated with the potential street and alley vacations would not occur. Pedestrian circulation improvements between campus areas and pedestrian safety benefits associated with the potential aerial 	<ul style="list-style-type: none"> The University would be afforded the opportunity for increased participation in implementation of UCUC Plan goals. As analyzed in the UCUC Plan Environmental Checklist, construction of new buildings within the University District would generate increases in noise, dust, equipment exhaust and

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Land and Shoreline Use, cont.</u>	<ul style="list-style-type: none"> The majority of campus development would likely occur in the West and Central Campus areas, and these would be the areas most affected. Overall, development would result in an intensification of buildings on the campus. Depending on which sites are selected, new development could result in the demolition of up to 39 temporary and permanent structures. New development on-campus could generate increased demands for indirect support businesses off-campus. Construction at identified sites would result in temporary impacts to adjacent land uses during the respective construction periods. 	<ul style="list-style-type: none"> under the <i>Proposed Action</i>. Construction impacts would be less than under the <i>Proposed Action</i>. 	<p><i>Action Alternative</i></p> <ul style="list-style-type: none"> With the existing lease lid, off-campus demand would need to be accommodated at locations in the Seattle area outside the Primary and Secondary Impact Zones. The potential for building demolitions and construction impacts would be less than under the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> plaza and skybridges would not occur. The visual impacts associated with the aerial plaza and skybridge over NE Pacific Street and Skybridge over Montlake Blvd. would not occur. 	<ul style="list-style-type: none"> traffic. University District uses would be consistent with zoning designations.
<u>Population</u>	<ul style="list-style-type: none"> Population would increase by an estimated 9,120 people over the planning period (a 16 percent increase from the 1999 campus population). The overall increase in campus population would lead to an increased demand for 	<ul style="list-style-type: none"> Population and housing demands would be similar to that described for the <i>Proposed Action</i>. Housing and institutional capacity on campus would be inadequate to accommodate increasing demand. Existing space would be 	<ul style="list-style-type: none"> Population growth and related impacts would remain the same as that described for the <i>Proposed Action</i>. Housing and institutional capacity on campus would be inadequate to accommodate increasing demand. 	<ul style="list-style-type: none"> Although planned construction and development would be reduced, population growth and related impacts would remain approximately the same as that described for the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> The population in the University District could increase as a result of University uses. Impacts related to increased population would be as described in the UCUC Plan Environmental Checklist.

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Population</u> <u>cont.</u>	housing, energy resources, transportation facilities and public services. Activity on campus would intensify, and indirect impacts associated with such increases would occur.	used more intensively.	Existing University space would be used more intensively.		
<u>Housing</u>	<ul style="list-style-type: none"> • Under the <i>Proposed Action</i>, the University would have capacity to add 850 to 1,000 beds for students on-campus (an increase of 17-20 percent). • The University would rely on the private market for a portion of student housing and all housing for faculty and staff. • Demand by students for private housing would be within the housing and population goals of the UCUC Plan. • The <i>Proposed Action</i> does not include new family housing. • University salaries have not increased at the same rate as housing costs; housing affordability could continue to decline over the planning period. 	<ul style="list-style-type: none"> • The private housing market in the University District and surrounding neighborhoods would be pressured to absorb all additional student housing demand. • <i>No Action</i> would ignore the home ownership goals of the University neighborhood. 	<ul style="list-style-type: none"> • The impacts of the <i>Decentralization/Open Space Alternative</i> do not differ from those of the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> • The impacts of this alternative do not differ from those of the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> • Demand for housing in the University District could increase. • Any University related housing in the University District would be consistent with applicable City of Seattle Zoning standards and could help to implement UCUC Plan goals.
<u>Light, Glare and Shadows</u>	<ul style="list-style-type: none"> • The amount of light presently emanating from the campus due to 	<ul style="list-style-type: none"> • There would be no increase in light, glare or shadow impacts. 	<ul style="list-style-type: none"> • The reduction in ambient light levels is not expected to be as great 	<ul style="list-style-type: none"> • Impacts related to this alternative would be comparable to those of 	<ul style="list-style-type: none"> • Depending on the amount of University-related development

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<p><u>Light, Glare and Shadows, cont.</u></p>	<p>parking lot lighting would be reduced. The cobra-type light standards would be removed, which would lessen light spillage impacts.</p> <ul style="list-style-type: none"> • New sources of light would be added to the University context in the form of pedestrian-scale lighting, exterior lighting associated with new campus buildings, and indirect light from within new campus buildings. • Areas adjacent to new campus buildings could experience some localized light spillage, although such is not expected to be disruptive. • Glare associated with development projects would result from sunlight reflected from specular surfaces on building facades. • It is expected that materials used in the facades of new buildings and glazing would not be highly reflective. • Solar glare impacts from glazing on new campus buildings sited proximate to major arterials (15th Ave. NE, NE Pacific St. and Montlake Blvd. NE.) could occur. • New campus buildings, the potential aerial plaza, and new plantings would 	<ul style="list-style-type: none"> • Existing levels of ambient light would occur on campus and light spillover into adjacent areas that current exists would continue. 	<p>as would occur in conjunction with the <i>Proposed Action</i>.</p> <ul style="list-style-type: none"> • Glare and shadow-related impacts would be comparable to those of the <i>Proposed Action</i>. • Because of decentralization, off-campus development would occur resulting in light, glare and shadow impacts proximate to new off-campus buildings. 	<p>the <i>Proposed Action</i>.</p> <ul style="list-style-type: none"> • Because more buildings would be needed – particularly in the West Campus, it is possible that the potential for light, glare and shading impacts could increase. • Similarly, open spaces that would be created as a result of this alternative would be smaller, with a greater potential for shading impacts from the increased number of buildings. 	<p>that occurs in the University District, light, glare and shadows could increase.</p> <ul style="list-style-type: none"> • All new building development would adhere to City of Seattle development regulations.

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
	cast shadows over portions of the campus and surrounding streets.				
<u>Aesthetics</u> <u>Aesthetics, cont.</u>	<ul style="list-style-type: none"> The <i>Proposed Action</i> would result in an intensification of development and increase in building bulk on the campus. The design of new development would respect the character of existing surrounding campus development. Proposed development would strengthen the visual character of the edges of campus. The total amount of open space on the campus could increase. The potential pedestrian bridge and aerial plaza over NE Pacific St. would be clearly visible and would diminish the feeling of openness. The potential pedestrian bridge over Montlake Blvd. would be clearly visible but would not obstruct or affect significant views. 	<ul style="list-style-type: none"> The level of building bulk on the campus would be less than under the <i>Proposed Action</i>. The strengthening of the visual character of campus edges would not occur. No additional open space would be developed on the campus. Visual conditions associated with the aerial plaza and skybridges would not occur. 	<ul style="list-style-type: none"> The level of building bulk on the campus would be less than under the <i>Proposed Action</i> and more than under the <i>No Action Alternative</i>. The potential for additional open space would be less than under the <i>Proposed Action</i>. Visual conditions associated with the aerial plaza may or may not occur, depending on if the site is included. 	<ul style="list-style-type: none"> The existing public roadway system on the campus would remain. The additional building and open space associated with the reconfiguration of NE Campus Parkway, aerial plaza over NE Pacific St. and other potential developments associated with vacations would not occur or would be limited. Visual impacts associated with the aerial plaza and skybridges would not occur. 	<ul style="list-style-type: none"> The pace of development could be increased and resulting bulk/scale and visual conditions in the University District could be affected. All new development in the University District would adhere to City of Seattle development regulations. As indicated in the UCUC Plan Environmental Checklist, specific impacts would be examined as part of project level environmental review.
<u>Recreation</u>	<ul style="list-style-type: none"> Participation in active recreational activities and the use of intramural facilities would increase as the campus population increases. 	<ul style="list-style-type: none"> The demand for active and passive recreational spaces would not be expected to differ from that described under the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> Although planned construction and development would be reduced, impacts to and demand for recreation resources would likely remain the same as that 	<ul style="list-style-type: none"> Although planned construction and development would be reduced and/or relocated, impacts to and demand for recreation resources 	<ul style="list-style-type: none"> Increased potential for University participation in development in the University District, consistent with City of Seattle zoning regulations and UCUC

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
	<ul style="list-style-type: none"> Population growth could lead to demand for additional active recreational facilities and/or lead to a need for additional maintenance staff and equipment for existing facilities. 		<p>described for the <i>Proposed Action</i>.</p> <ul style="list-style-type: none"> This alternative could lead to decentralization and an increase in off-campus development activity. 	<p>would remain the same as that described for the <i>Proposed Action</i>.</p>	<p>Plan goals.</p>
<p><u>Historic and Cultural</u></p>	<ul style="list-style-type: none"> The <i>Proposed Action</i> is not expected to result in any significant historic impacts – either to on-campus or off-campus structures. Construction of future development proximate to the University's historic structures could be expected to cause temporary indirect impacts, including localized increases in suspended particulates (dust), noise, vibration, and disruption of pedestrian and bicycle circulation, and a loss of surface parking. 	<ul style="list-style-type: none"> Because no new construction would occur with this alternative, there would be no impacts to existing historic structures on-campus or in the vicinity of the campus. 	<ul style="list-style-type: none"> The potential for impacts to on-campus structures would be reduced. Because of decentralization, off-campus development would occur resulting in potential impacts to historic structures proximate to the new off-campus buildings. 	<ul style="list-style-type: none"> Impacts related to this alternative would be comparable to those of the <i>Proposed Action</i>. 	<ul style="list-style-type: none"> All development in the University District would be required to adhere to City of Seattle Master Use permit process, which includes review of applicable development regulations, SEPA, and proximity to designated Landmark structures.
<p><u>Public Services and Utilities</u></p>	<ul style="list-style-type: none"> The <i>Master Plan Seattle Campus</i> is not expected to result in significant impacts to the Seattle Fire Department with regard to service demands. Replacement of the fire alarm system would likely be required in the 2002-2012 planning. 	<ul style="list-style-type: none"> Public services demands would not be expected to differ significantly <i>Proposed Action</i>. 	<ul style="list-style-type: none"> Sewer and water volumes and demand for fire, police and solid waste services would likely be similar to that described for the <i>Proposed Action</i>. Required sewer infrastructure improvements could be reduced if fewer sewer 	<ul style="list-style-type: none"> Sewer and water volumes and demand for fire, police and solid waste services would likely be similar to that described for the <i>Proposed Action</i>. Required sewer infrastructure improvements could be reduced as fewer sewer 	<ul style="list-style-type: none"> University-related development in the University District could increase the pace of development and related demand for services and utilities. Service and utility conditions would be as described in the UCUC Plan Expanded

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Public Services and Utilities, cont.</u>	<ul style="list-style-type: none"> Additional police security and patrol services and staff would be required. An increased sewage outflow of approximately 390,000 gallons per day (25 percent) would be expected. It is anticipated that the City's lift station and some older sewer lines would have to be improved or replaced. Water demand would increase by an estimated 28 percent. The water distribution system is direct buried and adequately sized to meet current and future needs. Older sections of piping would be replaced as the opportunity arises. Solid waste generation rates would likely be consistent with existing trends. 		line connections are required.	line connections are required.	Environmental Checklist.
<u>Transportation, Circulation and Parking</u>	<ul style="list-style-type: none"> The <i>Proposed Action</i> would maintain the number of parking spaces to approximately the existing level, and the number of motor vehicle trips to and from the campus would not significantly increase as a result of proposed master plan development. Potential relocation of 	<ul style="list-style-type: none"> Because the <i>Proposed Action</i> would not provide a significant amount of additional parking and vehicle trips would not significantly increase, overall traffic conditions would be similar to the <i>Proposed Action</i>. The shifting of vehicle trips on campus to other locations would not 	<ul style="list-style-type: none"> Because the <i>Proposed Action</i> would not provide a significant amount of additional parking and vehicle trips would not significantly increase, overall traffic conditions in the campus area would be similar to the <i>Proposed Action</i>. With the existing limitations on leasing in 	<ul style="list-style-type: none"> Traffic conditions would be similar to the Proposed Action because no traffic would be redistributed due to vacated streets or alleys. Pedestrian and bicycle circulation conditions would be similar to the Proposed Action. 	<ul style="list-style-type: none"> University-related development could increase the pace of University District development and increase the number of University-related trips. With implementation of University of Washington's TMP measures, traffic impacts associated with University-related

ELEMENT	Proposed Action	No Action Alternative	Decentralization/Open Space	No Street or Alley Vacations	Lifting of Lease Limit
<u>Transportation, Circulation and Parking, cont.</u>	<p>parking on the campus could increase the number of trips to the following intersections: 15th Ave./45th St.; 15th Ave./41st St.; Montlake Blvd./45th St.; Pacific Place/Montlake Blvd.; Pacific St./Montlake Blvd.; and, Pacific St./Montlake Blvd.</p> <ul style="list-style-type: none"> • The increased campus population and potential Sound Transit stations would increase the demands on the campus pedestrian circulation system. The <i>Master Plan Seattle Campus</i> includes measures to improve the existing pedestrian system on the campus. • The number of bicycle trips to the campus would increase as a result of the increased campus population. The <i>Master Plan Seattle Campus</i> includes measures to improve the existing bicycle system/facilities on the campus. • The increased demand for transit can be accommodated by the transit system either with or without light rail. • The potential street vacation with the greatest potential for transportation impacts is the realignment of NE 	<p>occur.</p> <ul style="list-style-type: none"> • The proposed pedestrian, bicycle and transit improvements on the campus would not occur. 	<p>the University District, decentralized uses would likely be located a significant distance from the Seattle Campus. Motor vehicle and other mode trips would be shifted from the University to other parts of the city.</p> <ul style="list-style-type: none"> • With University uses dispersed to various parts of the city, the University could not utilize TMP measures as efficiently as under the <i>Proposed Action</i>. 		<p>development in the University District could be less than that identified in the UCUC Plan Environmental Checklist.</p>

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	Campus Parkway. The realignment would not significantly impact traffic operations of the surrounding street system.				

E. Possible Mitigation Measures

Mitigation measures associated with the *Proposed Action* could include the following.

Earth

- Excavated areas and stockpiled materials could be managed, through methods such as soil nailing, to prevent wall failure and sloughing.
- Soldier piles and other slope stability techniques could be used as necessary in areas of unstable soils. Most development could be located in glacially consolidated soils.
- Structures could be designed with a structural system capable of supporting code-required floor loading and resisting lateral forces generated by earthquake and wind.
- Excavated earth could be disposed of at authorized disposal sites or reused on campus.
- To prevent an accumulation of dust and/or mud on campus during construction activities, the tires of construction equipment and trucks could be washed before they leave construction sites and streets could be swept as necessary.
- Whenever possible, construction could be scheduled to minimize overlapping of excavation periods for projects planned for construction in the same biennium.
- Temporary erosion and sedimentation controls could be implemented during excavation and construction activities to prevent impacts to water quality and wildlife habitat (see *Section III C.* of this Final EIS [*Water*] for further discussion).

Air

- During construction, best management practices to control dust and vehicle and equipment emissions could be implemented.
- The University's Transportation Management Program could be implemented (refer to *Section III O.* of this Final EIS [Transportation]).

Water

- Storm system extensions could be designed and constructed to accommodate runoff from the City of Seattle's ten-year frequency design storm. Storm drains from parking lots could be equipped with oil separators as required to reduce runoff pollutants entering the drainage system. Storm water facilities (i.e. detention facilities, catch basins, and underground storage) for temporary control of runoff during construction as well as permanent controls could be provided per City of Seattle standards (Seattle Municipal Code Ch. 22.800).
- Groundwater control measures could be provided for all subsurface wells and basement drainage.

- Mechanical devices to increase efficiency, reduce consumption, and monitor water use are included in all new construction projects. Measures to increase efficiency and reduce consumption could be taken in existing facilities as well.
- Changes to facilitate pedestrian access will be carried out so that additional damage to shoreline areas does not occur.
- Water conservation techniques and programs could be continued and/or expanded (see Section O of this Final EIS).
- In replacing existing roofs, efforts would continue to be made to use materials which would further reduce runoff that might possibly contain substances that are toxic to aquatic animals.
- Sky bridges and the aerial plaza would be designed to channelize stormwater runoff and thereby minimize sheet flow runoff to travel lanes below.
- The University anticipates working with the City of Seattle in developing and updating its compliance program for any new storm drainage pollution controls or treatment requirements.
- In response to the statewide listings of salmonids under the Endangered Species Act, the University would adopt additional water quality control measures and coordinate with the National Marine Fisheries Service, U.S. Environmental Protection Agency, Washington Department of Ecology and other federal and state agencies, as required.

There are other opportunities to mitigate water-related development impacts on-site and off-site. Potential on- and off-site mitigation measures may include the following:

- Avoid significant grade changes which could alter normal surface flow patterns.
- Control and plan for spills of hazardous materials, such as petroleum, cement, chemicals, or other toxic substances (primarily necessary during construction).
- Immediate site revegetation with native species, especially where displacement of established invasive species is possible, and minimal use of fertilizers, pesticides, herbicides, and fungicides following the University Integrated Pest Management program.
- Restoration or enhancement of wetlands and buffer areas that contribute habitat functions to species of concern.
- Retrofit problem storm outfalls to improve drainage system functions.
- Construction impacts could be minimized or eliminated by siting that avoids building or working in wetlands or wetland buffers. When wetlands are near a construction site, protective fences should be erected around sensitive areas, along with observing BMPs as described above, could mitigate potential impacts. Compensation for temporary or permanent impacts on wetlands could include enhancement of existing degraded wetlands or restoration of previously filled wetlands in the Union Bay Natural Area.

Plants and Animals

Plant and animal mitigation opportunities include impact avoidance (e.g., working when fish species are not particularly sensitive to disturbance or avoiding identified terrestrial habitats), stormwater drainage control, site and construction best management practices (BMP), alternative site design (including vegetation retention, landscaping, and alternatives to open parking lots), and habitat enhancement or restoration. Planned development would be sensitive to the existing shoreline.

All development would comply with federal, state and local regulatory standards for development and mitigation that the University of Washington, as a public entity, is required to follow. BMPs should be developed and rigorously followed for both general and site specific development activities, especially if development in sensitive areas has been permitted. BMPs, as specified by regulation, would include: site disturbance controls, construction staging, erosion and spill control, drainage control (water quantity and quality), vegetation retention and re-vegetation plans, and BMP training and monitoring.

Stormwater controls would be applied during construction activities and over the long term. Compliance would be measured against requirements set forth by the City of Seattle Stormwater, Drainage, and Erosion Control Requirements (SMC 22.802.015). These controls and BMPs would control on-site erosion and transport of sediment and pollutants off site, by minimizing disturbance, stabilizing unworked materials, applying vegetative or mulch controls, and implementing other controls to reduce and treat contaminants in drainage water. In addition, controls could address the release rate of stormwater discharge depending on project size (SMC 22.802.015).

Potential additional mitigation measures could include:

- In response to the statewide listings of salmonids under the Endangered Species Act, the University could adopt additional water quality control measures, in coordination with the National Marine Fisheries Service.
- Vegetation controls could include the development of an Integrated Pest Management Plan and a revegetation plan that emphasizes the propagation of native scrub-shrub and mixed coniferous species along shoreline areas. The development of new campus vistas or pedestrian viewpoints could be designed to not compromise opportunities to revegetate shoreline areas.
- Shoreline areas could be enhanced or restored through the retention or placement of shoreline-associated large woody debris for cover and forage production.

Energy and Natural Resources

Measures to mitigate potential energy and natural resources impacts may include the following.

- Centralized utilities allow the most efficient management of the related energy resource. Central plant additions were recently made to add steam, cooling water generation capacity and high voltage electrical capacity to continue this approach. Satellite plants for central

cooling could be established if space in the central plant proves to be too limited for meeting service demands.

- New facilities could comply with applicable energy codes. In addition, since the University must operate and maintain the facilities on a long-term basis, the economics of energy management and conservation are a primary design consideration. A standard of practicality must also be applied that assures that the building designs can be maintained properly. Sophisticated monitoring systems are becoming available to assure efficient operations.
- Projects receiving separate service from SCL could be subject to SCL General Service Energy Efficiency Standards on new or enlarged services to existing buildings.
- As plans for demolition and construction of facilities are developed, the University Design Team could contact SCL and Puget Sound Energy customer services to confirm specific requirements for service.
- Aggressive energy conservation measures could continue to be studied and implemented on campus.
- Required improvements to the electrical power, fossil fuel, and central cooling systems capacity and distribution improvements, as described above, could be implemented as necessary to meet demand.
- Provide early funding could be required to upgrade the emergency power and distribution to ensure that demand is available at the time of building occupancy.
- Adoption of Leadership in Energy and Environmental Design (LEED) standards for all new development to increase building sustainability.

Environmental Health

The University's construction specifications and Seattle Noise Ordinance would minimize potential environmental health impacts. Additional mitigation measures could include the following:

- Proposed facilities could be designed to minimize risk and could be expected to provide more protection than the older facilities on campus.
- Existing facilities for handling research chemicals and medical wastes in the Health Sciences and East Campus areas could be improved to meet future needs and standards as necessary.
- Current procedures for plan approval and construction, inspection, collecting, treating and disposing of hazardous waste will continue to be reviewed by the University's Environmental Health and Safety Department, in accordance with State and federal regulations. Any need for new procedures to handle hazardous substances new to campus will be addressed by the Department of Environmental Health and Safety.

- Construction activities could be managed to comply with University noise control requirements and construction specifications (as described above). The contractor may meet noise criterion by erecting barriers between equipment on jobs and such interior areas, by using alternative equipment or silencing mechanisms, and limiting schedules according to work and class hours.

Land and Shoreline Use – Land Use Patterns

- Implementation of the proposed open space and landscape features could help offset the proposed intensification of land uses on the campus.
- The demolition of existing temporary structures could be required for development of some of the identified development sites.
- Mitigation for height, bulk, and scale impacts could be minimized with implementation of general policies, development programs and development standards.
- New opportunities for landscaped and plaza public open space would be provided by the potential street and alley vacations.

Population

No direct population-related mitigation is necessary. Mitigation associated with indirect impacts are discussed in respective sections of this Final EIS.

Housing

The *Proposed Action* provides capacity for 850 to 1,000 new single student spaces that would mitigate the identified housing impacts generated by anticipated growth in students. Growth in faculty and staff does not create impacts sufficient enough to require mitigation.

Light, Glare and Shadows

- The University's existing internal design review processes (architectural, landscape and environmental review) would continue to review every major building project.
- Shield exterior lighting fixtures and site the fixtures to direct light away from adjacent land uses.
- Facade design could consider using the least reflective glazing available. Glazing could be recessed from the wall of the structure and separated by building structural elements (e.g. spandrels, mullions) to lessen the effect of reflective solar glare.
- Design associated with subsequent development on parking lot N5 could evaluate the possibility of providing tinted glazing on the west facade of building in order to lessen the potential impacts on the Observatory as a result of increased levels of ambient light.
- Provide lighting beneath the aerial plaza structure.

Aesthetics

No measures beyond those standards and guidelines identified in the *Master Plan Seattle Campus* required.

Recreation

Additional maintenance staff and acquisition of equipment for existing recreational facilities could be needed to effectively address the increase in use of active and passive recreation resources.

Historic and Cultural

- The University's existing internal design review processes (architectural, landscape, environmental review, architectural advisor, and Board of Regents) would continue to review and authorize every major building project in terms of siting, scale, and the use of compatible building materials relative to recognized historic structures.
- The University would follow the Architectural Opportunities Report process, as defined in the *Master Plan*, and where applicable prepare a Historic Resources Addendum as an attachment to all project documentation.
- As additional mitigation, the University may consider use of the Secretary of Interior's Guidelines for Rehabilitation, as outlined below.
 - Insure that the site is used for its general historic purpose (i.e. education,) or assigned new uses that require minimal change to the defining characteristics of the building and its site and environment.
 - Insure that the historic character of a property is retained and preserved. The removal of historic materials or alternation of features and spaces that characterize a property should be avoided.
 - Each property should be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, should not be undertaken.
 - Insure that those changes that have acquired historic significance in their own right are retained and preserved in a manner compatible with both the defining characteristics of the building while supporting current needs.
 - Insure that distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property are preserved.

- Chemical or physical treatments, such as sandblasting, that cause damage to historic materials should not be used. The surface cleaning of structures, if appropriate, should be undertaken using the gentlest means possible.
- Significant archeological resources affected by a project should be protected and preserved. If such resources must be disturbed, mitigation measures should be undertaken in accordance with applicable laws and regulations.

Public Services and Utilities

- All projects could be built to meet current fire code standards (as discussed above) in order to reduce fire-related hazards. Fire separations, automatic sprinklers, fire suppression systems and fire alarm systems could be installed as appropriate.
- The Seattle Fire Department could be notified of major utility shutdowns as well as campus street closures.
- Improvements to or replacement of the central alarm system should within the next 10 years in order to effectively accommodate development-related growth.
- The University could review the designs for new development on a project-by-project basis, evaluating the potential for impacts to life safety and personnel security.
- During the construction phases of major University projects, UWPD could provide escort services in the event of an emergency.
- The UWPD may need to increase its law enforcement staff capacity and expand its operations to meet increased security needs associated with the proposed *Master Plan Seattle Campus*.
- Where necessary, the University could grant easements to maintain water lines or bear the cost of relocation.
- The University's program to separate combined sewers should continue until complete or until the University and the Seattle Drainage Utility identify alternative programs to respond to new federal regulations on storm water runoff.
- Solid waste impacts associated with the Master Plan could include enhancement of current campus recycling programs. The University could comply with applicable existing and new regulatory requirements.
- Programs to publicize water conservation on campus could continue.
- Drip watering or low precipitation output systems could be used for irrigation wherever possible, and types of ground cover that require less irrigation could continue to be used. Irrigation conservation measures could continue.
- Opportunities to use/reuse recycled water are being investigated in cooperation with the King County Department of Natural Resources. Where appropriate, recycled water could be considered for nonpotable water usage.

Transportation, Circulation and Parking

The following is a menu of possible TMP measures available to the University. The University would choose among the listed possible TMP measures to maintain or reduce motor vehicle traffic compared to existing conditions, and increase the availability and effectiveness of alternate transportation modes.

Pedestrian Measures

- Coordinate with the City of Seattle to identify improvements to the local pedestrian network such as filling in gaps in the pedestrian network, changing signal timing to establish pedestrian priority over vehicles and enhancing pathways/sidewalks (either by widening or a regular maintenance program).
- Designate and improve priority pedestrian commuting corridors.
- Increase pedestrian safety through the use of better lighting and innovative roadway designs (such as raised crossings, curb extensions and advanced warning signage).
- Increase marketing of walking as an alternative mode.

Bicycle Measures

- Create additional secured, covered bike lockers and shower facilities on campus to promote bicycle use.
- Implement a bicycle/pedestrian safety program with measurable goals to help promote the use of bicycles as an alternative mode of travel and raise the awareness level of bicycles on the transportation network.
- Subsidize bicycle sales or leasing for students, faculty and staff to help increase bicycle ownership.
- Coordinate with the City of Seattle to enhance corridors identified in the Master Plan for use by bicycles.
- Develop intelligent transportation system (ITS) solutions to help “track” individual bicycle use to/from campus, which in turn offers parking subsidization for the individual for selecting an alternative mode to school/work.

Transit Measures

- Incorporate light rail ridership subsidies into the U-PASS program (assuming implementation of light rail by Sound Transit).
- Encourage transit agencies to increase evening (after 6PM) service to provide greater user flexibility and use of non-peak service.
- Provide a method for transit ridership subsidies for visitors to the campus and patients at the University of Washington Medical Center (UWMC).
- Incorporate intelligent transportation system (ITS) solutions such as advanced transit traveler information (kiosks at bus stops/stations to relate “real-time” bus locations and times).

HOV Measures

- Develop “intelligent carpool/vanpool” technology (ITS software) that cross-references zip code and class registration information (time of classes) for students and prints possible ridematch candidates on each student’s registration (upon student’s approval).
- Continue to promote carpool and vanpool use through marketing.

Parking Measures

- Increase parking pricing greater than the cost of living.
- Develop graduated parking pricing to create pricing “tiers” for users that allows discounted parking for infrequent users and increased parking fees for frequent users.
- Emphasize the “just once a week” theme for modes other than single occupant vehicles (SOV) and develop ITS technology that allows for a discounted parking price if modes other than SOV are used to access campus.

Marketing

The University currently maintains an extensive marketing program through brochures and the U-PASS program to help make students, staff and faculty aware of different commuting options. The University conducts transportation fairs where different mode options are highlighted and promoted. In the fall, all of the students, faculty and staff receive a U-PASS User’s Guide that covers multiple modes of travel and how the U-PASS covers each mode. The University of Washington World Wide Web site also contains useful information about the U-PASS program and other modes of travel. The following list summarizes some of the possible marketing improvements that could be accomplished in the TMP.

- Focus marketing efforts on new employees.
- Increase marketing of biking, walking and carpooling.
- Link marketing to national modal days (i.e. bike to work day, take transit to work day, etc.).
- Incorporate walking into promotions.
- Improve transit information to off-campus sites, visitors and patients.

Institutional Policies

The University can modify and implement institutional policies that help to promote different modes of travel and/or reduce vehicle trips on the transportation network. While the other elements of the TMP are aimed at provision of different mode choices, institutional policies are aimed primarily at controlling forecasted growth in trips. The following list summarizes some of the possible institutional policy measures that could be implemented as part of the TMP.

- Establish policies and aggressively promote telecommuting, flextime, compressed workweeks and other techniques to reduce peak period travel. This could include a program for staff and faculty to have computers with high-speed communication access while off campus.
- Expedite the delivery of the U-PASS to new employees.
- Direct growth to off-peak quarters (especially summer).
- Modify and expand faculty/staff-housing benefit to favor nearby housing.
- Partner with developers for off-campus U-District and transit corridor housing development (i.e. Sound Transit stations).

- Increase on-campus student employment to decrease linked SOV trips.
- Encourage surrounding employers/institutions to implement similar TMP strategies when applicable.
- Increase student housing development.
- Coordinate with the city so that costs for transportation facilities can be shared in a fair and equitable manner (e.g., district fees, area-wide fees, transportation improvement fees, etc.)
- Centralize off-campus development near transit hubs.

Monitoring Program

The University has an extensive program of monitoring, evaluating and reporting transportation conditions, including counting vehicles, on-street surveying of vehicles operators, surveying by telephone of students, staff and faculty about commute behavior, counting bicycle rack utilization and other ad hoc surveys.

The University produces reports on the annual Campus Traffic Count, the Biennial University District Cordon Count and UPASS Annual Report. Results of these reports are posted on the Web. Most of these monitoring and reporting activities are proposed to continue. However, the University proposes to cease its biennial on-street survey of vehicle operators, the “University District Cordon Count”, and focus its measurement and benchmarks on students, staff and faculty.

The University District Cordon Count is conducted over a two-week period every two years during the autumn quarter when 14 locations around the University are sampled once each and vehicle operators are asked, “Are you going to or from the University of Washington or its facilities?” Based on the percentage of yes/no answers to this question and a count of vehicles over the period, the percentage of University traffic is deduced.

The University believes that the survey does not provide information that leads to the improvement of transportation conditions in the University District. The survey costs the University and the City of Seattle \$30,000 each every two years. Both the City of Seattle and the University could better invest this money in other information gathering that will help address ongoing transportation problems in the area.

The University acknowledges that like other public and private organizations it should be responsible for managing the commuter transportation of its employees. However, like other public and private organizations, managing the transportation impact of the customers and visitors is problematic. Although students are the primary customers, it is believed the TMP can continue to be successful managing their transportation impacts.

Managing the travel behavior of patients and visitors to campus, such as museum and theater patrons, public school student guests, public meeting attendees, and other guests presents barriers to access to campus, conflicts with the public service mission of the University, is contrary to the interests of the citizens of the area and is contrary to City policy about encouraging public use of the campus.

Other public and private organizations are not subject to the same requirements and in fact the City does not require demand management of itself with its customers, for example at Seattle Center. Controlling the travel behavior of patients and visitors to campus is therefore proposed to be excluded from limitations on vehicle trips. Nevertheless, the University proposes above to

implement changes that will improve the mode share of these groups, for example providing a method for subsidized transit for patients and visitors.

This TMP will be monitored and TMP elements will be improved or expanded with some of the potential improvements listed herein to keep the vehicle trips created by University of Washington students, staff and faculty at or below the same level. The monitoring program would include the following.

- Conduct an annual campus traffic count to evaluate the number of vehicles entering and leaving campus.
- Conduct biennial transient parking survey to identify and track non-permit parking inventory usage.
- Conduct annual bicycle rack utilization survey. Modify the location and quantity of bike racks to accommodate demand.
- Conduct biennial U-PASS telephone surveys. Based on the results of the survey, calculate trips generated by students, staff and faculty. If these trips increase, implement additional elements to prevent trips calculated with the subsequent survey from exceeding the goals established in 1991.
- Conduct supplemental counts and surveys to better understand market segments.
- Produce and distribute a U-PASS Annual Report that identifies the results of monitoring efforts. Post the monitoring results on the Web.

F. Unavoidable Adverse Impacts

Earth

None.

Air

Increased traffic and congestion associated with on-campus construction activity and University operations could cause periodic, localized violations of the 1-hour standard for carbon monoxide. Other air quality standards would not be expected to be violated as a result of the proposed *Master Plan Seattle Campus*. Increases in suspended particulates would occur in construction areas to some extent during excavation for individual projects.

Water

Unavoidable adverse impacts include those impacts not controlled by mitigation measures, which could result from non-compliance with regulations or compliance with regulations that are insufficient to protect surface waters from stormwater impacts like erosion and sedimentation. Additionally, federal, state, local and regional water quality regulations and programs cannot always anticipate or eliminate adverse impacts to water quality.

During large construction projects, surface water quality could temporarily decline due to erosion and sediments in stormwater runoff. Fecal coliform levels could increase where sewer and storm water systems are still combined and discharging within the Lake Union basin.

Increased storm water runoff volumes could also negatively affect other water quality parameters. East Campus wetlands could sustain unavoidable adverse impacts if developing one or more of the projects on the East Campus offered no practicable alternative to encroaching on a wetland or its buffer. Because of the availability of buildable upland and the difficulties of construction in or near a wetland, such impacts, if any, are likely to be small. No other significant unavoidable adverse impacts are anticipated.

Plants and Animals

Significant unavoidable adverse impacts could occur along shoreline areas, affecting aquatic habitat areas, if planned development does not mitigate for disturbance. The increase in stormwater runoff volumes from new development could exacerbate water quality problems, thus affecting fish habitat. New development could permanently displace some existing terrestrial habitat.

Energy and Natural Resources

Development of the proposed 3 million square feet of building area could result in increased consumption of electrical, fossil fuel, and natural gas resources.

Environmental Health

No significant unavoidable adverse impacts would be anticipated over the long term. During construction, some temporary, intermittent unavoidable noise impacts may occur. These impacts could cause temporary interference with speech communication, stress reactions, and general annoyance.

Land and Shoreline Use – Land Use Patterns

An intensification of land uses on the campus would occur. The greatest potential for an increase in development would occur in the West and Central Campus.

Population

None.

Housing

The only unavoidable impacts are likely to be the construction-related impacts (noise, traffic, dust, etc.) that will occur in the immediate vicinity of housing construction sites. In addition, there is likely to be increased pedestrian and vehicle traffic in the immediate vicinity of new housing projects.

Light, Glare and Shadows

A tall building on parking lot N5 with glazing on the west façade could adversely affect the effectiveness of the Observatory.

Aesthetics

Implementation of development proposed in the *Master Plan Seattle Campus* would result in changes to the visual character of the campus. With proper implementation of the guidelines and standards listed in the Plan, the majority of changes in campus character could be interpreted as positive and significant negative aesthetic impacts would not be anticipated. The potential aerial plaza over NE Pacific Street would diminish the feeling of openness along the roadway.

Recreation

No significant unavoidable adverse impacts to recreation resources are expected to occur.

Historic and Cultural

None.

Public Services and Utilities

The demand for fire and police services would increase in conjunction with the proposed *Master Plan Seattle Campus*, in relation to inspection requirements, and with growth over time. Sewage and solid waste volumes generated and water required on campus would increase with population growth over the planning period. Public water supplies would be reduced by approximately 240,000 units per year upon full development of all proposed projects.

Transportation, Circulation and Parking

The increase in total campus population would increase the demand for pedestrian, bicycle, HOV and transit facilities. With implementation of the proposed TMP measures, significant impacts would not be anticipated.