

PETERSBURG MEDICAL CENTER MASTER PLAN



NAC
ARCHITECTURE

NAVIGANT

MASTER PLAN OBJECTIVE

Determine how Petersburg Medical Center can remain a viable partner and provide the best possible community healthcare well into the future.



MASTER PLAN TASKS

- Structural Analysis of the Existing Facility
- Inundation Study
- Debt Capacity Analysis
- Market and Service Line Analysis
- Numeric Space Program to Quantify Departmental Needs
- Conceptual Block Diagrams for each site
- Comparative Cost Estimates for each Option



BUILD ON PAST WORK

Review the accumulated body of healthcare data including:

- PMC Performance Improvement Report 2006
- Petersburg Mental Health MAPP Report 2013
- PMC Facility Condition Assessment 2015
- Community Health Needs Assessment 2015
- Petersburg Borough Comprehensive Plan Update 2016
- Community Needs Assessment-Forces of Change 2018
- PMC Strategic Plan 2019

Completed – Seismic Analysis of the Existing Facility

Engaged KPFF Engineers to perform an ASCE 41 Tier 1 Seismic Evaluation of the existing hospital, based on review of the available documents and a visual inspection of the facility. Per the evaluation standards the following potential deficiencies were identified:

- Concrete shear wall foundations at the LTC Wing
- Steel moment frames at the Hospital Building
- Attic diaphragms at both the LTC and Hospital

Completed – Inundation Study

Engaged Herrera Associates to perform an inundation analysis focused on the potential for tsunamis to inundate and impact the existing Petersburg Medical Center.

The summary conclusion is the threat of inundation to the existing PMC campus is extremely low. Though alternative sites near the airport offer a modest reduction in risk due to higher elevation the advantage is rendered moot by the impact of the very unlikely form of tsunami that could be generated by a large flank collapse of Petersburg Mountain.

Completed - Market Assessment, PMC Internal Assessment, Demand Modeling, Financial Projections and Debt Capacity Analysis



Completed - Market Assessment Petersburg Service Area

- Slow population increase, but 3% increase in 65+ in the next 5 years
- Inpatient Use Rates projected to grow less than 1% per year
- Outpatient volume will increase slightly more than inpatient
- No direct competition for primary care, urgent or ER care, inpatient services
- Direct competitors (or potential collaborators) for chronic care management and post acute care include Wrangell, Ketchikan, Juneau, and Swedish and Virginia Mason in Seattle.
- Lab and imaging expected to grow significantly over the next 5-10 years
- Most Imaging/Diagnostic volume will increase, but MRI expected to decline
- % Medicare patients expected to grow in line with aging population
- Number of privately insured expected to decrease by 5% over 10 years

Completed – PMC Internal Assessment

- General Medicine, Gastroenterology, Behavioral Health, and Cardiac services represent the highest inpatient service lines
- Gastroenterology, Nephrology, Substance Abuse, and Pulmonology represent the largest % of inpatient volume
- CT, Physical Therapy, Home Health and treatment room visits have shown recent significant growth
- Majority of inpatient days at PMC are Long Term Care



Completed – Demand Modeling

- Forecast suggests that current 12 acute care beds is sufficient
- Current average daily census (ADC) at the 15 bed Long Term Care SNF is 13.2, suggesting that it is at or near capacity.
- Low number of SNF beds in Alaska suggests there is unmet need.
- Forecast is that the SNF could support growth to 20 beds by 2029.
- Projected volumes in ancillary services can be met with a single room for:
 - CT Mammography
 - Ultrasound X-Ray
 - DEXA Bone Density ED (including observation)
 - Outpatient Surgery Endoscopy

Completed – Financial Projections & Debt Capacity

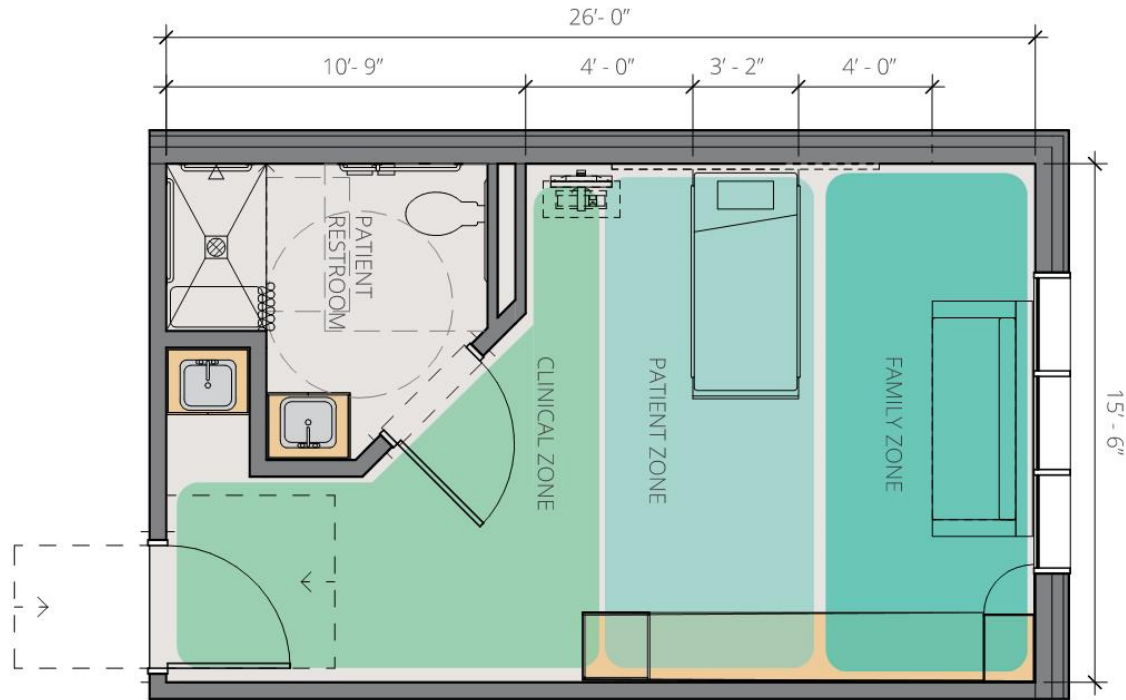
- FY20 Budget used as base year for financial projections
- Budget is break even from a total margin perspective
- Focus on how interest payments will affect operating income/margin and how easily PMC can afford the debt service
- Assumed that capital project will be entirely funded with debt, over a 30-year term at 5.5% interest
- Model assumes no additional debt and limited capital spending over the term
- Assumed days cash on hand will slowly build in a positive trajectory
- **Estimate of PMC's Debt Capacity is \$5.0M**



Fundamental and Preferred Services

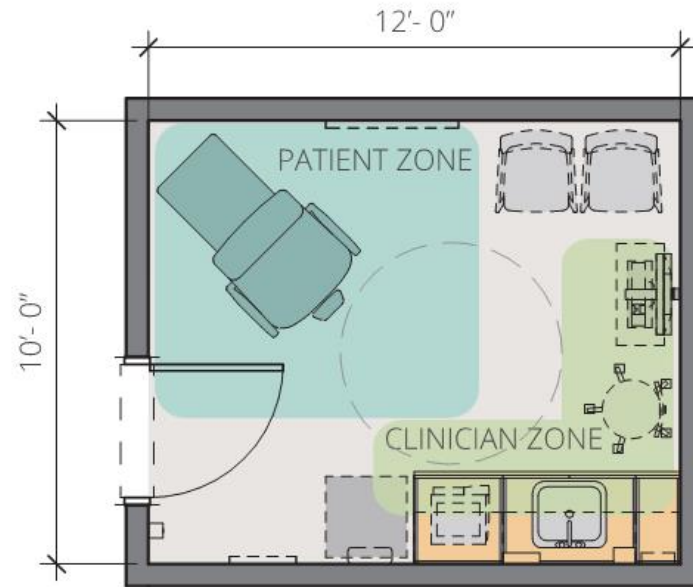
- Long Term Care Beds – 18
- Acute Care Beds -12
- General Surgery/Endoscopy
- OB/Birthing Services
- Imaging including:
 - CT, X-ray, Ultrasound
 - Mammography, DEXA
 - Echocardiography, C-Arm
 - Future MRI
- Inpatient Behavioral Health
- Emergency Care
- Physical and Occupational Therap
- Acupuncture, Massage
- Integrated Care/Wellness Counseling
- Home Health, Elder Care
- Women's Health
- Specialties including
 - Dental, Audiology, cardiology
 - Optometry, Ophthalmology
 - Dermatology, OB-Gyn, ENT
- Psychiatry/Counseling
- Cancer Care

Numeric Space Program – Patient Room Template



350-400
SF

Numeric Space Program – Exam Room Template



120 SF

Completed – Numeric Space Program

SPACE	EXISTING			PROPOSED		
	NSF	GF	DSF	NSF	GF	DSF
DEPARTMENTS						
MAIN ENTRY RECEPTION	875	1.10	966	2,525	1.15	2,904
ADMINISTRATION	2,183	1.18	2,578	1,200	1.35	1,620
INFORMATION TECHNOLOGY	0	0	0	1,140	1.25	1,425
BUSINESS/MED. RECORDS	884	1.19	1,051	1,120	1.25	1,400
LONG TERM CARE	4,430	1.38	6,094	8,460	1.50	12,690
CLINIC	2,736	1.95	5,342	6,430	1.40	9,002
ACUTE CARE	3,578	1.20	4,295	5,990	1.20	7,188
EMERGENCY DEPARTMENT	954	1.10	1,053	1,440	1.50	2,160
LABORATORY	1,683	1.12	1,881	2,060	1.25	2,575
IMAGING	1,437	1.48	2,126	3,470	1.50	5,205
PHARMACY	117	1.00	117	640	1.20	768
SURGERY	1,045	1.46	1,522	1,810	1.60	2,896
CENTRAL STERILE	480	1.09	523	760	1.30	988
PHYSICAL THERAPY	1,096	1.14	1,253	2,682	1.25	3,353
HOME HEALTH	1,672	1.44	2,416	440	1.40	616
MAINTENANCE	2,376	1.26	3,000	2,376	1.15	2,580
DIETARY	1,656	1.21	2,000	2,940	1.30	3,822
CENTRAL SUPPLY	5,012	1.20	6,000	4,840	1.30	6,292
OTHER SUPPORT SPACES	4,660	0.00	0	0	0.00	0
TOTAL DEPARTMENT GROSS SQUARE FOOTAGE			36,217	61,191		
Building grossing factor			1.35	1.30		
TOTAL DEPARTMENT GROSS SQUARE FOOTAGE			49,000	79,549		

BUILDING GROSSING FACTOR

Exterior walls, public corridors, mechanical and electrical services, stairs and elevators



Available Sites



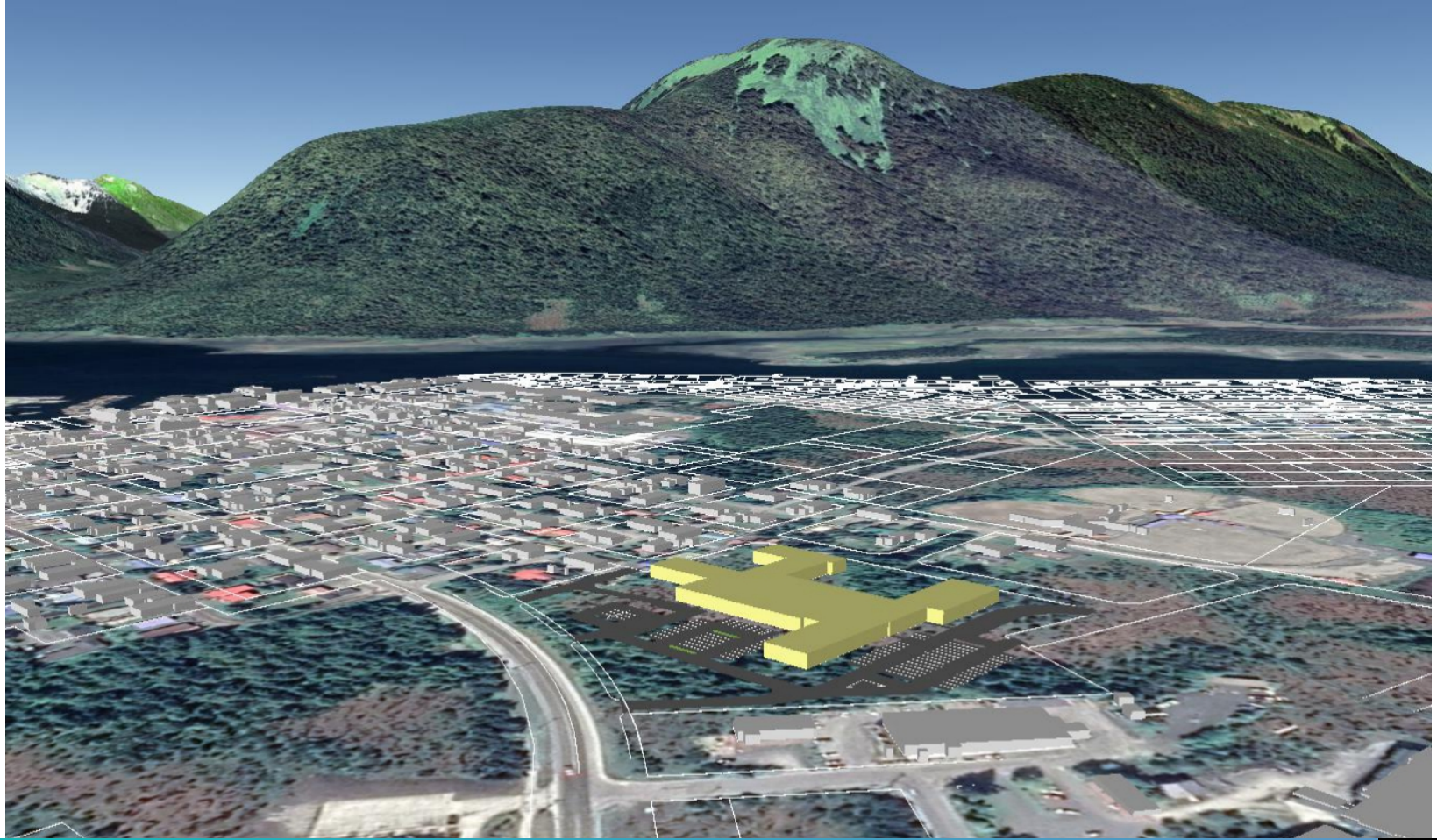
Site Selection Criteria

Higher scores indicate a relative advantage of the site

Criteria	Existing In Town	North Haugen	South Haugen	Excel Street	North Eighth
1. Access to Utilities	5	3	5	1	1
2. Proximity to Roads	5	5	5	1	1
3. Site Elevation/Muskeg Risk	5	3	1	3	3
4. Proximity to Residential	3	1	1	3	3
5. Zoning Designation	3	1	3	1	3
6. Existing Use Displaced	-7	5	5	5	5
7. Structures to Demolish	-3	3	3	3	3
8. Access to Views and Sunlight	2	2	3	3	3
9. Close to Downtown	5	3	3	1	1
10. Size	1	5	5	3	3
Total Score	21	28	34	24	26

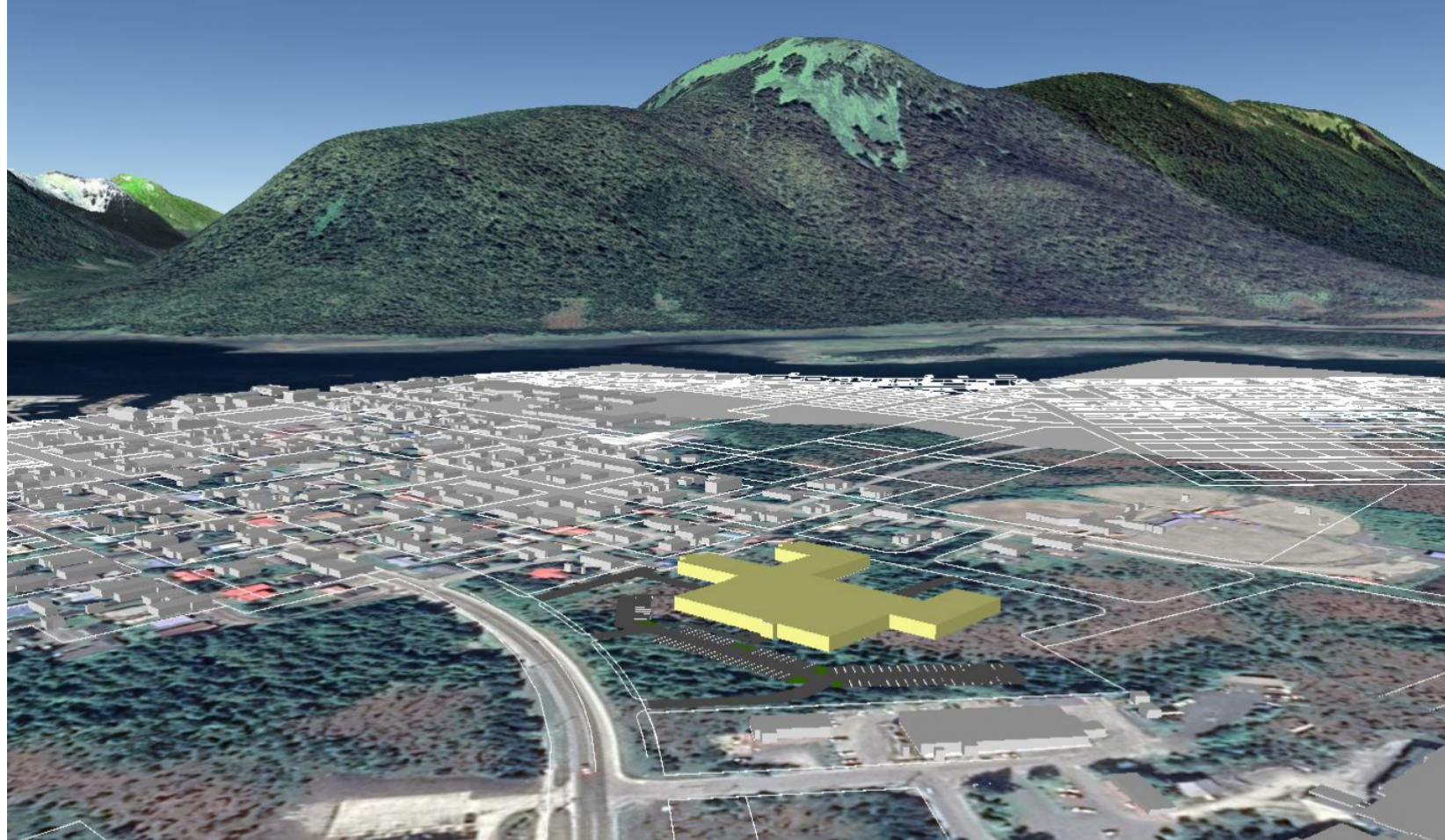
Completed– Site Diagrams and Conceptual Modeling



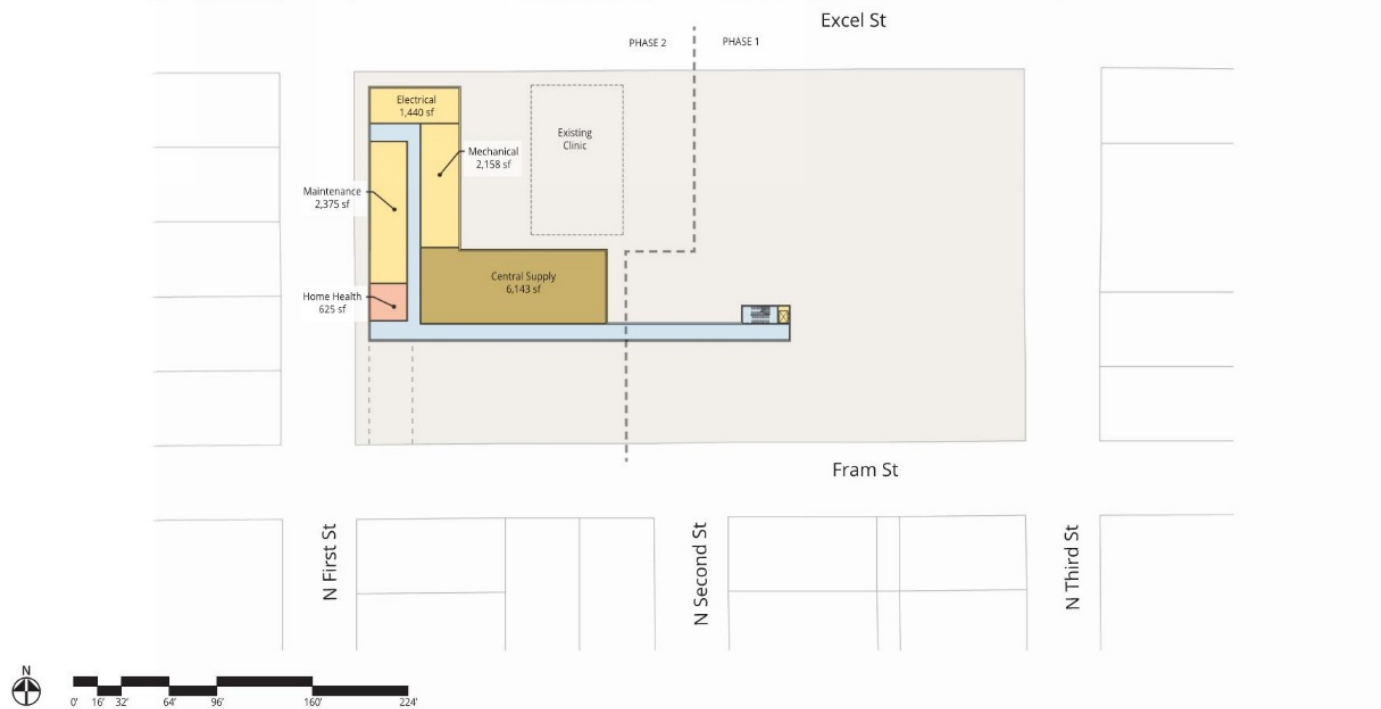


Completed– Site Diagrams and Conceptual Modeling





Site Diagram – Downtown



Downtown Scheme - Ground/Basement Floor

Petersburg Medical Center Master Plan / Pre-Design Study



Site Diagram – Downtown



Downtown Scheme - First Floor

Petersburg Medical Center Master Plan / Pre-Design Study



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Site Diagram – Downtown



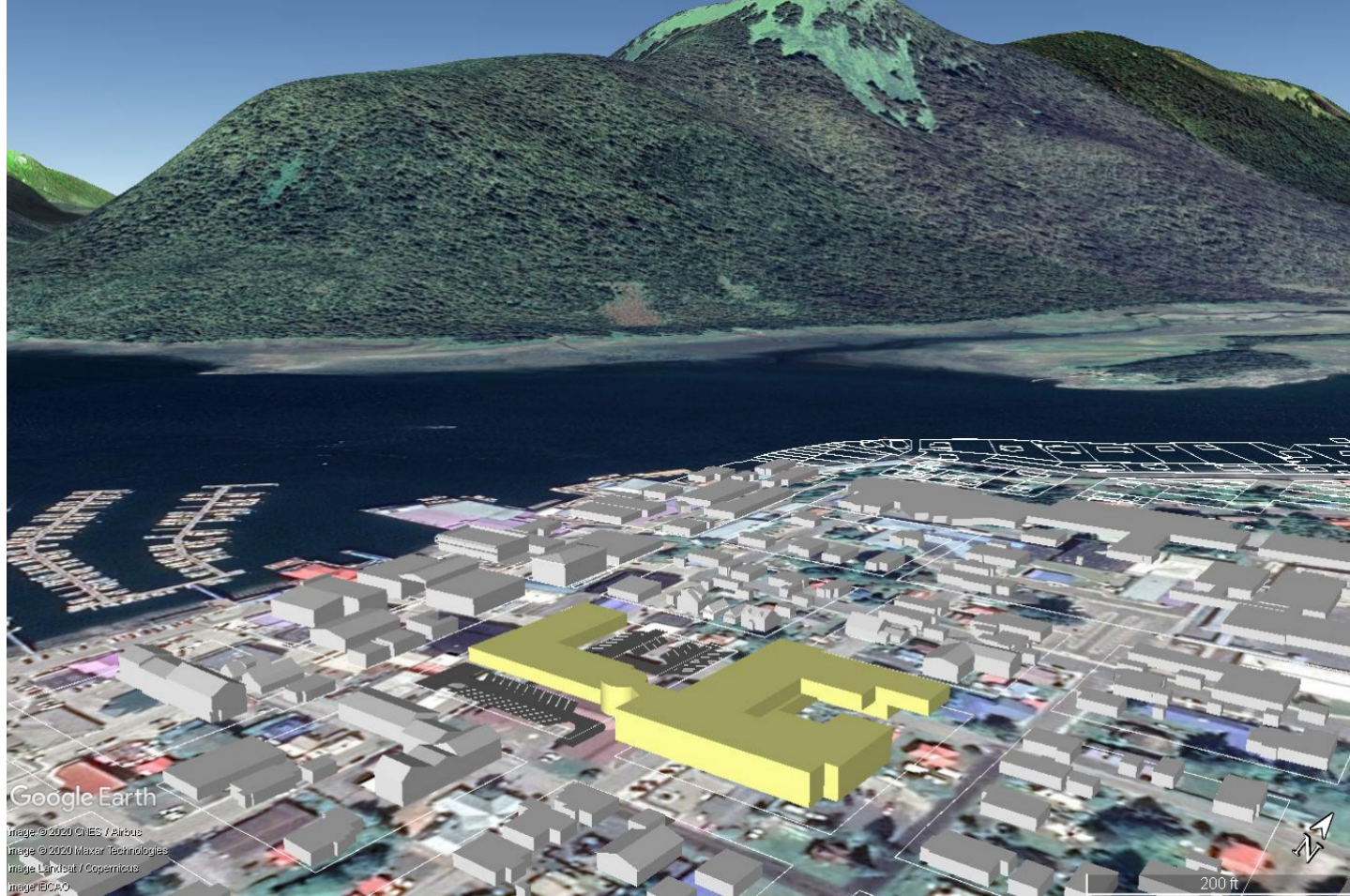
Downtown Scheme - Second Floor

Petersburg Medical Center Master Plan / Pre-Design Study



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PMC Master Plan



Completed - Comparative Cost Estimates

Cost Element	Greenfield Scheme 7A		Greenfield Scheme 7B		Downtown Scheme		
	Building	Site	Building	Site	Building	Site	
	72,463 SF	325,000 SF	80,170 SF	325,000 SF	95,414 SF	142,000 SF	
Direct Costs							
Construction	\$ 31,436,581	\$ 5,482,655	\$ 33,420,923	\$ 5,223,434	\$ 38,965,197	\$ 5,236,493	
Margins & Adjustments							
Location Factor	25.0%	\$ 7,859,145	\$ 1,370,664	\$ 8,355,231	\$ 1,305,859	\$ 9,741,299	\$ 1,309,123
General Conditions	7.5%	\$ 2,947,179	\$ 513,999	\$ 3,133,211	\$ 489,697	\$ 3,652,987	\$ 490,921
Design Contingency - Building	8.0%	\$ 3,379,432		\$ 3,592,749		\$ 4,188,759	
Design Contingency - Site	15.0%		\$ 1,105,097		\$ 1,052,848		\$ 1,055,481
MEP Market Contingency	2.6%	\$ 1,173,561		\$ 1,253,535		\$ 1,439,339	
Contractor's OH & Profit	7.5%	\$ 3,509,692	\$ 635,431	\$ 3,731,673	\$ 605,388	\$ 4,349,069	\$ 606,902
Escalation to NTP	8.4%	\$ 4,225,670	\$ 765,059	\$ 4,492,936	\$ 728,887	\$ 5,236,279	\$ 730,709
Per Diem Imported Labor	2.5%	\$ 1,363,282	\$ 246,823	\$ 1,449,505	\$ 235,153	\$ 1,689,323	\$ 235,741
Total Cost	\$ 55,894,542	\$ 10,119,727	\$ 59,429,763	\$ 9,641,265	\$ 69,262,252	\$ 9,665,370	
Total Estimated Construction Cost	\$ 66,014,269		\$ 69,071,028		\$ 78,927,622		
Indirect Costs*	40.0%	\$ 26,405,708		\$ 27,628,411		\$ 31,571,049	
Total Project Cost	\$ 92,419,977		\$ 96,699,440		\$ 110,498,670		

* Indirect Costs include non-construction project related expenses such as site surveys, geotechnical investigation, design fees, plan review and permit fees, inspections, finance cost, moving expenses, and furniture, fixtures, and equipment. Indirect costs on hospitals can range from 30% to 50%.

Questions?

