

UW Medicine

Results and Recommendations from NBBJ Comprehensive Facility Planning Study for UWMC

**Prepared by
NBBJ & University of Washington Medical Center**

October 2005

SUMMARY

1. Why have we developed a Comprehensive Facility Study?

- Continued Growth of Services to the Region
- Programmatic Needs of School of Medicine and Schools of the Health Sciences Clinical and Training Programs
- Space Shortages
- Changing Technologies
- Facility Obsolescence
- Requirement to Maintain Competitiveness
- Limited Site Availability
- Financial Planning for UWMC

University of Washington Medical Center and Surrounding South Campus



CHDD

Health Sciences Complex

Medical School

Proposed South Addition

Muilenburg Tower 1985

Pacific Tower 1959

Surgery Pavilion 2003

2. What are the current and projected needs of the Medical Center?

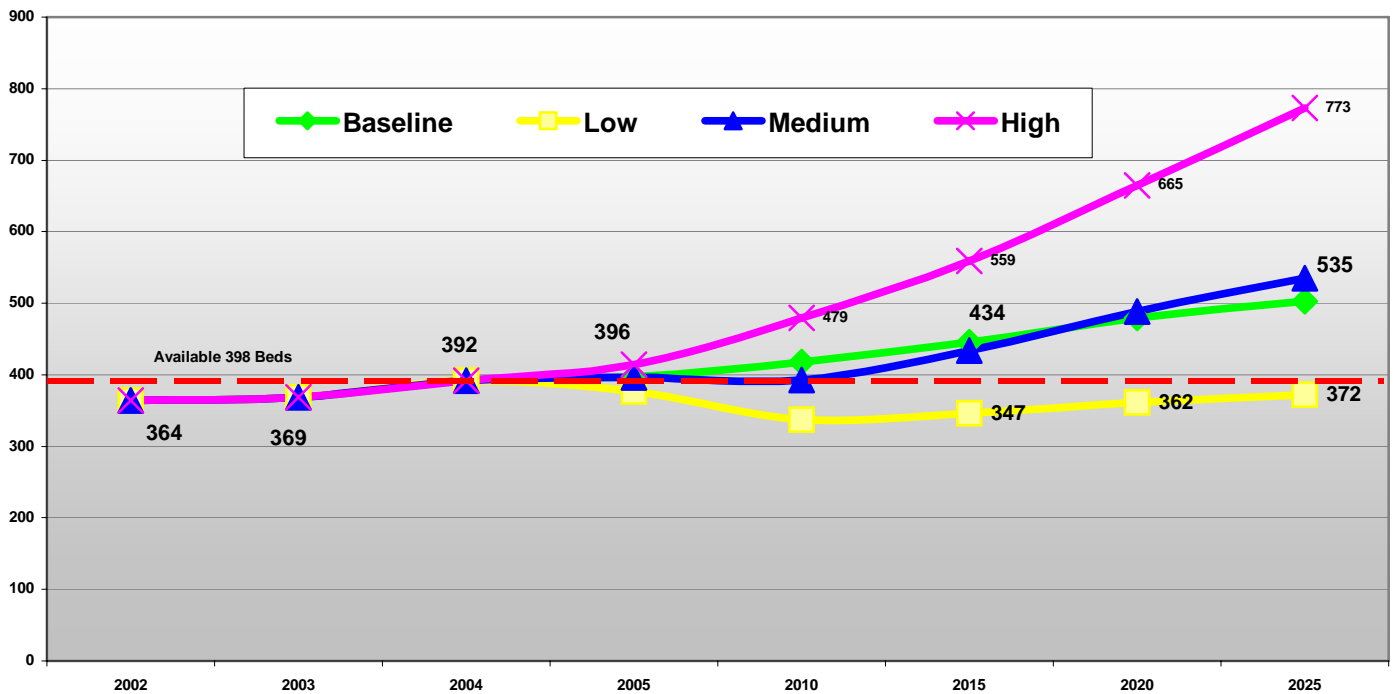
Key Assumptions

- A range of forecasts was developed by varying assumptions to understand a range of potential space needs.
- A “medium” forecast was used for the final growth projections, which closely matched the projections based only on demographic changes, but assumed significant operating efficiencies, including a one-day reduction in overall length of stay.

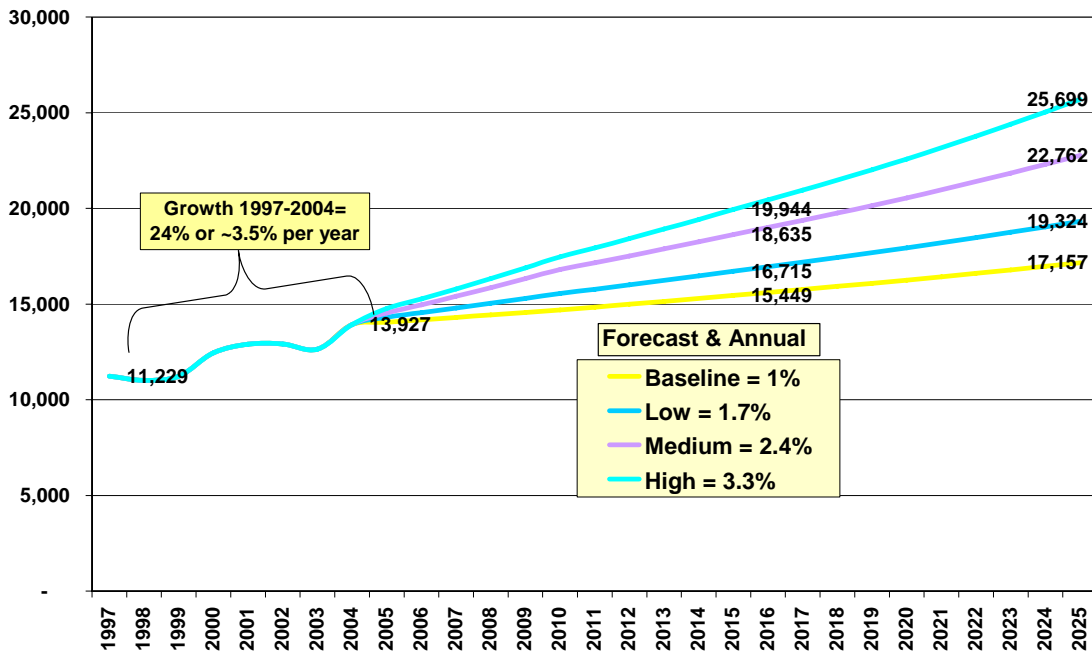
Findings

- Current bed count is 398. The facility is licensed for 470 beds (450 for UWMC, 20 for SCCA).
 - Bed need in 2005 is 396.
 - Bed need in 2015 is 434.
 - Bed need in 2025 is 535.
- Current total space is 1,500,00 square feet.
 - 2005 need is 1,648,500 square feet.
 - 2015 need is 1,760,000 square feet.
 - 2025 need is 2,110,000 square feet.
- Current major deficiencies include Diagnostic Imaging & Interventional Radiology, Neonatal Intensive Care Unit, Intensive Care Unit, Acute Care – especially for cancer and heart programs, Nursing support space, Surgery support space, Food Services, Pharmacy and Laboratory Medicine.
- Teaching space is needed to support training programs.
- Adjacent expansion space is not available for key departments.

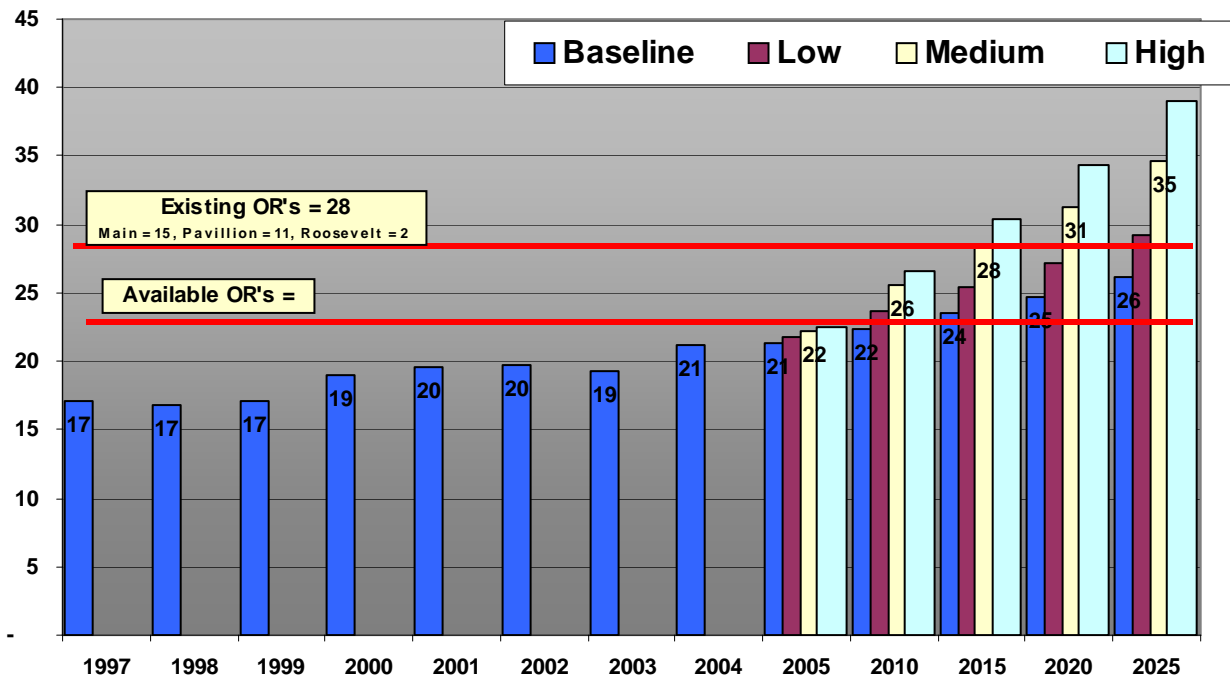
UWMC Bed Forecasts



UW Surgery Workload Forecast



UW Total Operating Room Need



3. Can the existing facilities meet the current and future needs?

Findings

- The 2005 space needs exceed today's area available by 148,500 square feet.
- The 2015 space needs exceed today's area available by 260,000 square feet.
- The 2025 space needs exceed today's area available by 610,000 square feet.
- Buildings constructed between 1959 and 2004 and have varying remaining useful lives.
- Many existing buildings cannot be expected to continue to be utilized until 2015 and 2025 without upgrade, replacement or significant compromise.

Conclusion

- The immediate and future needs of the Medical Center cannot be accommodated within the configuration of the existing facility.

4. What are the alternatives for the near and long term future?

- Upgrade or replace existing facilities on campus
- Limited off campus relocation of services
- Expand on campus
- Relocate to new campus

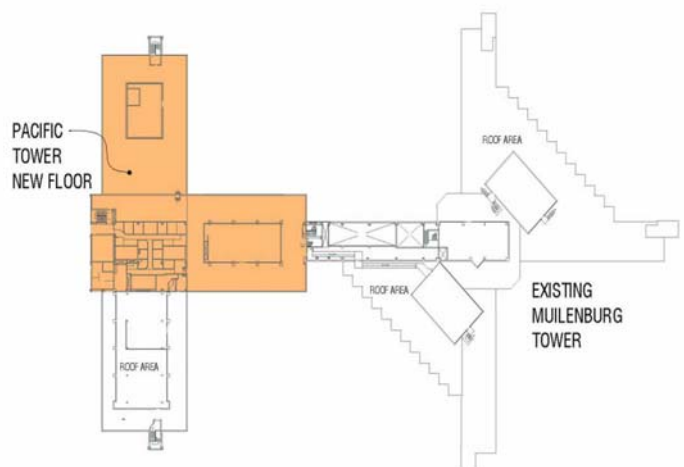
5. Which of the alternatives best addresses the many constraints?

A. Upgrade or replace existing facilities on campus

- Mission critical services are housed in 45-year old facilities that have obsolete structure and infrastructures. Upgrading current infrastructure is cost prohibitive and would necessitate closing departments during construction.
- The Pacific Tower can be expanded vertically by one floor to provide an additional nursing unit but the cost and impact on operations reduce the viability. It can continue to be used effectively for nursing support, offices, teaching/classrooms, research, clinics and other lower intensity services.
- The Mulienburg Tower can continue to serve as an effective bed tower (with continued improvements) well into the future.

Add Floor to Pacific Tower

- High cost for 22,000 square feet of space
- High disruption/impact on operations
- Limited benefit
- Existing floor plate limits functionality
- Longer time frame to remodel than new construction
- High risk due to renovation/unforeseen conditions

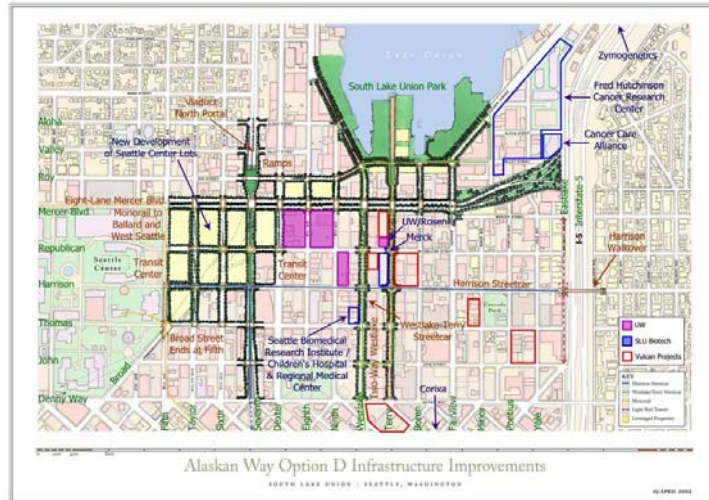


B. Limited off-campus relocation of service

- All services currently located on campus were evaluated for relocation off-campus. Few new opportunities exist since off-site relocation has been ongoing for the last twenty-five years.
- Relocation of services off-site will not totally solve current or future space demands.
- Cost is high since new off-campus space needs to be constructed and existing space needs to be renovated.

Sites Explored

- South Lake Union
- VA
- Group Health
- Harborview
- Northwest Hospital
- Lab Sites

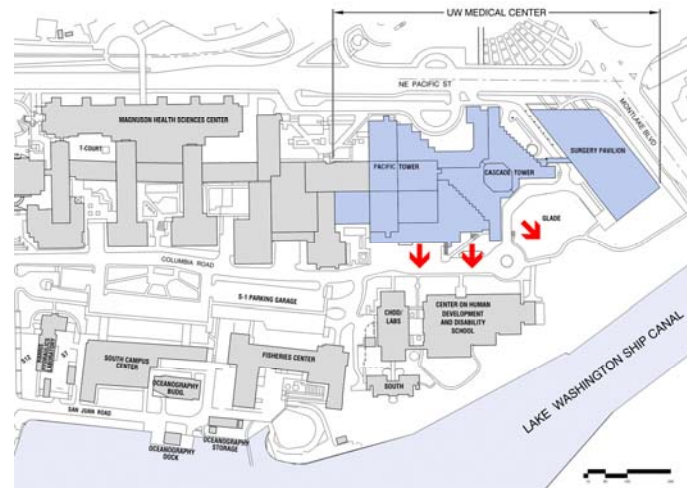


C. Expand on campus

- Currently, on-campus expansion is limited to the area south of the existing buildings.
- Most cost effective option.
- Does not necessitate closing portions of the hospital.

Expanding to the South

- Flexibility in design
- Better value
- Less disruption
- Lower cost per S.F. than renovation
- Allows efficient expansion of ORs and diagnostic imaging into adjacent space



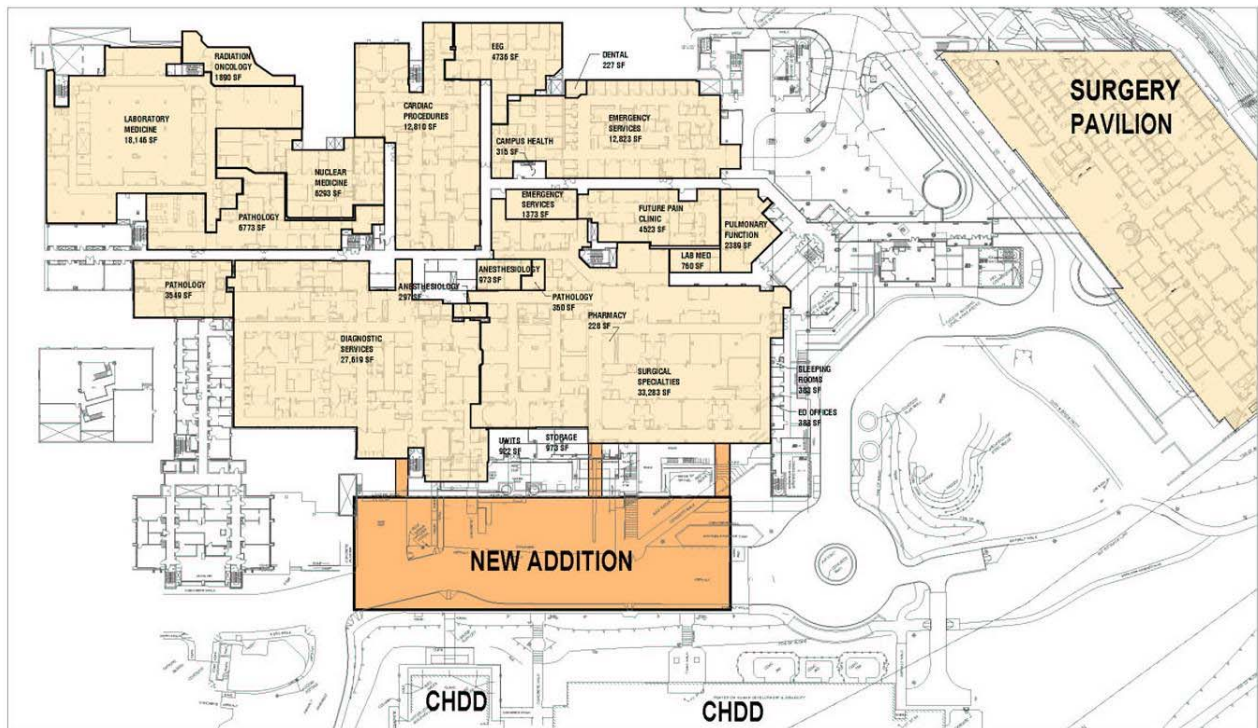
D. Relocate to new campus

- Relocation to a new campus is not financially feasible. Replacement cost of entire existing hospital estimated at \$1.2 billion (not including land costs).
- Not desirable for faculty to be away from main UW campus due to multiple commitments of patient care, teaching, and research. UW School of Medicine faculty collaborate with colleagues in many University departments, a rarity across the country.

Conclusion

Expansion on Campus and Limited Renovation of Existing Facilities best addresses the many constraints:

- UWMC should immediately initiate detailed planning, design and funding for a new South Addition. This proposed addition would greatly alleviate workload demands in ICU, Imaging, Acute Care and Surgery. Constructed over Columbia Road, to the South of the existing hospital, it will accommodate immediate and future unmet space needs.
- Improvements should continue to be made within the existing Medical Center to improve NICU, Imaging, Surgery, Labs, Pharmacy, Psych and Rehab, provide additional support space for Muilenburg Tower nursing units, and provide space for teaching, education, and offices.
- UWMC should continue to look for opportunities to relocate services off-site.



6. What are the financial implications and limitations?

Financial constraints prohibit the full provision of 260,000 additional square feet needed by 2015 in one project. The best option given the site and financial constraints, would be to build in phases:

- Phase I 2005 to 2015** – Build a new 4 story addition over Columbia Road which does not exceed 60 feet and renovate limited portions of the Pacific Tower (leaving an unmet need of 129,500 BGSF). While this site is not identified as a development site in the Campus Master Plan, it is likely the 4-story addition would be considered a movement of square footage within a sector, which is an exempt plan change.

	NEW	PACIFIC TOWER			MUILENBURG TOWER		
		S	N	E	SE	NE	
9			Mechanical			Mechanical	9
8		CLINIC	REHAB (20)	GYM	INFUSION	28	8
7		CRC 3	PSYCH (20)	REMODEL*	28	30	7
6	MECHANICAL	OB 14	NICU 32	LDR 9	28	30	6
5	SHELL (30)	OB 18	PF/ICU SUP	ICU (12)	ICU 22	30	5
4	UNIV. (30)	OFFICES	OFFICES	SHORT STAY (29)	28	30	4
3		CLINICS	CLINICS	CLINICS	CLINICS	CLINICS	3
2	IMAG. & SHELL	IMAGING	CARDIAC	MISC./EMS	SURGERY	SURGERY	2
1	EXISTING DOCK	CAFE	ONCOLOGY	MAT. MGMT	MAT. MGMT	PHARMACY	1
		35	72	41*	106	148	
		30					
		STACKING					
		432 BEDS (+ 30 SHELLED) = 462 POTENTIAL BEDS + 7E REMODEL					
		(* 7E Remodeled Beds not included)					

- Phase II 2015 to 2025** – Vertical Expansion of floors 5 to 8 for inpatient beds.

	NEW	PACIFIC TOWER			MUILENBURG TOWER		
		S	N	E	SE	NE	
9	BEDS (30)		Mechanical			Mechanical	9
8	BEDS (30)	CLINIC	REHAB (20)	GYM	INFUSION	28	8
7	BEDS (30)	CRC 3	PSYCH (20)	REMODEL*	28	30	7
6	MECHANICAL	OB 14	NICU 32	LDR 9	28	30	6
5	BEDS (30)	OB 18	PF/ICU SUP	ICU (12)	ICU 22	30	5
4	BEDS (30)	OFFICES	SHORT STAY (20)	SHORT STAY (20)	28	30	4
3		CLINICS	CLINICS	CLINICS	CLINICS	CLINICS	3
2	IMAG. & SHELL	IMAGING	CARDIAC	MISC./EMS	SURGERY	SURGERY	2
1	EXISTING DOCK	CAFE	ONCOLOGY	MAT. MGMT	MAT. MGMT	PHARMACY	1
		35	92	32*	106	148	
		150					
		STACKING					
		563 BEDS vs. 563 BED FORCAST + 7E REMODEL					
		(* 7E Remodeled Beds not included)					

UWMC will need to:

- Undertake comprehensive capital planning, focusing efforts on growing mission critical and profitable programs.
- Coordinate with UW Medicine on priority capital projects.

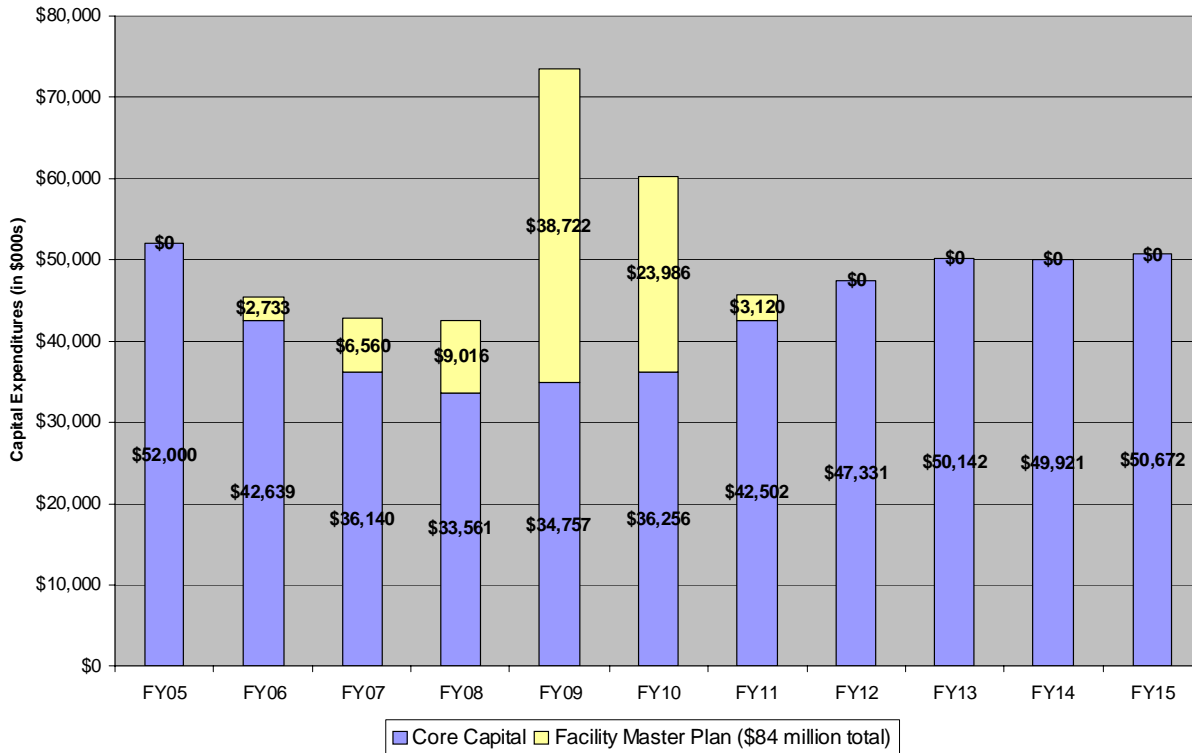
- Balance needs with cash flow, debt capacity and financing options, including fund raising.
- Continue to improve operational efficiency, with accompanying improvements in financial performance.

Phase I is estimated to cost approximately \$85 million. Build out of both Phases I and II is estimated to cost approximately \$155 million. UWMC has analyzed its debt capacity for Phase I and will be monitoring its ability to finance the proposed expansion carefully.

Sensitivity Analysis – Operating Margin

		Operating Margin						
		0.7%	1.2%	1.7%	2.2%	2.7%	3.2%	3.7%
FY07	Days Cash on Hand	90	94	99	103	108	112	117
	Debt Service Coverage	2.37	2.52	2.68	2.83	2.98	3.14	3.29
FY11	Days Cash on Hand	35	48	61	74	87	101	114
	Debt Service Coverage	2.89	3.13	3.37	3.60	3.83	4.07	4.30
FY15	Days Cash on Hand	16	38	60	81	103	125	148
	Debt Service Coverage	3.43	3.78	4.12	4.45	4.79	5.12	5.46

UWMC Projected Capital Expenditures
(\$ in 000s)



7. What about the 2025 need?

This study was originally limited in scope to find a solution up to the year 2015. Once the magnitude of 2015 needs became known, it was apparent that forecasts of 2025 need were required in order to inform discussions about 2015. Once Phases I and II of the South Addition are built, limited options exist for development of 2025 needs. The 2025 forecast calls for an additional 350,000 BGSF (over and above the 2015 need):

In order to meet projected needs, UWMC must further expand. These factors will create difficult questions for UWMC and the UW Campus:

- Should all UWMC growth stop?
- What on-campus expansion sites should be considered?
- Should off-site relocations be considered for Labs, all Outpatient Imaging, Inpatient and Outpatient Psych and/or Rehab, all Clinics?
- Should aging existing structures be replaced due to limited buildable area?

8. What are the next steps?

- Obtain required campus approval to proceed with planning and preliminary design.
- Begin preliminary discussions with the City of Seattle regarding master plan implications and permitting issues.
- In order to define the scope, schedule and costs for the project, the initial phase will require Program and Concept development. This requires appointment of an architect by the Board of Regents.