CAPITAL PROJECT PROPOSALS 2021-2023

Humanities & Social Sciences Complex

Replacement – Major Project

Design

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Please direct questions about this proposal to:
Steve Dupont, CWU Director of Government Relations
509-201-0528

August 15, 2020

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2020 PROJECT PROPOSAL CHECKLIST
2021-23 Biennium Four-year Higher Education Scoring Process

INSTITUTION	CAMPUS LOCATION
375 - Central Washington University	Ellensburg, WA
PROJECT TITLE	**FPMT UNIQUE FACILITY ID # (OR NA)**
Humanities & Social Sciences Complex	NA
PROJECT CATEGORY	**PROJECT SUBCATEGORY**
Replacement	Major
PROPOSAL IS	
New or Updated Proposal (for scoring)	Resubmitted Proposal (retain prior score)
☒ New proposal ☐ Resubmittal to be scored (more than 2 biennia old or significantly changed)	☐ Resubmittal from 2017-19 biennium ☐ Resubmittal from 2019-21 biennium
CONTACT	**PHONE NUMBER**
Steve Dupont, CWU Director Government Relations	509-201-0528

PROPOSAL CONTENT

- ☒ Project Proposal Checklist: this form; one for each proposal
- ☒ Project Proposal Form: Specific to category/subcategory (10-page limit)
- ☒ Appendices: templates, forms, exhibits and supporting/supplemental documentation for scoring.

INSTITUTIONAL PRIORITY

- ☒ Institutional Priority Form. Sent separately (not in this packet) to: Darrell Jennings.

Check the corresponding boxes below if the proposed project meets the minimum threshold or if the item listed is provided in the proposal submittal.

MINIMUM THRESHOLDS

- ☒ Project is not an exclusive enterprise function such as a bookstore, dormitory or contract food service.
- ☒ Project meets LEED Silver Standard requirements.
- ☒ Institution has a greenhouse gas emissions reduction policy in place in accordance with RCW 70.235.070 and vehicle emissions reduction policy in place per RCW 47.01.440 or RCW 43.160.020 as applicable.
- ☒ Design proposals: A complete predesign study was submitted to OFM by July 1, 2020.
- ☐ Growth proposals: Based on solid enrollment projections and is more cost-effectively providing enrollment access than alternatives such as university centers and distance learning.
- ☐ Renovation proposals: Project should cost between 60 – 80% of current replacement value and extend the useful life of the facility by at least 25 years.
- ☐ Acquisition proposals: Land acquisition is not related to a current facility funding request.
- ☐ Infrastructure proposals: Project is not a facility repair project.
- ☐ Stand-alone, infrastructure and acquisition proposals: is a single project requesting funds for one biennium.

2020 PROJECT PROPOSAL CHECKLIST
2021-23 Biennium Four-year Higher Education Scoring Process

REQUIRED APPENDICES

- ☒ Capital Project Report CBS 002
- ☒ Project cost estimate:
  - CBS 003 for projects between $2 million and $5 million
  - Excel C-100 for projects greater than $5 million
- ☒ Degree Totals and Targets template to indicate the number of Bachelors, High Demand and Advanced degrees expected to be awarded in 2021. (Required for Overarching Criteria scoring criteria for Major Growth, Renovation, Replacement and Research proposals).
- ☒ Availability of Space/Campus Utilization template for the campus where the project is located. (Required for all categories/subcategories except Infrastructure and Acquisition proposals).
- ☒ Assignable Square Feet template to indicate program-related space allocation. (Required for Growth, Renovation and Replacement proposals, all categories/subcategories).

OPTIONAL APPENDICES

Attach supplemental and supporting project documentation, *limit to materials directly related to and needed for the evaluation criteria*, such as:

- ☒ Degree and enrollment growth projections
- ☒ Selected excerpts from institutional plans
- ☐ Data on instructional and/or research space utilization
- ☐ Additional documentation for selected cost comparables (acquisition)
- ☒ Selected materials on facility conditions
- ☒ Selected materials on code compliance
- ☒ Tables supporting calculation of program space allocations, weighted average facility age, etc.
- ☒ Evidence of consistency of proposed research projects with state, regional, or local economic development plans
- ☐ Evidence of availability of non-state matching funds
- ☒ Selected documentation of prior facility failures, high cost maintenance, and/or system unreliability for infrastructure projects
- ☐ Documentation of professional assessment of costs for land acquisition, land cleanup, and infrastructure projects
- ☐ Selected documentation of engineering studies, site survey and recommendations, or opinion letters for infrastructure and land cleanup projects
- ☐ Other: Click or tap here to enter text.

I certify that the above checked items indicate either that the proposed project meets the minimum thresholds or the corresponding items have been included in this submittal.

Name: Delano Palmer Title: Director of Capital Planning & Projects

Signature: Click or tap here to enter text. Date: 8/13/20

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INSTITUTION	CAMPUS
Central Washington University	Ellensburg
PROJECT TITLE	
Humanities & Social Sciences Complex	

SUMMARY NARRATIVE

- **Problem statement (short description of the project – the needs and the benefits):**

CWU proposes to demolish two failing buildings and replace them with a new facility to serve programs in the Humanities and Social Sciences, which provide courses essential for the completion of general education curriculum required for nearly every bachelor's degree. The project removes Farrell Hall and Language and Literature (L&L), decreasing energy consumption by 31 percent. The project also avoids approximately $80 million in costs to renovate and update Farrell and L&L, according to a 2018 life-cycle cost analysis by MW Consulting Engineers (Please see **Appendix L – Life Cycle Cost Analysis**). As well the project will halt the necessity for investing precious Minor Works funds in failing buildings.

CWU has requested state funding to upgrade these buildings in several biennia, but has not received funding. Now the state of the buildings is quite literally beyond repair and these facilities must be replaced. Energy Systems are not compliant with current energy code, resulting in the need for all new piping, ductwork and air- handler distribution systems when replacement systems are considered. SAFETY The stairwells and many offices lack windows; in the event of power failure, students and faculty in these locations will find themselves in complete darkness. The buildings were constructed with interior roof drains that are clogged with debris—including ash from the eruption of Mt. St. Helens in 1980. The drain lines are not accessible for maintenance without invasive demolition of interior structure. A 2002 Structural Assessment of L&L and Farrell Hall by the structural engineering firm Putnam Collins Scott Associates identified significant concerns that could only be addressed through a "major level of structural upgrade."

Farrell Hall's 41-year-old systems are deteriorating, with infrastructure and major systems demonstrating critical issues. Water freezes on the roof of the uninsulated building; when the ice melts, rainwater leaders buried in the walls leak water inside, into classrooms and offices. Old insulation is liquefying and seeping through cracks in the masonry walls, which also admit insects. Farrell lacks modern technology infrastructure, from simple power outlets to data ports. In addition, Farrell is far too small to accommodate two of the university's fastest-growing programs, Law & Justice and Sociology.

The systems in the 50-year-old L&L are failing, too. Air system filters pump grey material (thought to be fan belt residue or gasket material) out the diffusers into occupied spaces. Filter fabric has been temporarily installed over the diffusers to stop the blowing debris, which also restricts air flow. Noise from the old ventilation system makes it difficult for students to hear instruction and discussion. Walls have been reconfigured over the years without adjustments to the mechanical system, resulting in spaces without sufficient heating or cooling. The controls are pneumatic (air operated logic in lieu of programmable electronic direct digital controllers) and the facility cannot be monitored or maintained at the campus level, so needs for service are identified through user complaints. Heating water is not adequately distributed through the building and pipes are frequently plugged. The pipe is concealed, resulting in wall removal to unplug and repair pipe. The south side of the building has insufficient cooling.

The physical layout the building itself, contributes to its inefficiency. L&L is constructed in two, unconnected ground-floor sections separated by an open-air courtyard. Each of the upper three floors of the two halves, which largely contain classrooms, are connected by a bridging section that houses offices. There are no restrooms on the third floor. This area is too small and inconvenient to serve as the main route of circulation between the two academic areas. Because of the configuration of the structure, the layout of the building is compartmentalized. Assignment of space cannot flex as department sizes change. Due to this restrictive design, scheduling efficiency can only achieve 53 percent. This is particularly problematic since the facility houses so many programs required for general education.

Both facilities are experiencing significant structural settling, due to their construction over saturated land that has hosted the Ellensburg Water Company Irrigation Canal for a century. The center structure of Farrell has settled; chairs roll from the walls to the middle of the rooms and doors will not close. Settling of the building forced CWU last year to reframe 17 doors after a badly warped door frame trapped a faculty member in his office for two hours, requiring 911 services to rescue him. (See **Appendix I – Structural Assessment of L&L and Farrell Hall** by Putnam Collins Scott Associates.)

A 2004 Fire Risk Assessment Report of the L&L and Farrell Hall Buildings by Creighton Engineering Inc. identified an occupant life-safety threat in which the undetected, early spread of smoke throughout a floor below an occupied floor could occur; L&L, which houses the state's only Deaf Studies BA Program, lacks fire alarms that signal both visually and audibly. Though the building construction is fire resistant, a delayed notification of fire could allow smoke and heat to spread to all areas of the building. The complicated layout of the building creates a configuration where both stairways are entered from a common atmosphere, in violation of current egress codes. (See **Appendix J – Fire Risk Assessment of L&L and Farrell Hall** by Creighton Engineers Inc.)

- **Project Benefits**

Building the Humanities & Social Sciences Complex is the most comprehensive and cost effective solution because it eliminates deferred maintenance that cannot be addressed through incremental biennial Minor Works appropriations. Furthermore, the project brings several programs together in a single, modern facility, maximizing efficiency while enhancing educational quality. The configuration creates a strong connection to Brooks Library, which will integrate fragmented departments into a single Humanities and Social Sciences Complex. This new facility, configured with flexible spaces, will facilitate shared use and inter-departmental interaction, helping to foster increased student activity and collaboration.

The benefits of the projects include the following:

– **Increased degree production and decreased time to degree** by the construction of a facility that affords optimal conditions for teaching and learning, scheduling, advising and student support; and by enhancing the efficiency and safety of buildings that provide general education curriculum, which is required for every degree.

– **Financial savings for the state of Washington,** by halting the expenditure of Minor Works funds on failing buildings and avoiding the expenditure of $80 million in deferred maintenance required to bring two buildings up to life-safety, academic, and energy standards.

– **Increased energy efficiency by an estimated 31 percent**. No systems meet modern energy codes. The original systems in the 50-year-old buildings have exceeded their service life by at least twice the industry standard: 25 years for fans, 20 years for coils, 20 years for pumps, 30 years for ductwork, 20 years for temperature controls and 17 years for motor controls.

– **Enhanced safety for building users.** The project resolves issues with poor air quality, failing elevators, and settling that has warped doors and caused floors to sink; ADA compliant fire alarms that

can be received by deaf students in the Bachelor of Arts degree in Deaf and Sign Language Studies, the only program of its kind in the state; and other issues.

– **Increased the efficiency and interdisciplinary nature of studies**, by housing Humanities in a single facility. Currently, lack of space and mechanical failure often force Humanities classes into other facilities, compromising the scheduling needs of other programs, and discouraging collaboration among faculty and students.

- **Alternatives Considered**

Alternative No. 1: No Action. This option was rejected because the buildings that currently house these programs have significantly deteriorated; maintenance is becoming increasingly expensive and renovation requests have been repeatedly rejected by the legislature. Now, to fully renovate each building is prohibitively expensive. These facilities are at the end of their useful lives and should be replaced, rather than continuing to invest in their upkeep.

Alternative No. 2: New Construction Northeast of Brooks Library Site (preferred alternative), including an addition and some renovation to the library. This option represents the most comprehensive and lowest-cost solution.

Alternative No. 3: Farrell Hall Site**.** This option explored developing an entirely new, stand-alone building located partially on the site of the existing Farrell Hall, extending northwest of Brooks Library. This option was rejected because it represented a higher-cost solution on a site likely already compromised by groundwater issues and that isn't centrally located.

Alternative No. 4: Renovation and expansion of Farrell Hall and L&L to extend their useful lives**.** This option was pursued several times but efforts to secure state funding failed. The alternative is now too expensive; the estimated cost to renovate facilities fully is approximately $80 million (please see Appendix H – Humanities Social Sciences Predesign), far more expensive than the construction of a singular complex, which also addresses the academic programming needs of both facilities.

- **History of the project or facilities**

Previous unfunded state capital funding requests submitted for proposed Humanities projects include:
– **L&L Building**: In 2009 CWU requested $250,000 for pre-design of an "Arts & Humanities" facility to accommodate growth for History, English, and Languages.
– **Brooks Library:** CWU requested funding the renovation of Brooks Library in 2011-2013, 2013-2015, and 2017-2019 budget cycles.
– **Farrell Hall:** in the 2017-2019 Biennium CWU submitted a self-funded Predesign Study for a renovation and addition for Farrell Hall. The pre-design was accepted, but the subsequent design funding request was not funded.

- **University programs addressed or encompassed by the project:**

Bachelor of Arts:
Asian Studies
Deaf Studies and American Sign Language
English Language and Literature
English Language and Literature Teaching
French
History
History/Social Studies Teaching
Japanese
Law & Justice
Philosophy
Professional and Creative Writing
Religious Studies
Russian

Sociology
Spanish
Women's, Gender, and Sexuality Studies

Bachelor of Science
Interdisciplinary Studies – Social Sciences
Political Science
Social Services

Master of Arts
History
Law & Justice,
Literature
Professional and Creative Writing
Teaching English as a Second Language

OVERARCHING SCORING CRITERIA

1.) Integral to achieving statewide policy goals

Provide degree targets, and describe how the project promotes improvement on 2018-19 degree production totals in the OFM Statewide Public Four-Year Dashboard. Include the degree totals and target template in an appendix.

The projects enhance degree production in Humanities programs by enhancing the efficiency of facilities, which now are too small to accommodate large sections, and so far out of date as to obstruct modern teaching and learning practices. Classrooms are structured n ow for static lectures; a faculty member speaking to a front-facing group. But modern classes cluster students for groups and projects, requiring seating, lighting, technology resources, and other equipment to be moveable and accessible through the space. Classrooms lack access to technology for research, presentation or any other function. The new facility will promote collaboration and communication, in support of better advising and program management.

The facility will house programs that play an essential role in general education curriculum for nearly all degree programs. Expanding capacity for providing these programs will reduce bottlenecks in high-demand Humanities programs and support shorter time to degree for students who need these courses to complete their degrees. (Please see **Appendix C - Degree Totals and Targets** template.)

2.) Integral to campus/facilities master plan

A. Describe the proposed project's relationship and relative importance to the institution's most recent campus/facilities master plan or other applicable strategic plan.

The proposed Humanities project is identified in the CWU 2019-2029 Capital Master Plan as "the Government, Ethics, and Civic Engagement Complex." That plan and all major campus capital projects are planned in accordance with the Growth Management Act (GMA) RCW 36.70A and coordinated with the City of Ellensburg and Kittitas County comprehensive plans. University updates to the Capital Master Plan and all proposed capital projects are planned and conducted with public SEPA reviews, open planning forums, and workshops to provide opportunities for the community, the city and the county to provide input.

The proposed location of the project complements the adjacent Central Campus. The proximity of the new facility will promote interdisciplinary education, enhance collaboration among students and faculty, foster curriculum integration, and avoid duplication of services and programs.

The creation of the Humanities facility supports all five themes of the university's strategic plan (Please see **Appendix F – CWU Capital Master Plan 2019-2029**, Chapter 2 - Strategic Plan):

- **Teaching and Learning,** by ensuring modern classroom configuration that supports engaged, inquiry-based learning; interdisciplinary collaboration; digital research and communications; and other best practices for effective teaching and learning;
- **Diversity and Inclusion,** by serving programs that promote cultural awareness and engagement,

including all World Language Programs; minors in Africana and Black Studies, Asian Studies, Latino and Latin American Studies, Women and Gender Studies; certificate programs in Global Cultural Training and in Spanish Translation and Interpretation, among others.

- **Scholarship and Creative Expression**, by ensuring climate control necessary to preserve sensitive research materials and equipment, and to maintain temperatures that allow faculty and students to conduct research related to human performance, both artistic and scientific;
- **Enhance the level of engagement, collaboration, and goodwill between the university and surrounding communities**, by promoting research in the public interest by focusing on relevant, local societal issues (e.g. How will physicians decide which COVID-19 victim has access to the last ventilator?), rather than more abstract questions (e.g. What is the meaning of death?);
- **Resource Development and Stewardship.** Finally, the new facility enhances CWU's commitment to stewardship by allowing the university to invest precious Minor Works funding in facilities in which the investment demonstrably preserves and enhances functionality, rather than pouring money into facilities that continue to decline, regardless of the investment. Objective 5.4 within this theme prioritizes providing "the facility and technology infrastructure and services appropriate to meet the university objectives, while maximizing sustainability and stewardship." The Humanities project directly addresses the following outcomes:
  - Outcome 5.4.1: Operate, preserve, and increase the functionality of state physical assets, buildings, and technology infrastructure.
  - Outcome 5.4.2: Provide facilities, campus buildings, and grounds that are welcoming, safe, and secure.
  - Outcome 5.4.3: Provide the technology infrastructure, systems, and campus services necessary for all units to achieve their objectives and the objectives of the university.

B. Does the project follow the sequencing laid out in the master plan (if applicable)? If not, explain why it is being requested now.

Yes. The project follows Master Plan sequencing, although the timeline has been delayed by a lack of state funding to upgrade existing facilities. The cost to renovate L&L and Farrell fully is now more expensive than constructing a new facility, so CWU is proposing to address the needs of these critical programs with the Humanities Complex. (Please see **Appendix F** - **CWU Capital Master Plan 2019-2029**, Chapter 4 CWU Capital Planning Priorities, Facilities Priorities: Teaching and Learning.

3.) Integral to institution's academic programs plan

Describe the proposed project's relationship and relative importance to the institution's most recent academic programs plan. Must the project be initiated soon in order to:

The project supports the academic quality goals articulated in the "CAH Compact" (Attachment K). These goals include:

- **Classroom Caliber:** 100 percent of CAH students graduate from engaged, innovative classrooms, with a signature experience in their major.
- **College Caliber:** CAH gives students of diverse need individual advising, internships, undergraduate research, post-graduation enrichment, and mentoring from faculty, peers, and alumni.
- **Career Caliber:** We guarantee that students leave CWU ready to compete for the career of their choice, with market skills uniquely taught in CAH.
- **Community Caliber:** CAH graduates are ethical leaders who are creative, globally aware, culturally responsive, and problem-solvers.

The project replaces unhealthful, unsafe, and archaic facilities with modern space that supports digital technology; flexible space that supports inquiry-based learning; and specialized space for innovative

programs like the Ethics lab and moot court. The new Humanities facility provides space in which individual mentoring and academic advising can occur without interruption by noisy or dysfunctional infrastructure.

Must the project be initiated soon in order to meet academic certification requirements?

The project is necessary to meet the following two accreditation requirements:

- **CWU's accrediting agency is the Northwest Commission on Colleges and Universities.** Standard 2.1.1, "Physical and Technology Infrastructure," provides the following directive:

  "Consistent with its mission, the institution creates and maintains physical facilities and technology infrastructure that are accessible, safe, secure, and sufficient in quantity and quality to ensure healthful learning and working environments that support and sustain the institution's mission, academic programs, and services."

  Neither Farrell nor L&L meet this standard in any way. The new facility, will, however, provide accessible, safe, secure and sufficient space for teaching and learning.

- **The Academy of Criminal Justice Sciences Standards for College/University Criminal Justice/Criminology Baccalaureate and Master's Degree Programs** (Section E: Resources) articulates facilities requirements:

  E.1 The program has sufficient facilities, equipment (including classrooms, laboratories, information and computer technology), and budgetary resources to meet program objectives and the needs of faculty and students.

  As discussed, Farrell Hall is utterly inadequate in the sufficiency of classrooms, labs and information technology.

Permit enrollment growth and/or specific quality improvements in currentprograms?

This new facility, with flexible, state of the art teaching and learning spaces, will promote enrollment growth, by offering more appealing space as well as simply more space. The Humanities Complex will offer quality improvements in <u>all</u> current programs by providing modern technology access, reliable heating and cooling, safe infrastructure (level floors, working elevators, doors that open), and a structure that is impervious to water and resists ground movement.

The new building will provide opportunities for students to acquire the essential skills of problem solving, critical thinking and communication skills in large and small groups that emulate modern work environments. Modern classrooms equipped with digital technology and flexible learning spaces will allow students on and off the Ellensburg campus to attend courses together, collaborate on learning theoretical and applied concepts, and expand the diversity of thought and creativity by expanding the reach of the CWU college experience across the state. The Humanities and Social Sciences Complex will serve as a hub for disciplines such as Philosophy, Political Science, Criminal Justice, and Sociology, allowing for "cross pollination" of theory and practice in government, policy, ethics and civic engagement. The new building will house the new NEH-funded Ethics Lab, the foreground of ethical growth and development for Central students and the greater community through the development of pedagogy and programs grounded in civic responsibility and ethics.

Permit initiation of new programs?

The Humanities and Social Sciences Complex will support and foster the initiation of new programs by providing modern, safe, and efficient space for teaching and learning. Currently departments lack space for

the programs they already have, seeking classrooms in buildings intended for computer science, education, and other programs. The new facility will enable the Humanities to offer cutting-edge programs, like the BA in Medical Humanities, Washington's first, now in development. The Medical Humanities Program will enable pre-med students to consider the deepest meanings of health and healing, the ethical and spiritual issues they will encounter as healthcare professionals, and the sacred nature of medicine as a vocation.

GENERAL CATEGORY SCORING CRITERIA

1. Age of building since last major remodel

Identify the number of years since the last substantial renovation of the facility or portion proposed for renovation. If only one portion of a building is to be remodeled, provide the age of that portion only. If the project involves multiple wings of a building that were constructed or renovated at different times, calculate and provide a weighted average facility age, based upon the gross square feet and age of each wing.

L&L and Farrell Hall are 50 and 43 years old, respectively, and are generally in their original states, other than a variety of repairs to original systems that have been made over the years. Neither has been renovated and both possess 1970s-era infrastructure at the end of its functional life.

2. Condition of building

Provide the facility's condition score (1 superior – 5 marginal functionality) from the 2016 Comparable Framework study, and summarize major structural and systems conditions that resulted in the score. Provide selected supporting documentation in appendix, and reference them in the proposal.

The building condition summaries for facilities involved in this project are as follows:

- Brooks Library: Condition Index, .12; Relative Condition Score, 3; Weighted Avg. Condition Score: 2.6
- Farrell Hall: Condition Index, 0.12; Relative Condition Score, 3; Weighted Avg Condition Score: 2.9
- L&L Building: Condition Index, 0.15; Relative Condition Score, 3; Weighted Avg Condition Score: 2.9

See **Appendix H – Humanities & Social Sciences Complex Predesign Study**, page 16 and Predesign Appendix G – CWU Existing Facility Condition Assessment Reports.

3. Significant health, safety, and code issues

It is understood that all projects that obtain a building permit will have to comply with current building codes. Identify whether the project is needed to bring the facility within current life safety (including seismic and ADA) or energy code requirements. Clearly identify the applicable standard or code, and describe how the project will improve consistency with it. Provide selected supporting documentation in appendix, and reference them in the body of the proposal.

The archaic designs of the Farrell Hall and L&L fail to meet more health, safety and code requirements than can be cited here. However, several significant conflicts with current code and infrastructure requirements are reflected below. Detailed information is provided in **Appendix M – Code Compliance**.

Washington State Building Code (WAC 52-50) State Building Code and Amendment of 2018 IBC.

The age of both buildings' "grandfather" them into certain allowable occupancy, but don't comply with aspects with **Section 1604 General design requirements** in regards to risk category III for building structures containing educational occupancies for students above the 12th grade with occupant load greater than 500. Adaptation to this code would require significantly renovation and

expansion that cumulatively in excess of the proposed design that address. Refer to **Life Cycle Cost Analysis Option 4.**

Revised Code of Washington (RCW) 19.27A.210

Based on the lack of building energy efficiency, both Farrell and L&L meet the criteria to adopt conditional compliance to the State Energy Standards for Clean Buildings. As identified in the **Life Cycle Cost Analysis Option 4**, the cost to effectively bring these building in compliance for the **Washington State Energy Code (Chapter 51-11C WAC)** supersedes the proposed solution of the Humanities & Social Science complex. The proposed solution would address further State Efficiency and Environmental Performance outlined in Governor Inslee **Executive Order 20-01** that mandates high-performance buildings for the reduction of greenhouse gases, reduction of pollutants from fossil fuels and use of clean energy when technically feasible.

National Fire Protection Association (NFPA)

The current fire protection in L&L is in conflict with the design requirements outlined in **section 13 of the NFPA**, due in large part to the age of the building along with the layout of the building. A 2004 Fire Risk Assessment report supports this analysis due to the documented risk of delayed notification of fire could allow smoke to rapidly spread if the building, which is further complicated by the dysfunctional floorplan layout during escape procedures. It is cost prohibitive to remedy the fire protection, energy efficiency, building code and ADA impacts in lieu of the proposed building replacement that combines the academic programming needs of both Farrell and L&L. **Refer to the Predesign - Appendix H,** page 5.

Americans with Disabilities Act of 1990 (2 U.S.C. Part B); RCW 28B.10.912, Students with Disabilities (1996); 70.92 RCW 70.92, Provisions in Buildings for Aged and Handicapped Persons (1975)

Neither Farrell Hall nor L&L meet standards for accessibility of the disabled. The Federal and state laws cited above outline construction criteria that accommodate people with disabilities. The general layout, emergency egress, handrail locations are beyond the normal construction standards incorporated by **ADA (2 U.S.C Part B)** as referenced in the **Pre-design on page 3-5 in Appendix H**. While CWU has incorporated some adjustments within reasonable financial means, the general layout of the building (especially L&L) would have to be significantly structurally modified within the building footprint. The Humanities & Social Science complex will incorporate the latest standards for disability accommodation.

4. Reasonableness of cost

Provide as much detailed cost information as possible, including baseline comparison of costs per square foot (SF) with the cost data provided in Chapter 5 of the scoring process instructions and a completed OFM C-100 form. Also, describe the construction methodology that will be used for the proposed project.

A summary of the conceptual cost estimate for the proposed Humanities and Social Sciences Complex project, which may be affected by modifications to the scope of work, special phasing requirements, restrictive technical specifications or excessive contract conditions, non-competitive or delayed bids, can be found in **Appendix B – Project Cost Estimate C100**.

Exclusions from Construction Costs:

- Assessments, finance, legal/development charges
- AV Equipment
- Builder's risk, project wrap-up and other owner provided insurance program
- Building and land acquisition fees (if applicable)
- Compression of schedule, premium or shift work
- Design fees

- Legal and accounting fees
- Moving owners' equipment and furniture
- Owner's furniture, furnishings and equipment
- Owners administration costs
- Owners supplied materials
- Pre-construction services
- Removal of unforeseen underground obstructions
- Washington State Sales Tax

The following major assumptions were used in generating conceptual cost estimates for the project (See Appendix H – Humanities & Social Sciences Complex Predesign, page 39).

- Estimating / Design Contingency is Included at 5.00%
- Escalation is calculated to Construction Start Date June 2023.
- Year 1 Escalation- 4.50%
- Year 2 Escalation- 4.25%
- Year 3 Escalation- 4.00%
- Open and competitive bidding among all proportions of the work.

The project will be delivered utilizing the alternative project delivery method of Design, Bid, Build (DBB).

If applicable, provide Life Cycle Cost Analysis results demonstrating significant projected savings for selected system alternates (Uniformat Level II) over 50 years, in terms of net present savings.

For the Life Cycle Cost Analysis for alternates using OFM's Life Cycle Cost Model, see **Appendix H – Humanities & Social Sciences Predesign Study**, pages 10 and 11, and replace Predesign Appendix E Life Cycle Cost Analysis with **Appendix H1 – Corrected LCCA.**

5. Availability of space/utilization on campus

Describe the institution's plan for improving space utilization and how the project will impact the utilization of classroom space.

The Humanities & Social Sciences Prospectus identifies current unmet functional space needs that are required to support the academic programs and accommodate expected future program activity levels. The prospectus is based on Facilities Evaluation and Planning Guidelines (FEPG). See **Appendix D – Availability of Space/Campus Utilization** and **Appendix H – Humanities & Social Sciences Predesign Study**, pages 17-20, and Predesign Appendix F - Humanities & Social Sciences Prospectus.

More generally, CWU's activity-based budget (ABB) model supports maximization of space use. ABB determines the resources that are available to the academic colleges, as well as the proportionate share of expenses that are needed to run the university and support the mission of the colleges. An annual academic space mapping exercise determines each college's percentage of assignable space, and, in effect, charges each college for the use of office space, conference rooms, classrooms and labs. The system, in place since 2018, has caused departments to think carefully about the space they need and incentivized them to release as much space as possible—or pay a higher rate.

6. Efficiency of space allocation

A. For each major function in the proposed facility (classroom, instructional labs, offices), identify whether space allocations will be consistent with Facility Evaluation and Planning Guide (FEPG) assignable square feet standards. To the extent any proposed allocations exceed FEPG standards, explain the alternative standard that has been used, and why. See Chapter 4 of the scoring process instructions for an example. Supporting tables may be included in an

appendix.

The first three floors of the Humanities building will each be 34,700 SF; a fourth floor will be 11,800 SF. The first two floors will house high-use lecture rooms and public spaces in the most accessible configuration. Specialty classrooms and student support areas will be located on the second and third floors. Administrative and office spaces are planned for the top two levels. A 24,000 SF addition to and 5,000 SF renovation of Brooks Library, which will be connected to Humanities, will focus primarily on student support and collaborative areas, including specialty labs intended for inter-departmental use.

See **Appendix E – Assignable Square Footage Template Program-related Space Allocation** and **Appendix H – Humanities & Social Sciences Predesign Study,** pages 17-20, and Predesign Appendix F Prospectus for Humanities and Social Sciences Complex.

B. Identify the following on form CBS002:

1. Usable square feet (USF) in proposed facility: 71,935
2. Gross square feet (GSF): 119,890
3. Building Efficiency (USF divided GSF): 60%
   See Appendix A – Capital Project Report CBS002

7. Adequacy of space

Describe whether and the extent to which the project is needed to meet modern educational standards and/or to improve space configurations, and how it would accomplish that.

The facility is needed to and will provide Internet access and digital tools standard to any modern classroom. Technology in current facilities includes electrical wall outlets—and only of few of those. The project is needed to and will meet modern educational standards for health and safety: efficient HVAC, modern fire prevention and alarm systems, reliable and stable building structures, bathrooms on each floor, accessibility for people with disabilities. The old facilities that Humanities will replace were structured for static class lectures: a person standing before and lecturing to front-facing students for an hour per day. The new facility provides space that encourages and supports interdisciplinary collaboration, small and large-group discussion, and project-based learning. The new facility will provide space that can accommodate double sections, precluding the need to send faculty and students to facilities intended for other purposes. See **Appendix H – Humanities & Social Sciences Predesign Study,** pages 17-20.

TEMPLATES REQUIRED IN APPENDIX FOR SCORING

- ☐ Degree totals and targets
- ☐ Availability of space/campus utilization
- ☐ Program-related space allocation

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDICES

Appendix A	Capital Project Report CBS002
Appendix B	Project Cost Estimate C100
Appendix C	Degree Totals and Targets
Appendix D	Availability of Space/Campus Utilization
Appendix E	Assignable Square Feet Program-related Space Allocation
Appendix F	CWU Capital Master Plan 2019-2029
Appendix G	DAHP Letter
Appendix H	Humanities & Social Sciences Predesign Study, July 2020
Appendix I	Structural Assessment of L&L and Farrell Hall
Appendix J	Fire Risk Assessment of L&L and Farrell Hall
Appendix K	College of Arts and Humanities Academic Plan
Appendix L	Life Cycle Cost Analysis
Appendix M	Code Compliance

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX A

Capital Project Report CBS002

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OFM

375 - Central Washington University
Capital Project Request

2021-23 Biennium

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Version: 1A CWU Working Version 2021 - 2023

Report Number: CBS002
Date Run: 8/13/2020 2:34PM

Project Number: **40000081**
Project Title: **Humanities & Social Science Complex**

Description

Starting Fiscal Year: 2022
Project Class: Preservation
Agency Priority: 0

Project Summary

CWU proposes a new, four-story, 90,600 square foot Humanities & Social Sciences Complex. The total project will include a 24,000 square foot addition to the existing Brooks Library and approximately 5,000 square feet of renovated space within the library building itself. The Humanities & Social Sciences Complex is the most comprehensive and cost-e?ective solution because it eliminates deferred maintenance that cannot be addressed through incremental biennial Minor Works appropriations. Furthermore, the project brings several programs together in a single, modern facility, maximizing e?ciency while enhancing educational quality. The configuration creates a strong connection to Brooks Library, which will integrate fragmented departments into a single Humanities and Social Sciences Complex. This new facility, configured with flexible spaces, will facilitate shared use and inter-departmental interaction, helping to foster increased student activity and collaboration.

Project Description

What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.

CWU proposes to demolish two failing buildings and replace them with a new facility to serve programs in the Humanities and Social Sciences, which provide courses essential for the completion of general education curriculum required for nearly every bachelor's degree. The project removes Farrell Hall and Language and Literature (L&L), decreasing energy consumption by 31 percent. The project also avoids approximately $80 million in costs to renovate and update Farrell and L&L, according to a 2018 life-cycle cost analysis by MW Consulting Engineers (Please see Appendix L – Life Cycle Cost Analysis). As well the project will halt the necessity for investing precious Minor Works funds in failing buildings.

CWU has requested state funding to upgrade these buildings in several biennia, but has not received funding. Now the state of the buildings is quite literally beyond repair and these facilities must be replaced. Energy systems are not compliant with current energy code, resulting in the need for all new piping, ductwork and air- handler distribution systems when replacement systems are considered. The stairwells and many o?ces lack windows; in the event of power failure, students and faculty in these locations will find themselves in complete darkness. The buildings were constructed with interior roof drains that are clogged with debris—including ash from the eruption of Mt. St. Helens in 1980. The drain lines are not accessible for maintenance without invasive demolition of interior structure. A structural assessment of L&L and Farrell Hall identified that significant concerns could only be addressed through a "major level of structural upgrade."

Farrell Hall's 41-year-old systems are deteriorating, with infrastructure and major systems demonstrating critical issues. Water freezes on the roof of the uninsulated building; when the ice melts, rainwater leaders buried in the walls leak water inside, into classrooms and o?ces. Old insulation is liquefying and seeping through cracks in the masonry walls, which also admit insects. Farrell lacks modern technology infrastructure, from simple power outlets to data ports. In addition, Farrell is far too small to accommodate two of the university's fastest-growing programs, Law & Justice and Sociology.

The systems in the 50-year-old L&L are failing, too. Air system filters pump grey material (thought to be fan belt residue or gasket material) out the di?users into occupied spaces. Filter fabric has been temporarily installed over the di?users to stop the blowing debris, which also restricts air flow. Noise from the old ventilation system makes it di?cult for students to hear instruction and discussion. Walls have been reconfigured over the years without adjustments to the mechanical system, resulting in spaces without su?cient heating or cooling. The controls are pneumatic (air operated logic in lieu of programmable electronic direct digital controllers) and the facility cannot be monitored or maintained at the campus level, so needs for service are identified through user complaints. Heating water is not adequately distributed through the building and pipes are frequently plugged. The pipe is concealed, resulting in wall removal to unplug and repair pipe. The south side of the building has insu?cient cooling.

Description

The physical layout the building itself, contributes to its ine?ciency. L&L is constructed in two, unconnected ground-floor sections separated by an open-air courtyard. Each of the upper three floors of the two halves, which largely contain classrooms, are connected by a bridging section that houses o?ces. There are no restrooms on the third floor. This area is too small and inconvenient to serve as the main route of circulation between the two academic areas. Because of the configuration of the structure, the layout of the building is compartmentalized.

Assignment of space cannot flex as department sizes change. Due to this restrictive design, scheduling e?ciency can only achieve 53 percent. This is particularly problematic since the facility houses so many programs required for general education. A fire risk assessment report of the buildings identified an occupant life safety concern where an undetected, early spread of smoke throughout a floor below an occupied floor could occur. The buildings lack fire alarms that signal both visually and audibly. Though the building construction is fire resistant, a delayed notification of fire could allow smoke and heat to spread to all areas of the building. The complicated layout of the building creates a configuration where both stairways are entered from a common atmosphere, in violation of current egress codes.

What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify if the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.

CWU self-funded the project predesign and now is requesting $5,204,535 for design during the 2021-2023 biennium. The proposed design scope includes a new four-story, 90,600 SF building will be connected to Brooks Library. The facility will include a 24,000 SF library addition and 5,000 SF of renovated existing library space.

The first three floors will be 34,700 SF each with a fourth 11,800 SF level. The first two floors will house high-use lecture rooms and public spaces in the most accessible configuration. Specialty classrooms and student support areas will be located on the second and third floors with a possible connection to Brooks Library on the third floor. Administrative and o?ce spaces are planned for the top two levels.

The 24,000 SF addition and 5,000 SF renovation to Brooks Library, which will focus primarily on student support and collaborative areas, will include specialty labs intended for inter-departmental use. The method of delivery will be design-bid-build, CWU's proven most cost-effective strategy for major capital projects.

The project schedule completes the design and construction over the course of two biennia: design start and completion within the 2021-23 biennium; construction start and completion within the 2023-2025 biennium. The total escalated requested cost of the project is $69 million

How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?

The request addresses the problems articulated with the two failing buildings and provides an opportunity for the following benefits: Increased degree production and decreased time to degree by the construction of a facility that affords optimal conditions for teaching and learning, scheduling, advising and student support; and by enhancing the efficiency and safety of buildings that provide general education curriculum, which is required for every degree; Financial savings for the state of Washington, by halting the expenditure of minor works funds on failing buildings and avoiding the expenditure of $80 million in deferred maintenance required to bring two buildings up to life-safety, academic, and energy standards; Increased energy efficiency by an estimated 31 percent.

No systems meet modern energy codes. The original systems in the 50-year-old buildings have exceeded their service life by at least twice the industry standard: 25 years for fans, 20 years for coils, 20 years for pumps, 30 years for ductwork, 20 years for temperature controls and 17 years for motor controls; Enhanced safety for building users. The project resolves issues with poor

Description

air quality, failing elevators, and settling that has warped doors and caused floors to sink; ADA compliant fire alarms that can be received by deaf students in the Bachelor of Arts degree in Deaf and Sign Language Studies, the only program of its kind in the state; and other issues; Increased the efficiency and interdisciplinary nature of studies, by housing Humanities in a single facility.

Currently, lack of space and mechanical failure often force Humanities classes into other facilities, compromising the scheduling needs of other programs, and discouraging collaboration among faculty and students. The result of not taking action means that the buildings that currently house these programs will continue to significantly deteriorate and maintenance will become increasingly expensive. The option to fully upgrade and renovate each building is prohibitively expensive. These facilities are at the end of their useful lives and should be replaced, rather than continuing to invest in their upkeep.

What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.

The Humanities & Social Sciences Complex Predesign, July 2020, considered the following alternatives:

Alternative No. 1: No Action. This option was rejected because the buildings that currently house these programs have significantly deteriorated; maintenance is becoming increasingly expensive and renovation requests have been repeatedly rejected by the legislature. Now, to fully renovate each building is prohibitively expensive. These facilities are at the end of their useful lives and should be replaced, rather than continuing to invest in their upkeep.

Alternative No. 2: New Construction Northeast of Brooks Library Site (preferred alternative), including an addition and some renovation to the library. This option represents the most comprehensive and lowest-cost solution.

Alternative No. 3: Farrell Hall Site. This option explored developing an entirely new, stand-alone building located partially on the site of the existing Farrell Hall, extending northwest of Brooks Library. This option was rejected because it represented a higher-cost solution and would not be centrally located.

Alternative No. 4: Renovation and expansion of Farrell Hall and L&L to extend their useful lives. This option was pursued several times but efforts to secure state funding failed. The alternative is now too expensive; the estimated cost to renovate facilities fully is approximately $80 million, far more expensive than the construction of a singular complex, which also addresses the academic programming needs of both facilities.

Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.

Humanities programs play a critical role in the structure of general education curriculum required for all bachelor's degrees. The project addresses current unmet functional and programmatic needs to support Colleges of Arts & Humanities (CAH) and College of the Sciences (CoTS) programs. CAH departments, which include English, World Languages, History, Philosophy and Religious Studies, are currently housed in L&L, which lacks adequate office and instructional space to support the very large number of classes taught, and the aged spaces do not allow for 21st-century humanities pedagogy and inquiry-based collaborative learning. Ethics Lab – only one in the pacific NW and NEH funds.

Medical Humanities – Digital Humanities uses information technology as a central part of its methodology, for creating and/or processing data. Digital Humanities employs technology in the pursuit of humanities research and subjects technology to humanistic questioning and interrogation, often simultaneously. The university of Oxford describes Digital Humanities this way: "It involves collaborative, transdisciplinary, and computationally engaged research, teaching, and publishing. It brings digital tools and methods to the study of the humanities with the recognition that the printed word is no longer the main medium for knowledge production and distribution."
The top four employers of CWU Humanities graduates are Boeing, Amazon, Washington Public Schools, and Microsoft, in that

Description

order. Graduates work in a variety of fields, from helping to guide resolution of ethical questions in digital advertising and communications, to analytical modeling and assessment. In order to be employment ready, CWU graduates need modern facilities in which they can hone the analytical and technological skills needed to be effective. Departments Law & Justice and Political Science are currently housed in Farrell Hall. Building systems in Farrell Law and Justice currently operates a “mock courtroom” in a very small former classroom. The CoTS Sociology department is currently located in Samuelson Hall, which was originally created to house computer science and computational sciences.

Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share OF project cost allowable and the supporting citation or documentation.

There are no other funding sources identified at this time.

Describe how this project supports the agency’s strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.

The proposed Humanities project is identified in the Central Washington University 2019-2029 Capital Master Plan as “the Government, Ethics, and Civic Engagement Complex.” The university’s Capital Master Plan and all major campus capital projects are planned in accordance with the Growth Management Act (GMA) RCW 36.70A and coordinated with the City of Ellensburg and Kittitas County comprehensive plans.

University updates to the CWU Capital Master Plan and all proposed capital projects are planned and conducted with public SEPA reviews, open planning forums, and workshops to provide opportunities for the community, the city and the county to provide input. The strategically planned location of proposed new project in the North Campus neighborhood is to complement the adjacent Central Campus. The proximity of the new facility will promote interdisciplinary education, enhance collaboration among students and faculty, foster curriculum integration, and avoid duplication of services and programs.

The creation of the Humanities facility supports all five themes of the university’s strategic plan:
Teaching and Learning, by ensuring modern classroom configuration that supports engaged, inquiry-based learning; interdisciplinary collaboration; digital research and communications; and other best practices for effective teaching and learning; Diversity and Inclusion, by serving programs that promote cultural awareness and engagement, including all World Language Programs; minors in Africana and Black Studies, Asian Studies, Latino and Latin American Studies, Women and Gender Studies; certificate programs in Global Cultural Training and in Spanish Translation and Interpretation, among others.

Scholarship and Creative Expression, by ensuring climate control necessary to preserve sensitive research materials and equipment, and to maintain temperatures that allow faculty and students to conduct research related to human performance, both artistic and scientific; Enhance the level of engagement, collaboration, and goodwill between the university and surrounding communities, by promoting research in the public interest by focusing on relevant, local societal issues (e.g. How will physicians decide which COVID-19 victim has access to the last ventilator?), rather than abstract, even archaic problems (e.g. What is the meaning of death?).

Resource Development and Stewardship. Finally, the new facility enhances CWU’s commitment to stewardship by allowing the university to invest precious Minor Works funding in facilities in which the investment demonstrably preserves and enhances functionality, rather than pouring money into facilities that continue to decline, regardless of the investment.

Objective 5.4 within this theme prioritizes providing “the facility and technology infrastructure and services appropriate to meet the university objectives, while maximizing sustainability and stewardship.”

The Humanities project directly addresses the following outcomes:

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Capital Project Request
2021-23 Biennium

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Version: 1A CWU Working Version 2021 - 2023

Report Number: CBS002
Date Run: 8/13/2020 2:34PM

Project Number: **40000081**
Project Title: **Humanities & Social Science Complex**

Description

Outcome 5.4.1: Operate, preserve, and increase the functionality of state physical assets, buildings, and technology infrastructure;

Outcome 5.4.2: Provide facilities, campus buildings, and grounds that are welcoming, safe, and secure.

Outcome 5.4.3: Provide the technology infrastructure, systems, and campus services necessary for all units to achieve their objectives and the objectives of the university

Does this project include IT related costs, including hardware, software, cloud based services, contracts or staff? If yes, attach IT Addendum.

No, the project does not fund any IT related costs.

If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12 Puget Sound Recovery) in the 2021-23 Operating Budget Instructions.
No, the project is not linked to the Puget Sound Action Agenda.

How does this project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.

The proposed project's design solution will address State Efficiency and Environmental Performance as outlined in Governor Inslee's Executive Order 20-01 that mandates high-performance buildings for the reduction of greenhouse gases, reduction of pollutants from fossil fuels and use of clean energy when technically feasible. CWU recognizes that the costs of constructing zero energy or zero energy capable buildings is becoming closer to that of conventional buildings and will continue to advance their building construction towards this mandate using life-cycle cost analysis tools for decision making in the design process. CWU has adopted a university energy policy (CWUP 2-50-020) that supports the educational mission of the university, since the educational process is dependent upon a controlled environment, which utilizes energy. It is structured to provide adequate energy policy details.

Is there additional information you would like decision makers to know when evaluating this request?

Funding

			Expenditures		2021-23 Fiscal Period	
Acct Code	Account Title	Estimated Total	Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	69,051,000				5,205,000
	Total	**69,051,000**	**0**	**0**	**0**	**5,205,000**

		Future Fiscal Periods			
		2023-25	2025-27	2027-29	2029-31
057-1	State Bldg Constr-State	63,846,000			
	Total	**63,846,000**	**0**	**0**	**0**

Schedule and Statistics

Start Date	End Date

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Capital Project Request

2021-23 Biennium

*

Version: 1A CWU Working Version 2021 - 2023

Report Number: CBS002
Date Run: 8/13/2020 2:34PM

Project Number: **40000081**
Project Title: **Humanities & Social Science Complex**

Schedule and Statistics

	Start Date	End Date
Predesign	05/01/2020	07/01/2020
Design	9/1/2021	5/1/2023
Construction	9/1/2023	6/1/2025

	Total
Gross Square Feet:	119,890
Usable Square Feet:	71,935
Efficiency:	60.0%
Escalated MACC Cost per Sq. Ft.:	422
Construction Type:	College Classroom Facilities
Is this a remodel?	No
A/E Fee Class:	B
A/E Fee Percentage:	6.22%

Cost Summary

		Escalated Cost	% of Project
Acquisition Costs Total		**0**	**0.0%**
Consultant Services			
Pre-Schematic Design Services		0	0.0%
Construction Documents		2,178,215	3.2%
Extra Services		1,676,726	2.4%
Other Services		1,026,795	1.5%
Design Services Contingency		253,576	0.4%
Consultant Services Total		**5,135,310**	**7.4%**
Maximum Allowable Construction Cost(MACC)	**50,612,821**		
Site work		4,302,255	6.2%
Related Project Costs		653,098	1.0%
Facility Construction		45,657,468	66.1%
GCCM Risk Contingency		0	0.0%
GCCM or Design Build Costs		0	0.0%
Construction Contingencies		2,535,783	3.7%
Non Taxable Items		0	0.0%
Sales Tax		4,411,334	6.4%
Construction Contracts Total		**57,559,937**	**83.4%**
Equipment			
Equipment		3,692,776	5.4%
Non Taxable Items		0	0.0%
Sales Tax		306,500	0.4%

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Capital Project Request
2021-23 Biennium

*

Version: 1A CWU Working Version 2021 - 2023

Report Number: CBS002
Date Run: 8/13/2020 2:34PM

Project Number: **40000081**
Project Title: **Humanities & Social Science Complex**

Cost Summary

	Escalated Cost	% of Project
Equipment Total	**3,999,275**	**5.8%**
Art Work Total	**343,538**	**0.5%**
Other Costs Total	**691,042**	**1.0%**
Project Management Total	**1,321,985**	**1.9%**
Grand Total Escalated Costs	**69,051,087**	
Rounded Grand Total Escalated Costs	**69,051,000**	

Operating Impacts

No Operating Impact

Capital Project Request

2021-23 Biennium

*

Parameter	Entered As	Interpreted As
Biennium	2021-23	2021-23
Agency	375	375
Version	1A-A	1A-A
Project Classification	*	All Project Classifications
Capital Project Number	40000081	40000081
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX B

Project Cost Estimate C100

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STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central WashingtonUniversity
Project Name	Humanities & Social Sciences Complex
OFM Project Number	40000081

Contact Information	
Name	Steve Dupont
Phone Number	509-201.0528
Email	Steve.Dupont@cwu.edu

Statistics			
Gross Square Feet	119,890	MACC per Square Foot	$384
Usable Square Feet	71,935	Escalated MACC per Square Foot	$422
Space Efficiency	60.0%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	6.23%
Remodel	No	Projected Life of Asset (Years)	50
Additional Project Details			
Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	Yes
Sales Tax Rate %	8.30%	Location Used for Tax Rate	Ellensburg, WA
Contingency Rate	5%		
Base Month	June-20	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule			
Predesign Start	May-20	Predesign End	July-20
Design Start	September-21	Design End	May-23
Construction Start	September-23	Construction End	June-25
Construction Duration	21 Months		

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Project Cost Estimate

Total Project	**$62,983,470**	Total Project Escalated	**$69,051,095**
		Rounded Escalated Total	**$69,051,000**

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central WashingtonUniversity
Project Name	Humanities & Social Sciences Complex
OFM Project Number	40000081

Cost Estimate Summary

Acquisition			
Acquisition Subtotal	**$0**	**Acquisition Subtotal Escalated**	**$0**

Consultant Services			
Predesign Services	$0		
A/E Basic Design Services	$2,077,429		
Extra Services	$1,591,677		
Other Services	$933,338		
Design Services Contingency	$230,122		
Consultant Services Subtotal	**$4,832,566**	**Consultant Services Subtotal Escalated**	**$5,135,314**

Construction			
Construction Contingencies	$2,301,282	Construction Contingencies Escalated	$2,535,783
Maximum Allowable Construction Cost (MACC)	$46,025,633	Maximum Allowable Construction Cost (MACC) Escalated	$50,612,821
Sales Tax	$4,011,134	Sales Tax Escalated	$4,411,335
Construction Subtotal	**$52,338,049**	**Construction Subtotal Escalated**	**$57,559,939**

Equipment			
Equipment	$3,351,280		
Sales Tax	$278,156		
Non-Taxable Items	$0		
Equipment Subtotal	**$3,629,436**	**Equipment Subtotal Escalated**	**$3,999,277**

Artwork			
Artwork Subtotal	**$343,538**	**Artwork Subtotal Escalated**	**$343,538**

Agency Project Administration			
Agency Project Administration Subtotal	$1,199,732		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$1,199,732**	**Project Administation Subtotal Escalated**	**$1,321,985**

Other Costs			
Other Costs Subtotal	**$640,150**	**Other Costs Subtotal Escalated**	**$691,042**

Project Cost Estimate

Total Project	**$62,983,470**	Total Project Escalated	**$69,051,095**
		Rounded Escalated Total	**$69,051,000**

Cost Estimate Details

Consultant Services				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Pre-Schematic Design Services				
Programming/Site Analysis				
Environmental Analysis				
Predesign Study				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.0299**	**$0**	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	$2,077,429			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	**$2,077,429**	**1.0502**	**$2,181,717**	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)	$250,000			
Geotechnical Investigation	$35,000			
Commissioning	$120,000			
Site Survey	$35,000			
Testing	$100,000			
LEED Services	$90,000			
Voice/Data Consultant	$200,000			
Value Engineering	$80,000			
Constructability Review	$80,000			
Environmental Mitigation (EIS)	$20,000			
Landscape Consultant	$110,000			
Acoustical Engineer, Cost Consultant	$150,000			
Remodel/Addition to Brooks 3% add	$321,677			
Sub TOTAL	**$1,591,677**	**1.0502**	**$1,671,580**	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	$933,338			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
Sub TOTAL	**$933,338**	**1.1019**	**$1,028,445**	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	$230,122			
Other				
Insert Row Here				
Sub TOTAL	**$230,122**	**1.1019**	**$253,572**	Escalated to Mid-Const.
CONSULTANT SERVICES TOTAL	**$4,832,566**		**$5,135,314**	

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Cost Estimate Details

Construction Contracts				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Site Work				
G10 - Site Preparation	$435,000			
G20 - Site Improvements	$980,000			
G30 - Site Mechanical Utilities	$465,000			
G40 - Site Electrical Utilities	$635,000			
G60 - Other Site Construction				
Demolition	$1,470,414			
Insert Row Here				
Sub TOTAL	**$3,985,414**	**1.0795**	**$4,302,255**	
2) Related Project Costs				
Offsite Improvements	$430,000			
City Utilities Relocation	$175,000			
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
Sub TOTAL	**$605,000**	**1.0795**	**$653,098**	
3) Facility Construction				
A10 - Foundations	$1,295,861			
A20 - Basement Construction				
B10 - Superstructure	$4,556,289			
B20 - Exterior Closure	$6,712,412			
B30 - Roofing	$1,095,175			
C10 - Interior Construction	$3,685,408			
C20 - Stairs	$349,481			
C30 - Interior Finishes	$2,969,230			
D10 - Conveying	$301,650			
D20 - Plumbing Systems	$1,378,200			
D30 - HVAC Systems	$7,135,358			
D40 - Fire Protection Systems	$585,890			
D50 - Electrical Systems	$6,202,934			
F10 - Special Construction				
F20 - Selective Demolition	$119,204			
General Conditions	$2,535,081			
GC Overhead & Profit	$2,513,046			
Insert Row Here				
Sub TOTAL	**$41,435,219**	**1.1019**	**$45,657,468**	
4) Maximum Allowable Construction Cost				
MACC Sub TOTAL	**$46,025,633**		**$50,612,821**	

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7) Construction Contingency				
Allowance for Change Orders	$2,301,282			
$43				
Insert Row Here				
Sub TOTAL	**$2,301,282**	**1.1019**	**$2,535,783**	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$4,011,134**		**$4,411,335**	
CONSTRUCTION CONTRACTS TOTAL	**$52,338,049**		**$57,559,939**	

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Cost Estimate Details

Equipment				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
E10 - Equipment	$1,500,000			
E20 - Furnishings	$1,851,280			
F10 - Special Construction				
Other				
Insert Row Here				
Sub TOTAL	**$3,351,280**	**1.1019**	**$3,692,776**	
1) Non Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$278,156**		**$306,501**	
EQUIPMENT TOTAL	**$3,629,436**		**$3,999,277**	

Green cells must be filled in by user

Cost Estimate Details

Artwork					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Project Artwork	$0				0.5% of total project cost for new construction
Higher Ed Artwork	$343,538				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	**$343,538**		**NA**	**$343,538**	

Green cells must be filled in by user

Cost Estimate Details

Project Management					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Agency Project Management	$1,199,732				
Additional Services					
Other					
Insert Row Here					
PROJECT MANAGEMENT TOTAL	**$1,199,732**		**1.1019**	**$1,321,985**	

Green cells must be filled in by user

Cost Estimate Details

Other Costs					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Mitigation Costs	$175,000				
Hazardous Material Remediation/Removal	$440,150				
Historic and Archeological Mitigation	$25,000				
Other					
Insert Row Here					
OTHER COSTS TOTAL	**$640,150**		**1.0795**	**$691,042**	

Green cells must be filled in by user

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX C

Degree Totals and Targets

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Degree Totals and Targets Template

Required for Overarching Criteria for Major Growth, Renovation, Replacement and Research Proposals

Institution:	CENTRAL WASHINGTON UNIVERSITY
Campus location:	ELLENSBURG
Project name:	HUMANITIES AND SOCIAL SCIENCES

	Increase in bachelor's degrees awarded	Increase in bachelor's degrees awarded in high-demand fields	Increase in advanced degrees awarded
2018-19 Statewide Public Four-Year Dashboard (a)	2,423	695	315
Number of degrees targeted in 2021 (b)	73	21	9
2018-19 totals/2021 target (a/b)	3319.2%	3309.5%	3500.0%
Score:	**0.00**	**0.00**	**0.00**

Comments:

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX D

Availability of Space/Campus Utilization

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Availability of Space/Campus Utilization Template

2020 Four-year Higher Education Scoring Process

Required for all categories except Infrastructure and Acquisition.

Project Name:	Humanities and Social Sciences
Institution:	Central Washington University
Campus Location:	Ellensburg

Identify the average number of hours per week each (a) classroom seat and (b) classroom lab is expected to be utilized in Fall 2018 on the porposed porject's campus. Please fill in the green shaded cells for the **campus** where the project is located.

(a) General University Classroom Utilization		**(b) General University Lab Utilization**	
Fall 2019 Weekly Contact Hours	130,280	Fall 2019 Weekly Contact Hours	33,788
Multiply by % FTE Increase Budgeted	0.00%	Multiply by % FTE Increase Budgeted	0.00%
Expected Fall 2020 Contact Hours	130,280	Expected Fall 2020 Contact Hours	33,788
Expected Fall 2020 Classroom Seats	6,447	Expected Fall 2020 Class Lab Seats	3,357
Expected Hours per Week Utilization	**20.2**	**Expected Hours per Week Utilization**	**10.1**
HECB GUC Utilization Standard	22.0	HECB GUL Utilization Standard	16.0
Differrence in Utilization Standard	-8%	Differrence in Utilization Standard	-37%

If the campus does not meet the 22 hours per classroom seat and/or the 16 hours per class lab HECB utilization standards, describe any institutional plans for achieving that level of utilization.

The CWU masterplan and strategic plans project and enrollment increase of 2,000 headcount by fall 2024. The Humanities and Social Sciences project includes a request to demolish Farrell Hall and L&L buildings which will take 1,032 seats of outdated instructional capacity out of service. This will allow CWU to "right-size" and re-balance our instructional capacity with teaching spaces that meet modern pedagogical demands.

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX E

Assignable Square Feet Program-related Space Allocation

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Program Related Space Allocation Template

Assignable Square Feet

Required for all Growth, Renovation and Replacement proposals.

Institution: CENTRAL WASHINGTON UNIVERSITY

Campus location: ELLENSBURG

Project name: HUMANITIES & SOCIAL SCIENCES

Input the assignable square feet for the proposed project under the applicable space types below:

Type of Space	Points	Assignable Square Feet	Percentage of total	Score [Points x Percentage]
Instructional space (classroom, laboratories)	10	39,300	54.61	5.46
Research space	2	`	0.00	0.00
Office space	4	25,275	35.12	1.40
Library and study collaborative space	10	-	0.00	0.00
Other non-residential space	8	7,390	10.27	0.82
Support and physical plant space	6	-	0.00	0.00
Total		**71,965**	**100.0**	**7.69**

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDIX F

Central Washington University

Capital Master Plan 2019-2029

with referenced appendices are located at:

www.cwu/facility/master-plan

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex

Replacement – Major Project

Design

APPENDIX G

DAHP Letter

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Allyson Brooks Ph.D., Director
State Historic Preservation Officer

June 22, 2020

Mr. Bill Yarwood, AIA
Chief Architect, Capital Planning and Projects
Central Washington University
400 East University Way
Ellensburg, WA 98926-7523

In future correspondence please refer to:
Project Tracking Code: 2020-06-04017
Property: Central Washington University; Brooks Library, Farrell Hall, Language and Literature Building
Re: Humanities-Social Sciences Predesign

Dear Mr. Yarwood:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP) regarding the development of a new Humanities and Social Sciences building on the Central Washington University (CWU) campus. We understand that you are self-funding a predesign, and applying for design funding in the 2021-23 biennium. We are providing these comments following our virtual conference and email discussions about the project, though neither the predesign nor the design funding is subject to review pursuant to Governor's Executive Order 05-05 (GEO 05-05).

Three buildings could be impacted by the potential construction of a new building or addition to Brooks Library, including Brooks Library itself, Farrell Hall, and the Language and Literature Building. Brooks Library and Farrell Hall were both completed in 1976 and designed by architectural firm Ibsen, Nelsen & Associates. It is our opinion that they are eligible for inclusion in the National Register of Historic Places under Criterion C for representing the work of master architecture firm Ibsen, Nelsen & Associates. The Language and Literature Building was completed in 1970 and designed by architectural firm Grant, Copeland, Chervenak & Associates. It is our opinion that it is also eligible for inclusion in the National Register under Criterion C for representing the work of master architecture firm Grant, Copeland, Chervenak & Associates. We believe all of these buildings are also eligible for inclusion in the National Register of Historic Places under Criterion A for their associations with broad patterns of history related to the late-twentieth century higher education at Central Washington University.

We anticipate adverse impacts should the project development include demolition or significant alteration of any of the three abovementioned buildings. As such, we highly recommend your continued collaboration and engagement with our office to minimize any potential adverse impacts, and to plan and budget for any mitigation activities that arise out of our ongoing discussions.

These comments have been provided on behalf of the State Historic Preservation Officer. Thank you for the opportunity to review and comment. We look forward to our continued consultation regarding this project and its design development through its ultimate construction. If you have any questions, please feel free to contact me.

Sincerely,

Nicholas Vann, AIA

Deputy State Historic Preservation Officer
(360) 586-3079
nicholas.vann@dahp.wa.gov

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDIX H

Humanities & Social Sciences Complex Predesign Study, July 2020

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HUMANITIES & SOCIAL SCIENCES COMPLEX
PREDESIGN STUDY

CENTRAL WASHINGTON UNIVERSITY

JULY 2020

PREPARED FOR:
State of Washington, Department of Financial Management

BY:
Central Washington University
Facilities Management Department
In Cooperation with Studio Meng Strazzara

TABLE OF CONTENTS

SECTION 1.0: EXECUTIVE SUMMARY

1.1 Problem Statement

This project resolves two problems. First, it demolishes two old facilities in poor condition, which continue to draw resources away from more productive projects. Farrell Hall and the Language and Literature (L&L) Building were built in 1973 and 1971, respectively. Demolishing these failing facilities reduces CWU's deferred maintenance log and allows the university to invest minor works resources in more lasting and productive projects.

A second issue the project addresses is the fragmentation of the Humanities and Social Sciences programs. The dilapidated, small, and technology-poor facilities send students and faculty to buildings all over campus. For example, the Department of Sociology is primarily located in Samuelson Hall, which was originally created to house computer science and computational sciences. A new facility would provide the modern space these programs require as well as encourage interdisciplinary projects and research, giving students the experience that employers increasingly look for in a graduate.

1.2 Analysis of Alternatives

Humanities and Social Sciences Predesign Study considered four alternatives:

Alternative No. 1: No Action – This option was rejected because the buildings that currently house these programs have significantly deteriorated and maintenance is becoming increasingly expensive. The buildings are out of compliance with modern codes, especially with state and federal requirements for Americans with disabilities. These facilities are at the end of their useful lives and should be replaced, rather than continuing to invest scarce funds into their upkeep.

Alternative No. 2: Northeast of Brooks Library Site (Preferred Alternative) – This alternative recommends a new building located northeast of Brooks Library, including an addition and some renovation to the existing library building. This option represents the most comprehensive answer to all of the program goals and planning criteria. It is also the lowest cost alternative.

Alternative No. 3: Farrell Hall Site – This option explored developing an entirely new, stand-alone building located partially on the site of the existing Farrell Hall, extending northwest of Brooks Library. This option was rejected because it represented a higher-cost solution and did not meet the goal of locating the new Humanities and Social Sciences complex in a central location on campus.

Alternative No. 4: Renovation and expansion of Farrell Hall and Language and Literature (L&L) to extend their useful lives – This option was rejected based on a cost-benefit analysis. The amount of renovation and expansion required to bring both facilities up to current energy efficiency standards and ADA requirements is counterproductive compared to a singular complex, which addresses the academic programming needs of both facilities.

1.3 Detailed Analysis of Preferred Alternative

The preferred alternative proposes a new, four-story, 90,600 SF building located directly adjacent to the east side of Brooks Library, extending north toward East Dean Nicholson Blvd. This configuration includes a 24,000 SF addition to Brooks Library and approximately 5,000 SF of renovated space within the library building itself.

The preferred option offers the most comprehensive, cost-effective solution. It eliminates deferred maintenance that cannot be addressed through incremental biennial Minor Works appropriations, which would be better spent maintaining buildings in good condition. The preferred option brings several programs together in a single, modern facility, maximizing efficiency while enhancing educational quality.

The preferred site to the northeast of Brooks Library provides excellent access to pedestrian traffic along Dean Nicholson

Blvd. This configuration creates a strong connection to Brooks Library, which will integrate fragmented departments into a single Humanities and Social Sciences Complex. This new facility, configured with flexible spaces, will facilitate shared use and inter-departmental interaction, helping to foster increased student activity and collaboration.

Schedule

A summary schedule is as follows:

Predesign	June 2020 - July 2020
Design	Sept 2021 - Feb 2023
Building Permit	Feb - May 2023
Bidding	June - July 2023
Construction	Sept 2023- Aug 2025
Furniture & Equipment Install	June - Aug 2025
Faculty & Staff Move-In	July - Aug 2025
Classes Begin in HSS	September 2025

1.4 Budget Analysis of Preferred Alternative

As part of the budget analysis of the Preferred Alternative (No.2, Northeast of Brooks Library Site), cost estimates were generated using the State of Washington Office of Financial Management's C-100(2020) Cost Estimate tool. Additionally, separate cost estimates were generated for both Alternatives No. 2 and No. 3 by RC Cost Group.

A summary of the proposed construction budget for the preferred alternative is as follows:

Item	***Construction***	***Gross Area***	***$/SF***	***$***
Humanities and Social Sciences Building	New	90,580 SF	421.69	38,196,783
Brooks Remodel	Renovation	5,000 SF	135.24	676,218
Brooks Addition at North Site	New	24,098 SF	416.90	10,046,364
Site Work	Site			3,303,909
Demolition & HAZMAT (L & L Building + Farrell)	Demolition			1,910,564
Off-site Improvements	Site			794,777
Total Construction Cost for Building & Site Work				**54,928,615**

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SECTION 2.0: PROBLEM STATEMENT

2.1 Identify the problem, opportunity or program requirement.

Central Washington University (CWU) is proposing the Humanities and Social Sciences project in order to house the academic departments that are currently located in the Language & Literature Building (L&L) and Farrell Hall, as well as replace the general purpose classroom space in those buildings. Their archaic designs lack functionality and do not meet modern building codes, especially ADA. The ongoing annual cost of maintaining these buildings is increasing with time and the university does not have the operating budget necessary to restore these buildings to the condition necessary to extend their useful lives. Unfortunately, there is no other space available without the Humanities and Social Sciences project; until a new facility is constructed, the university will continue to use Farrell and L&L at great expense and inconvenience to the faculty and students who must conduct their studies in them.

Farrell Hall's 41-year-old systems are deteriorating, with infrastructure and major systems demonstrating critical issues. The center of the structure has settled; chairs roll from the walls to the middle of the rooms and doors won't close. Water freezes on the roof of the uninsulated building; when the ice melts, rain-water leaders buried in the walls leak water inside, into classrooms and offices. Old insulation is liquefying and seeping through cracks in the masonry walls, which also admit insects. Farrell lacks modern technology infrastructure, from simple power outlets to data ports. In addition, Farrell is far too small to accommodate two of the university's fastest-growing programs, Law & Justice and Sociology.

The systems in the L&L building are similarly out of date and deteriorating. A structural assessment in 2003 identified significant concerns that could only be addressed through a "major level of structural upgrade." Recently, CWU reframed 17 doors in L&L after a badly warped door frame trapped a faculty member in his office for two hours, requiring 911 services to rescue him. The facility, which houses a Deaf Studies Program, lacks fire alarms that signal both visually and audibly. Further, there are no restrooms on the third floor.

The design of the building itself, contributes to its inefficiency. L&L is constructed in two, unconnected ground-floor sections separated by an open-air courtyard. Each of the upper three floors of the two halves, which largely contain the classrooms, are connected by a bridging section that houses offices. This area is too small and inconvenient to serve as the main route of circulation between the two academic areas. Because of the configuration of the structure, the layout of the building is compartmentalized. Assignment of space cannot flex as department sizes change. Due to this restrictive design, scheduling efficiency can only achieve 53 percent. This is particularly problematic since the facility houses so many programs required for general education.

Archived records kept by Facilities staff during the construction of L&L reference issues they have dealt with since the building was first occupied. The Language and Literature Building was built in 1971. Brooks Library and Farrell Hall were added to this section of campus shortly after- in 1973 and 1976. Prior to this development, the Ellensburg Water Company Irrigation Canal ran straight through that area of campus. The canal was re-routed to the south and west of the new buildings but the soil conditions, where the canal had previously been located, may not have been properly prepared for the new construction. Facilities staff believe this may be a factor in the ongoing settlement problems these buildings experience, which have required multiple repairs over the years.

A 2003 Structural Assessment of L&L and Farrell Hall by the structural engineering firm Putnam Collins Scott Associates identified significant concerns that could only be addressed through a "major level of structural upgrade." In particular, the assessment questioned the stability of the structure in the event of a seismic event. Other structural concerns included cracking in the masonry walls, the concrete floor slabs, and the concrete stairs and landings. A specific area of concern pertained to reinforcing in the structural masonry walls. The construction drawings indicate steel reinforcing in the walls throughout the building. They conducted tests at select locations to verify the placement of the reinforcing. The results indicated the steel reinforcing occurs only sporadically with little correlation to what is called for in the construction documents. The report noted the building was constructed during a time in which reinforced masonry construction was a relatively new concept, and the reinforcing may not have been placed as detailed in the drawings. Over the course of construction, the concrete deck formwork was removed early, which caused excessive deflection of the concrete floor slabs at the upper levels. This created problems including out-of-plumb doorways which jamb or will not close. Facilities has had

to repair these and other issues throughout the building due to movement that has occurred in the structure.

A 2004 Fire Risk Assessment Report of the L&L and Farrell Hall Buildings by Creighton Engineering Inc. identified an occupant life safety concern where an undetected, early spread of smoke throughout a floor below an occupied floor could occur. Though the building construction is fire resistive, a delayed notification of fire could allow smoke and heat to spread to all areas of the building. In addition, the complicated layout of the building creates a configuration where both stairways are entered from a common atmosphere. This would not be allowed under current egress codes.

The mechanical and electrical systems in L&L and Farrell Hall are all original from the 1971 and 1973 construction, and are approaching 50 years in service – well past their expected operational life. Specific problems include:

- Equipment has exceeded their service life by twice the expected industry standard: 25 years for fans, 20 years for coils, 20 years for pumps, 30 years for ductwork, 20 years for temperature controls and 17 years for motor controls.
- Systems are not compliant with current energy code, resulting in the need for all new piping, ductwork and air-handler distribution systems when replacement systems are considered.
- The controls are pneumatic (air operated logic in lieu of programmable electronic direct digital controllers) and the facility cannot be monitored or maintained at established campus levels. Needs for service are identified through user complaints. Maintaining consistent building temperatures with the old heating system is an on-going challenge.
- The stairwells and many offices lack windows; in the event of power failure, students and faculty in these locations will find themselves in complete darkness.
- Walls have been reconfigured over the years without adjustments to the mechanical system resulting in spaces without sufficient heating or cooling.
- The south side of the building has insufficient cooling.
- Heating water is not adequately distributed through the building and pipes are frequently plugged. The pipe is concealed, resulting in wall removal to unplug and repair pipe.
- The building air quality does not meet current standards. Air system filters are inadequate, resulting in grey material (thought to be fan belt residue or gasket material) to be blown out the diffusers into occupied spaces. Filter fabric has been temporarily installed over the diffusers to stop the blowing debris but also restrict air flow.
- Noise from the old ventilation system makes it difficult for students to hear.
- Outside-air fans located on the roof of one tower of the building provide ventilation to the whole complex, including the far lower level of the opposite side of the building. This results in far too much pressure for the fans to overcome and an inadequate level of air circulation.
- Complaints about the stuffy nature of the building have not been resolved. Ventilation in the building is limited in the winter by delivery temperature and is not regulated based upon building usage or air quality.
- The building was constructed with interior roof drains that are clogged with debris – including ash from the eruption of Mt. St. Helens in 1980. The drain lines are not accessible for maintenance without invasive demolition of interior structure.

The Humanities and Social Sciences project will house current unmet functional and programmatic needs, which are required to support academic goals and accommodate expected future program activity levels. The rationale for this proposed project is to:

- Provide modern, effective, and safe learning environments for students.
- Consolidate fragmented programs.
- Accommodate growth of existing and new academic programs.
- Address known existing facilities problems.
- Provide sustainable space with energy-efficient solutions.

CWU strives to provide opportunities to students of a broad range of talent, economic, and social positions. About half of CWU students are the first in their families to go to college, and transferred from other institutions. More than a third of students are people of color. CWU's role is to make these students successful by providing close faculty mentoring in excellent programs and facilities. The proposed Humanities and Social Sciences project supports this effort by providing safe facilities; increasing opportunities for students, faculty and staff for academic collaboration; enhancing opportunities for cooperation between the university and external communities; bringing academic programs together in the same facility; improving the coherence and collaboration among these programs; and providing technologies that enhance the learning

and working environments to ensure optimal delivery of academic programs.

2.2 Identify or explain the statutory or other requirements that drive the project's operational programs and how these affect the need for space, location or physical accommodations.

State and national structural building requirements: Neither Farrell Hall nor the L&L Building meet the following code and other infrastructure requirements:

Accessibility requirements for people with disabilities:

- Federal Fair Housing Act (42 U.S.C. 3604 et. seq.)
- Washington State Law Against Discrimination (RCW 49.60.222)
- Washington State Building Code (WAC 52-50)
- Americans with Disabilities Act of 1990 (2 U.S.C. Part B)
- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794)

Green building requirements:

- RCW 19.27 A.210, State Energy Standards for Clean Buildings, goes into effect in fall 2020. Energy use intensity targets are reflected in the 2018 Edition of the Washington State Energy Code, Chapter 51-11C WAC.
- Executive Order 20-01: State Efficiency and Environmental Performance mandates high-performance buildings for reduction of greenhouse gases, reduction of pollutants from fossil fuels and use of clean energy when technically feasible.
- CWU Policy 2-50-020 supports the educational mission of the university, since the educational process is dependent upon a controlled environment, which utilizes energy. It is structured to provide adequate environmental quality while minimizing expenditures of energy.

Infrastructure requirements:

- ASHRAE Standard 55 – Thermal Comfort
- ASHRAE Standard 62 – Ventilation
- CWU Facility Design Guidelines and Construction Standards
- Illuminating Engineers Society of North America (IESNA)
- International Building Code (IBC)
- International Mechanical Code
- Local Codes and Ordinances
- National Electric Code (NFPA 70)

Fire Protection Requirements:

- National Fire Protection Association (NFPA) Section 13
- International Fire Code (IFC)
- Regulations of the State Fire Marshall

Pedagogical requirements in the 21st Century differ dramatically from those of half a century ago, when Farrell and L&L were built. At that time, professors typically stood before a stationary group of people and lectured. The educational aids available to students were limited to textbooks.

Today, Humanities is an inquiry and team-based pursuit. Students work with tablets, lap-tops, and smart phones, in addition to textbooks. Rather than a lecture-focused delivery, classes center on students' exploration of the subject matter. They ask questions and share ideas in teams. In old buildings, the design of the learning space places the focal point at the head of the room where the professor lectured. Modern classrooms are designed to be configured in multiple ways to support the flexible way students work – without an assigned focal point. Through the use of mobile and modular furniture, teaching spaces can be adaptable as needs dictate.

Information technology and computational requirements have expanded dramatically. CWU's Humanities have shifted from a traditional, text-based curriculum, to Digital Humanities, which uses information technology as a central part of its methodology for creating and/or processing data. Digital Humanities employs technology in the pursuit of humanities research and subjects technology to humanistic questioning and interrogation, often simultaneously. The University of Oxford describes Digital Humanities this way: "*It involves collaborative, transdisciplinary, and computationally engaged research, teaching, and publishing. It brings digital tools and methods to the study of the humanities with the recognition that the printed word is no longer the main medium for knowledge production and distribution.*"

The top four employers of CWU Humanities graduates are Boeing, Amazon, Washington Public Schools, and Microsoft, in that order. Graduates work in a variety of fields, from helping to guide resolution of ethical questions in digital advertising and communications, to analytical modeling and assessment. In order to be employment-ready, CWU graduates need modern facilities in which they can hone the analytical and technological skills necessary to be effective.

Unfortunately, technical resources in many Farrell and L&L classrooms includes a single electrical outlet. Modern spaces must accommodate everything from Chromebooks to iPads, flatscreen TVs to VR gadgets and 3D printers. Each of these features supports and accelerates what is happening in the classroom.

Even some traditional space requirements cannot be accommodated in the old buildings. Classrooms in these old buildings were configured for 25 students, but the high-demand, general-education courses are required to accommodate as many as twice that number. No classrooms in L&L or Farrell can accommodate double sections, which instead must move to other facilities, limiting access to space for other programs.

Academic program requirements, which address the current unmet functional and programmatic needs and which will accommodate anticipated future academic program growth, are identified in attached Appendix F, Prospectus for Humanities and Social Sciences.

2.3 Explain the connection between the agency's mission, goals, and objectives; statutory requirements; and the problem, opportunity, or program requirements.

The mission of CWU is to prepare students for enlightened, responsible, and productive lives; to produce research, scholarship, and creative expression in the public interest; and to serve as a resource to the region and the state through effective stewardship of university resources. The project supports this mission by providing modern space in which students can prepare to be effective in the workplace. The project supports Digital Humanities research and scholarship, which has application in leading Washington technology industries.

This proposed academic facility supports five core themes of the strategic plan: Teaching and Learning, Inclusivity and Diversity, Scholarship and Creative Expression, Public Service and Community Engagement, and Resource Development and Stewardship. The facility provides space accessible to disabled students, while promoting new and exciting approaches to inquiry- and team-based teaching and learning. The Digital Humanities this facility supports promotes research in the public interest by focusing on relevant, local societal issues (e.g. How will physicians decide which COVID-19 victim has access to the last ventilator?), rather than abstract, even archaic problems (e.g. What is the meaning of death?).

A new building that meets safety, green-building, statutory, and code requirements promotes both efficient and responsible facility stewardship, while providing students healthful learning spaces.

Finally, the new facility enhances CWU's commitment to stewardship. It would allow the university to invest precious Minor Works funding into facilities where the investment demonstrably preserves and enhances functionality, rather than pouring money into facilities that continue to decline, regardless of the investment.

2.4 Describe in general terms what is needed to solve the problem.

Central Washington University desperately needs to retire Farrell Hall and L&L in order to promote health and safety, to promote the wise use of public funds (Minor Works), and to support modern education. Last year, L&L experienced a costly elevator failure. Farrell Hall's foundation is sinking and the building will soon suffer catastrophic structural damage. The old flat roof design poses a major threat of failure and significant water damage. The sooner these buildings can be demolished and a replacement building constructed, more money will be saved, risk will be reduced, and the academic experience will be enhanced.

The intent of the design solution is to create a flexible and engaging learning environment with functional space that supports 21st century, inquiry-based teaching and learning, including comprehensive technology applications. The goal is to provide an engaging educational environment that encourages students and produces employment-ready graduates, prepared for enlightened, responsible, and productive lives. The project aims to achieve this by providing effective and safe learning environments; consolidating fragmented programs; accommodating growth of existing and new academic programs; addressing known facilities problems; and providing sustainable, space, and energy efficient solutions.

2.5 Include any relevant history of the project, including previous predesigns or capital budget funding requests that did not go forward to design or construction.

Farrell Hall and L&L are about half a century old (43 and 50 years respectively) and are generally in their original states, other than a variety of repairs that have been made over the years. Neither has been renovated for improved functionality and possess 1970s-era infrastructure at the end of its functional life.

Previous state capital funding requested but not funded for Humanities projects included the following:

- **Brooks Library:** renovation projects for Brooks Library in 2011-2013, 2013-2015, and 2017-2019 Biennia.
- **Farrell Hall:** in the 2017-2019 Biennium, a self-funded Predesign Study for a renovation and addition for Farrell Hall was submitted and design funding was requested.
- **Language and Literature Building:** In 2009 CWU requested $250,000 for pre-design of a facility to accommodate growth in the College of Arts and Humanities.

SECTION 3.0: ANALYSIS OF ALTERNATIVES

3.1 Describe all alternatives considered.

For the new Humanities and Social Sciences facility, the predesign team considered six potential sites and analyzed, in further detail, two alternate options to determine the preferred solution for both the departmental-specific and shared program needs. Two other options were considered including a 'No Action' option and an alternative which only considered renovation/addition to existing campus facilities. A Life Cycle Cost Analysis (LCCA) which incorporated initial capital costs, energy costs, maintenance costs and expected component service life of the options was developed to determine the 50-year net present value of each alternative. The four options studied:

Alternate No. 1 No Action

This option was rejected because Farrell Hall and L&L are rapidly deteriorating and maintenance is becoming increasingly expensive. The buildings are out of compliance with modern codes, especially ADA, and are at the end of their useful lives and must be replaced. Furthermore, the existing buildings are grossly inadequate to accommodate instructional requirements for technology and space to meet the growing demand. Taking no action would have a negative impact on the success of these programs. Further consequences would be:

- Conditions of the existing facilities supporting these programs will continue to decline at great annual expense.
- Curricular goals of these programs will be increasingly difficult to achieve.
- The operation and maintenance cost of keeping the existing facilities operating will continue to increase.
- Risk of catastrophic building failures pose great monetary liability as well as for the safety of occupants.
- The instructional environment of the existing curricular spaces will become increasingly inadequate.
- Faculty and staff efficiency will continue to be a challenge.

Alternate No. 2 New Facility at Northeast of Brooks Library Site (Preferred Option)

Alternate No. 2 proposes locating a new, 90,600 SF facility at the north side of the Central Neighborhood on campus – directly adjacent to the East side of Brooks Library and extending to the north toward East Dean Nicholson Blvd. This configuration includes a physical connection to Brooks Library via an above-grade bridging element and approx. 24,000 SF of new addition to the library, as well as, approx. 5,000 SF of renovated space within the existing building. Development of this option, with the demolition of the Language & Literature and Farrell Buildings, makes good use of available space on campus and facilitates the possibility to develop a 'Central Park' open green in the heart of the Central Neighborhood. The preferred site to the northeast of Brooks Library places the new building in a highly visible central location with excellent access to existing pedestrian traffic and a prominent presence along East Dean Nicholson Blvd. This configuration creates a strong connection to Brooks Library and supports the goal of creating a Humanities and Social Sciences Center on campus, fostering increased student activity and inter-departmental interaction.

Alternate No. 3 New Facility at Farrell Hall Site

Alternate No. 3 considered locating a new, 119,900 SF facility at the Northwest corner of the Central Neighborhood area of the campus – directly adjacent to the West side of Brooks Library and extending to the North. This option would necessitate a phased construction to transfer the curricular capacity of the existing building to a portion of the new facility.

This configuration would occupy the under-developed open space Northwest of Brooks Library. It preserves the option to develop the 'Central Park' campus amenity. A new building placed here would help anchor the NW corner of the Central Neighborhood and provide a 'gateway' to the central campus at the corner of two major campus vehicular arterials – Wildcat Way and Dean Nicholson Blvd. This option also supports the goal of creating a Humanities and Social Sciences Center on Campus with its close association to Brooks Library. This option was rejected because it does not occupy a central location on campus and is to far to the edge of the Central Neighborhood. Pedestrian access would be less direct from much of the campus and the building would be somewhat hidden behind Brooks Library.

Alternate No. 4 Renovate and expand Farrell Hall and L&L to extend their useful lives

This option was rejected based on a cost-benefit analysis. The cost of restoring both Farrell Hall and L&L would be approximately $80 million, which is much greater than the anticipated cost of the Humanities and Social Sciences project. This option would also present a higher cost per square foot and the result would be less functionality due to the archaic structural

designs of the facilities. Because the buildings' structural walls are constructed of masonry, options for how to reconfigure various rooms and labs would be limited as they would need to conform to the unmovable structural components. This option would cost more and would result in a less desirable outcome.

3.2 Cost Estimates for each alternative.

Cost estimates were performed for the two viable design options, in order to gauge overall construction costs for each option. These estimates include the demolition of existing buildings associated with each proposed site, construction of the new Humanities and Social Sciences building, renovations of existing facilities as applicable, and necessary site work.

These estimates were generated under the same general assumptions, including project delivery type, and includes a contingency of 5%. Construction materials were also assumed; the same assumed materials were used for both design alternates. These estimates may be affected by modifications to the scope of work, special phasing requirements, restrictive technical specifications or excessive contract conditions, non-competitive bid situations, delayed bids or extensive schedule impacts. Detailed Cost Estimate reports for both design options are available in Appendix B- Project Budget Unit Cost Detail.

Overall Summary Construction Costs - Alternate Design Option No. 2, Northeast of Brooks Library Site (Preferred)

Item	*Construction*	*Gross Area*	*$/SF*	*$*
Humanities and Social Sciences Building	New	90,580 SF	421.69	38,196,783
Brooks Remodel	Renovation	5,000 SF	135.24	676,218
Brooks Addition at North Site	New	24,098 SF	416.90	10,046,364
Site Work	Site			3,303,909
Demolition & HAZMAT (L & L Building + Farrell)	Demolition			1,910,564
Off-site Improvements	Site			794,777
Total Construction Cost for Building & Site Work				**54,928,615**

Overall Summary Construction Costs - Design Alternate No. 3, Farrell Hall Site

Item	*Construction*	*Gross Area*	*$/SF*	*$*
Humanities and Social Sciences Building	New	119,890 SF	421.69	50,556,550
Site Work	Site			4,183,813
Demolition & HAZMAT (L & L Building + Farrell)	Demolition			1,910,564
Off-site Improvements	Site			794,777
Total Construction Cost for Building & Site Work				**57,445,704**

Life Cycle Cost Analysis: OFM Cost Model

Alternatives 2, 3, and 4 were analyzed using OFM's Life Cycle Cost Model. The No Action alternative (No. 1) was not analyzed as this solution does not meet the long term needs of the University. Alternative No. 2 is the most cost-effective option for both initial costs and 50-year cost of ownership, which includes initial costs and costs such as operations that includes maintenance, utilities, and energy.

Alternative No. 2 (preferred) (NE Brooks Library Expansion) reduces the campus' inventory of buildings by 5,000 square feet by renovating 5,000 square feet of Brooks Library in lieu of new construction. This option also removes Farrell Hall and L&L. While this option increases the aggregate building area by 37% over Farrell and L&L buildings, the new construction will result in a net 31% decrease in energy over current energy costs. The greater savings that is NOT calculated in the Life Cycle Cost Model is the savings that will be achieved due to continual work orders and deferred maintenance in Farrell Hall and L&L created by 30 years of deferred building upgrades. If Farrell and L&L are anticipated to remain in service, a minimum $24,000,000 should be anticipated for modernization in these facilities due to deferred maintenance.

Alternative No. 3 (Farrell Hall Site) is similar to Alternative No. 2 in many respects but locates the building in an alternate location, does not involve any renovation of Brooks Library resulting in a slightly larger new building,g and has more complicated site utilities. This alternative also shares the same operational savings of Alternative #2 by removal of Farrell and L&L buildings.

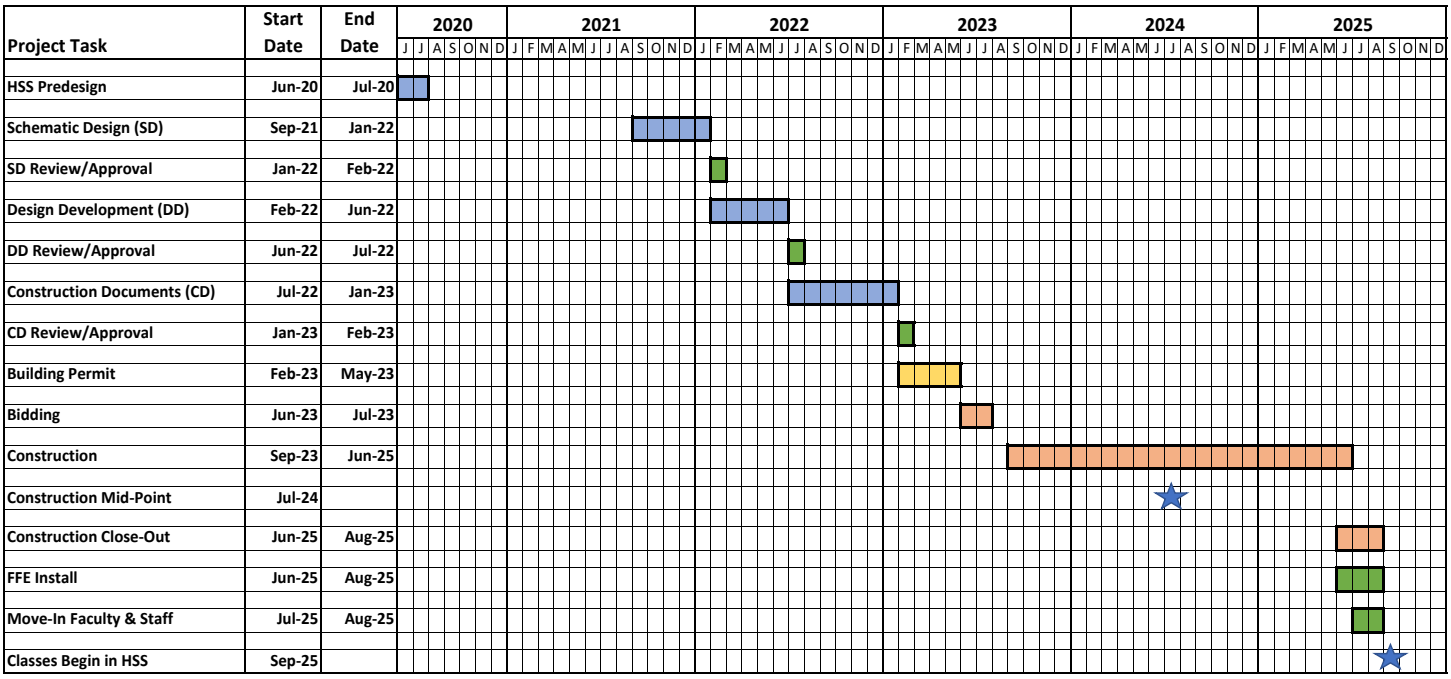
Alternative No. 4 (Renovation and Expansion of Farrell and L&L) is the least cost effective financially. This alternative was studied in prior pre-design reports and costs were escalated to current construction costs.

The following is a summary of the LCCA results, more detail can be found in the full reports, attached in Appendix E.

Design Alternative	*Estimated Cost*	*50 Year Net Present Value*
No. 1, No Action	-	-
No. 2, Northeast Brooks Library Site	$62,866,489	$237,011,099
No. 3, Farrell Hall Site	$65,120,860	$246,711,137
No. 4, Renovate L&L + Farrell Halls	$ 80,000,002	$281,548,756

3.3 Schedule Estimates for each alternative.

All alternates have the same anticipated schedule, which is as follows:



3.4 Potential Mechanical and Electrical issues for each alternative.

Potential Mechanical/Electrical issues with Alternate Design Option No. 2, Northeast of Brooks Library Site (Preferred)

Mechanical:

- A concrete steam utility trench with an accessible lid traverses the east end of the site in the north south direction near Randall hall and the southside of the site near L&L. It is suggested that the utility trench and valve vault serving L&L on the south side of the site be reused and extended to the new building. Depending upon the location of the mechanical room, the trench extension could be within 90 feet of the new building although piping in the trench may need to be replaced to meet demand of the building.

- The northeast corner of the site has a convergence of chilled water campus piping that feeds 5 different directions on campus. One feed that runs through this site services L&L which will be removed when L&L is demolished. Depending upon the final location of the building footprint, the remaining 4 feeds may need to be relocated but this piping is typically PVC or High Density Polypropylene (although up to 16" in size) and not as expensive to relocate as steel piping and concrete utilidors.
- When Farrell Hall is removed, Brooks Library will require new steam and chilled water feeds from the campus steam and chilled water network as currently Brooks Library steam and chilled water utilities are fed from Farrell Hall.
- A City of Ellensburg gas line crosses the south side of the site as part of a looped distribution system. If this is a critical part of the city system, it will need to be relocated.
- Sewer exists on the south and east edges of the site.
- Water exists on the east edge of the site.

Electrical:

- Power: A concrete encased electrical utility duct bank routes through the site near the northeast corner of the existing Brooks Library. This duct bank contains campus owned electrical distribution cabling that is currently in service. The design of the Brooks Library expansion should consider the location of the existing duct banks and protect them in place to the extent possible. The existing Brooks Library service appears to have spare electrical capacity to support the building expansion. The demolition of L&L will provide an available electrical service connection point for the new building, which is planned to be located North of the existing campus owned electrical distribution duct banks. The new building would be fed from existing medium voltage line switch LSB2 via existing and new duct banks. A new 480V transformer will be provided at the new building for electrical service. Emergency power will be provided via battery systems, such as a central lighting inverter for egress and exit lighting.
- Communications: A concrete encased electrical utility duct bank routes through the site near the northeast corner of the existing Brooks Library. This duct bank contains campus owned communications cabling that is currently in service. The design of the Brooks Library expansion should consider the location of the existing duct banks and protect them in place to the extent possible. It is anticipated that new communications service cabling would be provided to the new building from the existing MDF room in basement of the Brooks Library via existing and new duct banks.

Potential Mechanical/Electrical issues with Alternate Design Option No. 3, Farrell Hall Site

Mechanical:

- A concrete steam utility trench exists on the west side of the site and is in close proximity for connection to the new building.
- Chilled water exists on the west side of the site and is in close proximity for connection to the new building.
- When Farrell Hall is removed, Brooks Library will require new steam and chilled water feeds from the campus steam and chilled water network as currently Brooks Library steam and chilled water utilities are fed from Farrell Hall.
- A City of Ellensburg gas line crosses the south and east side of the site as part of a looped distribution system. If this is a critical part of the city system, it will need to be relocated.
- Sewer exists on the west edge of the site.
- Water exists on the northeast edge of the site.

Electrical:

- Power: A concrete encased electrical utility duct bank routes through the site near the west side of the existing Brooks Library. This duct bank contains campus owned electrical distribution cabling that is currently in service. The planned location of the new building should consider the location of the existing duct banks, but relocation of the existing communication and electrical duct banks is expected. Existing Farrell Hall is fed from the existing main switchboard in the basement of existing Brooks Library. The demolition of Farrell Hall will reduce the load on the existing Brooks Library service. An existing space is available on the incoming side of existing medium voltage line switch LSB1, which is in the basement of the existing Brooks Library. A new medium voltage service will be extended from the incoming side of LSB1 to the new building service yard via existing and new duct banks. A new medium voltage line switch and 480V transformer will be provided at the new building for electrical service.

Emergency power will be provided via battery systems, such as a central lighting inverter for egress and exit lighting.

- Communications: A concrete encased electrical utility duct bank routes through the site near the west side of the existing Brooks Library. This duct bank contains campus owned communications cabling that is currently in service. The planned location of the new building should consider the location of the existing duct banks, but relocation of the existing communication duct banks is expected. It is anticipated that new communications service cabling would be provided to the new building from the existing MDF room in the Brooks Library via existing and new duct banks.

Potential Mechanical/Electrical issues with Alternate Design Option No. 4, Renovate L&L + Farrell Halls

Mechanical and Electrical:

Utilities are currently present at both Farrell and L&L. As these buildings are expanded, new utility services from the existing campus utility infrastructure should be anticipated at both buildings.

SECTION 4.0: DETAILED ANALYSIS OF PREFERRED ALTERNATIVE

4.1 Program Analysis. (Nature of Space).

Assumptions

Through the planning and programming process, the design team considered the requirements written in the project prospectus, the developmental guidelines outlined in the current CWU Masterplan, input and priorities from the University leadership and administration, and the physical constraints and opportunities afforded by the existing campus buildings, utilities and landscaping. From this analysis, several assumptions were drawn to guide the projects development including program, budget and schedule. These assumptions include:

- The project needs to create a flexible and engaging learning environment with functional space conducive for personalized mentorship.
- The building should support an inclusive, diverse and cross-disciplinary curriculum.
- The building needs to provide opportunities for research, creative activities and service outside the classroom; and participation in a lively and stimulating community.
- The project should foster rewarding personal lives, productive careers, and a collective commitment to globally informed civic values.
- The project needs to provide energy efficient solutions for a sustainable facility.
- The building should be centrally located within the Campus Center Neighborhood proximate to Brooks Library.
- The project needs to provide an equitable, accessible and safe facility for all users.

Vision

The design team conducted planning workshops with the deans of the Colleges of Arts and Humanities and the College of the Sciences, the library dean, and Capital Planning administrators to discuss the goals for the project. Through these exercises, several common guiding principles were determined:

- The project should be focused on student needs
- A project goal is to consolidate fragmented departments and programs.
- The building should provide flexible spaces for inter-departmental use.
- The new building should instill pride and reflect the Universities (CWU's) values.
- The facility should be innovative and support current and future technology.
- The new building should have a contemporary aesthetic which expresses an active space but which is also respectful of the existing campus context.
- The new building should promote collaborative interaction.
- The new building needs to provide a healthy, sustainable learning environment.

Functional Area Prioritization Chart

CWU Central Washington University

PREDESIGN WORKSHOP #1
FUNCTIONAL AREA PRIORITIZATION - RESULTS

	Number of people voting:	3					
	Votes per person (# HIGH, # LOW):	9					
	Number of votes:	27		27			
	Multiplier for weighted ranking:	25	10	1			
	FUNCTIONAL AREA PRIORITIZATION	HIGH	MEDIUM	LOW	WEIGHT	RANK	DESCRIPTION
12	Mock Courtroom	3	0		75	1	12. Mock Courtroom
13	200 Seat Lecture Hall - Auditorium Seating (1)	3	0		75	1	13. 200 Seat Lecture Hall - Auditorium Seating (1)
15	50-60 Seat Classrooms (11 Total)	3	0		75	1	15. 50-60 Seat Classrooms (11 Total)
25	Student Collaboration Areas	3	0		75	1	25. Student Collaboration Areas
28	Model United Nations	3	0		75	1	28. Model United Nations
14	80-100 Seat Lecture Hall - Auditorium Seating (2 Total)	2	1		60	2	14. 80-100 Seat Lecture Hall - Auditorium Seating (2 Total)
26	Ethics Lab	2	1		60	2	26. Ethics Lab
16	30-42 Seat Classrooms (16 Total)	2	0	1	51	3	16. 30-42 Seat Classrooms (16 Total)
18	Conference Room / Seminar Room	1	2		45	4	18. Conference Room / Seminar Room
19	30 Seat D.E. Classroom & Support Room	1	2		45	4	19. 30 Seat D.E. Classroom & Support Room
6	Acoustical Phonetics Lab	1	1	1	36	5	6. Acoustical Phonetics Lab
5	Faculty Offices	1	1	1	36	5	5. Faculty Offices
21	General Computer Lab	1	1	1	36	5	21. General Computer Lab
1	Reception/Lobby		3		30	6	1. Reception/Lobby
7	Language Lab		3		30	6	7. Language Lab
9	Administrative Offices		3		30	6	9. Administrative Offices
22	Mothers Room		3		30	6	22. Mothers Room
27	Counseling Offices (Academic Advisors within Departments)	1	0	2	27	7	27. Counseling Offices (Academic Advisors within Departments)
2	Workrooms		2	1	21	8	2. Workrooms
3	Adjunct Offices		2	1	21	8	3. Adjunct Offices
20	Meeting Rooms		2	1	21	8	20. Meeting Rooms
11	Student Club Offices		1	2	12	9	11. Student Club Offices
23	Display Areas		1	2	12	9	23. Display Areas
24	Faculty/Staff Lounge		1	2	12	9	24. Faculty/Staff Lounge
4	Graduate TA Offices		0	3	3	10	4. Graduate TA Offices
8	File Rooms		0	3	3	10	8. File Rooms
10	Reading Rooms (2 Total)		0	3	3	10	10. Reading Rooms (2 Total)
17	Storage Rooms		0	3	3	10	17. Storage Rooms
SUBTOTAL		27		27	1002		

Criteria Prioritization Chart

CWU Central Washington University

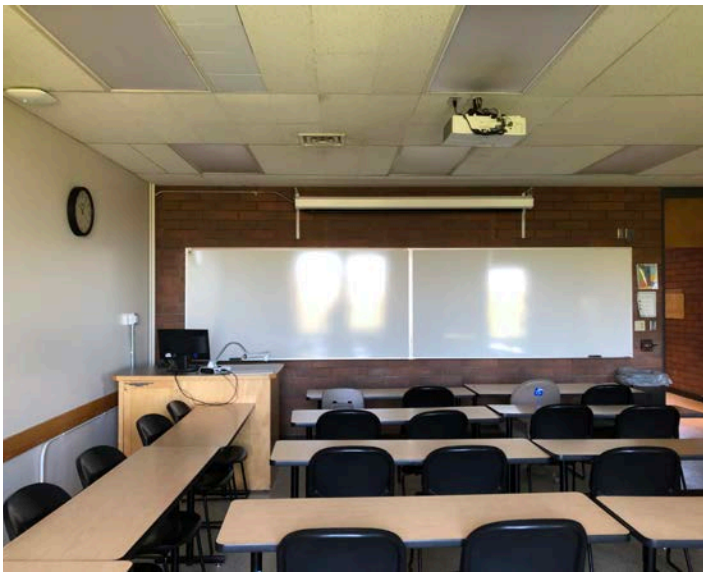
PREDESIGN WORKSHOP #1
CRITERIA PRIORITIZATION - RESULTS

	Number of people voting:	3					
	Votes per person (# HIGH, # LOW):	10					
	Number of votes:	30		30			
	Multiplier for weighted ranking:	25	10	1			
	CRITERIA PRIORITIZATION	HIGH	MEDIUM	LOW	WEIGHT	RANK	DESCRIPTION
3	Oriented to Student Needs	3	0		75	1	3. Oriented to Student Needs
4	Flexible Space	3	0		75	1	4. Flexible Space
8	Reflect Diversity	3	0		75	1	8. Reflect Diversity
9	Instill Pride	3	0		75	1	9. Instill Pride
19	Collaborative Environment	3	0		75	1	19. Collaborative Environment
28	Innovative	3	0		75	1	28. Innovative
13	Natural Light	2	1		60	2	13. Natural Light
27	Interdisciplinary Functionality	2	1		60	2	27. Interdisciplinary Functionality
29	Improve aesthetics of existing architecture	2	1		60	2	29. Improve aesthetics of existing architecture
1	Multi-media/Distance Learning	2	0	1	51	3	1. Multi-media/Distance Learning
12	Welcoming	1	2		45	4	12. Welcoming
14	Identifiable Main Entrance	1	2		45	4	14. Identifiable Main Entrance
26	Inclusive	1	2		45	4	26. Inclusive
6	Sustainability		3		30	5	6. Sustainability
15	Security		3		30	5	15. Security
18	Cultural Connection		3		30	5	18. Cultural Connection
20	Open Interior Spaces		3		30	5	20. Open Interior Spaces
10	Connection to the Community	1	0	2	27	6	10. Connection to the Community
22	Connection to Outdoors		2	1	21	7	22. Connection to Outdoors
11	Recognizable as a Place for Learning		1	2	12	8	11. Recognizable as a Place for Learning
16	Clear Wayfinding		1	2	12	8	16. Clear Wayfinding
21	Support Traditional Library Function		1	2	12	8	21. Support Traditional Library Function
7	Alignment with CWU Capital Master Plan		1	2	12	8	7. Alignment with CWU Capital Master Plan
2	Honor Context and Campus Architecture		0	3	3	9	2. Honor Context and Campus Architecture
5	Showcase University Identity		0	3	3	9	5. Showcase University Identity
17	Connection to the Science Neighborhood		0	3	3	9	17. Connection to the Science Neighborhood
23	Contemporary Aesthetic		0	3	3	9	23. Contemporary Aesthetic
24	Retain Parking Count		0	3	3	9	24. Retain Parking Count
25	Preserve 'International Path'		0	3	3	9	25. Preserve 'International Path'
SUBTOTAL		30		30	1050		

Existing Facilities

The departments that make up the Colleges of Arts & Humanities and the College of the Sciences are housed primarily in Farrell Hall and the Language and Literature Building (L&L) with some staff and administrative offices located in other buildings and some lecture functions assigned to general classrooms. The programs are not consolidated and there is little opportunity for inter-departmental sharing of facilities or collaboration.

Existing Interior Office Space at Farrell Hall



Existing Classroom at Language and Literature Hall

The existing buildings— Farrell Hall and L&L—are both nearly 50 years old and no longer meet the requirements for modern and effective teaching and learning. The building systems in each have reached their end-of-life and require major upgrades or replacement. The buildings are energy inefficient and represent a burden on the university to continue to operate and maintain. The teaching and administrative spaces are small by current needs and do not support new technological infrastructure. The buildings do not meet current accessibility codes and the configuration of their floorplans inhibit flexible use as stated in the project prospectus. The conditions of the existing facilities are coded within the State Facility Inventory System. Their building condition summaries conducted in 2020 are as follows:

Brooks Library	
Condition Index	0.12
Relative Condition Score	3
Weighted Avg Condition Score	2.6

Farrell Hall	
Condition Index	0.12
Relative Condition Score	3
Weighted Avg Condition Score	2.9

Language and Literature (L&L) Hall	
Condition Index	0.15
Relative Condition Score	3
Weighted Avg Condition Score	2.9

Existing floor plans with program labels are located in Section 6, Project Diagrams and Drawings.

4.2 Space needs assessment.

The Prospectus for the Humanities and Social Sciences Complex (Appendix F) identifies current unmet functional space needs that are required to support academic programs and accommodate expected future program activity levels. The Prospectus for Humanities and Social Sciences Complex is based on Facilities Evaluation and Planning Guidelines (FEPG).

Projected Space Needs Summary

Instructional Spaces

Space	*Total No. Req'd*	*NSF*	*GSF*
Department Labs, Meeting Rooms, Support Rooms	8	3,600	60% efficiency ratio
Multi-media Lecture Room- Auditorium Seating (80-200 Seats)	3	6,300	
Multi-media Classrooms (30-60 Seats)	28	26,450	
Conference / Seminar	8	2,950	
Total	**47**	**39,300**	**65,500**

Office, Student, and Support Spaces

Space	*Total No. Req'd*	*NSF*	*GSF*
Offices	206	25,275	60% efficiency ratio
Files/Instructional Storage	11	1,760	
Reception/Secretarial	12	3,500	
Workroom/Office Service/Faculty/Staff Lounge/Mothers Room	11	2,130	
Total	**240**	**32,665**	**54,442**

The space requirements for the Humanities and Social Sciences programs have been well considered. The Colleges of Arts and Humanities and Social Sciences must provide a high-quality teaching and learning environment while accommodating a growing enrollment. The goal of transformational education requires innovative and flexible educational spaces which support emerging technology and encourage interaction, teamwork and problem solving.

Table - Central Washington University, Projected Space Needs

Department	*Space*	*No. Req'd*	*Space (sq.ft.)*
English:	Acoustical Phonetics Lab	1	150
D.E Classroom:	D.E. Support Room	1	200
Law and Justice:	Department Lab (Mock Courtroom)	1	800
Support/Shared Spaces:	General Computer Lab (24 card hour access)	1	800
Support/Shared Spaces:	General Scheduled Meeting Room (24 hour card access)	1	350
World Languages:	Language Lab	1	800
Political Science:	Reading Room	1	250
Law and Justice:	Reading Room	1	250
	Department Labs, Meeting Rooms, Support Rooms	**8**	**3600**
General Classrooms:	100 Seat Multi-media Lecture Room-Auditorium Seating	1	1700
General Classrooms:	200 Seat Multi-media Lecture Room/ Film Studies Theater -Auditorium Seating	1	3200
General Classrooms:	80 Seat Multi-media Lecture Room- Auditorium Seating	1	1400
	Multi-media Lecture Room- Auditorium Seating (80-200 Seats)	**3**	**6300**

Department	*Space*	*No. Req'd*	*Space (sq.ft.)*
D.E Classroom:	30 Seat D.E. Room	1	700
General Classrooms:	30 Seat Multi-media Classroom	6	3900
General Classrooms:	42 Seat Multi-media Classroom	10	9000
General Classrooms:	50 Seat Multi-media Classroom	8	8800
General Classrooms:	60 Seat Multi-media Classroom	3	4050
	Multi-media Classrooms (30-60 Seats)	**28**	**26450**
CAH Dean:	Conference Room	1	500
English:	Conference/Seminar	1	450
World Languages:	Conference/Seminar	1	350
History:	Conference/Seminar	1	350
Philosophy:	Conference/Seminar	1	350
Law and Justice:	Multi-media conference room	1	300
Sociology:	Multi-media conference room	1	350
English:	Seminar	1	300
	Conference / Seminar	**8**	**2950**
English:	Academic Counselor	1	140
History:	Academic Counselor	1	140
Political Science:	Academic Counselor	1	140
Law and Justice:	Academic Counselor	1	140
Sociology:	Academic Counselor	1	140
Philosophy:	Adjunct Office Space	4	300
English:	Adjunct Offices	15	1125
World Languages:	Adjunct Offices	4	300
History:	Adjunct Offices	4	300
Political Science:	Adjunct Offices (shared)	5	700
Law and Justice:	Adjunct Offices (shared)	5	700
Sociology:	Adjunct Offices (shared)	5	700
CAH Dean:	Administrative Assistant	1	140
CAH Dean:	Associate Deans	2	300
CAH Dean:	Dean	1	225
CAH Dean:	Development	1	140
English:	Department Chair	1	175
History:	Department Chair	1	175
Philosophy:	Department Chair	1	175
Political Science:	Department Chair	1	175
Law and Justice:	Department Chair	1	175
Sociology:	Department Chair	1	175
World Languages:	Department Chair	1	175
Political Science:	Emeritus Faculty (shared)	1	140
Law and Justice:	Emeritus Faculty (shared)	1	140
Sociology:	Emeritus Faculty (shared)	1	140

Department	*Space*	*No. Req'd*	*Space (sq.ft.)*
Law and Justice:	Faculty Office	12	1680
Sociology:	Faculty Office	14	1960
English:	Faculty Offices	24	3360
World Languages:	Faculty Offices	15	2100
History:	Faculty Offices	12	1680
Philosophy:	Faculty Offices	10	1400
Political Science:	Faculty Offices	12	1680
English:	Graduate/TA Offices	20	1500
History:	Graduate/TA Offices	12	900
English:	Shared Emeritus Office	1	150
World Languages:	Shared Emeritus Office	1	140
History:	Shared Emeritus Office	1	140
Philosophy:	Shared Emeritus Office	1	140
CAH Dean:	Staff Offices	6	750
Political Science:	Student Club Office	1	140
Law and Justice:	Student Club Office	1	140
Sociology:	Student Club Office	1	140
	Offices	**206**	**25275**
CAH Dean:	Files	1	140
Political Science:	Files	1	140
Law and Justice:	Files	1	140
Sociology:	Files	1	140
English:	Files/ Instructional Storage	1	200
World Languages:	Files/ Instructional Storage	1	200
History:	Files/Instructional Storage	1	200
Philosophy:	Files/Instructional Storage	1	200
CAH Dean:	Storage	1	150
Political Science:	Storage	1	150
Support/Shared Spaces:	Storage	1	100
	Files/Instructional Storage	**11**	**1760**
CAH Dean:	Reception	1	350
Political Science:	Reception	1	350
Law and Justice:	Reception	1	350
Sociology:	Reception	1	350
English:	Reception/Secretarial	1	450
World Languages:	Reception/Secretarial	1	350
History:	Reception/Secretarial	1	350
Philosophy:	Reception/Secretarial	1	350
CAH Dean:	Secretarial/Student Assistant	1	150
Political Science:	Secretarial/Student Assistant	1	150
Law and Justice:	Secretarial/Student Assistant	1	150

Department	*Space*	*No. Req'd*	*Space (sq.ft.)*
Sociology:	Secretarial/Student Assistant	1	150
	Reception/Secretarial	**12**	**3500**
CAH Dean:	Workroom/Office Service	1	140
English:	Workroom/Office Service	1	300
World Languages:	Workroom/Office Service	1	250
History:	Workroom/Office Service	1	250
Philosophy:	Workroom/Office Service	1	250
Political Science:	Workroom/Office Service	1	140
Law and Justice:	Workroom/Office Service	1	140
Sociology:	Workroom/Office Service	1	140
Support/Shared Spaces:	Faculty/Staff Lounge	1	400
Support/Shared Spaces:	Mothers Room	1	120
Support/Shared Spaces:	Display Areas (In public circulation space)	1	-
	Workroom/Office Service/Faculty/Staff Lounge/Mothers Room	**11**	**2130**

4.3 Occupancy numbers.

The following matrix shows enrollment data collected for the departments in the Colleges of Arts & Humanities and Social Sciences from the 2018-19 academic year. The numbers include students pursuing degrees as their Major or Minor or as part of multiple degrees.

Department	*Major*	*Minor*	*Multiple*	*Total*
English	210	29	24	263
World Languages	80	168	61	309
History	139	11	24	174
Philosophy	34	117	28	179
Political Science	62	13	18	93
Law and Justice	404	75	99	578
Sociology	266	143	88	497
Total Enrollment	**1,195**	**556**	**342**	**2,093**

4.4 Basic configuration of the building.

The Preferred Alternative proposes a new four-story, 90,600 SF building located directly adjacent to the east side of Brooks Library and extending north toward East Dean Nicholson Blvd. This configuration includes a 24,000 SF addition to Brooks Library and approx. 5,000 SF of renovated space within the existing library building. The first three floors of the proposed facility will be approx. 34,700 SF each with a fourth level of approx. 11,800 SF. The first two floors will house lecture rooms and public spaces placing these high-use areas in the most accessible configuration. Specialty classrooms and student support areas would be located on the second and third floors with a connection to Brooks Library possibly located on the third floor. Administrative and office spaces are planned for the top two levels. The 24,000 SF addition and 5,000 SF renovation to Brooks Library will focus primarily on student support and collaborative areas and would include specialty labs intended for inter-departmental use.

4.5 Site Analysis

Potential Sites

The Humanities and Social Sciences Complex is located in Ellensburg, fully within the state/CWU property. Potential sites are situated within the northwestern section of the Central Neighborhood. Boundaries are defined by East Dean Nicholson Boulevard to the north, Moore Hall and Anderson Hall to the east, the Ellensburg Water Company irrigation canal to the south, and Wildcat Way to the west. Existing structures within this area include Farrell Hall, Brooks Library, Language & Literature, International Center, and Randall Hall. Other site features include parking, mature trees and the International Flag Pavilion.

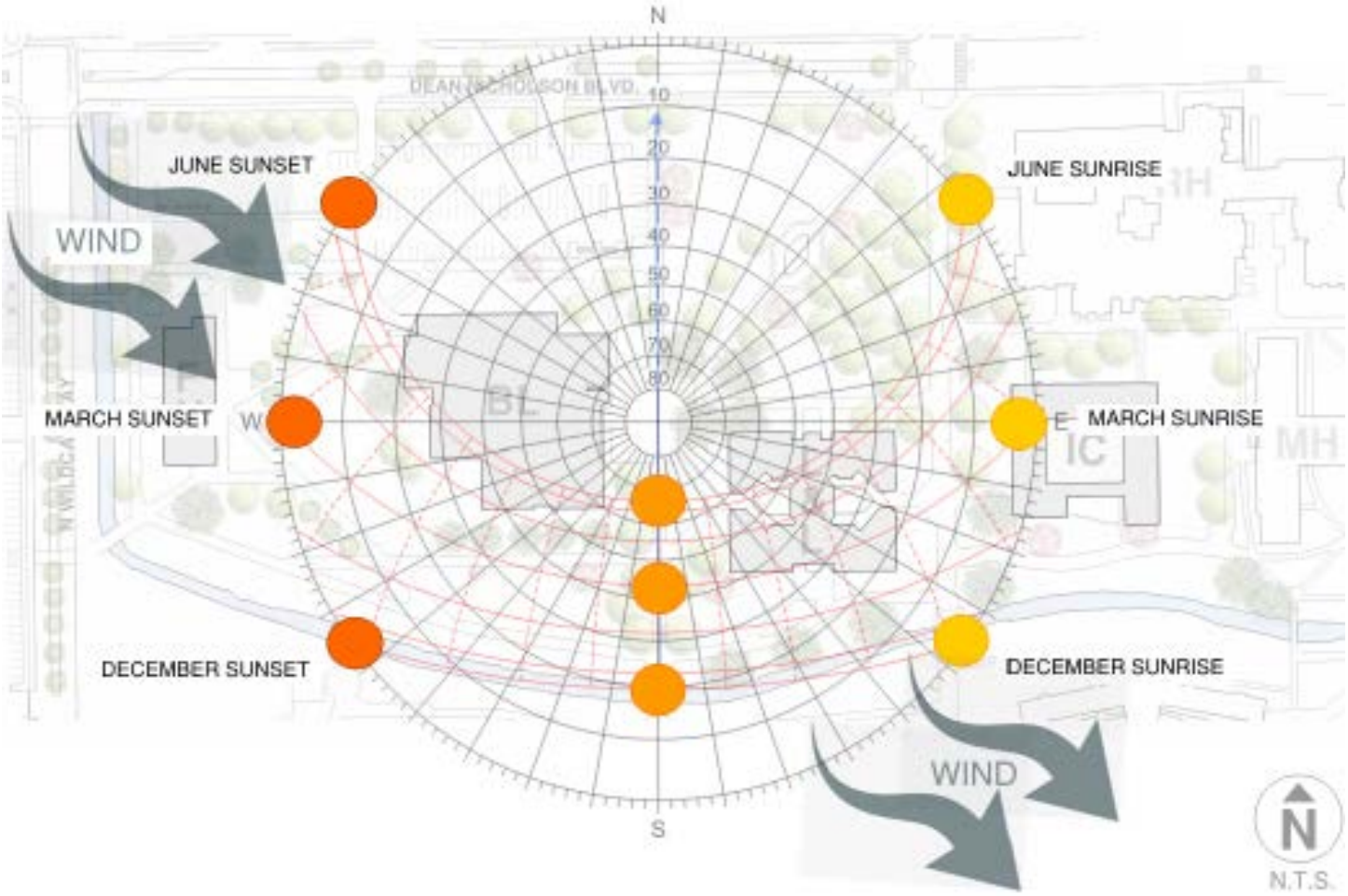
Aerial map

Site map

4.5.1 Site Evaluation - Physical Issues

Solar orientation
The primary obstacle to achieving optimal solar orientation on this site are the existing, four-story Language and Literature, Brooks Library and Farrell Hall buildings. Existing, mature deciduous trees are available to provide shade in the summer, and allow for sun to pass through bare branches in the winter. The preferred option should utilize the existing mature trees and avoid a location in the shadow of an existing structure.

Wind orientation
Strong, prevailing winds are out of the northwest. Wind should be utilized to provide natural ventilation, and the preferred alternative should provide shelter from at least one primary point of entry from wind.



Sun path diagram and wind direction

Water rights and water availability
Water Supply: Separate fire and domestic water services will likely be provided to the building from the 12-inch City of Ellensburg system water line on the north side of the site, which has a static pressure in this area of approximately 62 psi. A double check valve assembly and vault along with a post indicator valve will be required for the fire sprinkler service. A fire department connection will be provided on site, near the west central portion of the building adjacent to the mechanical room.
Water Meter: A building water meter will be provided to measure the domestic water use in the new building for the purpose of reporting trends in building systems consumption required by WA State law.

Stormwater requirements

Stormwater Treatment and Disposal: The university's stormwater system drains to the City of Ellensburg's street storm system, and Farrell Hall will conform to the City's development manual, which specifies stormwater design standards. Stormwater that runs off the vehicular service drive will be treated by a water quality treatment facility. Pretreatment of stormwater runoff from the proposed thermoplastic membrane roofing system is not required.

Stormwater Detention System: The soils on the CWU campus are typically not suitable for infiltration as the sole source of stormwater disposal. Stormwater runoff, from the roof and excess from the site, as well as the foundation drainage system, will be captured in storage system for discharge to the City stormwater system. This storage system will be comprised of a concrete vault, larger diameter pipes, or a surface pond if adequate site area is available.

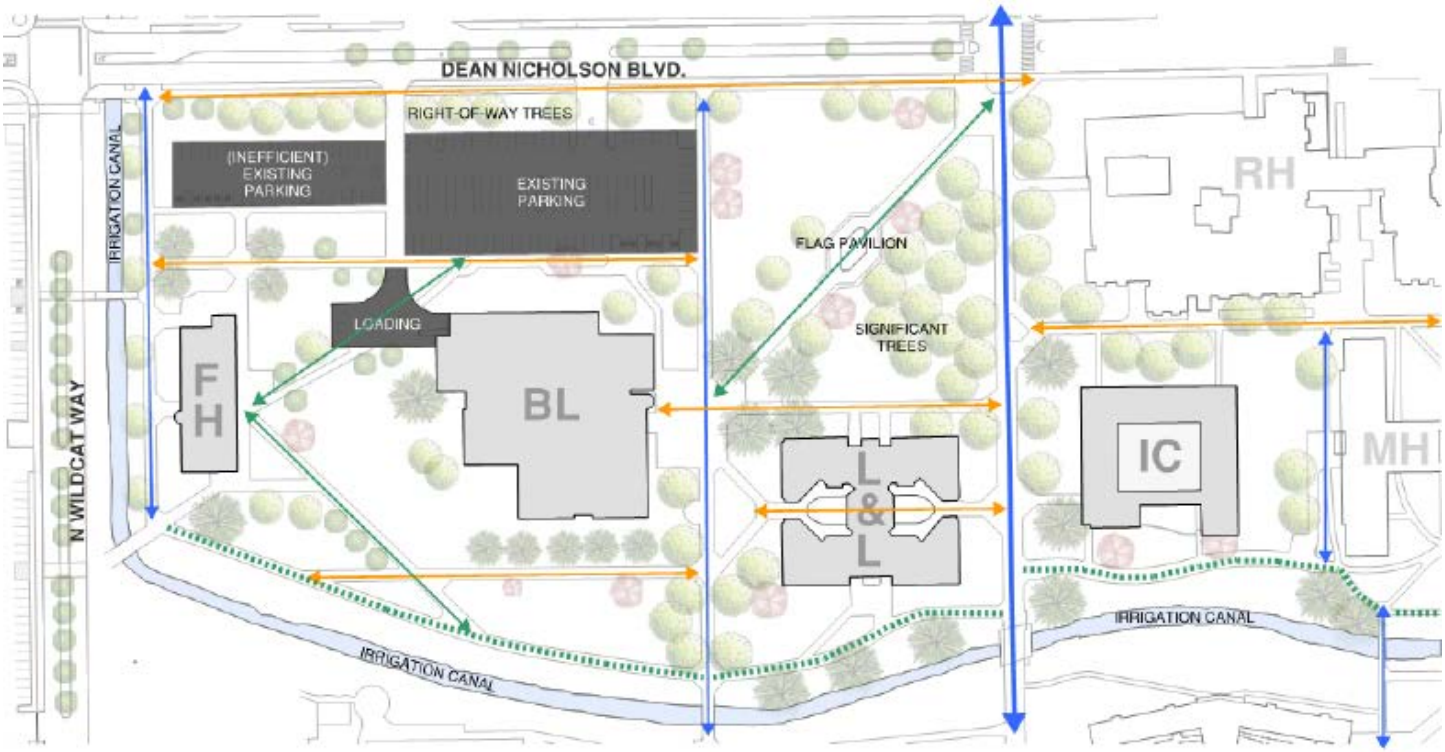
Ownership of the site, easements, setbacks and any acquisition issues

There are no acquisition issues or needs.

Easements & Setbacks: The site is located fully within state/CWU property. There are no neighborhood issues directly on the site, which is bounded by a parking lot, and five academic facilities. The only easement and set-back is the Ellensburg Water Company town ditch located south and west of the existing buildings.

Site circulation

The site is adjacent to the Walnut Mall, a north-south pedestrian arterial allowing for a strong, linear, through-campus circulation. It is critically important that the preferred option not only maintain this north-south campus connection, but also have visible entry points from N Walnut. Just west of the Language & Literature Building and east of Brooks Library is another north- south circulation path. This walk connects the site to the Science Neighborhood (south) to Dugmore Hall (north) and should also be maintained. East-west connections are shorter in length and more frequent. Also present is a path running parallel with the irrigation canal that connects the West Neighborhood and the East Neighborhood. This path is close in proximity to the irrigation canal, and current setbacks will likely keep this path from being affected by future development.



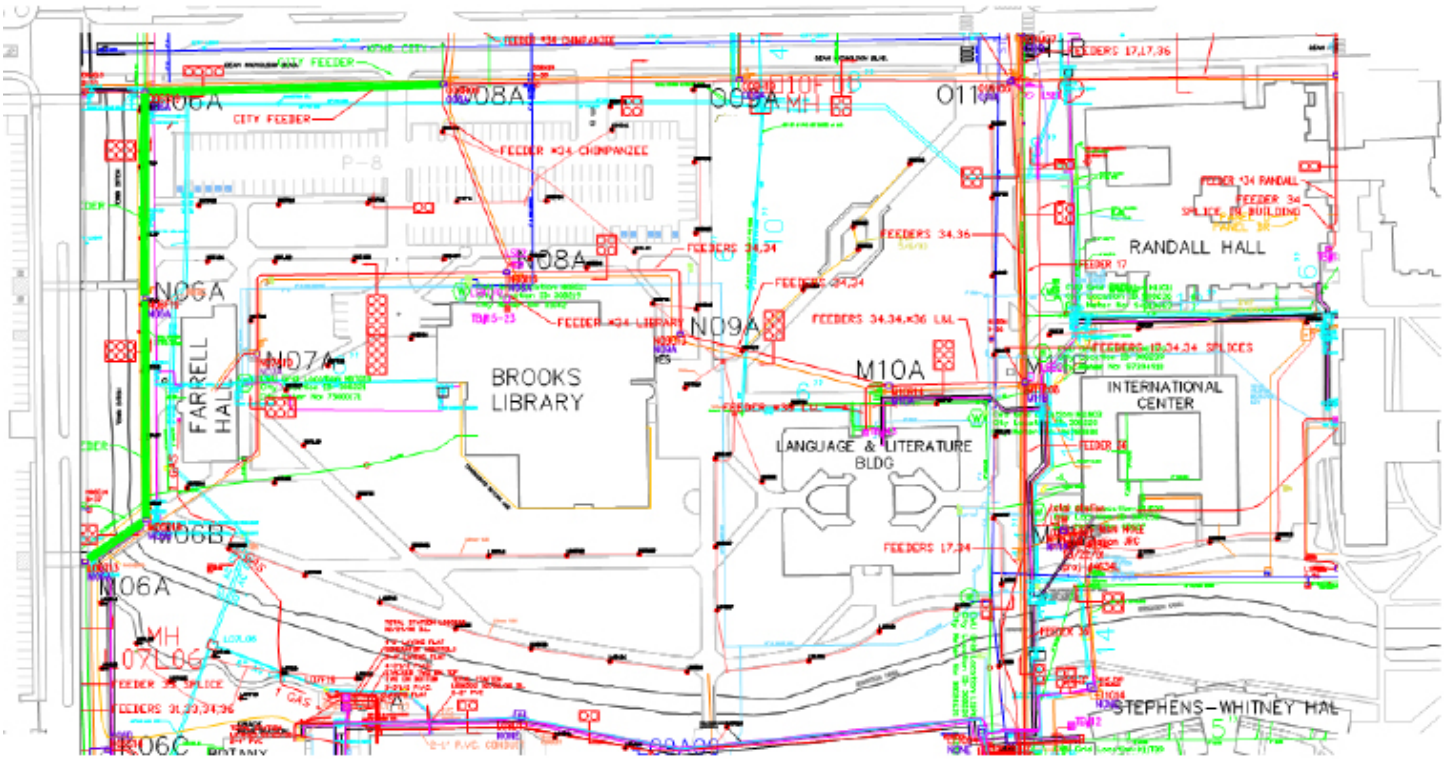
Pedestrian circulation study

Potential issues with the surrounding neighborhood, during construction and ongoing

During the early schematic design phase, the university and the design team will identify potential issues that may surface with the surrounding neighborhood both during the construction and occupancy of the new campus facility. Dust control and mitigating construction noise are issues that will need to be addressed. Potential post occupancy issues include traffic, parking, and night lighting. These and other issues that come up during design will need to be included and addressed in the project public SEPA review presentation.

Parking and access issues, including improvements required by local ordinances, local road impacts and demand

Parking issues always need to be addressed with any proposed major capital project on campus. Given the proximity of the proposed project to existing expandable parking lots, parking issues will be easily managed. All jurisdictional ordinances, including landscape and lighting requirements, for parking lots will be addressed. Multi-use transportation infrastructure is already in place in this area of campus. There are no anticipated significant issues regarding parking or transportation. During the design phase a traffic impact study will be conducted to confirm anticipated traffic impacts of the project. This study will be coordinated with the Master Plan Update Parking Analysis 2019, the City of Ellensburg Comprehensive Plan, and traffic impact studies for Dugmore Hall, Health Sciences, Health Education, and Discovery Hall. The traffic impact study for Humanities and Social Sciences will update the transportation impacts on the surrounding roadway network as well as parking and construction considerations for the proposed project. The Master Plan Update Parking Analysis is referenced Appendix R in CWU Capital Master Plan 2019-2029, which can be accessed at *www.cwu.edu/facility/master-plan*.



Existing underground utilities

Potential environmental impacts

CWU is committed to following the State Environmental Policy Act (SEPA), which was enacted in 1971 for state agencies and institutions to identify and consider environmental impacts that could result from constructing capital projects or adopting non-project long term master plans. The first university campus master plan, for which a SEPA review was conducted, was the 1986 campus master plan. Subsequent campus master plan updates in 1998, 2005, and 2013 included SEPA reviews. During the public SEPA review, the university acts as the lead agency and the CPP project management team is responsible to ensure environmental values and impacts are considered and collaborated with the community, city, county, and other state agencies. These reviews focus on environmental data, alternatives, mitigation, and specific courses of action in accordance with RCW 43.21C – State Environmental Policy and WAC 197-11 – Department of Ecology SEPA Rules.

Utility extension or relocation issues
Early in design all issues pertaining to above ground and below ground utilities will be identified and evaluated for inclusion into the project design solution overall scope of work. The proposed location for the new construction is adjacent to all existing campus utilities with no extended runs of utilities required for connections.

Impact on surroundings and existing development with construction lay-down areas and construction phasing
Site Preparation and Excavation: Site preparation will consist of demolishing the existing asphalt and concrete paving and landscaping areas within the area of proposed construction. The topsoil and vegetative material will be removed, screening and saving it for re-use in landscaped areas. The subgrade will be prepared prior to placing structural fill or building foundations, per future geotechnical recommendations. Existing fill soils are likely within the site area and over-excavation of fill soils to suitable bearing materials may be necessary. Structural fill will be approved imported material. Native fill material is not acceptable for reuse as structural fill and will be hauled off site to an approved location in conformance with local and state regulations. Approximately 10 trees will be removed for the site preparation.

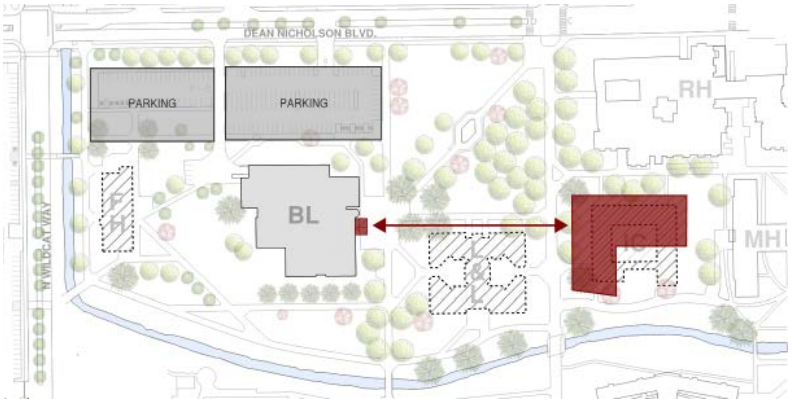
Temporary Sediment and Erosion Control: All temporary erosion and sedimentation control systems will be designed and constructed in accordance with the Eastern Washington Regional Stormwater Manual Best Management Practices (BMPs), to protect adjacent properties as well as minimize the quantity of sediment-laden water from entering the City of Ellensburg's public storm system. The site will be graded to drain to sediment control ponds adjacent to "Dean Nicholson Boulevard". Catch basin protection should be used on existing and future catch basins to reduce sediment-laden water from entering the existing storm conveyance system during construction.

Temporary Construction Features: The project will include a construction access drive constructed with quarry spalls, and silt fencing placed around the downhill portion of the site. Soil stockpiles will be erosion protected. Temporary cut slopes for the mechanical basement excavation will be laid back at 1.5 (horizontal) to 1 (vertical) slope.

Construction Debris: The contractor will implement Best Management Practices (BMPs) to prevent demolition and construction debris, waste, material, fuel, oil, lubricants, and other fluids from entering the public right of way and the existing storm conveyance system.

4.5.2 Location

Potential site locations are defined by zones and setbacks corresponding to existing site features, including buildings, arterials, significant trees and the irrigation canal.



1. International Center Zone

Located directly over the existing International Center Building footprint, this option would not only demolish Farrell Hall and Language & Literature, but also require the demolition of International Center prior to construction of the new facility. The site primarily consists of an existing structure, trees and lawn. The site is virtually level and is underlain by and adjacent to existing campus utilities.

2. Farrell Hall Zone

Located in the northwest corner of the Farrell Hall Zone, this option partially sits in the footprint of Farrell Hall. This option removes Language & Literature and would require either a complete or phased demolition of Farrell Hall. The site primarily consists of an existing structure, pavement, trees and lawn. The site is virtually level and is underlain by and adjacent to existing campus utilities.

3. Language and Literature Zone

Located directly over the existing Language & Literature footprint, this option removes Farrell Hall and requires demolition of Language & Literature prior to construction. The site primarily consists of an existing structure, trees and lawn. The site is virtually level and adjacent to existing campus utilities.

4. Brooks Library Zone - South

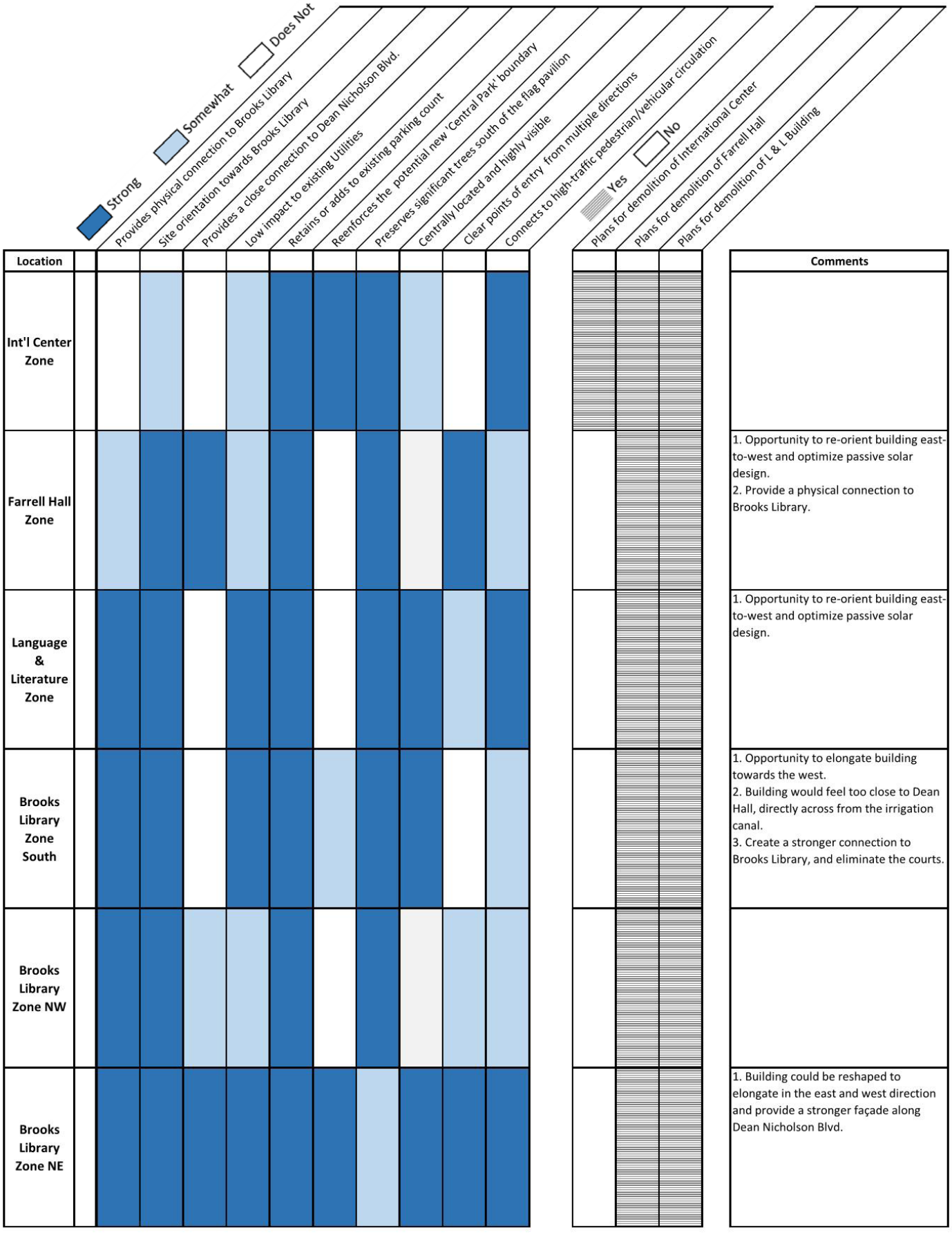
Located south of Brooks Library, this option creates a physical interior and exterior connection to Brooks. This option includes the removal and Farrell Hall, Language & Literature, and some demolition of the south Brooks Library facade would be required. The site primarily consists of trees and lawn and runs parallel to the irrigation canal. The site is virtually level and has little impact to existing underground utilities.

5. Brooks Library Zone - Northwest

Located at the northwest corner of Brooks Library, this option creates a physical interior and exterior connection to Brooks. This option includes the removal of Farrell Hall and Language & Literature and would also require demolition of the north and west Brooks Library facade. The site primarily consists of trees, pavement and lawn. The site is virtually level and would have a significant impact to existing underground utilities.

6. Brooks Library Zone - Northeast

Located at the northeast corner of Brooks Library, this option creates a physical interior and exterior connection to Brooks. This option includes the removal of Farrell Hall and Language & Literature and would also require demolition of the north and east Brooks Library facade. The site primarily consists of trees, pavement and lawn. The site is virtually level and is underlain by and adjacent to existing campus utilities.



Site location matrix: The site relationship criteria at the top of the matrix were compiled during workshop sessions and executive committee meetings. The existing buildings to-be-demolished mark which structures require removal. Comments made about each option during workshop session were recorded for further exploration.

Further Study

Following completion of the site location matrix, the executive committee selected the four most viable options for further study. Viability was based on the results of the matrix, site analysis and comments made by CWU staff during workshop sessions. Modifications were made to building footprints based on the following comments:

Brooks Library Zone - Northeast

- Elongate building footprint in the east-west direction for a better passive solar design opportunity.
- Elongate the facade along Dean Nicholson Blvd.

Farrell Hall Zone

- Re-orient the footprint in the east-west direction for a better passive solar design opportunity.
- Provide a closer physical connection to Brooks Library.

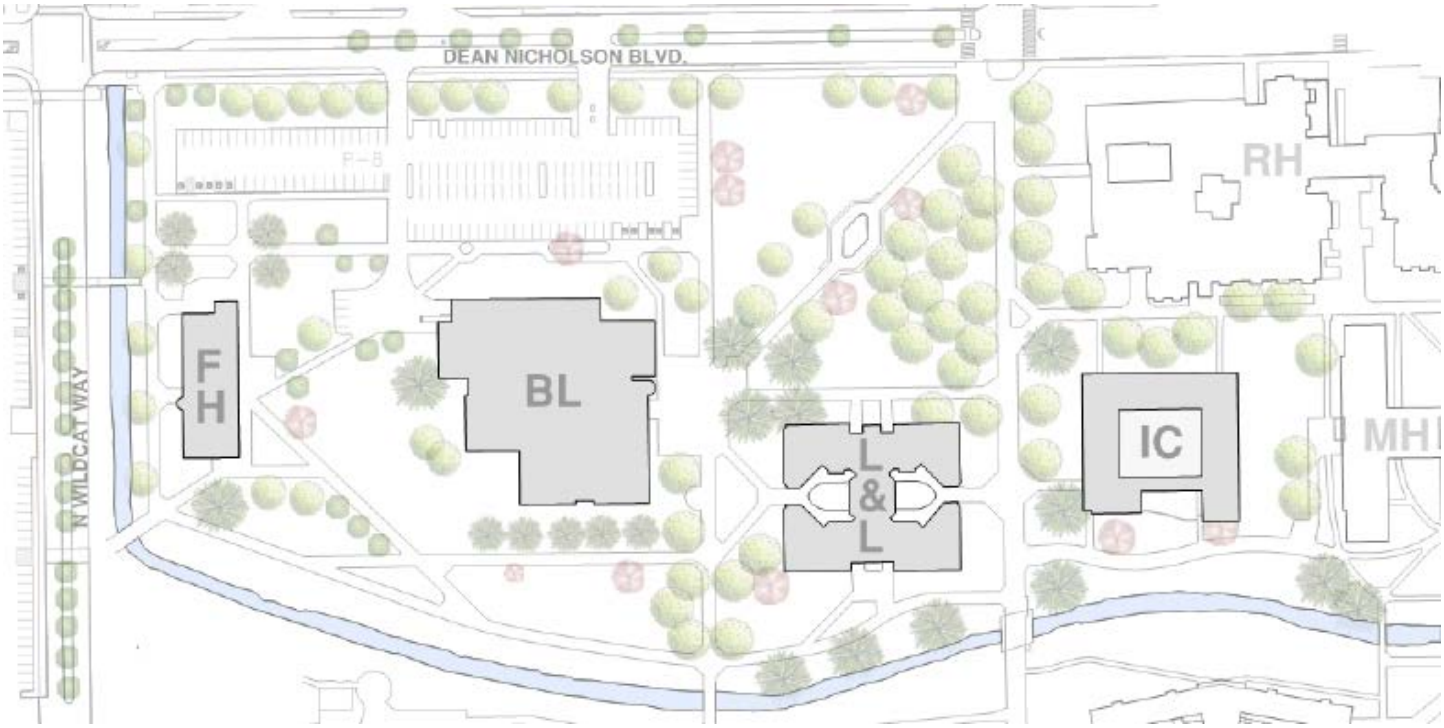
Language and Literature Zone

- Re-orient the footprint in the east-west direction for a better passive solar design opportunity.

4. Brooks Library Zone - South

- Elongate building footprint in the east-west direction for a better passive solar design opportunity.
- Pull the building further away from the irrigation canal.
- • Create a stronger connection to Brooks Library and eliminate small 'courtyards'.

Alternative No. 1 - No Action:



- Conditions of the existing facilities supporting these programs will continue to decline.
- Curricular goals of these programs will be increasingly difficult to achieve.
- The operation and maintenance cost of keeping the existing facilities operating will continue to increase.
- The instructional environment of the existing curricular spaces will become increasingly inadequate.
- Faculty and staff efficiency will continue to be a challenge.

Existing Site Model

Northeast Brooks Library Site - Preferred:

- Add new 90,580 square foot Humanities and Social Sciences facility located northeast of Brooks Library.
- Add new 24,098 square foot addition along the north facade of Brooks Library.
- Renovate 5,000 square feet of the existing Brooks Library.
- Demolish the existing Farrell Hall and Language & Literature buildings.

Pros:

- Makes good use of available space on campus and facilitates the possibility to develop a 'Central Park' open green in the heart of the Central Neighborhood.
- Places the new building in a highly visible central location with excellent access to existing pedestrian traffic and a prominent presence along Dean Nicholson Blvd.
- Creates a strong connection to Brooks Library and supports the goal of creating a Humanities and Social Sciences Center on campus, fostering increased student activity and inter-departmental interaction.

Massing and Space Distribution (Alternative 02 - Preferred)

A simple massing model was placed onto the site, divided by level, the color-coded with the projected space needs.

Instructional Spaces *Office, Student and Support Spaces*

Farrell Hall Site:

- Add new 119,890 square foot Humanities and Social Sciences facility located northwest of Brooks Library.
- Demolish the existing Farrell Hall and Language & Literature buildings.
- Reconfigure parking to maintain current number of parking stalls.

Pros:

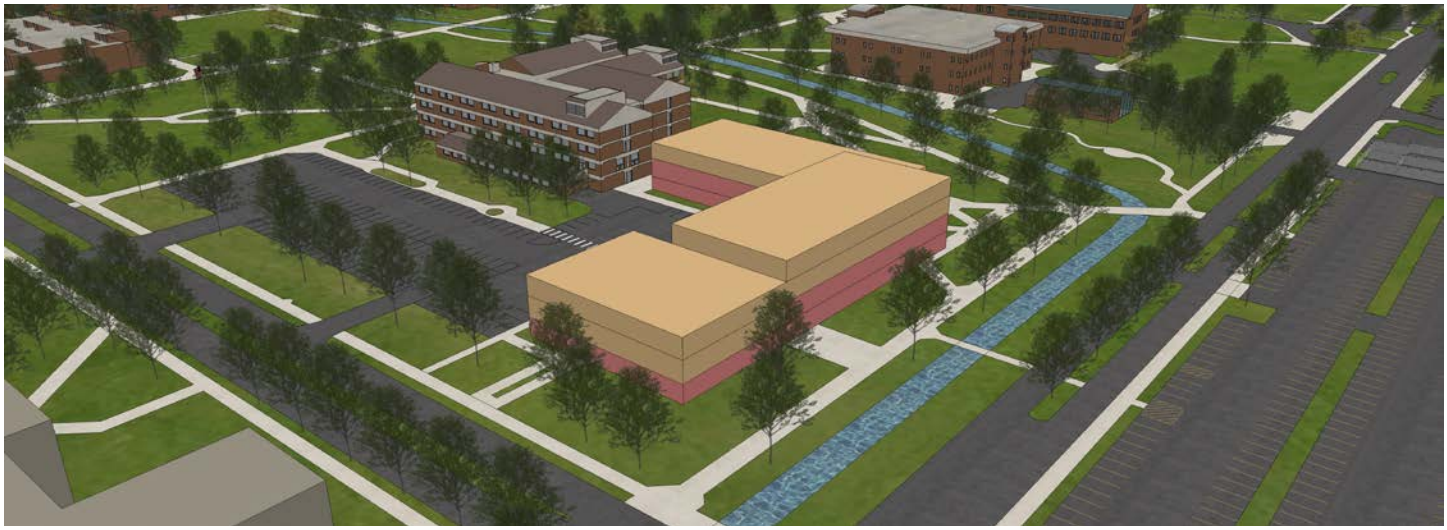
- Helps anchor the NW corner of the Central Neighborhood and provide a 'gateway' to the central campus at the corner of two major campus vehicular arterials – Wildcat Way and Dean Nicholson Blvd.
- Preserves the option to develop the 'Central Park' campus amenity.

Cons:

- Does not occupy a central location on campus and is too far to the edge of the Central Neighborhood.
- Pedestrian access would be less direct from much of the campus and the building would be somewhat hidden behind Brooks Library.

Massing and Space Distribution (Alternative 03)

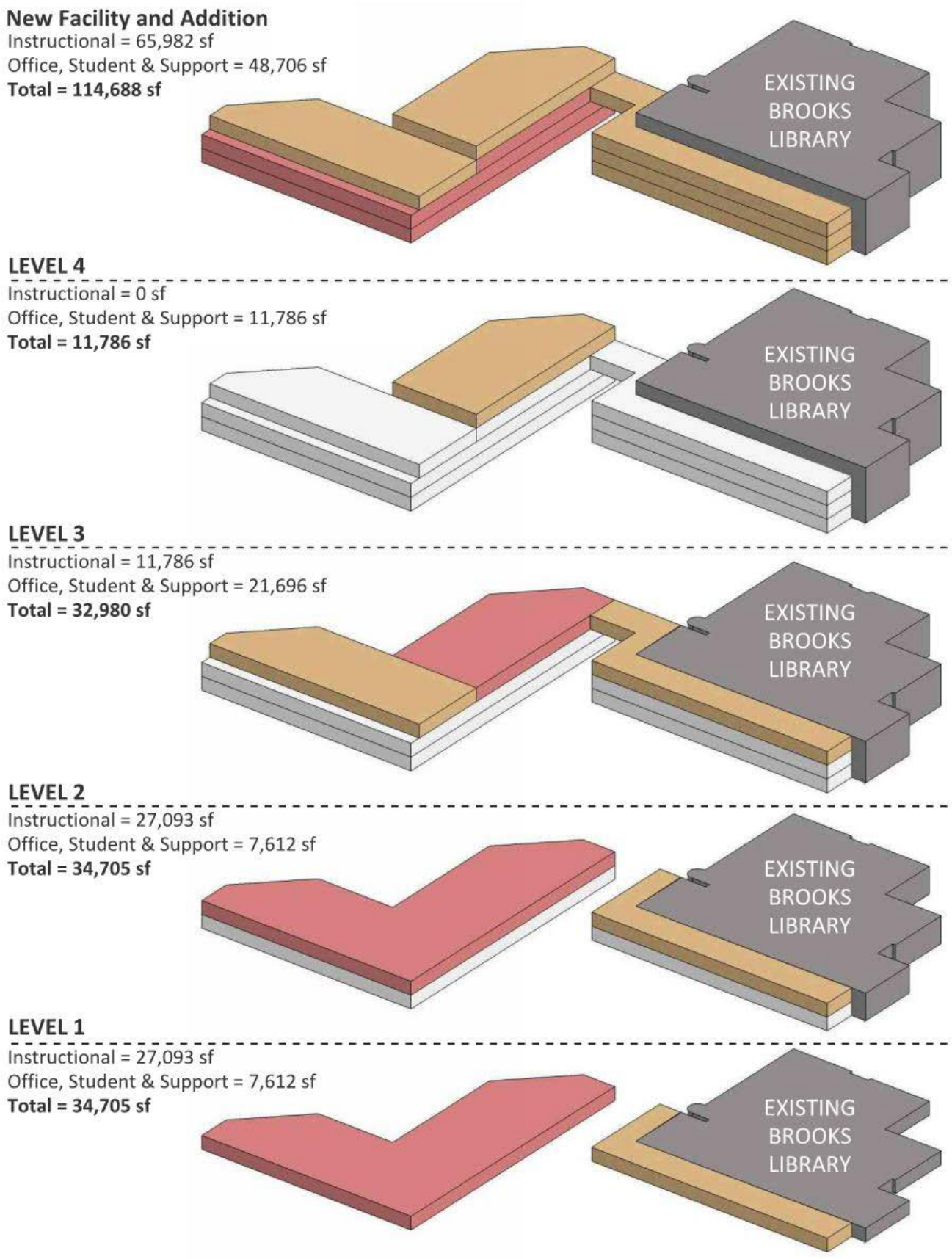
A simple massing model was place onto the site, divided by level, the color-coded with the projected space needs.



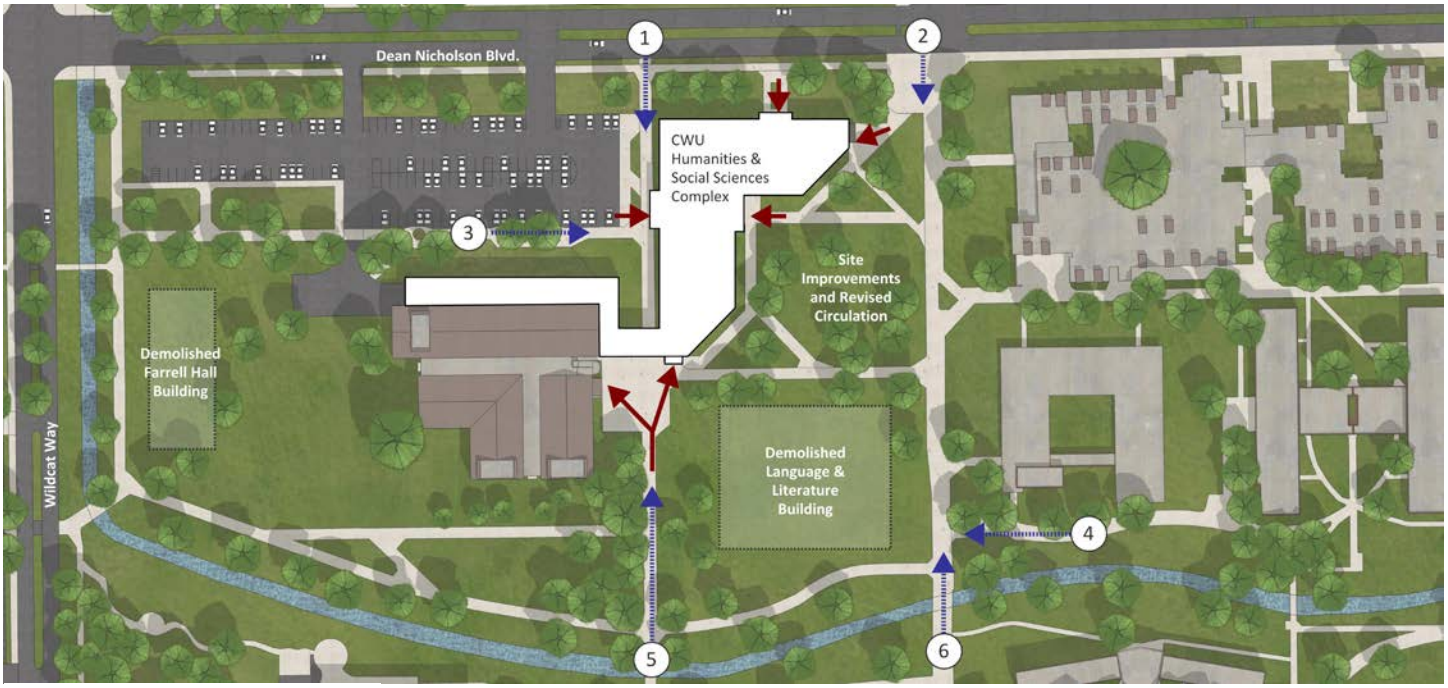
Instructional Spaces *Office, Student and Support Spaces*

Space Distribution Diagram (Alternative 02 - Preferred)

Floor-by-floor breakdown of space distribution for the Humanities and Social Sciences Facility and Addition to Brooks Library.



Building Entry and Site Circulation - Alternative No. 2 - Preferred



1. From Dugmore Hall and the North Neighborhood
2. From Nicholson Pavilion N Walnut St.
3. From Farrell Hall and the West Neighborhood
4. From the residence halls and the East Neighborhood
5. From the Student Union and South Campus
6. From the Science Neighborhood

Bird's Eye View - Alternative No. 2 - Preferred

View from the Northwest, looking Southeast

4.6 Consistency with applicable long-term plans.

The Humanities and Social Sciences project has been part of CWU's long-term plans and is a key element in helping the university to better serve the growing student body in the Humanities, Social Science and Services field. The addition of the project was included in CWU Capital Master Plan 2019-2029.

4.7 Consistency with other laws and regulations.

CPP project management team manages all state funded capital projects in accordance with CWU Policies and Procedures, which are governed by specific applicable state laws. Per university procedure CWUR 3-10-612, CPP project management team is authorized to procure all contractual services for public works projects as governed by RCW 39.04 – Public Works and RCW 39.80 – Contracts for Architectural and Engineering Services. These procedures determine how the project will proceed contractually, which impact the proposed project cost, risk, and schedule. The CPP project management team is responsible for issuing all contractual administrative and legal notices throughout the project timeline from the Notice to Proceed to Final Completion and Final Acceptance.

High Performance Public Buildings (Chapter 39.35D RCW)
CWU has a proven track record going back to 2007 of designing, building, and operating sustainable buildings using the LEED rating system. This project will select design consultants who embody CWU's sustainability objectives. This building will be designed to LEED Silver standard as a Minimum in accordance with RCW 39.35 but CWU has consistently accomplished sustainable buildings at higher levels up to LEED platinum certification. A LEEDv4 Checklist, outlining a preliminary program for the Humanities and Social Sciences project, has been included in Appendix C, LEED Checklist.

State Efficiency and Environmental Performance, if applicable (Executive Order 20-01)
The Governor's Executive Order #20-01 mandates high performance buildings for reduction of greenhouse gases, reduction of pollutants from fossil fuels and use of clean energy when technically feasible. CWU recognizes that the costs of constructing zero energy or zero energy capable buildings is becoming closer to that of conventional buildings and will continue to advance their building construction towards this mandate using life-cycle cost analysis tools for decision making in the design process.

CWU has adopted an energy policy (Policy 2-50-020) that supports the educational mission of the university, since the educational process is dependent upon a controlled environment, which utilizes energy. It is structured to provide adequate environmental quality while minimizing expenditures of energy. See the PROCEDURES manual for specific energy policy details.

State Energy Standards for Clean Buildings (RCW 19.27 A.210)
In November of 2020, the State Department of Commerce has adopted energy performance standards for buildings and has established energy use intensity targets, which are reflected in the 2018 Edition of the Washington State Energy Code Chapter 51-11C WAC. This energy code is presently scheduled to go into effect in the fall of 2020. This building will be compliant to meet or exceed Washington State Energy Code in place at the time of the building permitted. With outcome-based energy targets, public facilities will be on pace by 2031 to achieve a 70 percent reduction in annual energy use compared to a 2006 baseline.

The energy policy supports the educational mission of the university, since the educational process is dependent upon a controlled environment, which utilizes energy. It is structured to provide adequate environmental quality while minimizing expenditures of energy. See the PROCEDURES manual for specific energy policy details.

Greenhouse Gas Emissions Reduction Policy (RCW 10.235.070)
Referenced Revised Code of Washington regarding "Limiting Greenhouse Gas Emissions," requires all state agencies to reduce greenhouse gas emissions as follows:

- By July 1, 2020, to 15% below 2005 levels
- By 2035, To 35% Below 2005 levels
- By 2050, to the greater of 57.5% below 2005 levels or 70% below state government emissions that year

A key part of the university's strategy toward reducing greenhouse gas emissions is the reduction in the use of fossil fuels for building energy and power. The inclusion of energy-conserving HVAC and electrical systems in this proposed new facility is the best way for the project to assist in the goal of reducing overall campus use of fossil fuels. Since major capital projects are typically the greatest consumers of energy on a campus, discovering ways to make the new complex a low energy consumer will be especially significant.

Central Washington University's Greenhouse Gases Adopted Policy is as follows:
CWU Policy 2-50-020
CWUP 2-50-020 Energy Conservation

The Governor's Executive Order #E077-3 mandates specific energy conservation efforts and the development of an energy conservation ethic on the campuses of all state institutions.

The energy policy supports the educational mission of the university, since the educational process is dependent upon a controlled environment which, utilizes energy. It is structured to provide adequate environmental quality while minimizing expenditures of energy. See the PROCEDURES manual for specific energy policy details.
[Responsibility: VP of Operations; Authority: Cabinet/UPAC; Reviewed/Endorsed by: UPAC; Review/Effective Date 10/01/2008; Approved by James L. Gaudino, President]

Archaeological and Cultural Resources (Executive Order 05-05 and Section 106 of the National Preservation Act of 1966)
In adherence with Washington State Executive Order 05-05 and Section 106 of the National Historic Preservation Act of 1966, CWU has initiated consultation with DAHP and is committed to working with DAHP throughout the design phase to address historical and cultural resource impacts this proposed project may identify. Attached Appendix D – Department of Archaeology & Historic Preservation (DAHP) Cultural Resources Impact Letter, dated June 22, 2020.

Compliance with planning under Chapter 36.70A RCW, as required by RCW 43.88.0301(1)
CWU is committed to planning the project in accordance with specific Office of Financial Management instructions for major capital construction projects and requirements of these specific statutes. The CWU Capital Master Plan 2019-2029 identifies this proposed project to be located in the North Campus neighborhood and how it complements the adjacent Central Campus. The proximity of the proposed new facility will promote interdisciplinary education, enhance collaboration among students and faculty, foster curriculum integration, and avoid duplication of services and programs.

Information required by RCW 43.88.0301(1)
The proposed Humanities-Social Sciences Complex is identified in the Central Washington University 2019-2029 Capital Master Plan as "the Government, Ethics, and Civic Engagement Complex". The university's Capital Master Plan and all major campus capital projects are planned in accordance with the Growth Management Act (GMA) RCW 36.70A and coordinated with the City of Ellensburg and Kittitas County comprehensive plans. University updates to the CWU Capital Master Plan and all proposed capital projects are planned and conducted with public SEPA reviews, open planning forums, and workshops to provide opportunities for the community, the city and the county to provide input. A representative of the city is a member of the university standing committee that oversees all campus planning and projects.

Other codes or regulations.
The Capital Planning & Projects project management team plans and manages all state funded capital projects in accordance with CWU Policies and Procedures, which are governed by specific applicable state laws. Other State and Federal policies that will be followed throughout the Humanities and Social Sciences project include:

Clean Air Act of 1991
In response to the Clean Air Act of 1991, the university encourages carpooling by providing convenient dedicated spaces. It further encourages non-automobile commuting options by providing bicycle racks, lockers, and parking for carpools, electric vehicles, motorcycles, and scooters. HVAC requirements and material selection for this project will improve indoor air quality and reduce outdoor emissions.

Growth Management Act of 1990
The Growth Strategies legislation of 1991 requires all state agencies to comply with local land use regulations adopted pursuant to the Growth Management Act. This project is subject to the plan review and environmental mitigation process of

Kittitas County and State of Washington. No significant issues are anticipated as the development proposed by this predesign document is in compliance with all major requirements.

Governor's Executive Order 90-94 for Protection of Wetlands
Humanities and Social Sciences project will not impact any wetland. No environmentally sensitive areas will be affected by this project.

Clean Water Act
Humanities and Social Sciences project will include storm water, drainage and erosion control plan requirements into its construction documents. The National Pollutant Discharge Elimination System (NPDES) permit requirements and storm water pollution prevention plans will be implemented through the installation and maintenance of drainage systems.

Hazardous Substances
The project will require selective demolition of portions of existing structures. Prior to any demolition to any facilities, CWU will engage an approved outside consultant and/or chemical hygiene expert to prepare an inventory of all hazardous substances to be abated, utilized in, or removed from, the project. This consultant assists in developing a mitigation plan for removal and/or abatement and for adherence to notification requirements.

Government Options to Landfill Disposal
Humanities and Social Sciences project will include a Construction Waste Management Plan and Reporting process. It is anticipated the over 90% of the selective demolition of the project will be recycled and diverted away from the landfill.

Governor Executive Order 05-05
This Executive Order requires state agencies to review capital construction projects with the Department of Archaeology and Historic Preservation (DAHP), to determine potential impacts on cultural resources. The university is consulting with DAHP throughout this process as part of the budgeting process outlined and reviewed by the SBCTC and Office of Financial Management (OFM).

Chapter 12, Laws of 2005 (ESSB 5509)
Humanities and Social Sciences project will be designed and constructed according to ESSB 5509 requiring, at a minimum, LEED silver certification. Project initial LEED checklist based on this predesign is a gold certification.

Other Policy Coordination
Other Policies which the Humanities and Social Sciences project will follow include:

- Washington State Board for community & Technical College – Model Classrooms for Electronic Presentation Classrooms
- State of Washington Facilities Evaluation and Planning Guide (FEPG)
- State of Washington Department of General Administration – Construction Waste Management Plan
- State of Washington Department of General Administration – Leadership in Energy and Environmental Design (LEED) – Quality Assurance Process Guidelines for State Agency/College and University Facilities.
- State of Washington RCW 70.235 Limiting greenhouse gas emissions
- State of Washington RCW 39.35 Energy conservation in the design of public facilities.
- Washington State Environmental Policy Act (SEPA)
- CWU Facility Design Guidelines and Construction Standards
- International Building Code (IBC)
- International Fire Code (IFC)
- Americans with Disabilities Act (ADA)
- Local Codes and Ordinances
- Underwriters Laboratories (UL)
- Regulations of the State Fire Marshall
- Washington State Energy Code
- Washington State Department of Labor and Industries
- Washington Administrative Code
- National Electric Code (NFPA 70)

- Illuminating Engineers Society of North America (IESNA)
- International Mechanical Code
- Uniform Plumbing Code
- Washington State Boiler and Unified Pressure Vessel Code
- ASHRAE Standard 55 – Thermal Comfort
- ASHRAE Standard 62 – Ventilation
- National Fire Protection Association (NFPA) Section 13

4.8 Identify problems that require further study. Evaluate identified problems to establish probable costs and risk.

Materials, finishes, building assemblies and systems will need to be selected to provide the quality construction required to ensure the new facility will meet all current codes and standards and have a minimum expected service life of 50 years. Through the Capital Master Planning process, the university has a long-term development plan and CPP project management team provides specific project design guidelines and the design intent for each respective new campus facility. The Capital Master Plan is used as a guide for evaluating traffic, parking requirements, and proposed alternatives for the project.

4.9 Identify significant or distinguishable components, including major equipment and ADA requirements in excess of existing code.

No known components or issues included in the proposed project – including accessibility – are expected to exceed existing code.

4.10 Identify planned technology infrastructure and other related IT investments that affect the building plans.

Solutions for IT infrastructure and distribution include central building access locations and accessible pathways throughout the facility. Each instructional space will be equipped with project screen(s), media consoles with computers, audio and video players and video projectors. Smart-boards, document cameras and other special equipment will be provided where specifically needed. Student desks will carry technology infrastructure tailored to specific program requirements without excluding general use.

4.11 Identify any site-related and/or physical security measures for the project.

The proposed site for the Preferred Alternative is within the existing campus and will be subject to existing campus security protocols. The site is relatively flat with good access for both vehicular and pedestrian circulation.

4.12 Describe planned commissioning to ensure systems function as designed.

A commissioning consultant, a member in the Building Commissioning Association and the U.S. Green Building Council, will conduct the project commissioning in compliance with the Building Commissioning Association's Essential Attributes of Building Commissioning. This consultant will act as the university's Commissioning Authority for the project. Initial services will include developing a project specific commissioning plan, which describes the process and identifies all responsibilities and roles of the university, A/E consultant, sub-consultants, contractor, and sub-contractors. This plan will identify the university's functional building systems requirements and establish the project design intent. The commissioning process will continue throughout the course of design and construction to final completion, final acceptance, and the warranty phase. Specific commissioning services will include, but not be limited to, LEED monitoring, building automation and energy management systems, heating, ventilating and air conditioning systems, lighting controls, plumbing, domestic heating water system, HVAC heating and cooling systems, plumbing, electrical lighting control systems, and related services that will enhance the value of the facility, increase maintainability, save energy and increase indoor environmental quality and comfort for building occupants

4.13 Describe any future phases or other facilities that will affect this project.

There are no future phases or projects for Humanities and Social Sciences identified at this time that would affect Central Washington University's preferred alternative.

4.14 Provide a comparative discussion of the proposed delivery method.

CWU will use the Design-Bid-Build (DBB) project delivery method for the project in accordance with RCW 39.04 – Public Works. The university has successfully used this approach as the most cost-effective delivery method for all of the campus academic state-funded major projects over the last two decades. The alternative project delivery method, progressive Design- Build, was recently used for the new Dugmore Hall residential hall on campus. Superior budget management is the primary objective with the Design-Bid-Build process along with CWU's successful history with this delivery method that matches typical state capital budget process.

4.15 Describe how the project will be managed within the agency.

The university's Capital Planning and Projects (CPP) division under the Office of Operations will manage all aspects of the project from programming and initial budgeting the proposed project to the initial selection of the project architect/engineer (A/E) consultant design team and throughout the subsequent design, bidding, construction, commissioning, and warranty phases. CPP project management team will oversee the required contractual administration for the project architect/engineer (A/E) consultants and public works contractors. The CPP team is responsible to work closely with the university's administration, the design team, and the contractors to ensure the project is delivered on time and within budget. The project management/contract administration team has overseen every state and university-funded major capital projects over the past two decades, delivering each respective project on time with no cost overruns. The cost for the university's project management of the project design and construction phases is included in the Project Cost Estimate form in the Project Budget Analysis section of this report.

Project Management Strategy

Programming:

Central Washington University

- Assists in Consultant Selection
- Coordinates stakeholder participation
- Participates in detailed programming
- Reviews and approves detailed programming and budget

CWU Project Manager

- Directs Consultant Selection
- Manages and administers the Consultant Contract
- Assists University in review and approval of programming and budgets

Design A/E Consultant

- Provides programming services per agreement

Design:

Central Washington University

- Participates in periodic design meetings
- Provides design decisions including program adjustments
- Reviews and approves design and cost estimates

CWU Project Manager

- Manages and administers the Consultant Contract
- Assists university in review and approval of programming and budgets

Design Consultant

- Provides design services per negotiated agreement

Bidding:

Central Washington University

- Issues advertisement for bid

- Conducts public bid opening

CWU Project Manager

- Manages Consultant Contract

Design Consultant

- Provides bidding assistance per agreement

Construction:

Central Washington University

- Participates in construction progress meetings
- Provides construction direction including change orders

CWU Project Manager

- Manages Consultant Contract

Design Consultant

- Provides construction administration services per agreement
- Observes progress, schedule, and quality of the work and construction activities

Commissioning:

Central Washington University

- Participates in all commissioning activities
- Attends operating instructions

CWU Project Manager

- Coordinates selection and contracting of the commissioning consultant
- Monitors both commissioning agent and A/E design consultant
- Advises university in all matters related to acceptance of systems

Design Consultant

- Provides support to the commissioning agent services

Warranty:

Central Washington University

- Identifies warranty issues
- Notifies project consultant(s) of needed warranty repairs

CWU Project Manager

- Assists in obtaining warranty repairs

Design Consultant

- Notifies contractor of needed warranty repairs

4.16 Schedule

A summary schedule is as follows:

Predesign	June 2020 - July 2020
Design	Sept 2021 - Feb 2023
Building Permit	Feb 2023 - May 2023
Bidding	June 2023 - July 2023
Construction	Sept 2023 - Aug 2025
Furniture & Equipment Install	June 2025 - Aug 2025
Faculty & Staff Move-In	July 2025 - Aug 2025
Classes Begin in HSS	September 2025

Value Engineering Analysis and Constructability.

The schedule for the development of the Humanities and Social Sciences Complex will include a third-party, peer reviewed Value Engineering study and a Constructability / QAQC review. The VA study will occur near the end of the Schematic Design phase of the project's development and will include a cost estimate. The Constructability review will be scheduled at approx. 90% completion of the Construction Documents. It is expected there will be community and stakeholder workshops and meetings scheduled throughout the developmental process.

There are no known factors that may pose a delay or complication to the permitting of the project. The project team will contact the agencies of jurisdiction early in the development process and will incorporate permitting milestones into the overall project schedule to ensure permits are obtained as required to meet the overall project timeline.

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SECTION 5.0: PROJECT BUDGET ANALYSIS OF PREFERRED ALTERNATIVE

5.1 Cost Estimate.

Below is a summary of the conceptual cost estimate for the Preferred Option, Alternate Design Option No. 2. This estimate may be affected by modifications to the scope of work, special phasing requirements, restrictive technical specifications or excessive contract conditions, non-competitive or delayed bids.

Detailed Cost Estimate Reports can be found in Appendix B.

Item	*Construction*	*Gross Area*	*$/SF*	*$*
Humanities and Social Sciences Building	New	90,580 SF	421.69	38,196,783
Brooks Remodel	Renovation	5,000 SF	135.24	676,218
Brooks Addition at North Site	New	24,098 SF	416.90	10,046,364
Site Work	Site			3,303,909
Demolition & HAZMAT (L & L Building + Farrell)	Demolition			1,910,564
Off-site Improvements	Site			794,777
Total Construction Cost for Building & Site Work				**54,928,615**

Exclusions from Construction Costs:

- Pre-construction services
- Design fees
- Building and land acquisition fees (if applicable)
- Owners administration costs
- Legal and accounting fees
- Removal of unforeseen underground obstructions
- Owner's furniture, furnishings and equipment
- Owners supplied materials
- Moving owners equipment and furniture
- Compression of schedule, premium or shift work
- Assessments, finance, legal and development charges
- Builder's risk, project wrap-up and other owner provided insurance program
- Washington State Sales Tax
- AV Equipment

Major Assumptions

The following major assumptions were used in generating conceptual cost estimates for the Humanities and Social Sciences project:

- The project will be delivered utilizing the alternative project delivery method of Design, Bid, Build.
- Estimating / Design Contingency is Included at 5.00%
- Escalation is calculated to Construction Start Date June 2023.
    - Year 1 Escalation- 4.50%
    - Year 2 Escalation- 4.25%
    - Year 3 Escalation- 4.00%
- Open and competitive bidding among all proportions of the work.

Materials, Design and Construction Assumptions

The following assumptions were made in regards to the design and construction of the Humanities and Social Sciences project.

A10: Foundations:

Scope of work continuous and spread footings, perimeter drainage, reinforced concrete slab on grade, elevator pit.

B10: Superstructure:

Vertical and horizontal steel structure including BRB brace frames, metal deck and reinforced concrete topping slab at floor structure, sprayed cementitious fireproofing, intumescent paint at select columns and housekeeping pads.

B20: Exterior enclosure:

Scope of work includes laid up brick and metal panel and metal panel soffits. The extent of brick would be 70% and 30% metal panels at opaque walls. Glazing scope includes curtain wall and storefront glazing. The extent of the glazing would be comparable to the Health Science project at approximately 24% to the gross wall area. Other scope would include louvers. Exterior door scope would include glazed aluminum doors at vestibules and hollow metal doors at other locations.

B30: Roofing:

Roof scope of work includes a 1-ply EPDM 60 mil white fully adhered with R-38 insulation, sheet metal flashings, rough carpentry. Scope includes roof ladders, roof hatch, skylights.

C10: Interior Construction:

Interior partitions consist of metal stud framing, batt insulation and gypsum board, interior glazing, railings at open to below areas, operable partitions and interior doors. Fittings and specialties will include toilet partitions, signage, miscellaneous, restroom accessories fire extinguishers and cabinets.

C20: Stairs

Scope includes exit stairs and architectural stairs.

C30: Interior Finishes

Wall finishes include paint to gypsum board, porcelain tile at restroom wet walls, specialty wall finishes. Floor finishes include porcelain tile at restrooms, carpet tile, resilient flooring, polished concrete, walk off mats and sealed concrete at MEP rooms. Ceiling finishes include ACT and grid, gypsum board painted, specialty wall finishes.

D10: Conveying systems

Two passenger elevators.

D20: Plumbing

Plumbing include sanitary fixtures, sanitary waste, vent and service piping, water treatment, storage and circulation, surface water drainage, gas piping, fittings and specialties.

D30: Heating, Ventilation and Air Conditioning (HVAC)

Heat generation and chilling, thermal storage and circulation pumps, piping, fittings, valves and insulation, radiant systems, air handling equipment, air distribution and return, diffusers and return air grilles, controls, instrumentation and balancing.

D40: Fire Protection Systems

Wet pipe sprinkler system, standpipe systems to stairs.

D50: Electrical

Electrical scope includes main service and distribution, emergency or uninterrupted power, grounding systems, machine and equipment power, user convenience power, testing and seismic restraints. Other scope includes lighting and branch wiring, communications and security systems, alarm and access control and CCTV system rough-in only.

E10: Equipment

No Scope Anticipated

E20: Fixed Furnishing
Fixed furnishings include casework and interior and exterior window treatments.

C-100 Cost Estimate
A State of Washington C-100 Estimate Document has been generated to verify the estimated funds needed to for each Design Alternate Option.

The following is a summary for the preferred alternative. Full C-100s for both design alternatives No. 2 and No. 3 are attached in Appendix B.

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY
Updated June 2020

Agency	Central Washington University
Project Name	Humanities & Social Sciences Complex
OFM Project Number	

Contact Information	
Name	Bill Yarwood
Phone Number	509.963.1120
Email	william.yarwood@cwu.edu

Statistics			
Gross Square Feet	119,890	MACC per Square Foot	$372
Usable Square Feet	71,935	Escalated MACC per Square Foot	$409
Space Efficiency	60.0%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	6.26%
Remodel	No	Projected Life of Asset (Years)	50
Additional Project Details			
Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	Yes
Sales Tax Rate %	8.30%	Location Used for Tax Rate	Ellensburg, WA
Contingency Rate	5%		
Base Month	June-20	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule			
Predesign Start	May-20	Predesign End	July-20
Design Start	September-21	Design End	May-23
Construction Start	September-23	Construction End	June-25
Construction Duration	21 Months		

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Project Cost Estimate			
Total Project	**$62,866,490**	Total Project Escalated	**$68,800,382**
		Rounded Escalated Total	**$68,800,000**

STATE OF WASHINGTON AGENCY / INSTITUTION PROJECT COST SUMMARY *Updated June 2020*		
Agency	Central Washington University	
Project Name	Humanities & Social Sciences Complex	
OFM Project Number		

Cost Estimate Summary

Acquisition			
Acquisition Subtotal	**$1,470,414**	**Acquisition Subtotal Escalated**	**$1,470,414**

Consultant Services			
Predesign Services	$148,700		
A/E Basic Design Services	$2,020,744		
Extra Services	$1,591,677		
Other Services	$907,871		
Design Services Contingency	$233,450		
Consultant Services Subtotal	**$4,902,441**	**Consultant Services Subtotal Escalated**	**$5,204,535**

Construction			
Construction Contingencies	$2,227,761	Construction Contingencies Escalated	$2,454,770
Maximum Allowable Construction Cost (MACC)	$44,555,220	Maximum Allowable Construction Cost (MACC) Escalated	$49,025,510
Sales Tax	$3,882,987	Sales Tax Escalated	$4,272,864
Construction Subtotal	**$50,665,968**	**Construction Subtotal Escalated**	**$55,753,144**

Equipment			
Equipment	$3,351,280		
Sales Tax	$278,156		
Non-Taxable Items	$0		
Equipment Subtotal	**$3,629,436**	**Equipment Subtotal Escalated**	**$3,999,277**

Artwork			
Artwork Subtotal	**$342,290**	**Artwork Subtotal Escalated**	**$342,290**

Agency Project Administration			
Agency Project Administration Subtotal	$1,215,789		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$1,215,789**	**Project Administation Subtotal Escalated**	**$1,339,679**

Other Costs			
Other Costs Subtotal	**$640,150**	**Other Costs Subtotal Escalated**	**$691,042**

5.2 Proposed Funding.

It is anticipated that funding for the Humanities and Social Sciences project will be provided through the State of Washington by way of the capital budgeting process. The university requests 100 percent State appropriation for design in the 2021-2023 biennium and a future appropriation in the 2023-2025 biennium for the construction of Health Education. Based on the current proposed Humanities and Social Science project information, university program requirements, as well as the project site-development requirements, the estimated construction cost for the project is $62.1 million. The total project budget request is $68.8 million.

Identify fund sources and expected receipt of the funds.
Funds for the Humanities and Social Sciences project will be requested as follows:

Funding Phase	*Biennium*	*Request Amount*
Predesign	2020	Self Funded
Design	2021-2023	$ 5,204,535
Construction	2023-2025	$ 62,125,432
Total Request (Escalated & Rounded)		**$ 68,800,000**

5.3 Facility Operations and Maintenance Requirements.

The renovated and expanded facility will require increases in CWU's custodial staff, maintenance staff, information technology staff, and police services. Operations and maintenance costs for the new Humanities and Social Sciences Complex are estimated to start in 2025, the first year of occupancy.

Define the anticipated impact of the proposed project on the operating budget for the university. Include maintenance and operating assumptions (including FTEs) and moving costs.
Funding for the increase in operating costs based on the new additional gross square feet (GSF) will be requested within the overall state appropriated budget.

Assumptions
Estimated operations and maintenance costs for the preferred alternative for the Humanities-Social Science Complex are based on the Fiscal Year 2020 budgeted costs per gross square foot (GSF). Costs are escalated at an inflation rate of 1.3% per year based on the BASS overall escalation rate to 2025.

New construction square footage is 99,890 GSF, with the addition being approximately 15,000 GSF and a 5,000 square foot renovation inside of Brooks Library, which totals 119,890 square footage. Therefore, for energy and maintenance of new 114,890 sq. ft., with L & L and Farrell being removed, then 88,030 GSF is subtracted.

Operations & Maintenance Costs
Most recent calculated campus operations and maintenance costs are shown in Table 1. Projected operations and maintenance costs for the project are shown in the following tables:

Table 1 - Operations and Maintenance for FY 2020

Operations	*Operating Costs GSF/Yr - 2020*
Component:	
091- Utilities	$1.76
092- Building & Utilities Maintenance	$4.66
093- Custodial & Grounds Services	$2.38
094- Operations & Maintenance Support	$0.54
094- Police & Parking	$0.85
Total Annual Cost Per GSF	**$10.19**

Table 2 - Operations and Maintenance Costs for Humanities Complex for 2025

Operations	***Operating Costs GSF/Yr - 2025***	***GSF (Net addition)***	***Est. Cost for Additional GSF/FY 2025***
Component:			
091- Utilities	$2.05	61,986	$127,074
092- Building & Utilities Maintenance	$5.44	61,986	$337,082
093- Custodial & Grounds Services	$2.78	61,986	$172,159
094- Operations & Maintenance Support	$0.62	61,986	$38,671
094- Police & Parking	$0.99	61,986	$61,582
Total Annual Cost Per GSF	**$11.88**	**61,986**	**$736,567**

Table 3 - Operations and Maintenance Costs for Humanities Complex for 2025 by positions and goods & services.

Division	***FTE***	***Amount FTE Base & Benefits***	***Goods & Services***	***Total***
Utilities			$48,600	$48,600
CUSTODIAL				
Custodial-Benchmark APPA:				
(GSF/ Custodian FTE- 35,000)	1.000	$61,677	$8,262	$69,940
MAINTENANCE				
Maintenance-Benchmark APPA:				
(GSF/Maintenance FEE- 73,000)	0.500	$46,092	$17,747	$63,839
POLICE SERVICES	0.500	$60,380	$15,000	$75,381
IS (Information Services)	0.500	$68,741	$20,000	$88,742
Total	**2.500**	**$236,891**	**$109,609**	**$346,502**

Table 4 - Operating Costs over Five Biennia (Inflation rate based on BASS overall escalation rate to 2023 of 3.12%.)

Component	***FMD FY 2020***	***Police Svcs. FY 2020***	***IS FY 2020***	***FY 2020***	***FY 2021***	***FY 2022***
091- Utilities	$3,358,885			$3,358,885	$3,463,682	$3,571,749
092- Building & Utilities Maintenance	$3,359,265		$5,550,667	$8,909,932	$9,187,922	$9,474,585
093- Custodial & Grounds Services	$4,550,602			$4,550,602	$4,692,581	$4,838,989
094- Operations & Maintenance Support	$1,022,165			$1,022,165	$1,054,057	$1,086,943
094- Police and Parking		$1,627,776		$1,627,776	$1,678,563	$1,730,934
Total	**$12,290,917**	**$1,627,776**	**$5,550,667**	**$19,469,360**	**$20,076,804**	**$20,703,200**
				Operating Costs		**Operating Costs**
				Per GSF/Yr.		**Per GSF/Yr.**
091- Utilities				$1.76		$1.87
092- Building & Utilities Maintenance				$4.66		$4.96
093- Custodial & Grounds Services				$2.38		$2.53
094- Operations & Maintenance Support				$0.54		$0.57
094- Police and Parking				$0.85		$0.91
Total				**$10.19**		**$10.84**

Table 4 - continued

Component	***FY 2023***	***FY 2024***	***FY 2025***	***FY 2026***	***FY 2027***	***FY 2028***
091- Utilities	$3,683,188	$3,798,103	$3,916,604	$4,038,802	$4,164,813	$4,294,755
092- Building & Utilities Maintenance	$9,770,192	$10,075,022	$10,389,363	$10,713,511	$11,047,772	$11,392,463
093- Custodial & Grounds Services	$4,989,966	$5,145,653	$5,306,197	$5,471,750	$5,642,469	$5,818,514
094- Operations & Maintenance Support	$1,120,856	$1,155,826	$1,191,888	$1,229,075	$1,267,422	$1,306,966
094- Police and Parking	$1,784,939	$1,840,629	$1,898,057	$1,957,276	$2,018,343	$2,081,315
Total	**$21,349,140**	**$22,015,233**	**$22,702,109**	**$23,410,414**	**$24,140,819**	**$24,894,013**
		Operating Costs	**Operating Costs**			**Operating Costs**
		Per GSF/Yr.	**Per GSF/Yr.**			**Per GSF/Yr.**
091- Utilities		$1.99	$2.05			$2.25
092- Building & Utilities Maintenance		$5.27	$5.44			$5.96
093- Custodial & Grounds Services		$2.69	$2.78			$3.05
094- Operations & Maintenance Support		$0.60	$0.62			$0.68
094- Police and Parking		$0.96	$0.99			$1.09
Total		**$11.52**	**$11.88**			**$13.03**

Table 5 - Operating Budget Impacts during the Project

CWU Employees	***Design FTE***	***Construction FTE***
Architects	0.125	0.125
Project Manager	0.600	0.250
Engineers	0.200	0.100
Construction Manager		0.600
Inspectors/Coordinators/Trades	0.100	0.400
Total	**1.025**	**1.475**

5.4 Clarification regarding furniture, fixtures and equipment are included in project budget.

Furniture, fixtures and equipment have been included in the proposed project budget.

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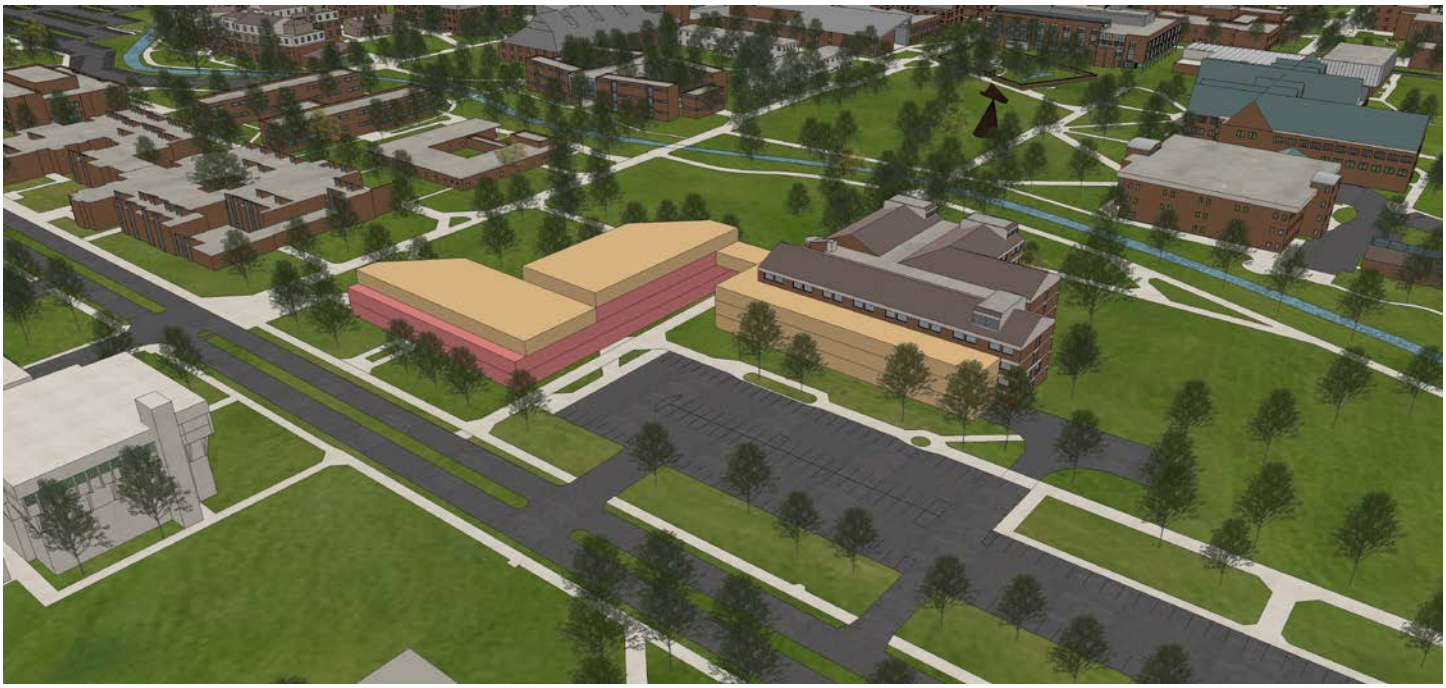
Massing and Space Distribution - Alternative No. 2
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 2



View from the Northwest, looking Southeast

Bird's Eye View - Alternative No. 2

View from the Northeast, looking Southwest

Instructional Spaces *Office, Student and Support Spaces*

Massing and Space Distribution - Alternative No. 2
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 2

View from the Southeast, looking Northwest

Bird's Eye View - Alternative No. 2

View from the Southwest, looking Northeast

Instructional Spaces

Office, Student and Support Spaces

Massing and Space Distribution - Alternative No. 2
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 2

View from the Northwest, looking Southeast

Bird's Eye View - Alternative No. 2

View from the Northeast, looking Southwest

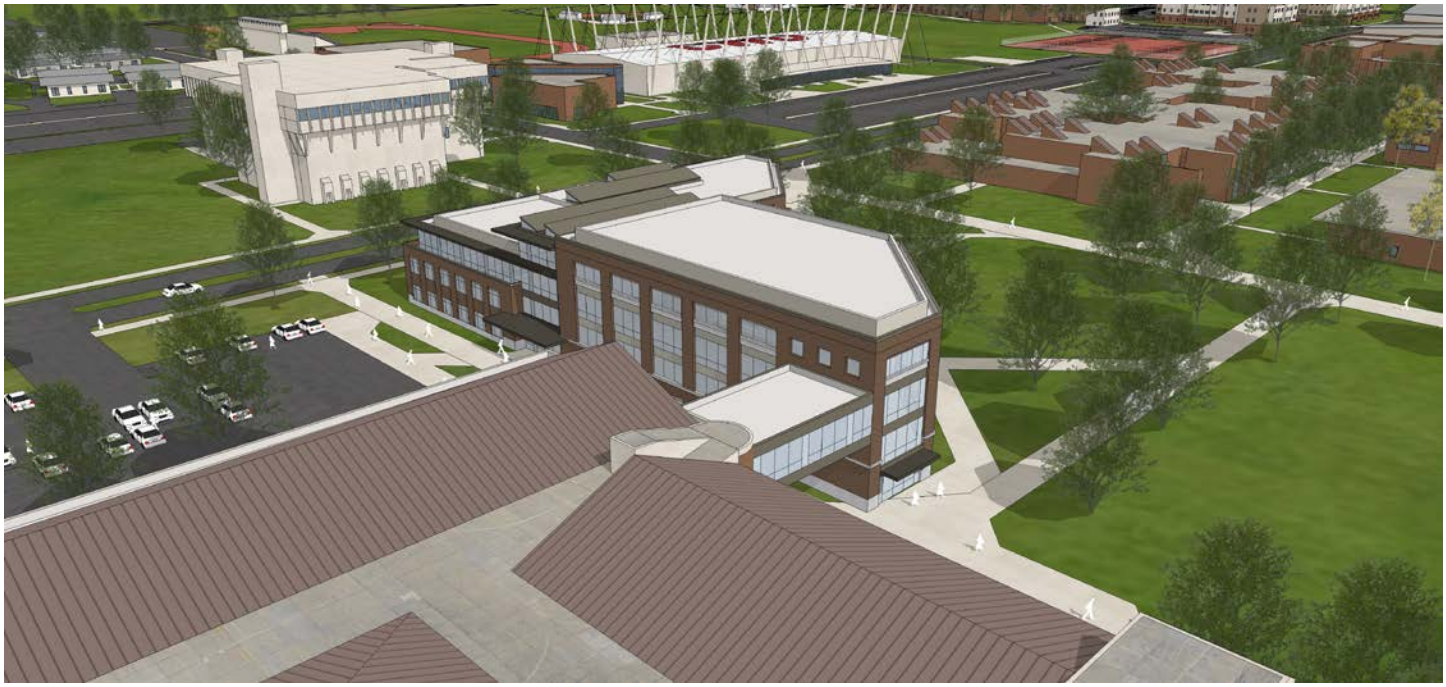
Instructional Spaces *Office, Student and Support Spaces*

Massing and Space Distribution - Alternative No. 2
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 2

View from the Southeast, looking Northwest

Bird's Eye View - Alternative No. 2



View from the Southwest, looking Northeast

Instructional Spaces

Office, Student and Support Spaces

Conceptual Renderings - Alternative No. 2

Rendering 1 - Alternative No. 2

View from the parking lot, looking East

Rendering 2 - Alternative No. 2

View from the irrigation canal, looking Northwest

Conceptual Renderings - Alternative No. 2

Rendering 3 - Alternative No. 2

View from N. Walnut, looking West

Rednering 4 - Alternative No. 2

View from Dean Nicholson Blvd., looking Southeast

Conceptual Elevations - Alternative No. 2

North Elevation - Alternative No. 2 (Preferred)

East Elevation - Alternative No. 2 (Preferred)

South Elevation - Alternative No. 2 (Preferred)

West Elevation - Alternative No. 2 (Preferred)

Massing and Space Distribution - Alternative No. 3
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 3

View from the Northwest, looking Southeast

Bird's Eye View - Alternative No. 3

View from the Northeast, looking Southwest

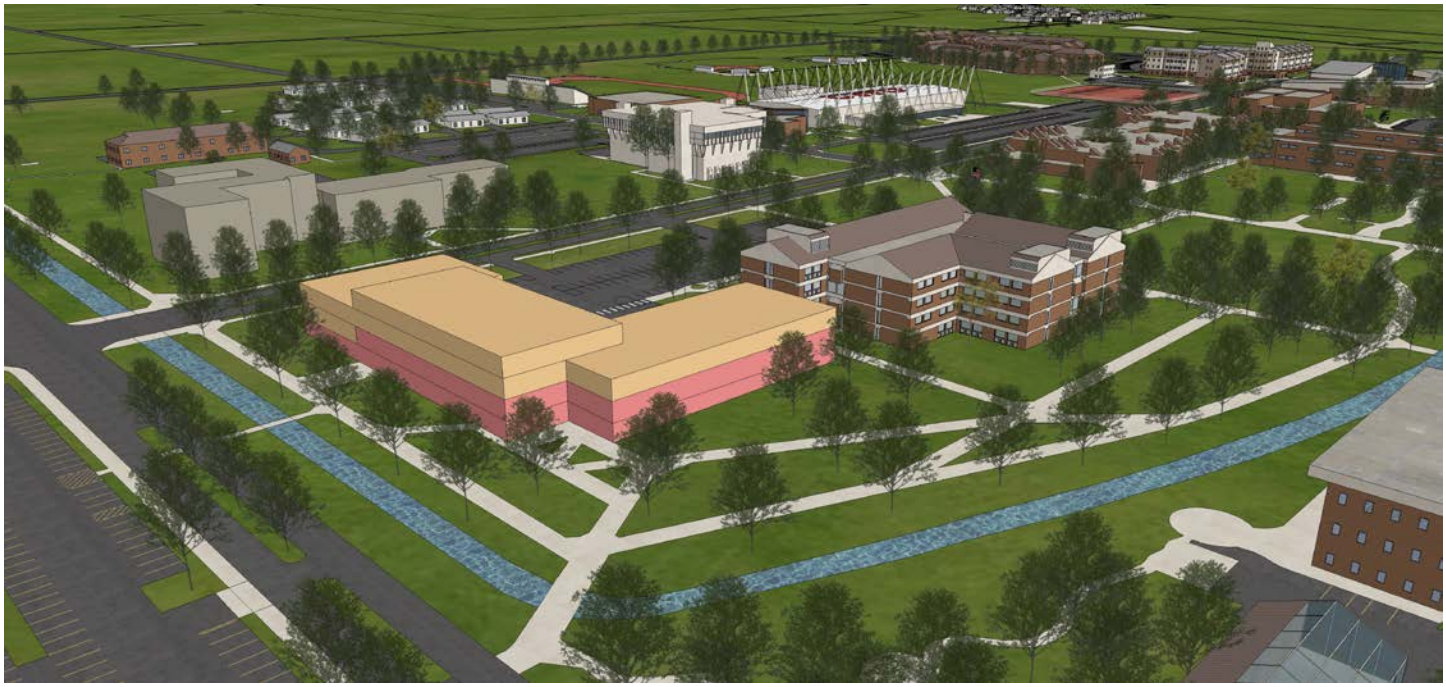
Instructional Spaces *Office, Student and Support Spaces*

Massing and Space Distribution - Alternative No. 3
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 3

View from the Southeast, looking Northwest

Bird's Eye View - Alternative No. 3



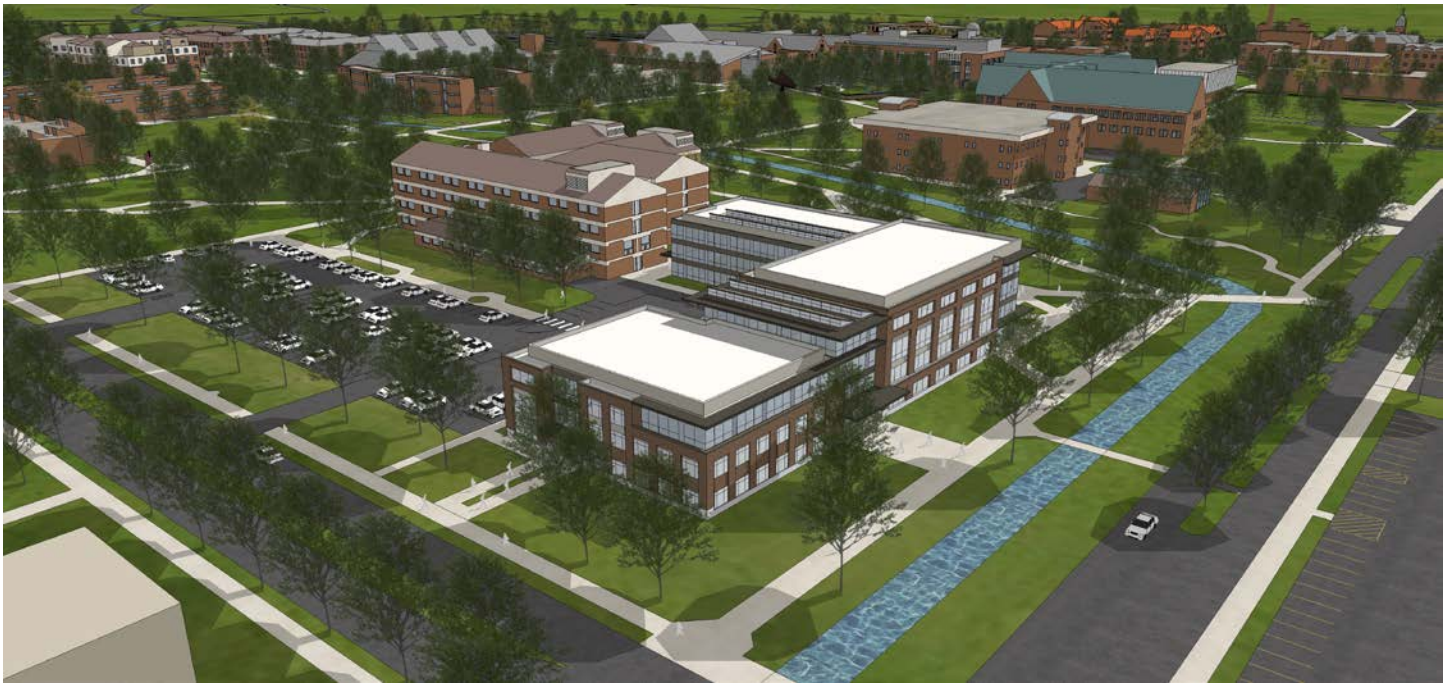
View from the Southwest, looking Northeast

Instructional Spaces

Office, Student and Support Spaces

Massing and Space Distribution - Alternative No. 3
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 3



View from the Northwest, looking Southeast

Bird's Eye View - Alternative No. 3

View from the Northeast, looking Southwest

Instructional Spaces *Office, Student and Support Spaces*

Massing and Space Distribution - Alternative No. 3
A simple massing model divided by level and color-coded with the projected space needs.

Bird's Eye View - Alternative No. 3

View from the Southeast, looking Northwest

Bird's Eye View - Alternative No. 3

View from the Southwest, looking Northeast

Instructional Spaces

Office, Student and Support Spaces

Conceptual Renderings - Alternative No. 3

Rendering 1 - Alternative No. 3

View from Dean Nicholson Blvd., looking Southwest

Rendering 2 - Alternative No. 3

View from the canal walk, looking Northwest

Conceptual Renderings - Alternative No. 3

Rendering 3 - Alternative No. 3

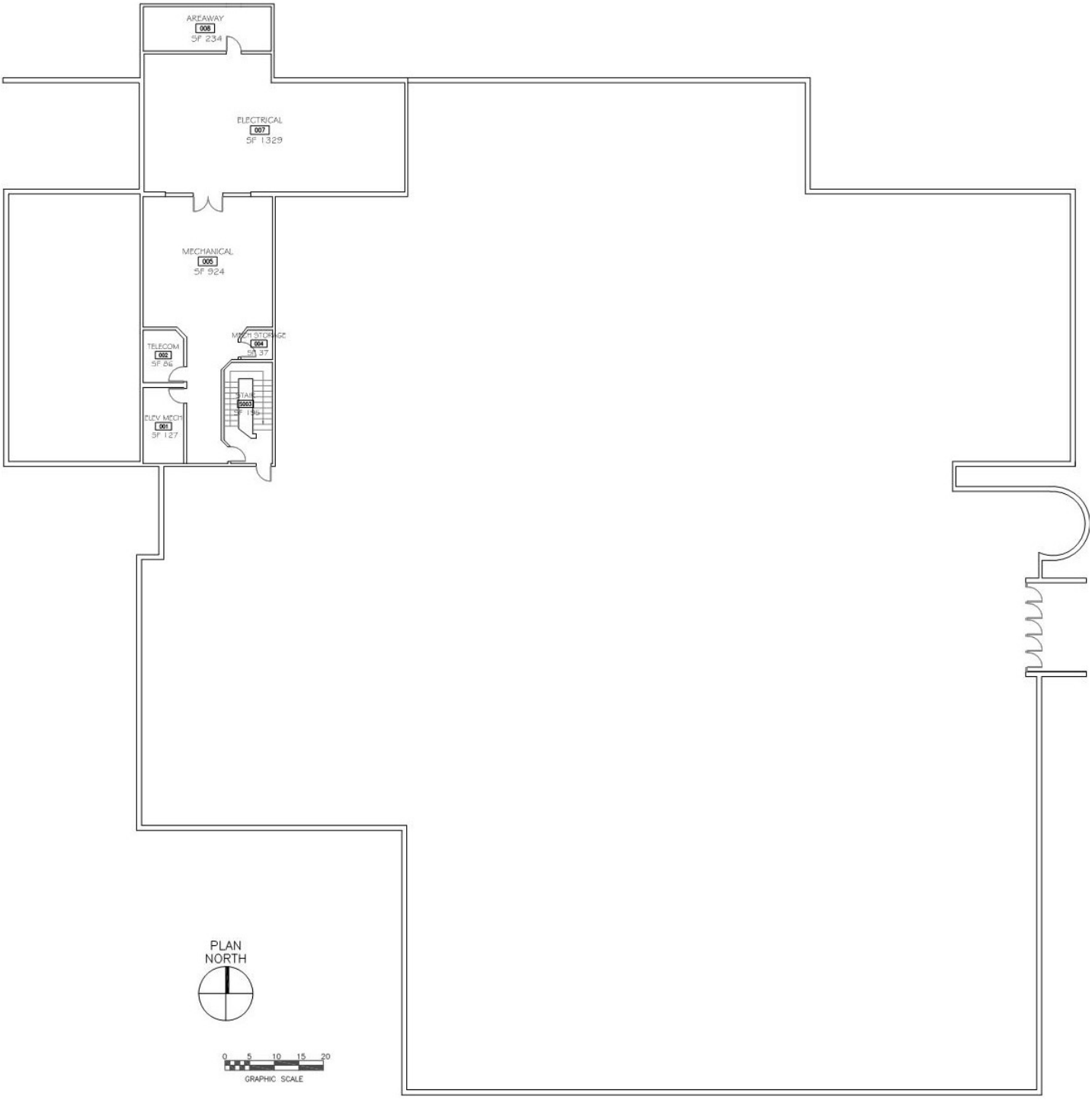
View from the Wildcat Way canal crossing, looking Northeast

Rednering 4 - Alternative No. 3

View from the corner of Dean Nicholson Blvd. and Wildcat Way, looking Southeast

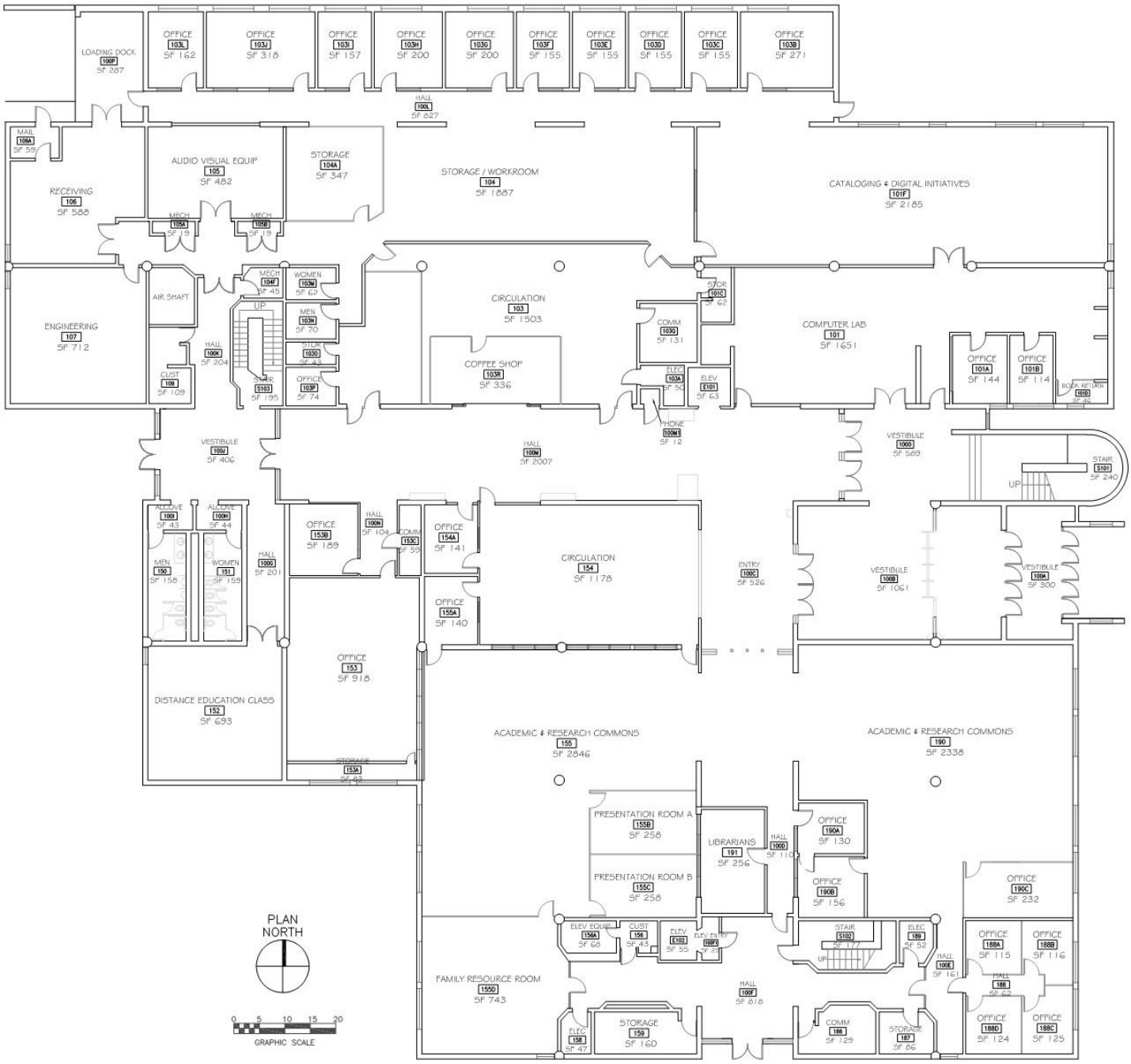
Brooks Library

Existing Basement Layout



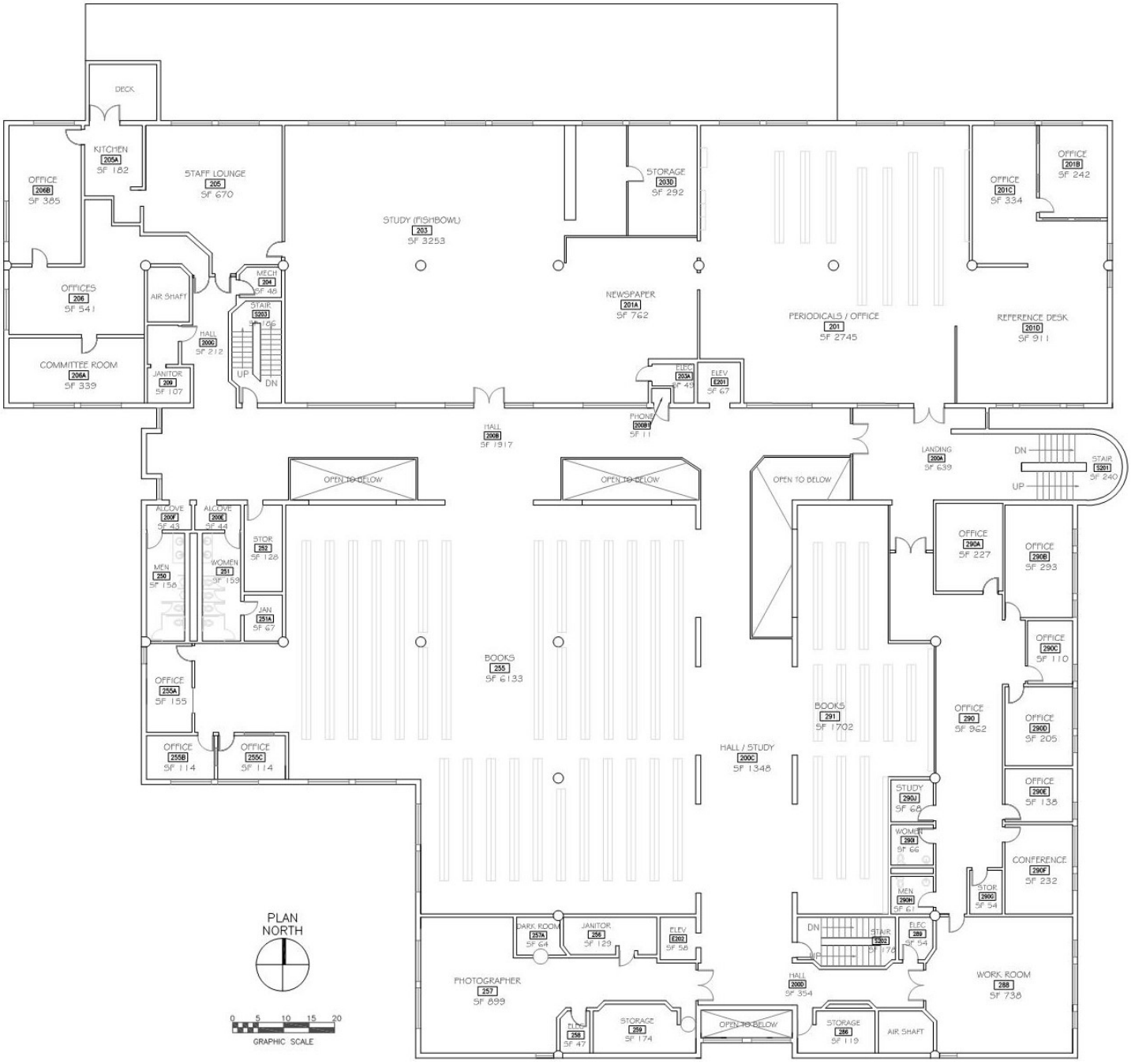
Brooks Library

Existing First Floor Layout



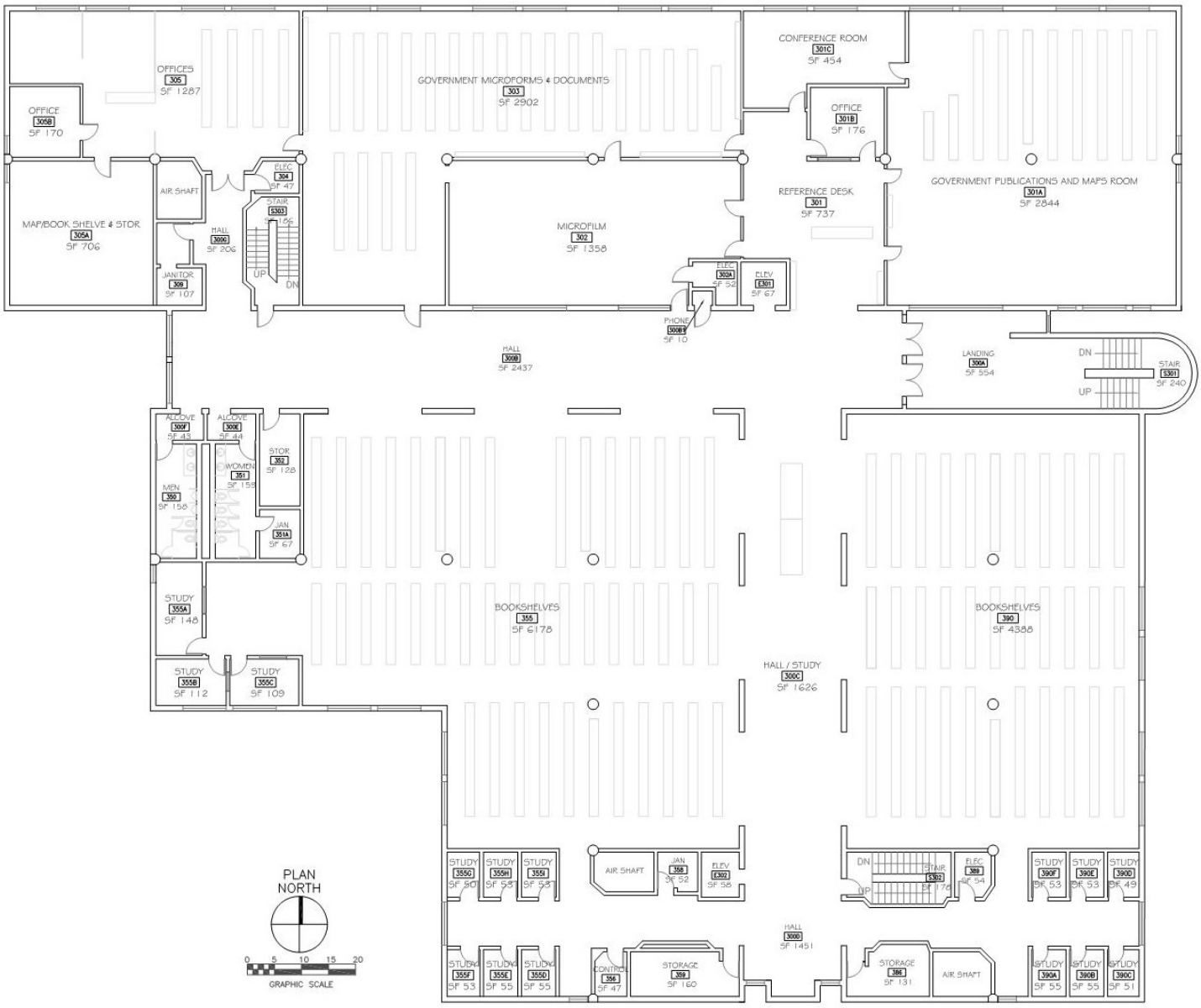
Brooks Library

Existing Second Floor Layout



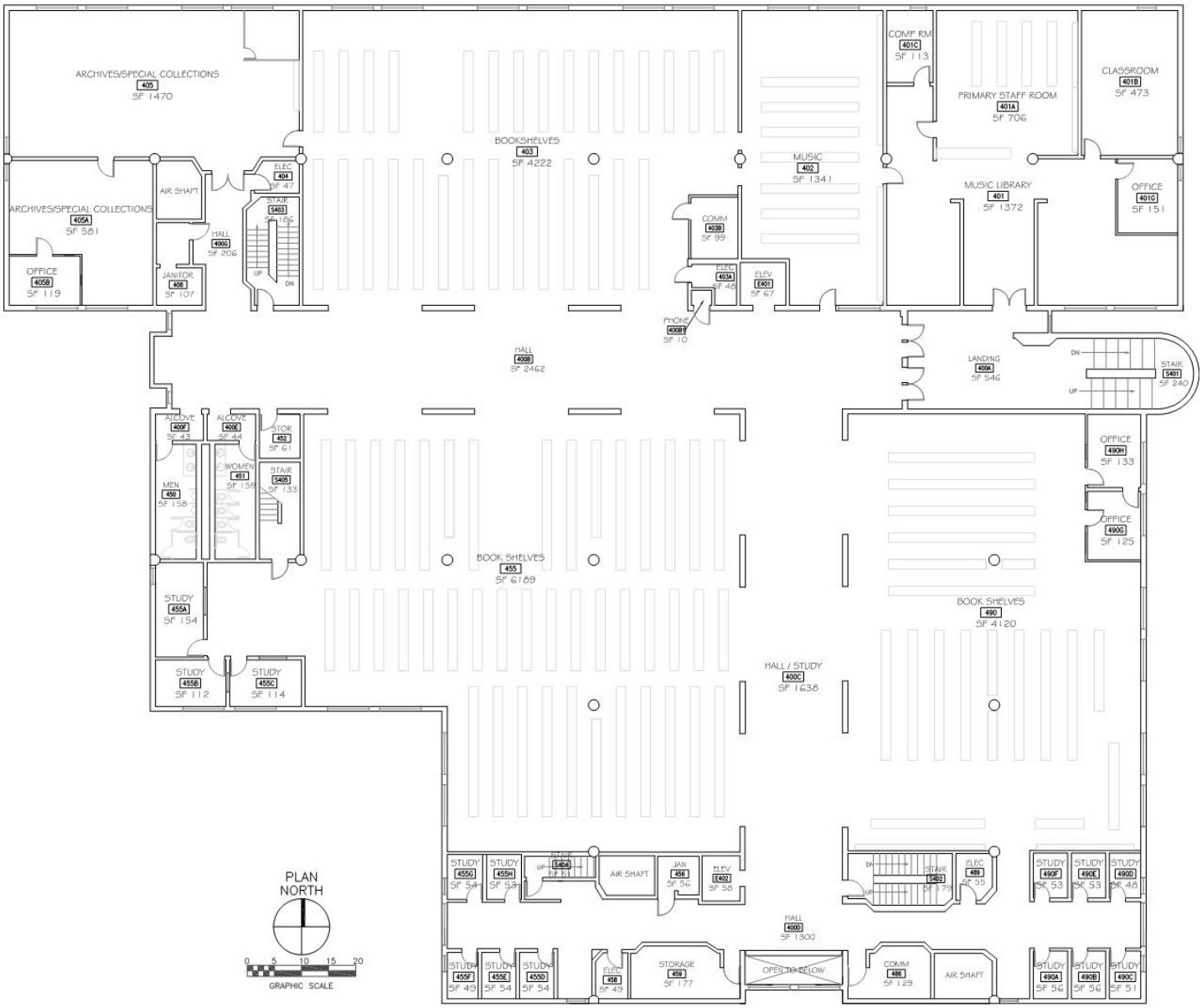
Brooks Library

Existing Third Floor Layout



Brooks Library

Existing Fourth Floor Layout

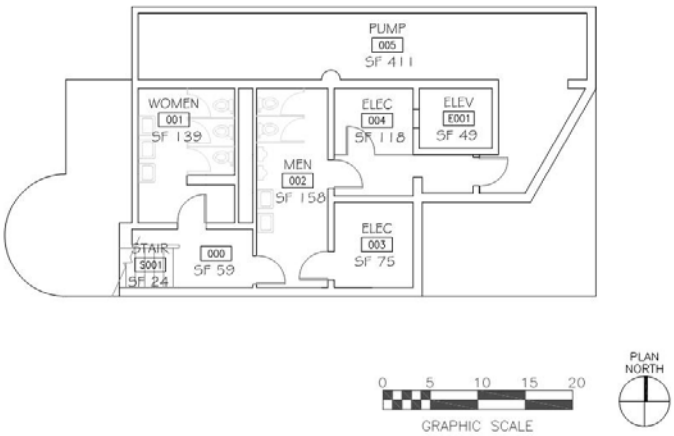


Brooks Library

Existing Fifth Floor Layout

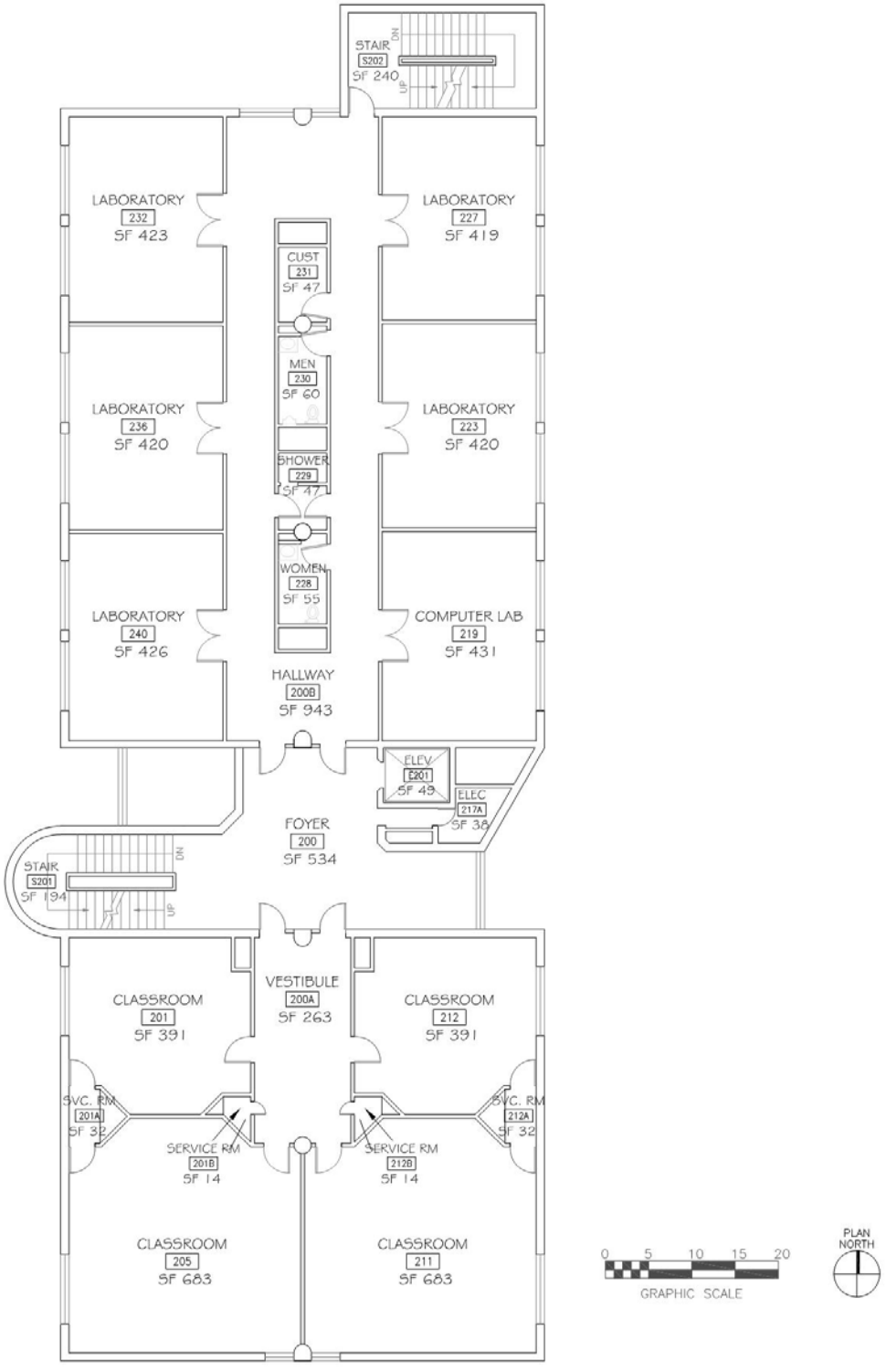
Farrell Hall

Existing Basement Layout



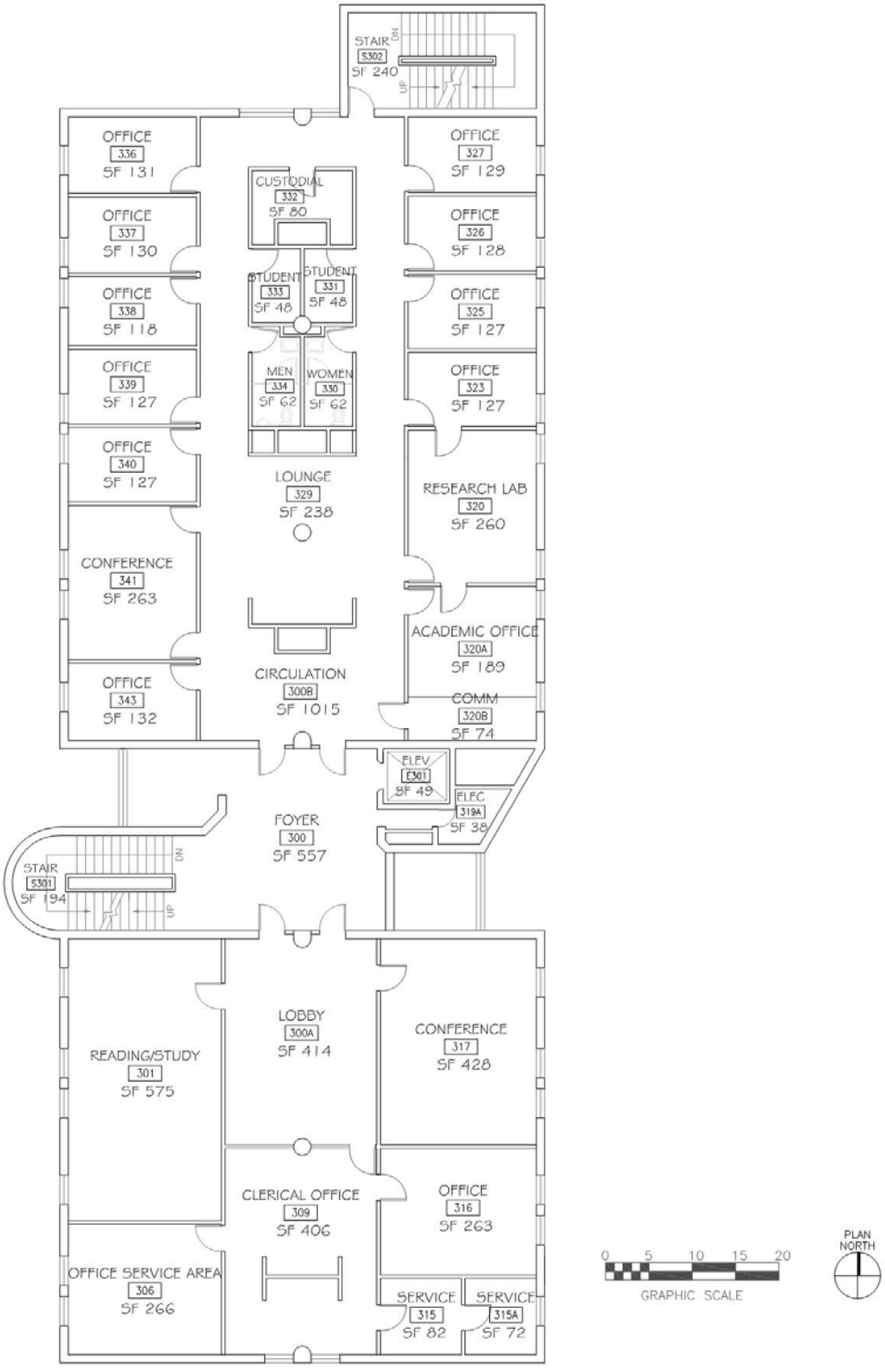
Farrell Hall

Existing First Floor Layout



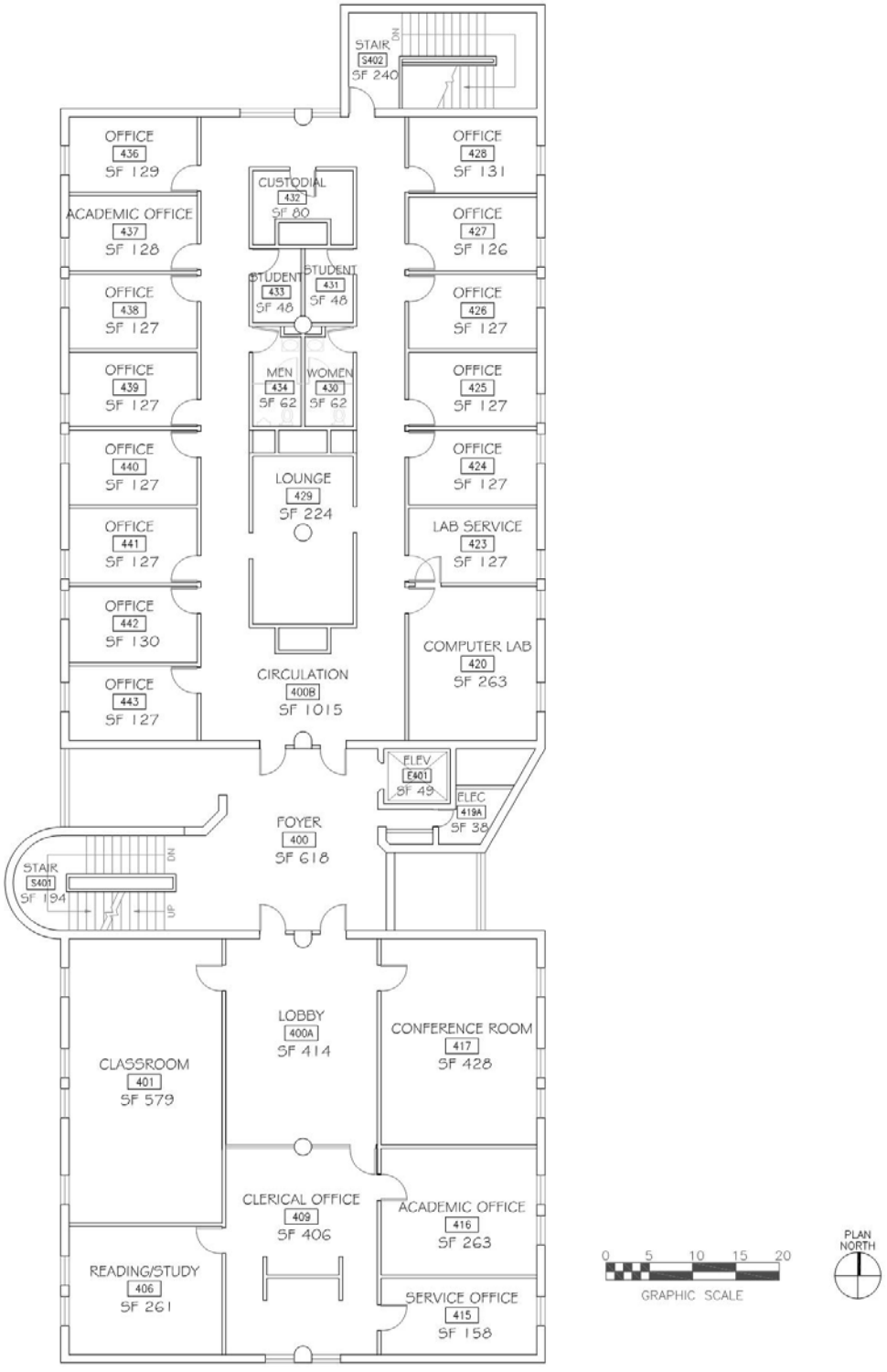
Farrell Hall

Existing Basement Layout



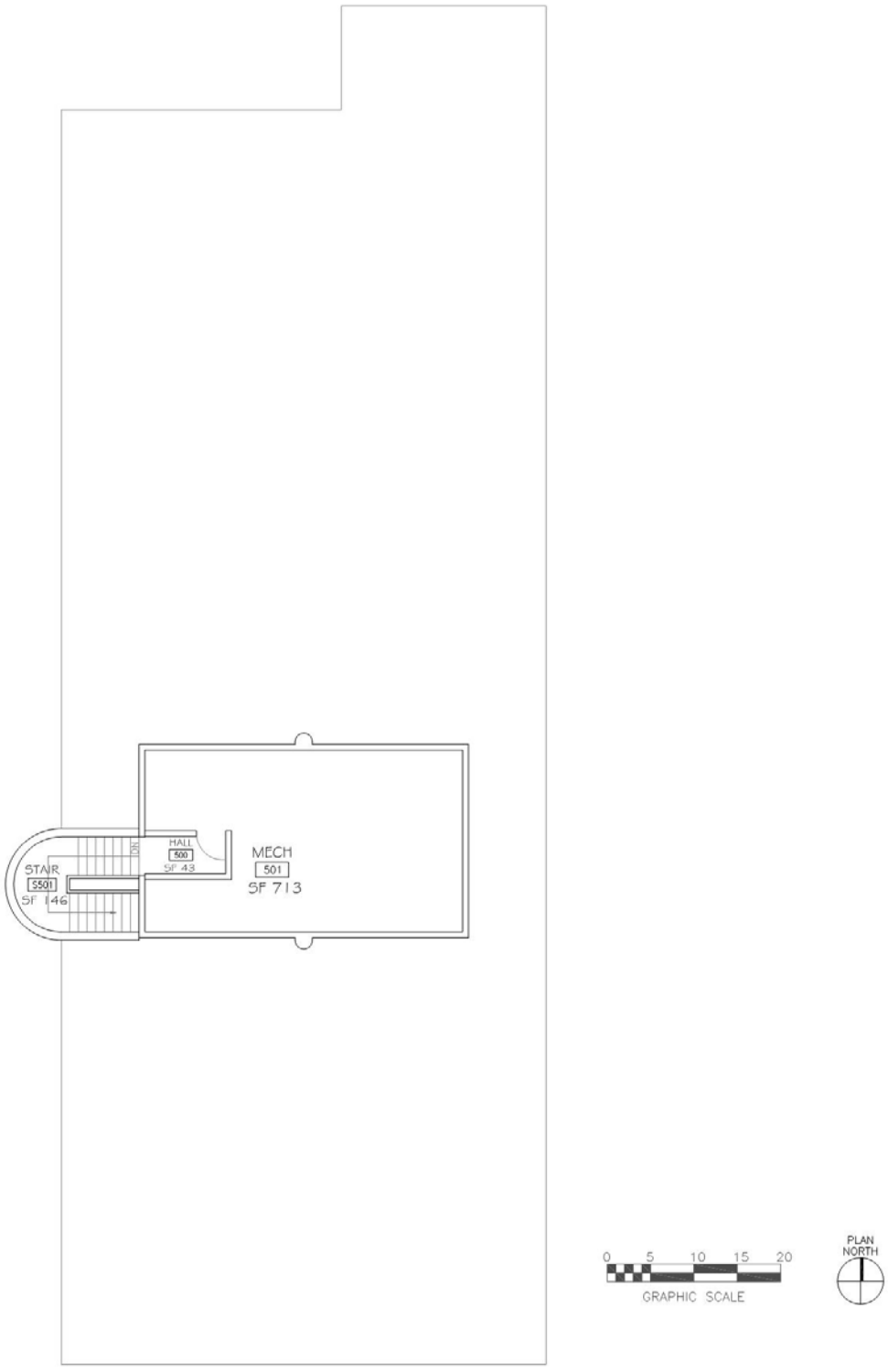
Farrell Hall

Existing First Floor Layout



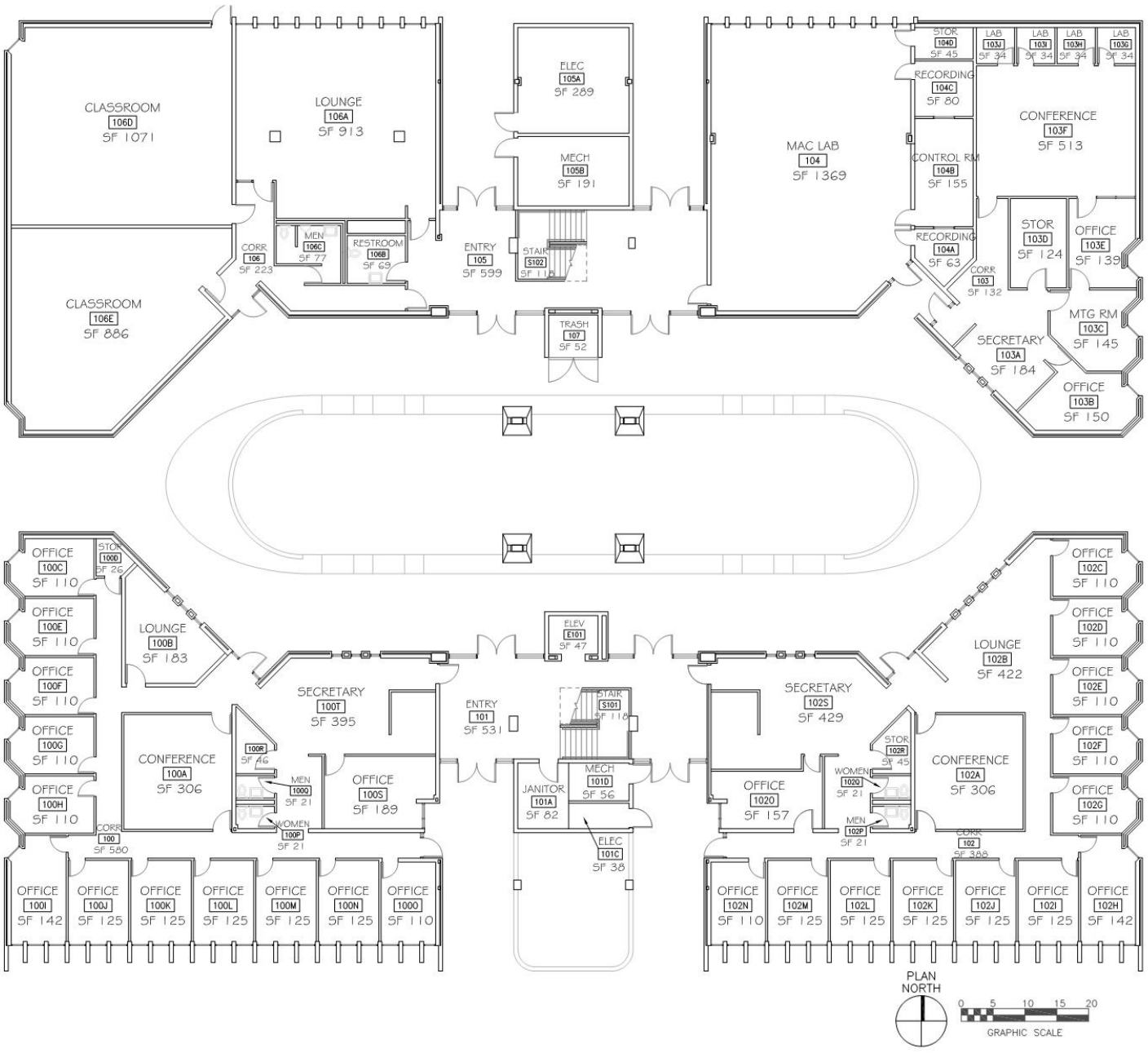
Farrell Hall

Existing Basement Layout



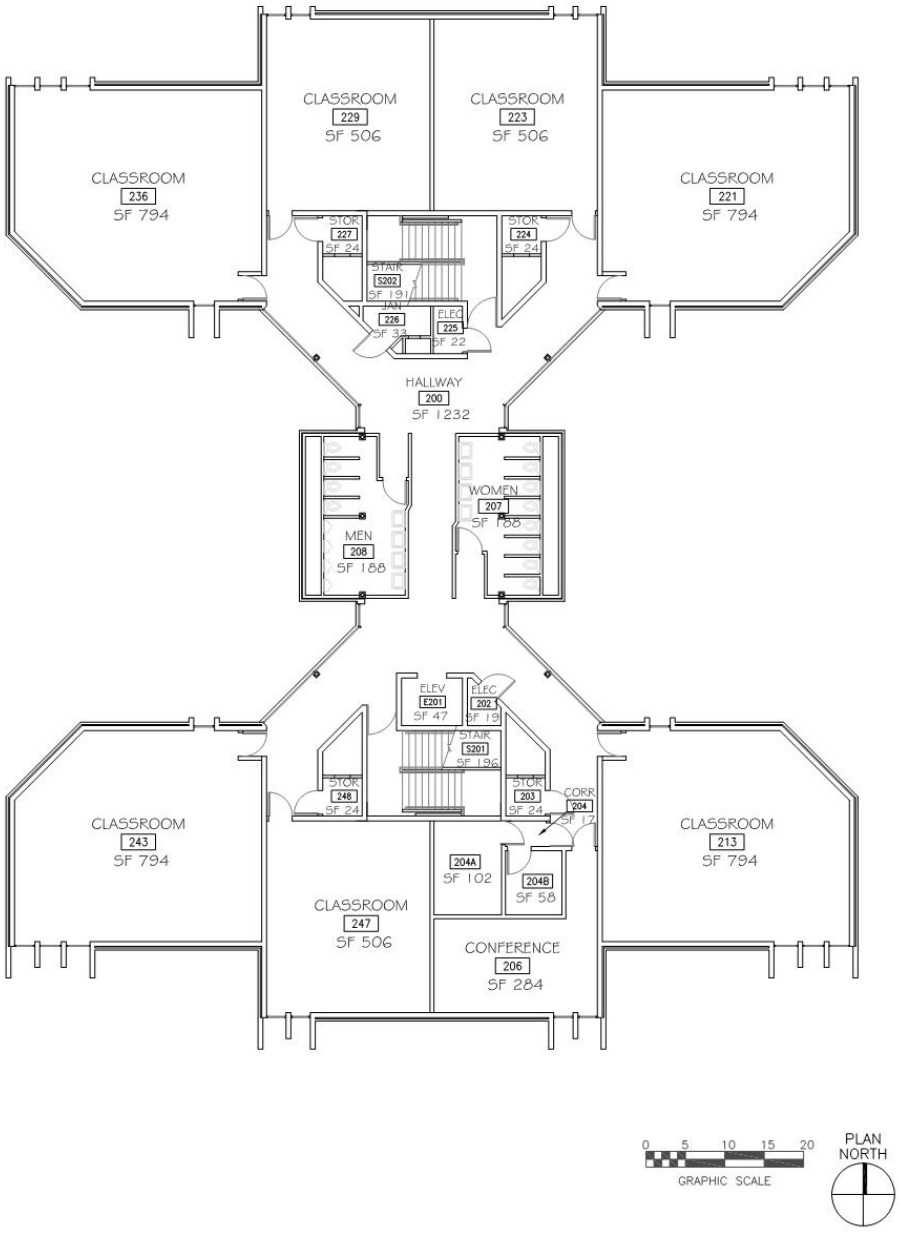
Language & Literature

Existing First Floor Layout



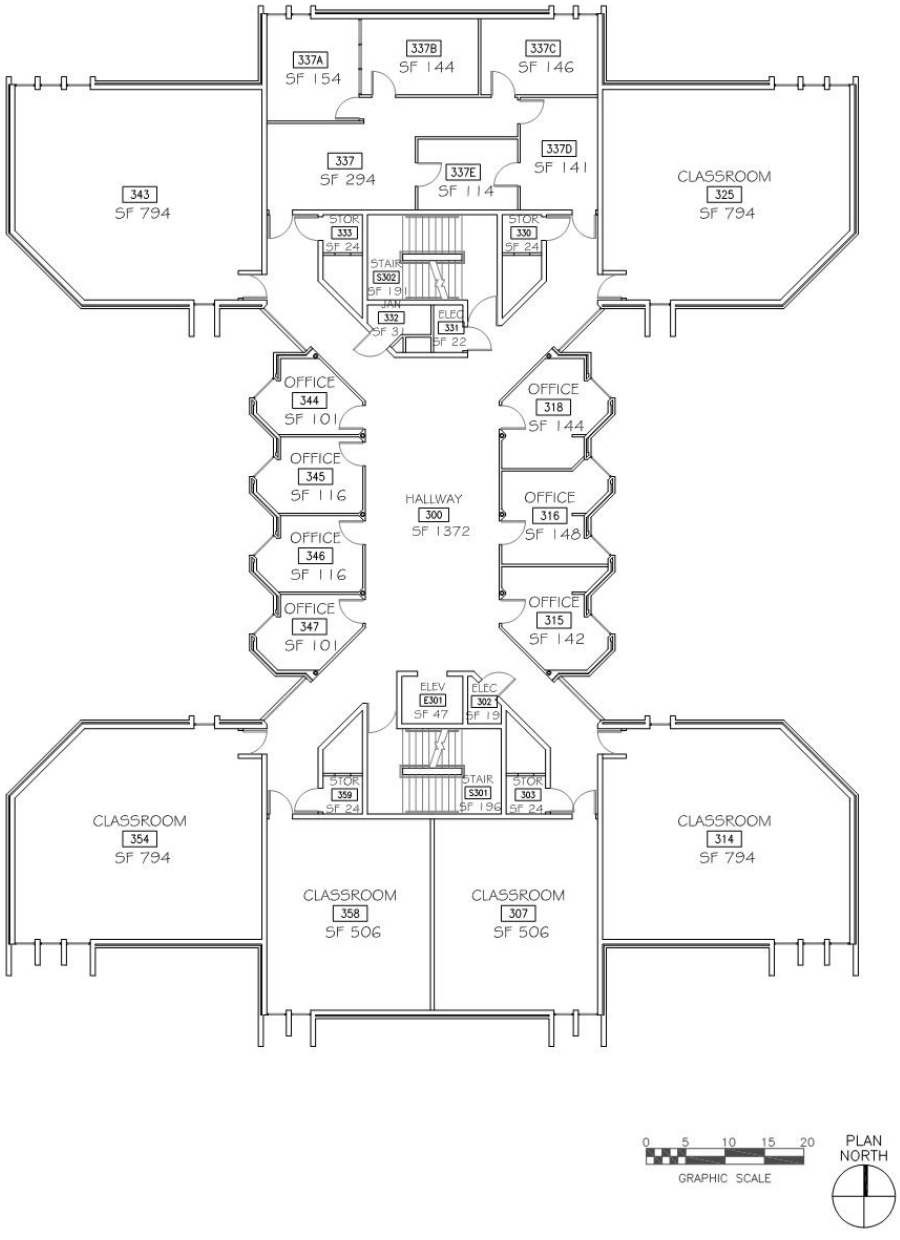
Language & Literature

Existing Second Floor Layout



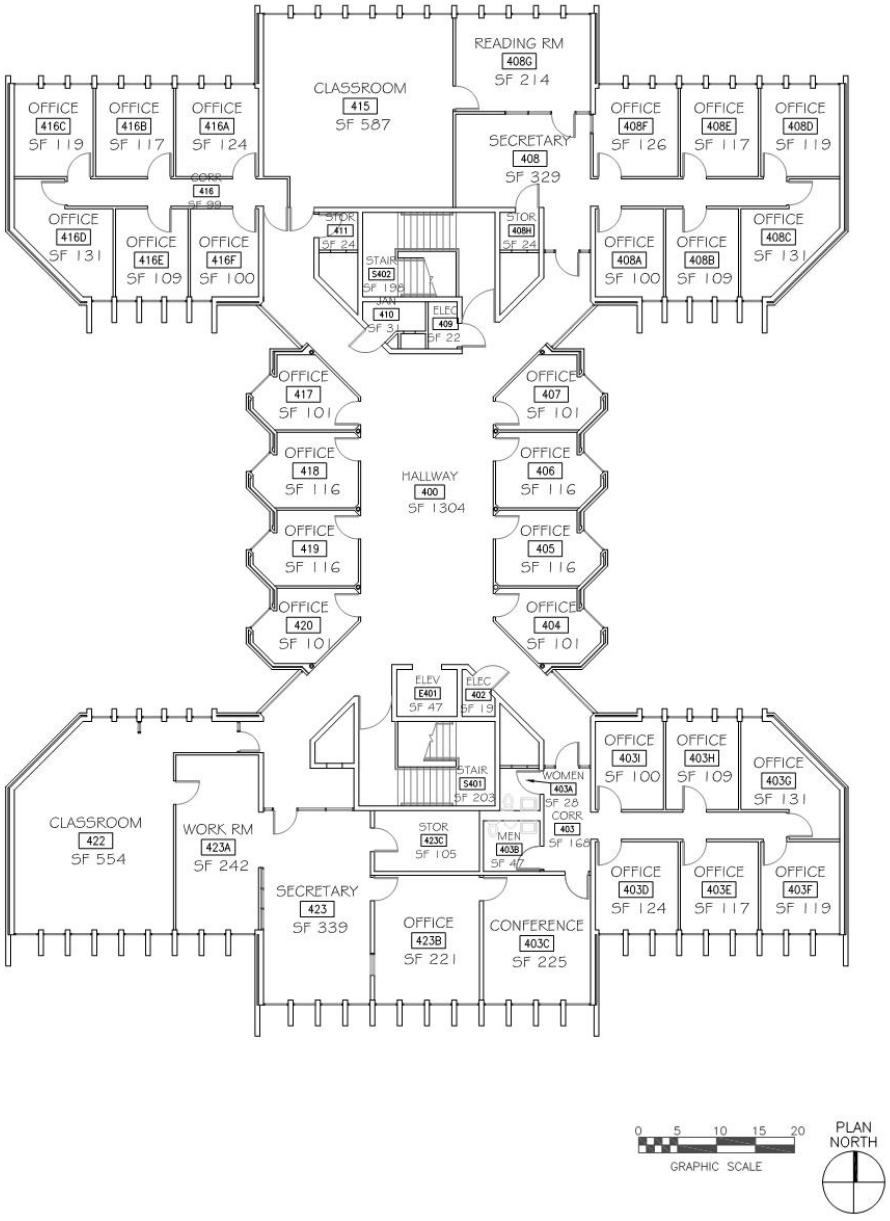
Language & Literature

Existing Third Floor Layout



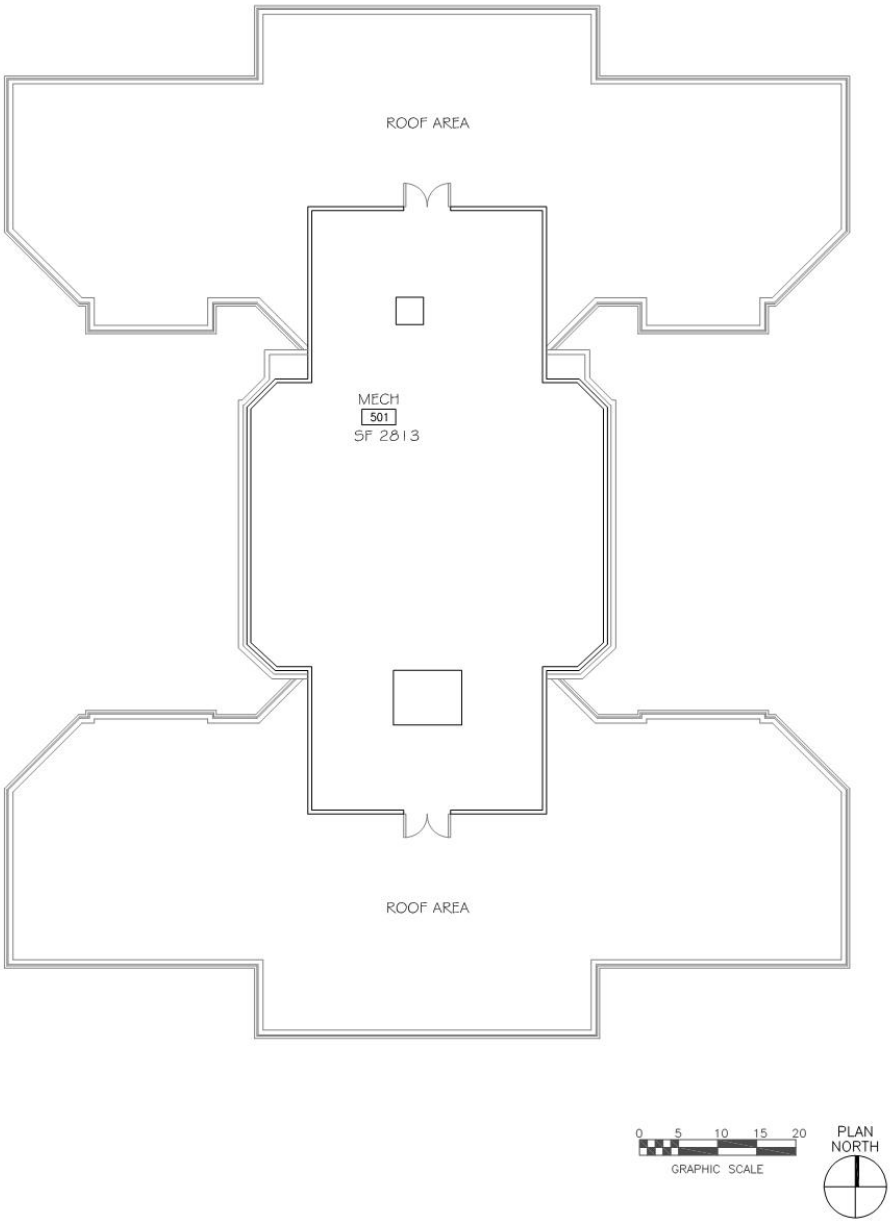
Language & Literature

Existing Fourth Floor Layout



Language & Literature

Existing Fifth Floor Layout



APPENDIX A

OFM PREDESIGN CHECKLIST AND OUTLINE

PREDESIGN CHECKLIST

- ☑ **Executive summary**
- ☑ **Problem statement, opportunity or program requirement**
  - ☑ Identify the problem, opportunity or program requirement that the project addresses and how it will be accomplished.
  - ☑ Identify and explain the statutory or other requirements that drive the project's operational programs and how these affect the need for space, location or physical accommodations. Include anticipated caseload projections (growth or decline) and assumptions, if applicable.
  - ☑ Explain the connection between the agency's mission, goals and objectives; statutory requirements; and the problem, opportunity or program requirements.
  - ☑ Describe in general terms what is needed to solve the problem.
  - ☑ Include any relevant history of the project, including previous predesigns or budget funding requests that did not go forward to design or construction.
- ☑ **Analysis of alternatives (including the preferred alternative)**
  - ☑ Describe all alternatives that were considered, including the preferred alternative. Include:
  - ☑ A no action alternative.
  - ☑ Advantages and disadvantages of each alternative. Please include a high-level summary table with your analysis that compares the alternatives, including the anticipated cost for each alternative.
  - ☑ Cost estimates for each alternative:
    - ☑ Provide enough information so decision makers have a general understanding of the costs.
    - ☑ Complete OFM's Life Cycle Cost Model (RCW 39.35B.050).
  - ☑ Schedule estimates for each alternative. Estimate the start, midpoint and completion dates.
- ☑ **Detailed analysis of preferred alternative**
  - ☑ Nature of space – how much of the proposed space will be used for what purpose (i.e., office, lab, conference, classroom, etc.)
  - ☑ Occupancy numbers.
  - ☑ Basic configuration of the building, including square footage and the number of floors.
  - ☑ Space needs assessment. Identify the guidelines used.
  - ☑ Site analysis:
    - ☑ Identify site studies that are completed or under way and summarize their results.
    - ☑ Location.
    - ☑ Building footprint and its relationship to adjacent facilities and site features. Provide aerial view, sketches of the building site and basic floorplans.
    - ☑ Water rights and water availability.
    - ☑ Stormwater requirements.
    - ☑ Ownership of the site, easements, and any acquisition issues.
    - ☑ Property setback requirements.
    - ☑ Potential issues with the surrounding neighborhood, during construction and ongoing.
    - ☑ Utility extension or relocation issues.
    - ☑ Potential environmental impacts.
    - ☑ Parking and access issues, including improvements required by local ordinances, local road impacts and parking demand.
    - ☑ Impact on surroundings and existing development with construction lay-down areas and construction phasing.
  - ☑ Consistency with applicable long-term plans (such as the Thurston County and Capitol campus master plans and agency or area master plans) as required by RCW 43.88.110.
  - ☑ Consistency with other laws and regulations:
    - ☑ High-performance public buildings (Chapter 39.35D RCW).

- ☑ State efficiency and environmental performance, if applicable (Executive Order 20-01).
- ☑ State energy standards for clean buildings (RCW 19.27A.210).
- ☑ Compliance with required vehicle charging capability for new buildings that provide on-site parking (RCW 19.27.540).
- ☑ Greenhouse gas emissions reduction policy (RCW 70.235.070).
- ☑ Archeological and cultural resources (Executive Order 05-05 and Section 106 of the National Historic Preservation Act of 1966). If mitigation is anticipated, please note this in the predesign with narrative about how mitigation is worked into the project schedule and budget.
- ☑ Americans with Disabilities Act (ADA) implementation (Executive Order 96-04).
- ☑ Compliance with planning under Chapter 36.70A RCW, as required by RCW 43.88.0301.
- ☑ Information required by RCW 43.88.0301(1).
- ☑ Other codes or regulations.

- ☑ Identify problems that require further study. Evaluate identified problems to establish probable costs and risk.
- ☑ Identify significant or distinguishable components, including major equipment and ADA requirements in excess of existing code.
- ☑ Identify planned technology infrastructure and other related IT investments that affect the building plans.
- ☑ Identify any site-related and/or physical security measures for the project.
- ☑ Describe planned commissioning to ensure systems function as designed.
- ☑ Describe any future phases or other facilities that will affect this project.
- ☑ Provide a comparative discussion of the pros and cons of the project delivery methods considered for this project, and offer a recommendation of proposed procurement method for the preferred alternative. The proposed method of project delivery must be justified.
- ☑ Describe how the project will be managed within the agency.
- ☑ Schedule.
  - ☑ Provide a high-level milestone schedule for the project, including key dates for budget approval, design, bid, acquisition, construction, equipment installation, testing, occupancy and full operation.
  - ☑ Incorporate value-engineering analysis and constructability review into the project schedule, as required by RCW 43.88.110(5)(c).
    - ☑ Describe factors that may delay the project schedule.
    - ☑ Describe the permitting or local government ordinances or neighborhood issues (such as location or parking compatibility) that could affect the schedule.
    - ☑ Identify when the local jurisdiction will be contacted and whether community stakeholder meetings are a part of the process.

- ☑ **Project budget analysis for the preferred alternative**
  - ☑ Cost estimate.
    - ☑ Major assumptions used in preparing the cost estimate.
    - ☑ Summary table of Uniformat Level II cost estimates.
    - ☑ The C-100.
  - ☑ Proposed funding.
    - ☑ Identify the fund sources and expected receipt of the funds.
    - ☑ If alternatively financed, such as through a COP, provide the projected debt service and fund source. Include the assumptions used for calculating finance terms and interest rates.
  - ☑ Facility operations and maintenance requirements.
    - ☑ Define the anticipated impact of the proposed project on the operating budget for the agency or institution. Include maintenance and operating assumptions (including FTEs) and moving costs.
    - ☑ Show five biennia of capital and operating costs from the time of occupancy, including an estimate of building repair, replacement and maintenance.

- ☑ Identify the agency responsible for ongoing maintenance and operations, if not maintained by the owner.
- ☑ Clarify whether furniture, fixtures and equipment are included in the project budget. If not included, explain why.

☑ **Predesign appendices**

- ☑ Completed Life Cycle Cost Model.
- ☑ A letter from DAHP.
- ☐ Title report for projects including proposed acquisition. (NOT APPLICABLE)

APPENDIX B

PROJECT BUDGET UNIT COST DETAIL

C-100, DESIGN ALTERNATE NO. 2
COST ESTIMATE REPORT, DESIGN ALTERNATE NO.2
C-100, DESIGN ALTERNATE NO. 3
COST ESTIMATE REPORT, DESIGN ALTERNATE NO.3

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central Washington University	
Project Name	Humanities & Social Sciences Complex	
OFM Project Number		

Contact Information		
Name	Bill Yarwood	
Phone Number	509.963.1120	
Email	william.yarwood@cwu.edu	

Statistics			
Gross Square Feet	119,890	MACC per Square Foot	$372
Usable Square Feet	71,935	Escalated MACC per Square Foot	$409
Space Efficiency	60.0%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	6.26%
Remodel	No	Projected Life of Asset (Years)	50
Additional Project Details			
Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	Yes
Sales Tax Rate %	8.30%	Location Used for Tax Rate	Ellensburg, WA
Contingency Rate	5%		
Base Month	June-20	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule			
Predesign Start	May-20	Predesign End	July-20
Design Start	September-21	Design End	May-23
Construction Start	September-23	Construction End	June-25
Construction Duration	21 Months		

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Project Cost Estimate

Total Project	**$62,866,490**	Total Project Escalated	**$68,800,382**
		Rounded Escalated Total	**$68,800,000**

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central Washington University
Project Name	Humanities & Social Sciences Complex
OFM Project Number	

Cost Estimate Summary

Acquisition			
Acquisition Subtotal	**$1,470,414**	**Acquisition Subtotal Escalated**	**$1,470,414**

Consultant Services			
Predesign Services	$148,700		
A/E Basic Design Services	$2,020,744		
Extra Services	$1,591,677		
Other Services	$907,871		
Design Services Contingency	$233,450		
Consultant Services Subtotal	**$4,902,441**	**Consultant Services Subtotal Escalated**	**$5,204,535**

Construction			
Construction Contingencies	$2,227,761	Construction Contingencies Escalated	$2,454,770
Maximum Allowable Construction Cost (MACC)	$44,555,220	Maximum Allowable Construction Cost (MACC) Escalated	$49,025,510
Sales Tax	$3,882,987	Sales Tax Escalated	$4,272,864
Construction Subtotal	**$50,665,968**	**Construction Subtotal Escalated**	**$55,753,144**

Equipment			
Equipment	$3,351,280		
Sales Tax	$278,156		
Non-Taxable Items	$0		
Equipment Subtotal	**$3,629,436**	**Equipment Subtotal Escalated**	**$3,999,277**

Artwork			
Artwork Subtotal	**$342,290**	**Artwork Subtotal Escalated**	**$342,290**

Agency Project Administration			
Agency Project Administration Subtotal	$1,215,789		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$1,215,789**	**Project Administation Subtotal Escalated**	**$1,339,679**

Other Costs			
Other Costs Subtotal	**$640,150**	**Other Costs Subtotal Escalated**	**$691,042**

Project Cost Estimate

Total Project	**$62,866,490**	Total Project Escalated	**$68,800,382**
		Rounded Escalated Total	**$68,800,000**

Cost Estimate Details

Acquisition Costs				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
Purchase/Lease				
Appraisal and Closing				
Right of Way				
Demolition	$1,470,414			
Pre-Site Development				
Other				
Insert Row Here				
ACQUISITION TOTAL	**$1,470,414**	**NA**	**$1,470,414**	

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Cost Estimate Details

Consultant Services				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Pre-Schematic Design Services				
Programming/Site Analysis	$120,500			
Environmental Analysis				
Predesign Study	$28,200			
Other				
Insert Row Here				
Sub TOTAL	**$148,700**	**1.0299**	**$153,147**	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	$2,020,744			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	**$2,020,744**	**1.0502**	**$2,122,186**	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)	$250,000			
Geotechnical Investigation	$35,000			
Commissioning	$120,000			
Site Survey	$35,000			
Testing	$100,000			
LEED Services	$90,000			
Voice/Data Consultant	$200,000			
Value Engineering	$80,000			
Constructability Review	$80,000			
Environmental Mitigation (EIS)	$20,000			
Landscape Consultant	$110,000			
Acoustical Engineer, Cost Consultant	$150,000			
Remodel/Addition to Brooks 3% add	$321,677			
Insert Row Here				
Sub TOTAL	**$1,591,677**	**1.0502**	**$1,671,580**	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	$907,871			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
Sub TOTAL	**$907,871**	**1.1019**	**$1,000,383**	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	$233,450			
Other				
Insert Row Here				
Sub TOTAL	**$233,450**	**1.1019**	**$257,239**	Escalated to Mid-Const.
CONSULTANT SERVICES TOTAL	**$4,902,441**		**$5,204,535**	

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Cost Estimate Details

Construction Contracts				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Site Work				
G10 - Site Preparation	$435,000			
G20 - Site Improvements	$980,000			
G30 - Site Mechanical Utilities	$465,000			
G40 - Site Electrical Utilities	$635,000			
G60 - Other Site Construction				
Insert Row Here				
Sub TOTAL	**$2,515,000**	**1.0795**	**$2,714,943**	
2) Related Project Costs				
Offsite Improvements	$430,000			
City Utilities Relocation	$175,000			
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
Sub TOTAL	**$605,000**	**1.0795**	**$653,098**	
3) Facility Construction				
A10 - Foundations	$1,295,861			
A20 - Basement Construction				
B10 - Superstructure	$4,556,289			
B20 - Exterior Closure	$6,712,412			
B30 - Roofing	$1,095,175			
C10 - Interior Construction	$3,685,408			
C20 - Stairs	$349,481			
C30 - Interior Finishes	$2,969,230			
D10 - Conveying	$301,650			
D20 - Plumbing Systems	$1,378,200			
D30 - HVAC Systems	$7,135,358			
D40 - Fire Protection Systems	$585,890			
D50 - Electrical Systems	$6,202,934			
F10 - Special Construction				
F20 - Selective Demolition	$119,204			
General Conditions	$2,535,081			
GC Overhead & Profit	$2,513,046			
Insert Row Here				
Sub TOTAL	**$41,435,220**	**1.1019**	**$45,657,469**	
4) Maximum Allowable Construction Cost				
MACC Sub TOTAL	**$44,555,220**		**$49,025,510**	

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7) Construction Contingency				
Allowance for Change Orders	$2,227,761			
Other				
Insert Row Here				
Sub TOTAL	**$2,227,761**	**1.1019**	**$2,454,770**	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$3,882,987**		**$4,272,864**	
CONSTRUCTION CONTRACTS TOTAL	**$50,665,968**		**$55,753,144**	

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Cost Estimate Details

Equipment				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
E10 - Equipment	$1,500,000			
E20 - Furnishings	$1,851,280			
F10 - Special Construction				
Other				
Insert Row Here				
Sub TOTAL	**$3,351,280**	**1.1019**	**$3,692,776**	
1) Non Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$278,156**		**$306,501**	
EQUIPMENT TOTAL	**$3,629,436**		**$3,999,277**	

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Cost Estimate Details

Artwork					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Project Artwork	$0				0.5% of total project cost for new construction
Higher Ed Artwork	$342,290				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	**$342,290**		**NA**	**$342,290**	

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Cost Estimate Details

Project Management				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
Agency Project Management	$1,215,789			
Additional Services				
Other				
Insert Row Here				
PROJECT MANAGEMENT TOTAL	**$1,215,789**	**1.1019**	**$1,339,679**	

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Cost Estimate Details

Other Costs				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
Mitigation Costs	$175,000			
Hazardous Material Remediation/Removal	$440,150			
Historic and Archeological Mitigation	$25,000			
Other				
Insert Row Here				
OTHER COSTS TOTAL	**$640,150**	**1.0795**	**$691,042**	

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C-100(2020)
Additional Notes

Tab A. Acquisition
Insert Row Here

Tab B. Consultant Services
Insert Row Here

Tab C. Construction Contracts
Insert Row Here

Tab D. Equipment
Insert Row Here

Tab E. Artwork
Insert Row Here

Tab F. Project Management
Insert Row Here

Tab G. Other Costs
Insert Row Here

Central Washington University
Humanities and Social Sciences
Ellensburg, WA

Conceptual Cost Model - Preferred Option #2

Estimate Issue Date: **June 25, 2020**
Estimate Revision: **0**

For: Dennis Erwood
Studio Meng Strazzara

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Date: **June 25, 2020**

Estimated By:

Architectural - Andy Cluness, Mark Richardson

Structural: Andy Cluness

Electrical, Mechanical - Neil Watson

Sitework - Andy Cluness

Exclusions from Construction Cost:

Pre-construction Services

Design fees

Owners administration costs

Building and land acquisition fees

Legal and accounting fees

Removal of unforeseen underground obstructions

Owner's furniture, furnishings and equipment

Owners supplied materials

Moving owners equipment and furniture

Compression of schedule, premium or shift work

Assessments, finance, legal and development charges

Builder's risk, project wrap-up and other owner provided insurance program

Washington State Sales Tax

AV Equipment

Assumption used in establishing the estimate:

The project will be delivered utilizing the alternative project delivery method of Design, Bid, Build.

Estimating / Design Contingency is Included at 5.00%

Escalation is calculated to Construction Start Date June 2023.

Year 1 Escalation - 4.50%

Year 2 Escalation - 4.25%

Year 3 Escalation - 4.00%

Open and competitive bidding among all proportions of the work

Items that may affect the cost estimate:

Modifications to the scope of work included in this estimate.

Special phasing requirements other than mentioned above.

Restrictive technical specifications or excessive contract conditions.

Any non-competitive bid situations.

Bids delayed beyond the projected schedule.

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Date: **June 25, 2020**

Assumptions used in establishing the estimate:

A10: Foundations:

Scope of work continuous and spread footings, perimeter drainage, reinforced concrete slab on grade, elevator pit.

B10: Superstructure:

Vertical and horizontal steel structure including BRB brace frames, metal deck and reinforced concrete topping slab at floor structure, sprayed cementitious fireproofing, intumescent paint at select columns and housekeeping pads.

B20: Exterior enclosure:

Scope of work includes laid up brick and metal panel and metal panel soffits. The extent of brick would be 70% and 30% metal panels at opaque walls. Glazing scope includes curtain wall and storefront glazing. The extent of the glazing would be comparable to the Health Science project at approximately 24% to the gross wall area. Other scope would include louvers. Exterior door scope would include glazed aluminum doors at vestibules and hollow metal doors at other locations.

B30: Roofing:

Roof scope of work includes a 1-ply EPDM 60 mil white fully adhered with R-38 insulation, sheet metal flashings, rough carpentry. Scope includes roof ladders, roof hatch, skylights.

C10: Interior Construction:

Interior partitions consist of metal stud framing, batt insulation and gypsum board, interior glazing, railings at open to below areas, operable partitions and interior doors. Fittings and specialties will include toilet partitions, signage, miscellaneous, restroom accessories fire extinguishers and cabinets.

C20: Stairs

Scope includes exit stairs and architectual stairs.

C30: Interior Finishes

Wall finishes include paint to gypsum board, porcelain tile at restroom wet walls, specialty wall finishes. Floor finishes include porcelain tile at restrooms, carpet tile, resilient flooring, polished concrete, walk off mats and sealed concrete at MEP rooms. Ceiling finishes include ACT and grid, gypsum board painted, specialty wall finishes.

D10: Conveying systems

Two passenger elevators.

D20: Plumbing

Plumbing include sanitary fixtures, sanitary waste, vent and service piping, water treatment, storage and circulation, surface water drainage, gas piping, fittings and specialties.

D30: Heating, Ventilation and Air Conditioning (HVAC)

Heat generation and chilling, thermal storage and circulation pumps, piping, fittings, valves and insulation, radiant systems, air handling equipment, air distribution and return, diffusers and return air grilles, controls, instrumentation and balancing.

D40: Fire Protection Systems

Wet pipe sprinkler system, standpipe systems to stairs.

D50: Electrical

Electrical scope includes main service and distribution, emergency or uniterrupted power, grounding systems, machine and equipment power, user convenience power, testing and seismic restraints. Other scope includes lighting and branch wiring, communications and security systems, alarm and access control and CCTV system rough-in only.

E10: Equipment

No Scope Anticipated

E20: Fixed Furnishing

Fixed furnishings include casework and interior and exterior window treatments.

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Date: **June 25, 2020**

OVERALL SUMMARY CONSTRUCTION COST

Prepared By: AC

	Construction	Gross Area	$/SF	$
Humanities and Social Sciences Building	New	90,580 SF	421.69	38,196,783
Brooks Remodel	Renovation	5,000 SF	135.24	676,218
Brooks Addition at North Side	New	24,098 SF	416.90	10,046,364
Sitework	Site			3,303,909
Demolition & HAZMAT (L&L Building)	Demolition			1,910,564
Off-Site Improvements	Site			794,777
TOTAL CONSTRUCTION COST BUILDING & SITEWORK				**54,928,615**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Gross Floor Area: 95,580 SF

Summary of Estimate

Date: June 25, 2020

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS			1,295,861	13.56
A1010	Standard Foundation		825,682		8.64
A1020	Special Foundation				-
A1030	Slab on grade		470,180		4.92
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE			4,556,289	47.67
B1010	Floor & Roof Construction		4,556,289		47.67
B20	EXTERIOR ENCLOSURE			6,712,412	70.23
B2010	Exterior Walls		4,484,165		46.92
B2020	Exterior Windows		2,111,450		22.09
B2030	Exterior Doors		116,797		1.22
B30	ROOFING			1,095,175	11.46
B3010	Roofing		1,095,175		11.46
C10	INTERIOR CONSTRUCTION			3,685,408	38.56
C1010	Partitions		2,717,303		28.43
C1020	Interior Doors		622,856		6.52
C1030	Fittings		345,250		3.61
C20	STAIRS			349,481	3.66
C2010	Stair Construction		349,481		3.66
C30	INTERIOR FINISHES			2,969,230	31.07
C3010	Wall Finishes		872,601		9.13
C3020	Floor Finishes		951,220		9.95
C3030	Ceiling Finishes		1,145,409		11.98
D10	CONVEYING			301,650	3.16
D1010	Elevators & Lifts		301,650		3.16
D20	PLUMBING			1,378,200	14.42
D2010	Plumbing		1,378,200		14.42
D30	HVAC			7,135,358	74.65
D3010	HVAC		7,135,358		74.65
D40	FIRE PROTECTION			585,890	6.13

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Gross Floor Area: 95,580 SF

Summary of Estimate

Date: June 25, 2020

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		585,890		6.13
D50	ELECTRICAL			6,202,934	64.90
D5000	Electrical		6,202,934		64.90
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			851,280	8.91
E2010	Fixed Furnishings		851,280		8.91
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			119,204	1.25
F2010	Selective Demolition		119,204		1.25
G	BUILDING SITEWORK			2,515,000	26.31
G10	Site Preparation		435,000		4.55
G20	Site Improvement		980,000		10.25
G30	Site Mechanical Utilities		465,000		4.87
G40	Site Electrical Utilities		635,000		6.64
G	DEMOLITION & ABATEMENT			1,454,359	15.22
G10	Demolition & Abatement		1,454,359		15.22
G	OFFSITE IMPROVEMENTS			605,000	6.33
G10	Site Preparation		150,000		1.57
G20	Site Improvement		280,000		2.93
G30	Site Mechanical Utilities		125,000		1.31
G40	Site Electrical Utilities		50,000		0.52
	Sub-Total Direct Cost			**41,812,732**	**437.46**
	Estimating / Design Contingency	5.00%		2,090,637	21.87
	Escalation - June 2023	13.37%		5,871,191	61.43
	General Conditions / General Requirements	5.20%		2,588,277	27.08
	GC Overhead & Profit	4.90%		2,565,779	26.84
	TOTAL CONSTRUCTION COST			**$54,928,615**	**574.69**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2

Gross Floor Area: 95,580 SF

Summary of Estimate

Date: June 25, 2020

No.	Element Description		Element Totals		Cost Per SF
A10	FOUNDATIONS		1,295,861		-
A20	BASEMENT WALL CONSTRUCTION				-
B10	SUPERSTRUCTURE		4,556,289		-
B20	EXTERIOR ENCLOSURE		6,712,412		-
B30	ROOFING		1,095,175		-
C10	INTERIOR CONSTRUCTION		3,685,408		-
C20	STAIRS		349,481		-
C30	INTERIOR FINISHES		2,969,230		-
D10	CONVEYING		301,650		-
D20	PLUMBING		1,378,200		-
D30	HVAC		7,135,358		-
D40	FIRE PROTECTION		585,890		-
D50	ELECTRICAL		6,202,934		-
E10	EQUIPMENT				-
E20	FURNISHINGS		851,280		-
F10	SPECIAL CONSTRUCTION				-
F20	SELECTIVE BUILDING DEMOLITION		119,204		-
G	BUILDING SITEWORK		2,515,000		-
G	DEMOLITION & ABATEMENT		1,454,359		-
G	OFFSITE IMPROVEMENTS		605,000		-
	Sub-Total Direct Cost			**41,812,732**	**437.46**
	Estimating / Design Contingency	5.00%		2,090,637	21.87
	Escalation - June 2023	13.37%		5,871,191	61.43
	General Conditions / General Requirements	5.20%		2,588,277	27.08
	GC Overhead & Profit	4.90%		2,565,779	26.84
	TOTAL CONSTRUCTION COST			**$54,928,615**	**574.69**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 90,580 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS			1,023,554	11.30
A1010	Standard Foundation		652,176		7.20
A1020	Special Foundation				-
A1030	Slab on grade		371,378		4.10
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE			3,577,910	39.50
B1010	Floor & Roof Construction		3,577,910		39.50
B20	EXTERIOR ENCLOSURE			5,484,619	60.55
B2010	Exterior Walls		3,650,374		40.30
B2020	Exterior Windows		1,739,136		19.20
B2030	Exterior Doors		95,109		1.05
B30	ROOFING			865,039	9.55
B3010	Roofing		865,039		9.55
C10	INTERIOR CONSTRUCTION			2,900,100	32.02
C1010	Partitions		2,137,688		23.60
C1020	Interior Doors		493,661		5.45
C1030	Fittings		268,751		2.97
C20	STAIRS			276,043	3.05
C2010	Stair Construction		276,043		3.05
C30	INTERIOR FINISHES			2,263,141	24.99
C3010	Wall Finishes		674,821		7.45
C3020	Floor Finishes		718,752		7.94
C3030	Ceiling Finishes		869,568		9.60
D10	CONVEYING			181,160	2.00
D1010	Elevators & Lifts		181,160		2.00
D20	PLUMBING			1,068,844	11.80
D2010	Plumbing		1,068,844		11.80
D30	HVAC			5,525,380	61.00
D3010	HVAC		5,525,380		61.00
D40	FIRE PROTECTION			452,900	5.00

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 90,580 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		452,900		5.00
D50	ELECTRICAL			4,800,740	53.00
D5000	Electrical		4,800,740		53.00
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			656,705	7.25
E2010	Fixed Furnishings		656,705		7.25
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			-	
F2010	Building Demolition				-
	Sub-Total Direct Cost			**29,076,135**	**321.00**
	Estimating / Design Contingency	5.00%		1,453,807	16.05
	Escalation - June 2023	13.37%		4,082,765	45.07
	General Conditions / General Requirements	5.20%		1,799,861	19.87
	GC Overhead & Profit	4.90%		1,784,216	19.70
	TOTAL CONSTRUCTION COST			**$38,196,783**	**421.69**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 5,000 SF**
Library Improvements **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS				-
A1010	Standard Foundation				-
A1020	Special Foundation				-
A1030	Slab on grade				-
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE				-
B1010	Floor & Roof Construction				-
B20	EXTERIOR ENCLOSURE				-
B2010	Exterior Walls				-
B2020	Exterior Windows				-
B2030	Exterior Doors				-
B30	ROOFING				-
B3010	Roofing				-
C10	INTERIOR CONSTRUCTION			47,500	9.50
C1010	Partitions		35,000		7.00
C1020	Interior Doors		7,500		1.50
C1030	Fittings		5,000		1.00
C20	STAIRS			-	-
C2010	Stair Construction				-
C30	INTERIOR FINISHES			104,000	20.80
C3010	Wall Finishes		18,250		3.65
C3020	Floor Finishes		41,250		8.25
C3030	Ceiling Finishes		44,500		8.90
D10	CONVEYING			-	-
D1010	Elevators & Lifts				-
D20	PLUMBING			25,000	5.00
D2010	Plumbing		25,000		5.00
D30	HVAC			140,000	28.00
D3010	HVAC		140,000		28.00
D40	FIRE PROTECTION			12,500	2.50

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 5,000 SF**
Library Improvements **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		12,500		2.50
D50	ELECTRICAL			125,000	25.00
D5000	Electrical		125,000		25.00
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			16,250	3.25
E2010	Fixed Furnishings		16,250		3.25
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			44,500	
F2010	Building Demolition		44,500		8.90
	Sub-Total Direct Cost			**514,750**	**102.95**
	Estimating / Design Contingency	5.00%		25,738	5.15
	Escalation - June 2023	13.37%		72,279	14.46
	General Conditions / General Requirements	5.20%		31,864	6.37
	GC Overhead & Profit	4.90%		31,587	6.32
	TOTAL CONSTRUCTION COST			**$676,218**	**135.24**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 24,098 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS			272,307	11.30
A1010	Standard Foundation		173,506		7.20
A1020	Special Foundation				-
A1030	Slab on grade		98,802		4.10
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE			978,379	40.60
B1010	Floor & Roof Construction		978,379		40.60
B20	EXTERIOR ENCLOSURE			1,227,793	50.95
B2010	Exterior Walls		833,791		34.60
B2020	Exterior Windows		372,314		15.45
B2030	Exterior Doors		21,688		0.90
B30	ROOFING			230,136	9.55
B3010	Roofing		230,136		9.55
C10	INTERIOR CONSTRUCTION			737,808	30.62
C1010	Partitions		544,615		22.60
C1020	Interior Doors		121,695		5.05
C1030	Fittings		71,499		2.97
C20	STAIRS			73,439	3.05
C2010	Stair Construction		73,439		3.05
C30	INTERIOR FINISHES			602,089	24.99
C3010	Wall Finishes		179,530		7.45
C3020	Floor Finishes		191,218		7.94
C3030	Ceiling Finishes		231,341		9.60
D10	CONVEYING			120,490	5.00
D1010	Elevators & Lifts		120,490		5.00
D20	PLUMBING			284,356	11.80
D2010	Plumbing		284,356		11.80
D30	HVAC			1,469,978	61.00
D3010	HVAC		1,469,978		61.00
D40	FIRE PROTECTION			120,490	5.00

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Preferred Option #2 **Gross Floor Area: 24,098 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		120,490		5.00
D50	ELECTRICAL			1,277,194	53.00
D5000	Electrical		1,277,194		53.00
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			178,325	7.40
E2010	Fixed Furnishings		178,325		7.40
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			74,704	
F2010	Building Demolition		74,704		3.10
	Sub-Total Direct Cost			**7,647,488**	**317.35**
	Estimating / Design Contingency	5.00%		382,374	15.87
	Escalation - June 2023	13.37%		1,073,832	44.56
	General Conditions / General Requirements	5.20%		473,392	19.64
	GC Overhead & Profit	4.90%		469,277	19.47
	TOTAL CONSTRUCTION COST			**$10,046,364**	**416.90**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model Date: **June 15, 2020**
Sitework **Summary of Estimate** Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			2,515,000	
G10	Site Preparation		435,000		
G20	Site Improvement		980,000		
G30	Site Mechanical Utilities		465,000		
G40	Site Electrical Utilities		635,000		
	Sub-Total Direct Cost			**2,515,000**	
	Estimating / Design Contingency	5.00%		125,750	
	Escalation - June 2023	13.37%		353,147	
	General Conditions / General Requirements	5.20%		155,683	
	GC Overhead & Profit	4.90%		154,329	
	TOTAL CONSTRUCTION COST			**$3,303,909**	

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model Date: **June 15, 2020**
Building Demolition / HAZMAT **Summary of Estimate** Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			1,454,359	
G10	Building Demolition / HAZMAT		899,368		
			554,991		
G20	Site Improvement				
G30	Site Mechanical Utilities				
G40	Site Electrical Utilities				
	Sub-Total Direct Cost			**1,454,359**	
	Estimating / Design Contingency	5.00%		72,718	
	Escalation - June 2023	13.37%		204,216	
	General Conditions / General Requirements	5.20%		90,027	
	GC Overhead & Profit	4.90%		89,245	
	TOTAL CONSTRUCTION COST			**$1,910,564**	

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model Date: **June 15, 2020**
Off-Site Improvements **Summary of Estimate** Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			605,000	
G10	Site Preparation		150,000		
G20	Site Improvement		280,000		
G30	Site Mechanical Utilities		125,000		
G40	Site Electrical Utilities		50,000		
	Sub-Total Direct Cost			**605,000**	
	Estimating / Design Contingency	5.00%		30,250	
	Escalation - June 2023	13.37%		84,952	
	General Conditions / General Requirements	5.20%		37,450	
	GC Overhead & Profit	4.90%		37,125	
	TOTAL CONSTRUCTION COST			**$794,777**	

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central Washington University	
Project Name	Humanities & Social Sciences Complex	
OFM Project Number		

Contact Information		
Name	Bill Yarwood	
Phone Number	509.963.1120	
Email	william.yarwood@cwu.edu	

Statistics			
Gross Square Feet	119,890	MACC per Square Foot	$389
Usable Square Feet	71,935	Escalated MACC per Square Foot	$428
Space Efficiency	60.0%	A/E Fee Class	B
Construction Type	College classroom facilit	A/E Fee Percentage	6.21%
Remodel	No	Projected Life of Asset (Years)	50
Additional Project Details			
Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	Yes
Sales Tax Rate %	8.30%	Location Used for Tax Rate	Ellensburg, WA
Contingency Rate	5%		
Base Month	June-20	OFM UFI# (from FPMT, if available)	
Project Administered By	Agency		

Schedule			
Predesign Start	May-20	Predesign End	July-20
Design Start	September-21	Design End	May-23
Construction Start	September-23	Construction End	June-25
Construction Duration	21 Months		

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Project Cost Estimate

Total Project	**$65,120,861**	Total Project Escalated	**$71,279,479**
		Rounded Escalated Total	**$71,279,000**

STATE OF WASHINGTON
AGENCY / INSTITUTION PROJECT COST SUMMARY

Updated June 2020

Agency	Central Washington University
Project Name	Humanities & Social Sciences Complex
OFM Project Number	

Cost Estimate Summary

Acquisition			
Acquisition Subtotal	**$1,470,414**	**Acquisition Subtotal Escalated**	**$1,470,414**

Consultant Services			
Predesign Services	$148,700		
A/E Basic Design Services	$2,100,408		
Extra Services	$1,270,000		
Other Services	$943,662		
Design Services Contingency	$223,138		
Consultant Services Subtotal	**$4,685,908**	**Consultant Services Subtotal Escalated**	**$4,978,448**

Construction			
Construction Contingencies	$2,334,230	Construction Contingencies Escalated	$2,572,089
Maximum Allowable Construction Cost (MACC)	$46,684,606	Maximum Allowable Construction Cost (MACC) Escalated	$51,356,877
Sales Tax	$4,068,563	Sales Tax Escalated	$4,476,105
Construction Subtotal	**$53,087,400**	**Construction Subtotal Escalated**	**$58,405,071**

Equipment			
Equipment	$3,369,203		
Sales Tax	$279,644		
Non-Taxable Items	$0		
Equipment Subtotal	**$3,648,846**	**Equipment Subtotal Escalated**	**$4,020,665**

Artwork			
Artwork Subtotal	**$354,624**	**Artwork Subtotal Escalated**	**$354,624**

Agency Project Administration			
Agency Project Administration Subtotal	$1,233,518		
DES Additional Services Subtotal	$0		
Other Project Admin Costs	$0		
Project Administration Subtotal	**$1,233,518**	**Project Administation Subtotal Escalated**	**$1,359,214**

Other Costs			
Other Costs Subtotal	**$640,150**	**Other Costs Subtotal Escalated**	**$691,042**

Project Cost Estimate

Total Project	**$65,120,861**	Total Project Escalated	**$71,279,479**
		Rounded Escalated Total	**$71,279,000**

Cost Estimate Details

Acquisition Costs					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition	$1,470,414				
Pre-Site Development					
Other					
Insert Row Here					
ACQUISITION TOTAL	**$1,470,414**		**NA**	**$1,470,414**	

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Cost Estimate Details

Consultant Services				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Pre-Schematic Design Services				
Programming/Site Analysis	$120,500			
Environmental Analysis				
Predesign Study	$28,200			
Other				
Insert Row Here				
Sub TOTAL	**$148,700**	**1.0299**	**$153,147**	Escalated to Design Start
2) Construction Documents				
A/E Basic Design Services	$2,100,408			69% of A/E Basic Services
Other				
Insert Row Here				
Sub TOTAL	**$2,100,408**	**1.0502**	**$2,205,849**	Escalated to Mid-Design
3) Extra Services				
Civil Design (Above Basic Svcs)	$250,000			
Geotechnical Investigation	$35,000			
Commissioning	$120,000			
Site Survey	$35,000			
Testing	$100,000			
LEED Services	$90,000			
Voice/Data Consultant	$200,000			
Value Engineering	$80,000			
Constructability Review	$80,000			
Environmental Mitigation (EIS)	$20,000			
Landscape Consultant	$110,000			
Acoustical Engineer, Cost Consultant	$150,000			
Insert Row Here				
Sub TOTAL	**$1,270,000**	**1.0502**	**$1,333,754**	Escalated to Mid-Design
4) Other Services				
Bid/Construction/Closeout	$943,662			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
Sub TOTAL	**$943,662**	**1.1019**	**$1,039,821**	Escalated to Mid-Const.
5) Design Services Contingency				
Design Services Contingency	$223,138			
Other				
Insert Row Here				
Sub TOTAL	**$223,138**	**1.1019**	**$245,877**	Escalated to Mid-Const.
CONSULTANT SERVICES TOTAL	**$4,685,908**		**$4,978,448**	

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Cost Estimate Details

Construction Contracts				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
1) Site Work				
G10 - Site Preparation	$487,200			
G20 - Site Improvements	$1,097,600			
G30 - Site Mechanical Utilities	$888,800			
G40 - Site Electrical Utilities	$711,200			
G60 - Other Site Construction				
Insert Row Here				
Sub TOTAL	**$3,184,800**	**1.0795**	**$3,437,992**	
2) Related Project Costs				
Offsite Improvements	$430,000			
City Utilities Relocation	$175,000			
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
Sub TOTAL	**$605,000**	**1.0795**	**$653,098**	
3) Facility Construction				
A10 - Foundations	$1,354,757			
A20 - Basement Construction				
B10 - Superstructure	$4,735,655			
B20 - Exterior Closure	$7,259,340			
B30 - Roofing	$1,144,950			
C10 - Interior Construction	$3,838,518			
C20 - Stairs	$365,365			
C30 - Interior Finishes	$2,995,452			
D10 - Conveying	$239,780			
D20 - Plumbing Systems	$1,414,702			
D30 - HVAC Systems	$7,313,290			
D40 - Fire Protection Systems	$599,450			
D50 - Electrical Systems	$6,354,170			
F10 - Special Construction				
F20 - Selective Demolition				
General Conditions	$2,651,212			
GC Overhead & Profit	$2,628,167			
Insert Row Here				
Sub TOTAL	**$42,894,806**	**1.1019**	**$47,265,787**	
4) Maximum Allowable Construction Cost				
MACC Sub TOTAL	**$46,684,606**		**$51,356,877**	

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7) Construction Contingency				
Allowance for Change Orders	$2,334,230			
Other				
Insert Row Here				
Sub TOTAL	**$2,334,230**	**1.1019**	**$2,572,089**	
8) Non-Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$4,068,563**		**$4,476,105**	
CONSTRUCTION CONTRACTS TOTAL	**$53,087,400**		**$58,405,071**	

Green cells must be filled in by user

Cost Estimate Details

Equipment				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
E10 - Equipment	$1,500,000			
E20 - Furnishings	$1,869,203			
F10 - Special Construction				
Other				
Insert Row Here				
Sub TOTAL	**$3,369,203**	**1.1019**	**$3,712,525**	
1) Non Taxable Items				
Other				
Insert Row Here				
Sub TOTAL	**$0**	**1.1019**	**$0**	
Sales Tax				
Sub TOTAL	**$279,644**		**$308,140**	
EQUIPMENT TOTAL	**$3,648,846**		**$4,020,665**	

Green cells must be filled in by user

Cost Estimate Details

Artwork					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Project Artwork	$0				0.5% of total project cost for new construction
Higher Ed Artwork	$354,624				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
ARTWORK TOTAL	**$354,624**		**NA**	**$354,624**	

Green cells must be filled in by user

Cost Estimate Details

Project Management					
Item	**Base Amount**		**Escalation Factor**	**Escalated Cost**	**Notes**
Agency Project Management	$1,233,518				
Additional Services					
Other					
Insert Row Here					
PROJECT MANAGEMENT TOTAL	**$1,233,518**		**1.1019**	**$1,359,214**	

Green cells must be filled in by user

Cost Estimate Details

Other Costs				
Item	**Base Amount**	**Escalation Factor**	**Escalated Cost**	**Notes**
Mitigation Costs	$175,000			
Hazardous Material Remediation/Removal	$440,150			
Historic and Archeological Mitigation	$25,000			
Other				
Insert Row Here				
OTHER COSTS TOTAL	**$640,150**	**1.0795**	**$691,042**	

Green cells must be filled in by user

C-100(2020)
Additional Notes

Tab A. Acquisition
Insert Row Here

Tab B. Consultant Services
Insert Row Here

Tab C. Construction Contracts
Insert Row Here

Tab D. Equipment
Insert Row Here

Tab E. Artwork
Insert Row Here

Tab F. Project Management
Insert Row Here

Tab G. Other Costs
Insert Row Here

Central Washington University
Humanities and Social Sciences
Ellensburg, WA

Conceptual Cost Model - Alternate #3

Estimate Issue Date: **June 25, 2020**
Estimate Revision: **1**

For: Dennis Erwood
Studio Meng Strazzara

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3

Date: **June 25, 2020**

Estimated By:

Architectural - Andy Cluness, Mark Richardson

Structural: Andy Cluness

Electrical, Mechanical - Neil Watson

Sitework - Andy Cluness

Exclusions from Construction Cost:

Pre-construction Services

Design fees

Owners administration costs

Building and land acquisition fees

Legal and accounting fees

Removal of unforeseen underground obstructions

Owner's furniture, furnishings and equipment

Owners supplied materials

Moving owners equipment and furniture

Compression of schedule, premium or shift work

Assessments, finance, legal and development charges

Builder's risk, project wrap-up and other owner provided insurance program

Washington State Sales Tax

AV Equipment

Assumption used in establishing the estimate:

The project will be delivered utilizing the alternative project delivery method of Design, Bid, Build.

Estimating / Design Contingency is Included at 5.00%

Escalation is calculated to Construction Start Date June 2023.

Year 1 Escalation - 4.50%

Year 2 Escalation - 4.25%

Year 3 Escalation - 4.00%

Open and competitive bidding among all proportions of the work

Items that may affect the cost estimate:

Modifications to the scope of work included in this estimate.

Special phasing requirements other than mentioned above.

Restrictive technical specifications or excessive contract conditions.

Any non-competitive bid situations.

Bids delayed beyond the projected schedule.

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3

Date: **June 25, 2020**

Assumptions used in establishing the estimate:

A10: Foundations:

Scope of work continuous and spread footings, perimeter drainage, reinforced concrete slab on grade, elevator pit.

B10: Superstructure:

Vertical and horizontal steel structure including BRB brace frames, metal deck and reinforced concrete topping slab at floor structure, sprayed cementitious fireproofing, intumescent paint at select columns and housekeeping pads.

B20: Exterior enclosure:

Scope of work includes laid up brick and metal panel and metal panel soffits. The extent of brick would be 70% and 30% metal panels at opaque walls. Glazing scope includes curtain wall and storefront glazing. The extent of the glazing would be comparable to the Health Science project at approximately 24% to the gross wall area. Other scope would include louvers. Exterior door scope would include glazed aluminum doors at vestibules and hollow metal doors at other locations.

B30: Roofing:

Roof scope of work includes a 1-ply EPDM 60 mil white fully adhered with R-38 insulation, sheet metal flashings, rough carpentry. Scope includes roof ladders, roof hatch, skylights.

C10: Interior Construction:

Interior partitions consist of metal stud framing, batt insulation and gypsum board, interior glazing, railings at open to below areas, operable partitions and interior doors. Fittings and specialties will include toilet partitions, signage, miscellaneous, restroom accessories fire extinguishers and cabinets.

C20: Stairs

Scope includes exit stairs and architectual stairs.

C30: Interior Finishes

Wall finishes include paint to gypsum board, porcelain tile at restroom wet walls, specialty wall finishes. Floor finishes include porcelain tile at restrooms, carpet tile, resilient flooring, polished concrete, walk off mats and sealed concrete at MEP rooms. Ceiling finishes include ACT and grid, gypsum board painted, specialty wall finishes.

D10: Conveying systems

Two passenger elevators.

D20: Plumbing

Plumbing include sanitary fixtures, sanitary waste, vent and service piping, water treatment, storage and circulation, surface water drainage, gas piping, fittings and specialties.

D30: Heating, Ventilation and Air Conditioning (HVAC)

Heat generation and chilling, thermal storage and circulation pumps, piping, fittings, valves and insulation, radiant systems, air handling equipment, air distribution and return, diffusers and return air grilles, controls, instrumentation and balancing.

D40: Fire Protection Systems

Wet pipe sprinkler system, standpipe systems to stairs.

D50: Electrical

Electrical scope includes main service and distribution, emergency or uniterrupted power, grounding systems, machine and equipment power, user convenience power, testing and seismic restraints. Other scope includes lighting and branch wiring, communications and security systems, alarm and access control and CCTV system rough-in only.

E10: Equipment

No Scope Anticipated

E20: Fixed Furnishing

Fixed furnishings include casework and interior and exterior window treatments.

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3

Date: **June 25, 2020**

OVERALL SUMMARY CONSTRUCTION COST

Prepared By: AC

	Construction	Gross Area	$/SF	$
Humanities and Social Sciences Building	New	119,890 SF	421.69	50,556,550
Sitework	Site			4,183,813
Demolition & HAZMAT (Farrell Hall Building)	Demolition			1,910,564
Off-Site Improvements	Site			794,777
TOTAL CONSTRUCTION COST BUILDING & SITEWORK				**57,445,704**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3 **Gross Floor Area: 119,890 SF**

Summary of Estimate **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS			1,354,757	11.30
A1010	Standard Foundation		863,208		7.20
A1020	Special Foundation				-
A1030	Slab on grade		491,549		4.10
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE			4,735,655	39.50
B1010	Floor & Roof Construction		4,735,655		39.50
B20	EXTERIOR ENCLOSURE			7,259,340	60.55
B2010	Exterior Walls		4,831,567		40.30
B2020	Exterior Windows		2,301,888		19.20
B2030	Exterior Doors		125,885		1.05
B30	ROOFING			1,144,950	9.55
B3010	Roofing		1,144,950		9.55
C10	INTERIOR CONSTRUCTION			3,838,518	32.02
C1010	Partitions		2,829,404		23.60
C1020	Interior Doors		653,401		5.45
C1030	Fittings		355,714		2.97
C20	STAIRS			365,365	3.05
C2010	Stair Construction		365,365		3.05
C30	INTERIOR FINISHES			2,995,452	24.99
C3010	Wall Finishes		893,181		7.45
C3020	Floor Finishes		951,327		7.94
C3030	Ceiling Finishes		1,150,944		9.60
D10	CONVEYING			239,780	2.00
D1010	Elevators & Lifts		239,780		2.00
D20	PLUMBING			1,414,702	11.80
D2010	Plumbing		1,414,702		11.80
D30	HVAC			7,313,290	61.00
D3010	HVAC		7,313,290		61.00
D40	FIRE PROTECTION			599,450	5.00

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3

Gross Floor Area: 119,890 SF

Summary of Estimate

Date: June 25, 2020

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		599,450		5.00
D50	ELECTRICAL			6,354,170	53.00
D5000	Electrical		6,354,170		53.00
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			869,203	7.25
E2010	Fixed Furnishings		869,203		7.25
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			-	-
F2010	Selective Demolition				-
G	BUILDING SITEWORK			3,184,800	26.56
G10	Site Preparation		487,200		4.06
G20	Site Improvement		1,097,600		9.16
G30	Site Mechanical Utilities		888,800		7.41
G40	Site Electrical Utilities		711,200		5.93
G	DEMOLITION & ABATEMENT			1,454,359	12.13
G10	Demolition & Abatement		1,454,359		12.13
G	OFFSITE IMPROVEMENTS			605,000	5.05
G10	Site Preparation		150,000		1.25
G20	Site Improvement		280,000		2.34
G30	Site Mechanical Utilities		125,000		1.04
G40	Site Electrical Utilities		50,000		0.42
	Sub-Total Direct Cost			**43,728,789**	**364.74**
	Estimating / Design Contingency	5.00%		2,186,439	18.24
	Escalation - June 2023	13.37%		6,140,237	51.22
	General Conditions / General Requirements	5.20%		2,706,884	22.58
	GC Overhead & Profit	4.90%		2,683,355	22.38
	TOTAL CONSTRUCTION COST			**$57,445,704**	**479.15**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3

Gross Floor Area: 119,890 SF

Summary of Estimate

Date: June 25, 2020

No.	Element Description		Element Totals		Cost Per SF
A10	FOUNDATIONS		1,354,757		-
A20	BASEMENT WALL CONSTRUCTION				-
B10	SUPERSTRUCTURE		4,735,655		-
B20	EXTERIOR ENCLOSURE		7,259,340		-
B30	ROOFING		1,144,950		-
C10	INTERIOR CONSTRUCTION		3,838,518		-
C20	STAIRS		365,365		-
C30	INTERIOR FINISHES		2,995,452		-
D10	CONVEYING		239,780		-
D20	PLUMBING		1,414,702		-
D30	HVAC		7,313,290		-
D40	FIRE PROTECTION		599,450		-
D50	ELECTRICAL		6,354,170		-
E10	EQUIPMENT				-
E20	FURNISHINGS		869,203		-
F10	SPECIAL CONSTRUCTION				-
F20	SELECTIVE BUILDING DEMOLITION				-
G	BUILDING SITEWORK		3,184,800		-
G	DEMOLITION & ABATEMENT		1,454,359		-
G	OFFSITE IMPROVEMENTS		605,000		-
	Sub-Total Direct Cost			**43,728,789**	**364.74**
	Estimating / Design Contingency	5.00%		2,186,439	18.24
	Escalation - June 2023	13.37%		6,140,237	51.22
	General Conditions / General Requirements	5.20%		2,706,884	22.58
	GC Overhead & Profit	4.90%		2,683,355	22.38
	TOTAL CONSTRUCTION COST			**$57,445,704**	**479.15**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3 **Gross Floor Area: 119,890 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
A10	FOUNDATIONS			1,354,757	11.30
A1010	Standard Foundation		863,208		7.20
A1020	Special Foundation				-
A1030	Slab on grade		491,549		4.10
A20	BASEMENT WALL CONSTRUCTION				-
A2010	Basement Excavation				-
A2020	Basement Wall Construction				-
B10	SUPERSTRUCTURE			4,735,655	39.50
B1010	Floor & Roof Construction		4,735,655		39.50
B20	EXTERIOR ENCLOSURE			7,259,340	60.55
B2010	Exterior Walls		4,831,567		40.30
B2020	Exterior Windows		2,301,888		19.20
B2030	Exterior Doors		125,885		1.05
B30	ROOFING			1,144,950	9.55
B3010	Roofing		1,144,950		9.55
C10	INTERIOR CONSTRUCTION			3,838,518	32.02
C1010	Partitions		2,829,404		23.60
C1020	Interior Doors		653,401		5.45
C1030	Fittings		355,714		2.97
C20	STAIRS			365,365	3.05
C2010	Stair Construction		365,365		3.05
C30	INTERIOR FINISHES			2,995,452	24.99
C3010	Wall Finishes		893,181		7.45
C3020	Floor Finishes		951,327		7.94
C3030	Ceiling Finishes		1,150,944		9.60
D10	CONVEYING			239,780	2.00
D1010	Elevators & Lifts		239,780		2.00
D20	PLUMBING			1,414,702	11.80
D2010	Plumbing		1,414,702		11.80
D30	HVAC			7,313,290	61.00
D3010	HVAC		7,313,290		61.00
D40	FIRE PROTECTION			599,450	5.00

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model - Alternate #3 **Gross Floor Area: 119,890 SF**
Humanities and Social Sciences Building **Summary of Estimate** **Date: June 25, 2020**

No.	Element Description		Element Totals	Group Totals	Cost Per SF
D4010	Sprinkler System		599,450		5.00
D50	ELECTRICAL			6,354,170	53.00
D5000	Electrical		6,354,170		53.00
E10	EQUIPMENT			-	-
E1010	Equipment				-
E20	FURNISHINGS			869,203	7.25
E2010	Fixed Furnishings		869,203		7.25
F10	SPECIAL CONSTRUCTION			-	-
F1010	Special Structure				
F1020	Special Construction				
F20	SELECTIVE BUILDING DEMOLITION			-	
F2010	Building Demolition				-
	Sub-Total Direct Cost			**38,484,630**	**321.00**
	Estimating / Design Contingency	5.00%		1,924,232	16.05
	Escalation - June 2023	13.37%		5,403,871	45.07
	General Conditions / General Requirements	5.20%		2,382,262	19.87
	GC Overhead & Profit	4.90%		2,361,555	19.70
	TOTAL CONSTRUCTION COST			**$50,556,550**	**421.69**

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model
Sitework **Summary of Estimate**

Date: **June 15, 2020**
Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			3,184,800	
G10	Site Preparation		487,200		
G20	Site Improvement		1,097,600		
G30	Site Mechanical Utilities		888,800		
G40	Site Electrical Utilities		711,200		
	Sub-Total Direct Cost			**3,184,800**	
	Estimating / Design Contingency	5.00%		159,240	
	Escalation - June 2023	13.37%		447,198	
	General Conditions / General Requirements	5.20%		197,144	
	GC Overhead & Profit	4.90%		195,431	
	TOTAL CONSTRUCTION COST			**$4,183,813**	

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model Date: **June 15, 2020**
Building Demolition / HAZMAT **Summary of Estimate** Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			1,454,359	
G10	Building Demolition / HAZMAT		554,991		
			899,368		
G20	Site Improvement				
G30	Site Mechanical Utilities				
G40	Site Electrical Utilities				
	Sub-Total Direct Cost			**1,454,359**	
	Estimating / Design Contingency	5.00%		72,718	
	Escalation - June 2023	13.37%		204,216	
	General Conditions / General Requirements	5.20%		90,027	
	GC Overhead & Profit	4.90%		89,245	
	TOTAL CONSTRUCTION COST			**$1,910,564**	

Central Washington University
Humanities and Social Sciences
Ellensburg, WA
Conceptual Cost Model Date: **June 15, 2020**
Off-Site Improvements **Summary of Estimate** Prepared By: AC

No.	Element Description		Element Totals	Group Totals	
G	BUILDING SITEWORK			605,000	
G10	Site Preparation		150,000		
G20	Site Improvement		280,000		
G30	Site Mechanical Utilities		125,000		
G40	Site Electrical Utilities		50,000		
	Sub-Total Direct Cost			**605,000**	
	Estimating / Design Contingency	5.00%		30,250	
	Escalation - June 2023	13.37%		84,952	
	General Conditions / General Requirements	5.20%		37,450	
	GC Overhead & Profit	4.90%		37,125	
	TOTAL CONSTRUCTION COST			**$794,777**	

APPENDIX C

LEED CHECKLIST

LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: Central Washington University HSS Complex
Date: 5/25/2020
Predesign Potential LEED Checklist

Y	?	N			
1			Credit	Integrative Process	1

12	4	16	Location and Transportation		16
2		14	Credit	LEED for Neighborhood Development Location	16
1			Credit	Sensitive Land Protection	1
1	1		Credit	High Priority Site	2
3		2	Credit	Surrounding Density and Diverse Uses	5
3	2		Credit	Access to Quality Transit	5
1			Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

2	5	2	Sustainable Sites		10
Y			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
	1		Credit	Open Space	1
1	2		Credit	Rainwater Management	3
	1		Credit	Heat Island Reduction	2
	1		Credit	Light Pollution Reduction	1

6	2	3	Water Efficiency		11
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
3	1	2	Credit	Indoor Water Use Reduction	6
	1	1	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

16	6	3	Energy and Atmosphere		33
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
4	2		Credit	Enhanced Commissioning	6
10			Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering	1
	2		Credit	Demand Response	2
		3	Credit	Renewable Energy Production	3
1			Credit	Enhanced Refrigerant Management	1
	2		Credit	Green Power and Carbon Offsets	2

6	5	0	Materials and Resources		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
2	1		Credit	Building Life-Cycle Impact Reduction	5
2			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	2		Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	2		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

11	5	0	Indoor Environmental Quality		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	2		Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
2			Credit	Indoor Air Quality Assessment	2
	1		Credit	Thermal Comfort	1
2			Credit	Interior Lighting	2
2	1		Credit	Daylight	3
	1		Credit	Quality Views	1
1			Credit	Acoustic Performance	1

4	2	0	Innovation		6
3	2		Credit	Innovation	5
1			Credit	LEED Accredited Professional	1

0	0	0	Regional Priority		4
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

58	29	24	TOTALS	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

APPENDIX D

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION (DAHP) LETTER

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

June 22, 2020

Mr. Bill Yarwood, AIA
Chief Architect, Capital Planning and Projects
Central Washington University
400 East University Way
Ellensburg, WA 98926-7523

In future correspondence please refer to:
Project Tracking Code: 2020-06-04017
Property: Central Washington University; Brooks Library, Farrell Hall, Language and Literature Building
Re: Humanities-Social Sciences Predesign

Dear Mr. Yarwood:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP) regarding the development of a new Humanities and Social Sciences building on the Central Washington University (CWU) campus. We understand that you are self-funding a predesign, and applying for design funding in the 2021-23 biennium. We are providing these comments following our virtual conference and email discussions about the project, though neither the predesign nor the design funding is subject to review pursuant to Governor's Executive Order 05-05 (GEO 05-05).

Three buildings could be impacted by the potential construction of a new building or addition to Brooks Library, including Brooks Library itself, Farrell Hall, and the Language and Literature Building. Brooks Library and Farrell Hall were both completed in 1976 and designed by architectural firm Ibsen, Nelsen & Associates. It is our opinion that they are eligible for inclusion in the National Register of Historic Places under Criterion C for representing the work of master architecture firm Ibsen, Nelsen & Associates. The Language and Literature Building was completed in 1970 and designed by architectural firm Grant, Copeland, Chervenak & Associates. It is our opinion that it is also eligible for inclusion in the National Register under Criterion C for representing the work of master architecture firm Grant, Copeland, Chervenak & Associates. We believe all of these buildings are also eligible for inclusion in the National Register of Historic Places under Criterion A for their associations with broad patterns of history related to the late-twentieth century higher education at Central Washington University.

We anticipate adverse impacts should the project development include demolition or significant alteration of any of the three abovementioned buildings. As such, we highly recommend your continued collaboration and engagement with our office to minimize any potential adverse impacts, and to plan and budget for any mitigation activities that arise out of our ongoing discussions.

These comments have been provided on behalf of the State Historic Preservation Officer. Thank you for the opportunity to review and comment. We look forward to our continued consultation regarding this project and its design development through its ultimate construction. If you have any questions, please feel free to contact me.

Sincerely,

Nicholas Vann, AIA

Deputy State Historic Preservation Officer
(360) 586-3079
nicholas.vann@dahp.wa.gov

APPENDIX E

LIFE CYCLE COST ANALYSIS REPORT

Life Cycle Cost Analysis Table of Contents

This life cycle cost analysis was prepared in accordance with the Predesign Manual for Capital Projects Funded in the 2021-23 Biennium. The spread sheet utilizes OFM's Life Cycle Cost Model downloaded from this website: https://ofm.wa.gov/facilities/state-agency-facility-oversight/facility-life-cycle-cost-analysis-alternatives-comparison

Ownership Option 1 Information Sheet

*	***Requires a user input***	*Green Cell*	*= Value can be entered by user.*	*Yellow Cell*	*= Calculated value.*

*	**Project Description**	Alternative 4-Remodel Farrell and L&L with additions to each building
*	**Construction or Purchase/Remodel**	Construction
*	**Project Location**	Ellensburg — Market Area = Eastern Counties

	Statistics	
*	Gross Sq Ft	130,000
*	Usable Sq Ft	71,935
	Space Efficiency	55%
	Estimated Acres Needed	5.00
	MACC Cost per Sq Ft	$414.21
	Estimated Total Project Costs per Sq Ft	$615.38
	Escalated MACC Cost per Sq Ft	$482.98
	Escalated Total Project Costs per Sq Ft	$717.56

*	**Move In Date**	1/1/2025

Interim Lease Information	**Start Date**
Lease Start Date	
Length of Lease (in months)	
Square Feet (holdover/temp lease)	
Lease Rate- Full Serviced ($/SF/Year)	
One Time Costs (if double move)	

	Construction Cost Estimates (See Capital Budget System For Detail)			
		Known Costs	Estimated Costs	Cost to Use
	Acquisition Costs Total	$ -	$ 1,250,000	$ 1,250,000
A & E	**Consultant Services**			
	A & E Fee Percentage (if services not specified)		5.89% Std	5.89%
	Pre-Schematic Design services	$ -		
	Construction Documents	$ 3,540,896		
	Extra Services	$ 996,400		
	Other Services	$ 2,196,014		
	Design Services Contingency	$ 673,330		
	Consultant Services Total	$ 7,406,640	$ 3,291,310	$ 7,406,640
MACC	**Construction Contracts**			
	Site Work			
	Related Project Costs	$ 53,846,800		
	Facility Construction			
	MACC SubTotal	$ 53,846,800	$ 39,000,000	$ 53,846,800
	Construction Contingency (5% default)	$ 4,669,881	$ 2,692,340	$ 4,669,881
	Non Taxable Items			$ -
	Sales Tax	$ 4,212,232		$ 4,212,232
	Construction Additional Items Total	$ 8,882,113	$ 2,692,340	$ 8,882,113
	Equipment			
	Equipment	$ 4,079,999		
	Non Taxable Items			
	Sales Tax	$ 338,639		
	Equipment Total	$ 4,418,638		$ 4,418,638
	Art Work Total	$ 260,884	$ 269,234	$ 260,884
	Other Costs			
		$ 2,114,327		
	Other Costs Total	$ 2,114,327		$ 2,114,327
	Project Management Total	$ 1,820,600		$ 1,820,600
	Grand Total Project Cost	**$ 78,750,002**	**$ 46,502,884**	**$ 80,000,002**

Construction One Time Project Costs			
One Time Costs	Estimate	Calculated	
Moving Vendor and Supplies		$ -	*$205 / Person in FY09*
Other (not covered in construction)			
Total	$ -	$ -	

	Ongoing Building Costs				
Added Services	New Building Operating Costs	Known Cost /GSF/ 2025	Estimated Cost /GSF/ 2025	Total Cost / Year	Cost / Month
☐	Energy (Electricity. Natural Gas)	$ 0.71	$0.00	$ 92,300	$ 7,692
☐	Janitorial Services	$ 1.39	$0.00	$ 180,700	$ 15,058
☐	Utilities (Water, Sewer, & Garbage)	$ 2.05	$0.00	$ 266,500	$ 22,208
☐	Grounds	$ 1.39	$0.00	$ 180,700	$ 15,058
☐	Pest Control	$ -	$0.00	$ -	$ -
☐	Security	$ 0.50	$0.00	$ 65,000	$ 5,417
☐	Maintenance and Repair	$ 5.44	$0.00	$ 707,200	$ 58,933
☐	Management	$ 0.62	$0.00	$ 80,600	$ 6,717
☐	Road Clearance	$ -	$0.00	$ -	$ -
☐	Telecom	$ 1.43	$0.00	$ 185,900	$ 15,492
	Additional Parking	$ -	$ -	$ -	$ -
	Other	$ (9.84)	$ -	$ -	$ -
	Total Operating Costs	**$ 3.69**	**$ -**	**$ 1,758,900**	**$ 146,575**

Ownership Option 2 Information Sheet

*	***Requires a user input***	*Green Cell*	*= Value can be entered by user.*	*Yellow Cell*	*= Calculated value.*

*	**Project Description**	Alternative 2 (preferred)-NE Brooks Library Expansion and includes demolition of existing L&L and Farrell
*	**Construction or Purchase/Remodel**	construction
*	**Project Location**	Ellensburg — Market Area = Eastern Counties

	Statistics	
*	Gross Sq Ft	114,890
*	Usable Sq Ft	71,935
	Space Efficiency	63%
	Estimated Acres Needed	5.00
	MACC Cost per Sq Ft	$387.81
	Estimated Total Project Costs per Sq Ft	$547.19
	Escalated MACC Cost per Sq Ft	$452.20
	Escalated Total Project Costs per Sq Ft	$638.05

*	**Move In Date**	1/1/2025

Interim Lease Information	**Start Date**
Lease Start Date	
Length of Lease (in months)	
Square Feet (holdover/temp lease)	
Lease Rate- Full Serviced ($/SF/Year)	
One Time Costs (if double move)	

	Construction Cost Estimates (See Capital Budget System For Detail)			
		Known Costs	Estimated Costs	Cost to Use
	Acquisition Costs Total	$ 1,470,414	$ 1,250,000	$ 1,470,414
A & E	**Consultant Services**			
	A & E Fee Percentage (if services not specified)		6.11% Std	6.11%
	Pre-Schematic Design services	$ 148,700		
	Construction Documents	$ 2,020,744		
	Extra Services	$ 1,591,677		
	Other Services	$ 907,871		
	Design Services Contingency	$ 233,450		
	Consultant Services Total	$ 4,902,442	$ 2,723,375	$ 4,902,442
MACC	**Construction Contracts**			
	Site Work	$ 2,515,000		
	Related Project Costs	$ 605,000		
	Facility Construction	$ 41,435,220		
	MACC SubTotal	$ 44,555,220	$ 34,467,000	$ 44,555,220
	Construction Contingency (5% default)	$ 2,227,761	$ 2,227,761	$ 2,227,761
	Non Taxable Items			$ -
	Sales Tax	$ 3,882,987		$ 3,882,987
	Construction Additional Items Total	$ 6,110,748	$ 6,110,748	$ 6,110,748
	Equipment			
	Equipment	$ 3,351,280		
	Non Taxable Items	$ -		
	Sales Tax	$ 278,156		
	Equipment Total	$ 3,629,436		$ 3,629,436
	Art Work Total	$ 342,290	$ 222,776	$ 342,290
	Other Costs			
	Mitigation	$ 175,000		
	Haz Mat Removal	$ 440,150		
	Historical&Archeological Mitigation	$ 25,000		
	Other Costs Total	$ 640,150		$ 640,150
	Project Management Total	$ 1,215,789		$ 1,215,789
	Grand Total Project Cost		**$ 44,773,899**	**$ 62,866,489**

Construction One Time Project Costs			
One Time Costs	Estimate	Calculated	
Moving Vendor and Supplies		$ -	*$205 / Person in FY09*
Other (not covered in construction)			
Total	$ -	$ -	

	Ongoing Building Costs				
Added Services	New Building Operating Costs	Known Cost /GSF/ 2025	Estimated Cost /GSF/ 2025	Total Cost / Year	Cost / Month
☐	**Energy (Electricity. Natural Gas)**	$ 0.71	$0.00	$ 81,572	$ 6,798
☐	**Janitorial Services**	$ 1.39	$0.00	$ 159,697	$ 13,308
☐	**Utilities (Water, Sewer, & Garbage)**	$ 2.05	$0.00	$ 235,525	$ 19,627
☐	**Grounds**	$ 1.39	$0.00	$ 159,697	$ 13,308
☐	**Pest Control**	$ -	$0.00	$ -	$ -
☐	**Security**	$ 0.50	$0.00	$ 57,445	$ 4,787
☐	**Maintenance and Repair**	$ 5.44	$0.00	$ 625,002	$ 52,083
☐	**Management**	$ 0.62	$0.00	$ 71,232	$ 5,936
☐	**Road Clearance**	$ -	$0.00	$ -	$ -
☐	**Telecom**	$ 1.43	$0.00	$ 164,293	$ 13,691
	Additional Parking	$ -	$ -	$ -	$ -
	Other	$ (11.14)	$ -	$ -	$ -
	Total Operating Costs	**$ 2.39**	**$ -**	**$ 1,554,462**	**$ 129,538**

Ownership Option 3 Information Sheet

* ***Requires a user input*** | *Green Cell* = *Value can be entered by user.* | *Yellow Cell* = *Calculated value.*

*	**Project Description**	Alternative 3-West Brooks Expansion and includes the demolition of Farrell and L&L
*	**Construction or Purchase/Remodel**	Construction
*	**Project Location**	Ellensburg — Market Area = Eastern Counties

	Statistics	
*	Gross Sq Ft	119,980
*	Usable Sq Ft	71,935
	Space Efficiency	60%
	Estimated Acres Needed	5.00
	MACC Cost per Sq Ft	$389.10
	Estimated Total Project Costs per Sq Ft	$542.76
	Escalated MACC Cost per Sq Ft	$453.71
	Escalated Total Project Costs per Sq Ft	$632.89

*	**Move In Date**	1/1/2025

Interim Lease Information	**Start Date**
Lease Start Date	
Length of Lease (in months)	
Square Feet (holdover/temp lease)	
Lease Rate- Full Serviced ($/SF/Year)	
One Time Costs (if double move)	

	Construction Cost Estimates (See Capital Budget System For Detail)			
		Known Costs	Estimated Costs	Cost to Use
	Acquisition Costs Total	$ 1,470,414	$ 1,250,000	$ 1,470,414
A & E	**Consultant Services**			
	A & E Fee Percentage (if services not specified)		6.06% Std	6.06%
	Pre-Schematic Design services	$ 148,700		
	Construction Documents	$ 2,100,408		
	Extra Services	$ 1,270,000		
	Other Services	$ 943,662		
	Design Services Contingency	$ 223,138		
	Consultant Services Total	$ 4,685,908	$ 2,828,005	$ 4,685,908
MACC	**Construction Contracts**			
	Site Work	$ 3,184,800		
	Related Project Costs	$ 605,000		
	Facility Construction	$ 42,894,806		
	MACC SubTotal	$ 46,684,606	$ 35,994,000	$ 46,684,606
	Construction Contingency (5% default)	$ 2,334,230	$ 2,334,230	$ 2,334,230
	Non Taxable Items			$ -
	Sales Tax	$ 4,068,563		$ 4,068,563
	Construction Additional Items Total	$ 6,402,793	$ 6,402,793	$ 6,402,793
	Equipment			
	Equipment	$ 3,369,203		
	Non Taxable Items			
	Sales Tax	$ 279,644		
	Equipment Total	$ 3,648,847		$ 3,648,847
	Art Work Total	$ 354,624	$ 233,423	$ 354,624
	Other Costs			
	Mitigation	$ 175,000		
	Haz Mat Removal	$ 440,150		
	Historical&Archeological Mitigation	$ 25,000		
	Other Costs Total	$ 640,150		$ 640,150
	Project Management Total	$ 1,233,518		$ 1,233,518
	Grand Total Project Cost		**$ 46,708,221**	**$ 65,120,860**

Construction One Time Project Costs			
One Time Costs	Estimate	Calculated	
Moving Vendor and Supplies		$ -	*$205 / Person in FY09*
Other (not covered in construction)			
Total	$ -	$ -	

	Ongoing Building Costs				
Added Services	New Building Operating Costs	Known Cost /GSF/ 2025	Estimated Cost /GSF/ 2025	Total Cost / Year	Cost / Month
☐	**Energy (Electricity. Natural Gas)**	$ 0.71	$0.00	$ 85,186	$ 7,099
☐	**Janitorial Services**	$ 1.39	$0.00	$ 166,772	$ 13,898
☐	**Utilities (Water, Sewer, & Garbage)**	$ 2.05	$0.00	$ 245,959	$ 20,497
☐	**Grounds**	$ 1.39	$0.00	$ 166,772	$ 13,898
☐	**Pest Control**	$ -	$0.00	$ -	$ -
☐	**Security**	$ 0.50	$0.00	$ 59,990	$ 4,999
☐	**Maintenance and Repair**	$ 5.44	$0.00	$ 652,691	$ 54,391
☐	**Management**	$ 0.62	$0.00	$ 74,388	$ 6,199
☐	**Road Clearance**	$ -	$0.00	$ -	$ -
☐	**Telecom**	$ 1.43	$0.00	$ 171,571	$ 14,298
	Additional Parking	$ -	$ -	$ -	$ -
	Other	$ (10.67)	$ -	$ -	$ -
	Total Operating Costs	**$ 2.86**	**$ -**	**$ 1,623,329**	**$ 135,277**

Life Cycle Cost Analysis - Project Summary

Agency	Central Washington University
Project Title	Humanities/Social Sciences Complex

Existing Description	The Humanities program currently exists in the Language and Literature Building and Farrell Hall. These faciliteis lack the office and instructional space required to to support the large number of classes taught and have issues with ADA accessability as well supporting mechanical and electrical systems which have reach the end of their life

Lease Option 1 Description	

Lease Option 2 Description	

Ownership Option 1 Description	Alternative 4-Remodel Farrell and L&L with additions to each building

Ownership Option 2 Description	Alternative 2 (preferred)-NE Brooks Library Expansion and includes demolition of existing L&L and Farrell

Ownership Option 3 Description	Alternative 3-West Brooks Expansion and includes the demolition of Farrell and L&L

Lease Options Information	**Existing Lease**	**Lease Option 1**	**Lease Option 2**
Total Rentable Square Feet	-	-	-
Annual Lease Cost (Initial Term of Lease)	$ -	$ -	$ -
Full Service Cost/SF (Initial Term of Lease)	$ -	$ -	$ -
Occupancy Date	n/a		
Project Initial Costs	n/a	$ -	$ -
Persons Relocating	-	-	-
RSF/Person Calculated			

Ownership Information	**Ownership 1**	**Ownership 2**	**Ownership 3**
Total Gross Square Feet	130,000	114,890	119,980
Total Rentable Square Feet	71,935	71,935	71,935
Occupancy Date	1/1/2025	1/1/2025	1/1/2025
Initial Project Costs	$ -	$ -	$ -
Est Construction TPC ($/GSF)	$ 718	$ 638	$ 633
RSF/Person Calculated	-	-	-

Financial Analysis of Options

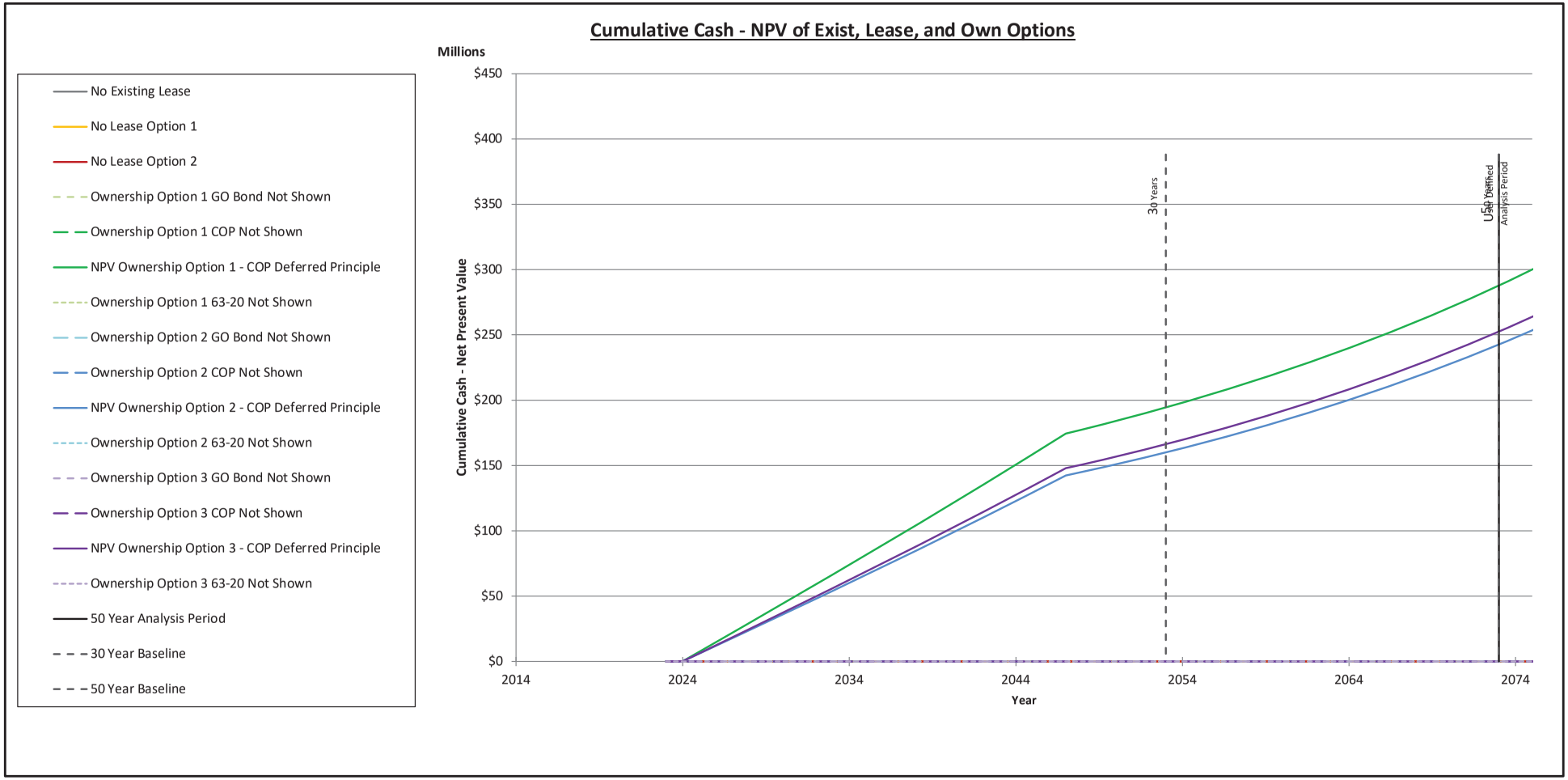
	Display Option?	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	No	No	No	Yes	No
	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
50	50 Year Cumulative Cash	$ -	$ -	$ -			$ 319,602,998				$ 269,759,404				$ 280,850,485	
	50 Year Net Present Value	$ -	$ -	$ -			$ 281,548,756				$ 237,011,099				$ 246,711,137	
	Lowest Cost Option (Analysis Period)						**3**				**1**				**2**	

	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
30	30 Year Cumulative Cash	$ -	$ -	$ -			$ 206,513,082				$ 169,814,016				$ 176,477,192	
	30 Year Net Present Value	$ -	$ -	$ -			$ 190,564,013				$ 156,601,582				$ 162,739,217	
	Lowest Cost Option (30 Years)						**3**				**1**				**2**	

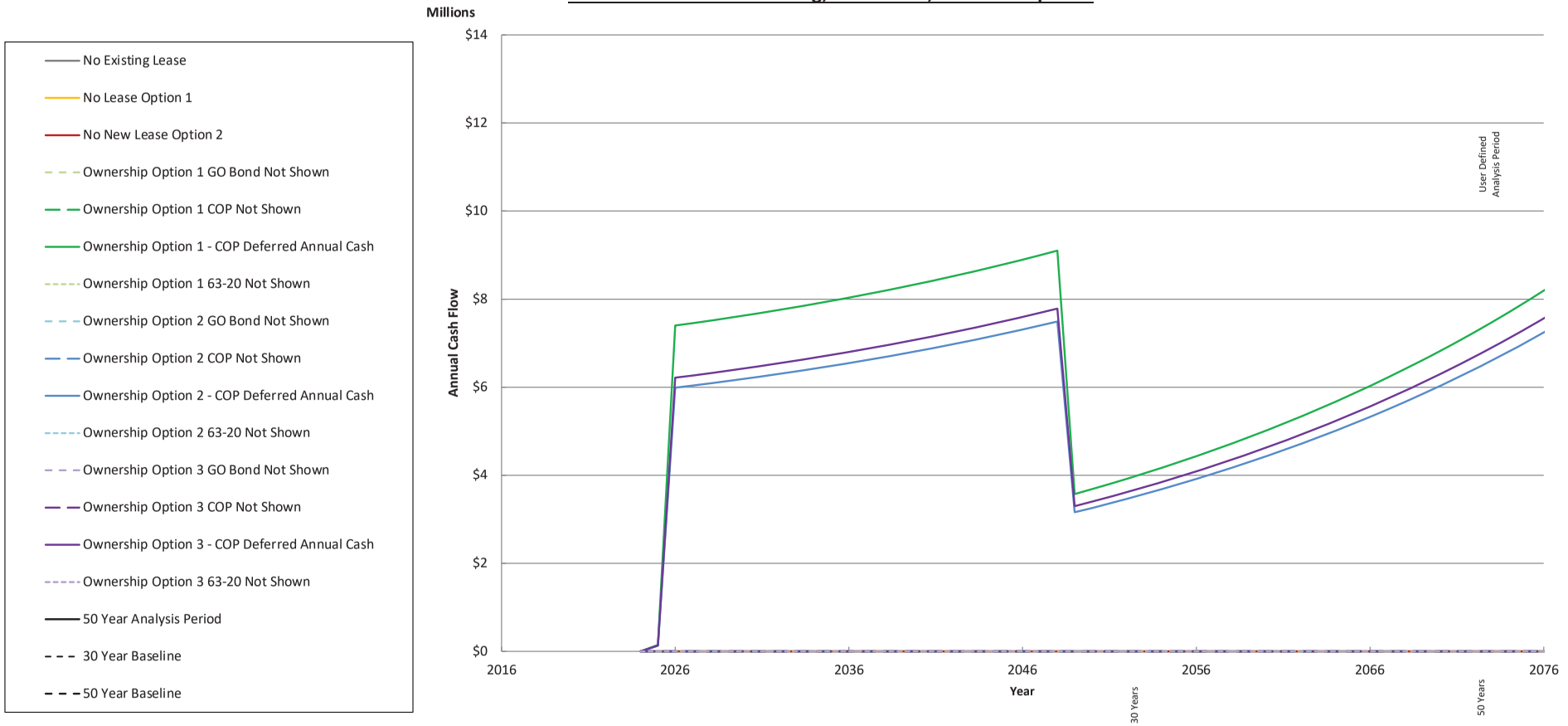
	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
50	50 Year Cumulative Cash	$ -	$ -	$ -			$ 319,602,998				$ 269,759,404				$ 280,850,485	
	50 Year Net Present Value	$ -	$ -	$ -			$ 281,548,756				$ 237,011,099				$ 246,711,137	
	Lowest Cost Option (50 Years)						**3**				**1**				**2**	

** - Defers payment on principle for 2 years while the building is being constructed. See instructions on Capitalized Interest.*

Cumulative Cash - NPV of Exist, Lease, and Own Options



Annual Cash Flow of Existing, New Lease, and Own Options



Financial Assumptions

Date of Life Cycle Cost Analysis:	7/1/2020
Analysis Period Start Date	1/2/2023
User Input Years of Analysis	50

All assumptions subject to change to reflect updated costs and conditions.

	Lease Options			Ownership Option 1			Ownership Option 2			Ownership Option 3		
	Existing Lease	**Lease Option 1**	**Lease Option 2**	**GO Bond**	**COP**	**63-20**	**GO Bond**	**COP**	**63-20**	**GO Bond**	**COP**	**63-20**
Inflation / Interest Rate	3.120%	3.120%	3.120%	3.540%	3.670%	3.670%	3.540%	3.670%	3.670%	3.540%	3.670%	3.670%
Discount Rate	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%
Length of Financing	N/A	N/A	N/A	25	25	25	25	25	25	25	25	25

See Financial Assumptions tab for more detailed information

COP Deferred and 63-20 Financing defer the payment on principle until construction completion.

New Lease Assumptions

Real Estate Transaction fees are 2.5% of the lease for the first 5 years and 1.25% for each year thereafter in the initial term of the lease.

Tenant Improvements are typically estimated at $15 per rentable square foot.

IT infrastructure is typically estimated at $350 per person.

Furniture costs are typically estimated at $500 per person and do not include new workstations.

Moving Vendor and Supplies are typically estimated at $205 per person.

Default Ownership Options Assumptions

Assumes a 2 month lease to move-in overlap period for outfitting building and relocation.

Assumes surface parking.

The floor plate of the construction option office building is 25,000 gross square feet.

The estimated total project cost for construction is $420.00 per square foot.

See the Capital Construction Defaults tab for more construction assumptions.

	A	B	C	D	E
1	**Life Cycle Cost Model**				
2	**Financing Assumption for OFM**				
3	**Office of the State Treasurer**				
4	**Interest Rates as of : 5/14/2018**				
5					
6		**May 2018 Numbers**			
7	**Financing Assumptions**	**$0-$20 Million**	**$20-$100 Million**	**$100+ Million**	**Assumption Comments/Sources**
8	% Financing Cost - GO Bond	0.39%	0.39%	0.39%	From MDA Analysis; All-inclusive (U/D, Ins, COI)
9	% Financing Cost - COP	1.15%	0.70%	0.47%	Based on MDA Analysis; COI controlled by contract
10	% Financing Cost - 63-20	n/a	2.20%	1.63%	Based on MDA Analysis assuming actual expenses
11					
12	Average Interest rate - GO Bond	3.54%	3.54%	3.54%	Projected 25-year GO Bonds based on MDA Analysis (5/14/2018)
13	Average Interest rate - COP*	3.72%	3.67%	3.67%	Projected 25-year COPs based on MDA Analysis (5/14/2018)
14	Average Interest rate - 63-20*	3.72%	3.67%	3.67%	Projected 25-year 63-20 bonds based on MDA Analysis (5/14/2018)
15	Average Interest rate - Conventional	4.75%	4.75%	4.75%	Prime rate (63-20 at taxable rate), May 14, 2018
16	Treasurer Short Term Investment Rate Yield	1.72%	1.72%	1.72%	LGIP Net Average Rate April 2018
17	Commercial Short Term Interest	1.72%	1.72%	1.72%	LGIP Net Average Rate April 2018
18					
19	GO Yield Restriction Factor	0.00%	0.00%	0.00%	Placeholder in Model
20	COP Yield Restriction Factor	0.00%	0.00%	0.00%	Placeholder in Model
21	63-20 Yield Restriction Factor	0.00%	0.00%	0.00%	Placeholder in Model
22					
23	Short Term GO Reinvestment with Yield Restrictions	1.72%	1.72%	1.72%	Calculation
24	Months of Cash Flow Subject to Arbitrage	6	6	6	Per the Office of the State Treasurer
25					
26	Short Term COP Reinvestment with Yield Restrictions and Market	1.72%	1.72%	1.72%	Calculation
27	Short Term COP Reinvestment with Yield Restrictions	3.72%	3.67%	3.67%	Intermediate Calculation
28					
29	Short Term 63-20 Reinvestment with Yield Restrictions and Market	1.72%	1.72%	1.72%	Calculation
30	Short Term 63-20 Reinvestment with Yield Restrictions	3.72%	3.67%	3.67%	Intermediate Calculation
31					
32					
33	Developer Financing Cost with Financing Up Front	2.00%	2.00%	2.00%	Placeholder in Model -- from OFM
34	Developer Financing Cost with Financing At End	2.00%	2.00%	2.00%	Placeholder in Model -- from OFM
35	Number of Years Financed - GO Bond	25	25	25	Placeholder in Model
36	Number of Years Financed - COP	25	25	25	Placeholder in Model
37	Number of Years Financed - 63-20	25	25	25	Placeholder in Model
38					
39					
40	General Inflation	3.12%	3.12%	3.12%	10th year Avg (CY 2028) -- May 2018 (OFC: CTL0518::CPI) -- *closest to weighted average life of bonds an*
41	Real Discount Rate	0.53%	0.53%	0.53%	Calculation $\mathrm{Pr} = \frac{Pn - J}{1 + J}$
42					
43					
44					
45	**Calculated Interest Rate Diffeernetals**				
46	Interest Rate Differential - COP vs. Bond	0.18%	0.13%	0.13%	
47	Interest Rate Differential - 63-20 vs. COP	0.00%	0.00%	0.00%	
48	Interest Rate Differential - 63-20 vs. Bond	0.18%	0.13%	0.13%	
49					
50					
51	**Enter Data for U/D, Ins, & COI here**				
52	% Underwriters' Discount - GO Bond	0.34%	0.34%	0.34%	Per MDA Estimate on 5/14/2018
53	% Underwriters' Discount - COP	0.50%	0.45%	0.35%	Per MDA Estimate on 5/14/2018
54	% Underwriters' Discount - 63-20	n/a	0.60%	0.60%	Per MDA Estimate on 5/14/2018
55					
56	% Bond Insurance - GO Bond	0.00%	0.00%	0.00%	Per MDA Estimate on 5/14/2018
57	% Bond Insurance - COP	0.00%	0.00%	0.00%	Per MDA Estimate on 5/14/2018
58	% Bond Insurance - 63-20	0.00%	0.00%	0.00%	Per MDA Estimate on 5/14/2018
59					
60	% Cost of Issuance - GO Bond	0.05%	0.05%	0.05%	Per OST Estimate on 2/16/2017
61	% Cost of Issuance - COP	0.65%	0.25%	0.12%	Per OST Estimate on 5/14/2018
62	% Cost of Issuance - 63-20	n/a	1.60%	1.03%	Per OST Estimate on 9/3/2010
63					
64	**Total % Financing Cost - GO Bond**	0.39%	0.39%	0.39%	
65	**Total % Financing Cost - COP**	1.15%	0.70%	0.47%	
66	**Total % Financing Cost - 63-20**	n/a	2.20%	1.63%	

APPENDIX F

PROSPECTUS FOR HUMANITIES AND SOCIAL SCIENCE COMPLEX

PROSPECTUS FOR
HUMANITIES/SOCIAL SCIENCES COMPLEX
CENTRAL WASHINGTON UNIVERSITY

I. VISION, MISSION STATEMENT AND CONTEXT

University Mission

The mission of Central Washington University is to prepare students for enlightened, responsible, and productive lives; to produce research, scholarship, and creative expression in the public interest; and to serve as a resource to the region and the state through effective stewardship of university resources.

University Vision

"Central Washington University (CWU) is a dynamic, creative, and inclusive environment that promotes engaged learning and scholarship. It is distinguished regionally for the rigor of its curriculum and scholarship, for the excellence of its pedagogy, for the vibrancy of its co-curricular and residential experiences, for its commitment to providing access to higher education, and for its efforts to advance the social and economic health of the region. It is typified by an entrepreneurial spirit that establishes it as a national leader in higher education. It has a strong commitment to engaged learning and scholarship, internationalism, sustainability, inclusiveness, and life-long learning."

Context

Central Washington University is one of six state-assisted, four-year institutions of higher education in Washington. A regional comprehensive university, CWU offers baccalaureate and graduate degrees in more than 100 academic programs to over 10,000 students. Throughout its history, the university has distinguished itself in many ways, most notably through its quality teaching and academic programs, its student-centered orientation, and its commitment to research, outreach, international experiences for faculty and students, and provision of life-long learning opportunities to the citizens of Washington.

College of Arts and Humanities
Vision, Mission, and Strategic Priorities

Vision:
The College of Arts and Humanities empowers ethically minded students to reach their creative, intellectual, and leadership potential

Mission:
Recognized for our unwavering commitment to high quality teaching and learning, the College of Arts and Humanities is at the heart of the success of Central Washington University. Our innovative and dynamic departments and programs challenge our students to build enduring skills for lifelong achievement through an emphasis on creative, analytical, and ethical thinking and communication. We provide personalized mentorship; an inclusive, diverse and cross-disciplinary curriculum; opportunities for research, creative activities and service outside the classroom; and participation in a lively and stimulating community. As our alumni can affirm, this rich educational environment provides the foundation for a rewarding personal life, a productive career, and a commitment to globally informed civic values.

Strategic Priorities
1. Create and support a culture of mentorship across the college
2. Support and promote strategic curricular growth and enhancement including interdisciplinary, international, multimodal, inclusive, and diverse programming
3. Increase support for and value of scholarship and creative expression
4. Improve visibility of CAH internally and externally
5. Better engage alumni

College of the Sciences
Mission and Commitments

Mission:
The College of the Sciences prepares students for enlightened and productive lives through the intertwined endeavors of learning and research in the classroom, laboratory, and field. As practitioners of scientific inquiry, students and faculty create and apply knowledge to solving human, social and environmental problems. The college values instruction, research, and service as interdependent activities that enable human curiosity and discovery.

Our Commitments:
All departments within the CWU College of the Sciences are committed to teaching excellence; faculty and student research; scholarship and professional service; and community outreach, demonstrating the practical applications of our academic specialization.

CWU Libraries

Vision

CWU Libraries is committed to being a full partner with students and faculty in providing transformative teaching, learning, and research. We provide a wide variety of services, resources, and programs. We seek to make our offerings even more deeply integrated with the needs of our students and the greater CWU community.

Mission

The Central Washington University libraries provide quality resources and innovative services to stimulate creativity, intellectual curiosity, and to facilitate lifelong learning and research within the communities we serve.

Strategic Priorities

1) Be a partner in transformative teaching, learning, and research
2) Welcome the University community with excellent service and resources, seamless access to those resources and services, and inclusive spaces and programs accessible and approachable to all
3) Add to the quality of life of the CWU community
4) Create and extend an atmosphere of Inclusiveness and Diversity

II. PROGRAM RATIONALE

The program rationale for this project are to:

- Provide modern, effective, and safe learning environments for students.
- Consolidate fragmented programs.
- Accommodate growth of existing and new academic programs.
- Address known facilities problems and provide sustainable, space, and energy efficient solutions.

III. REQUIRED ROOM TYPES, COURSE OFFERINGS AND FUNCTIONS

In addition to an appropriate mix of office, support spaces and multi-media classrooms, CAH and CoTS departments use specialized laboratory and seminar instructional spaces. There is an overall need at the university for a large venue, 200 seat lecture hall. The nature of instruction in these teaching environments demands good acoustics, proper line of sight visibility, adequate ventilation and environmental control.

Instructional offerings range from small seminar and graduate classes to large lower division lecture courses with enrollments up to 200 students. There is increase demand for highly flexible, interactive classrooms set up with sophisticated A/V systems and movable tables and chairs. Laboratories for problem solving, data visualization, and text mining will support coursework and student research.

IV. CURRENT CONDITIONS

Humanities:
CAH departments currently housed in the Language and Literature Building lack adequate office and instructional space to support the very large number of classes taught, and the aged spaces do not allow for 21st-century humanities pedagogy and inquiry-based collaborative learning. CAH currently houses the state's only accessibility degree (BA, Deaf Studies) in L&L, which lacks full ADA access. The L&L building is old, inefficient and has reached the end of its productive life. The College of Arts and Humanities Dean is currently housed in fragmented space within Hebeler Hall which is remote from the bulk of CAH departments and programs. A goal of this project is to correct the CAH Dean space and location challenges.

Social Sciences:
The Law and Justice and Political Science departments are housed in Farrell Hall. Building systems in Farrell Hall have reached end of life as evidenced by a major HVAC system failure two years ago. Instructional spaces in Farrell are outdated, cramped, and do not meet demands for effective teaching and learning. Law and Justice currently operates a "mock courtroom" in a very small former classroom. A larger space is required to perform this function. Sociology is housed in Samuelson in space that was reprogrammed to meet their needs in 2018.

Connection space:
Connecting space between the Brooks Library and the new buildings in the complex will create a physical continuity and traffic flow between active classrooms, laboratories, and collaborative study space.

Other Program Considerations:
In order to fully vacate L&L, approximately 1600 square feet of space will need to be identified to accommodate the Ronald McNair Scholars Program. Full vacation of Farrell Hall will require relocation of CWAS (2800 square feet), Archeology Archives 900 square feet), Police and Public Safety gear storage (500 square feet), and the Anthropology Primate research group (1200 square feet) which includes archive materials from the former CHCI program.

V. FUTURE CWU PROGRAM, MASTER PLAN, ENROLLMENT AND SPACE REQUIREMENTS

This prospectus includes a summary of physical spaces required to address currently unmet and projected program needs for Humanities and Social Sciences departments. Instructional spaces are intended to meet departmental needs in the context of CWU's inventory of general scheduled classrooms. Instructional spaces will be designed to be fully mediated and furnished to support multiple layout configurations. Infrastructure pathway will be incorporated in the design to support future adaptability for new technology. Office/department suites need to be arranged to allow flexible assignment of offices between departments and assignment to interdisciplinary functions as needed. The facility needs to respond to student demand for access of key functions outside of regular building hours. The facility needs to be highly energy efficient and fit into a new campus utilities Master Plan targeted at state mandated greenhouse gas reduction standards.

Master Plan

This project is included within the CWU 10 year capital plan in the "Central Neighborhood." OVERARCHING CAMPUS-WIDE PLANNING GUIDELINES
The following are capital planning guidelines and priorities that apply to all aspects of campus development:

• Academic quality is a priority. New facilities will be flexible and support integrated, multidisciplinary programming. CWU will develop funding strategies to ensure facilities are safe, modern, and supportive of academic goals.
• Aesthetics are a priority: Seek opportunities to screen or soften utility and materials-handling areas. Look for opportunities to preserve and enhance the quality and variety of green space. Support the expansion, variety, and accessibility of artistic elements in the landscape. Make campus borders safer, easier to maintain, and more consistent aesthetically by targeting for purchase strategic properties adjacent to campus. Establish consistent, visible, and attractive entrances to campus along city thoroughfares.
• Pedestrians are a priority: Provide ADA, pedestrian, and bicycle access along arterial pathways. Circulation paths that flow with overall campus circulation should continue through buildings. Functions and facilities should be located to minimize the need for vehicle traffic on campus. Make features that serve both the university and the larger community accessible to both. Maintain campus compactness to ensure that students can walk from one building to another in about 10 minutes.
• Sustainability is a priority: Promote energy conservation to support sustainability and cost efficiency. Use space efficiently, adding new gross square footage only when necessary. Building design and materials should be consistent, meet sustainability standards, and complement campus setting and regional climate. Open space outdoors should provide a respite from intellectual pursuits, provide inviting space for solitude or socialization, and feature interesting, diverse, well maintained plant life as well as complementary hardscapes. Planning should be integrated with Ellensburg and Kittitas

County comprehensive growth plans. The depreciation of facilities, fixtures, and equipment, and strategies to maintain or replace them is an integral part of campus planning.

The 2019-2029 CWU Capital Master Plan calls for us to:

- Continually adjust space functions to support evolving needs, mission and goals. Facility utilization and capacity will be maximized to meet space requirements.
- Plan for long-term space needs will consider re-use and re-purposing of existing facilities in conjunction with strategic development of new space.
- Accommodate about 37 percent of full-time Ellensburg students who will continue to live in on-campus residences. Strategically establish proximity among departments, proximity that will foster curriculum integration and support interdisciplinary programs.
- Provide solutions for departments with identified space compaction problems.
- Develop spaces to support the delivery and administration of mentored undergraduate and graduate research, externally funded projects, and interdisciplinary programs.

The development plans synthesize the relationships among potential new development, open space, and circulation with the existing elements of the campus environment. These plans aims to preserve and enhance areas that are strong contributors to a sense of place, while improving areas that are weaker by comparison. The plans are intended to visualize how the campus might appear with increased density, within the current boundaries and in accordance with the general master plan goals and objectives. The interrelationship between the campus, the community and downtown Ellensburg is also an important aspect of the plans. In addition, improvements to interaction, and thus sense of community, are proposed by increasing pedestrian linkages, improving existing facilities, siting new development where appropriate, and strengthening open space.

Planning Guidelines

The following are capital planning guidelines that apply to all neighborhoods:

• Using uniform building design and materials.

• Screening or softening of utility and materials-handling areas on buildings.

• Providing pedestrian and bicycle access along arterial pathways will be provided. Circulation paths that flow with overall campus circulation will continue through buildings.

• Locating functions and facilities to minimize the need for vehicle travel on campus. Uses which serve both the university and the larger community will be accessible to the community.

• Promoting design consistent with campus setting and regional climate.

• Implementing energy conservation through low maintenance and operating costs is promoted.

• Using spaces fully, adding new gross square footage only when necessary.

• Operating facilities efficiently and maintaining them properly for maximum building life.
• Developing new facilities with sustainability in mind, keeping a focus on energy use and consequent emission effects. 28 | 2019-2029 CWU CAPITAL MASTER PLAN This vision is informed and supported by ubiquitous digital technologies that connect people to teaching and learning, data, entertainment, and to each other, 24/7. Modern systems ensure the physical safety of people, and the security of personal information and intellectual property. Throughout, efficiency and sustainability are priorities. The vision is supported by thorough and true-cost budgeting, innovative funding, and rigorous stewardship.

Enrollment

The 2019-2029 CWU Master Plan states: "The number of students enrolled at CWU has remained relatively constant since 2010. CWU will strive to grow headcount enrollment at the residential campus to 12,000, and statewide to 14,000 by the fall term of 2024. CWU assumes the bulk of future enrollment growth will occur online and at satellite locations."

Space Requirements
This section details the various rooms, their quantities, and the sizes required to support existing academic programs and accommodate expected future program activity levels.

Projected Space Needs

Projected Space Needs

CAH Dean:	No. Req'd	Unit Size	Space (sq.ft.)
Reception	1	350	350
Dean	1	225	225
Associate Deans	2	150	300
Staff Offices	6	125	750
Secretarial/Student Assistant	1	150	150
Workroom/Office Service	1	140	140
Files	1	140	140
Conference Room	1	500	500
Storage	1	150	150
Administrative Assistant	1	140	140
Development	1	140	140
Sub-Total			**2,985**

English:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Department Chair	1	175	175
Reception/Secretarial	1	450	450
Workroom/Office Service	1	300	300
Files/ Instructional Storage	1	200	200
Faculty Offices	24	140	3360
Adjunct Offices	15	75	1125
Graduate/TA Offices	20	75	1500
Academic Counselor	1	140	140
Shared Emeritus Office	1	150	150
Acoustical Phonetics Lab	1	150	150
Conference/Seminar	1	450	450
Seminar	1	300	300
Sub-Total			**8,300**

World Languages:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Department Chair	1	175	175
Reception/Secretarial	1	350	350
Workroom/Office Service	1	250	250
Files/ Instructional Storage	1	200	200
Faculty Offices	15	140	2100
Adjunct Offices	4	75	300
Shared Emeritus Office	1	140	140
Conference/Seminar	1	350	350
Language Lab	1	800	800
Sub-Total			**4,665**

History:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Department Chair	1	175	175
Reception/Secretarial	1	350	350
Workroom/Office Service	1	250	250
Files/Instructional Storage	1	200	200
Faculty Offices	12	140	1680
Adjunct Offices	4	75	300
Graduate/TA Offices	12	75	900
Academic Counselor	1	140	140
Shared Emeritus Office	1	140	140
Conference/Seminar	1	350	350
Sub-Total			**4,485**

Philosophy:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Department Chair	1	175	175
Reception/Secretarial	1	350	350
Workroom/Office Service	1	250	250
Files/Instructional Storage	1	200	200
Faculty Offices	10	140	1400
Adjunct Office Space	4	75	300
Shared Emeritus Office	1	140	140
Conference/Seminar	1	350	350
Sub-Total			**3,165**

Political Science:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Reception	1	350	350
Department Chair	1	175	175
Faculty Offices	12	140	1680
Adjunct Offices (shared)	5	140	700
Emeritus Faculty (shared)	1	140	140
Secretarial/Student Assistant	1	150	150
Workroom/Office Service	1	140	140
Files	1	140	140
Student Club Office	1	140	140
Reading Room	1	250	250
Storage	1	150	150
Academic Counselor	1	140	140
Sub-Total			**4,155**

Law and Justice:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Reception	1	350	350
Department Chair	1	175	175
Faculty Office	12	140	1680
Adjunct Offices (shared)	5	140	700
Emeritus Faculty (shared)	1	140	140
Secretarial/Student Assistant	1	150	150
Student Club Office	1	140	140
Reading Room	1	250	250
Workroom/Office Service	1	140	140
Academic Counselor	1	140	140
Multi-media conference room	1	300	300
Files	1	140	140

Department Lab (Mock Courtroom)	1	800	800
Sub-Total			**5,105**

Sociology:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
Reception	1	350	350
Department Chair	1	175	175
Faculty Office	14	140	1960
Adjunct Offices (shared)	5	140	700
Emeritus Faculty (shared)	1	140	140
Secretarial/Student Assistant	1	150	150
Student Club Office	1	140	140
Workroom/Office Service	1	140	140
Academic Counselor	1	140	140
Multi-media conference room	1	350	350
Files	1	140	140
Sub-Total			**4,385**

General Classrooms:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
200 Seat Multi-media Lecture Room/ Film Studies Theater -Auditorium Seating	1	3200	3200
100 Seat Multi-media Lecture Room - Auditorium Seating	1	1700	1700
80 Seat Multi-media Lecture Room- Auditorium Seating	1	1400	1400
60 Seat Multi-media Classroom	3	1350	4050
50 Seat Multi-media Classroom	8	1100	8800
42 Seat Multi-media Classroom	10	900	9000
30 Seat Multi-media Classroom	6	650	3900
Sub-Total			**32,050**

D.E Classroom:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
30 Seat D.E. Room	1	700	700
D.E. Support Room	1	200	200
Sub-Total			**900**

Support/Shared Spaces:	**No. Req'd**	**Unit Size**	**Space (sq.ft.)**
General Scheduled Meeting Room (24 hour card access)	1	350	350

General Computer Lab (24 card hour access)	1	800	800
Storage	1	100	100
Mothers Room	1	120	120
Display Areas (In public circulation space)	1	-	-
Faculty/Staff Lounge	1	400	400
Student Collaboration Areas			
Sub-Total			**1,770**

TOTAL ASSIGNABLE S.F.	**71,935**

In addition to these spaces, there is a desire for outdoor seating and gathering areas as well as informal space in public areas for students to study, collaborate on projects, and conduct meetings.

Gross Square Footage Requirements

Given this space program and an estimated efficiency ratio of 60%, the estimated square footage requirement is 119,890 GSF (71,935 ASF/60% efficiency = **119,890 GSF**.)

APPENDIX G

CWU EXISTING FACILITY CONDITION ASSESSMENT REPORTS

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
BROOKS LIBRARY Facility
BROOKS LIBRARY — **Building ID** A06018

Building Size - Gross	143,324	**Building Size- Assignable**	99,794
Year Of Original Construction	1976	**Year Of Last Renovation**	
Building Use Type	Teaching Labs		
Construction Type	Heavy		

Survey Date 04/15/20 **Survey By** FMD

Building Condition Summary

Condition Index	**0.12**
Relative Condition Score	**3**
Weighted Avg Condition Score	**2.6**

Building Components

Systems	Scores	Comments
A Substructure:	**1.4**	
Foundations		
Standard Foundations	1	
Slab on Grade	2	
B Shell:	**2.8**	
Superstructure		
Floor Construction	3	
Roof Construction	2	
Exterior Closure		
Exterior Walls	3	
Exterior Windows	4	
Exterior Doors	3	
Roofing		
Roof Coverings	2	
Roof Opening	2	
Projections	2	
C Interiors:	**2.2**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
BROOKS LIBRARY Facility
BROOKS LIBRARY — **Building ID** A06018

Interior Construction		
Fixed and Moveable Partitions	2	
Interior Doors	2	
Specialties	3	
Staircases		
Stair Construction	1	
Stair Finishes	2	
Interior Finishes		
Wall Finishes	2	
Floor Finishes	3	2 Floor Replace 2018 New 1
Ceiling Finishes	2	
D Services:	**2.8**	
Vertical Transportation		
Elevators and Lifts	3	
Plumbing		
Plumbing Fixtures	2	
Domestic Water Distribution	2	
Sanitary Waste	2	
Rain Water Drainage	3	
Special Plumbing Systems		DOES NOT EXIST
HVAC		
Energy Supply	2	
Heat Generating Systems	2	
Cooling Generating Systems	4	
Distribution Systems	4	
Terminal and Package Units	4	
Controls and Instrumentation	2	Controllers Upgraded
Special HVAC Systems and Equipment		DOES NOT EXIST
Fire Protection		
Fire Protection Sprinkler Systems		DOES NOT EXIST
Stand-Pipe and Hose Systems	3	
Fire Protection Specialties		DOES NOT EXIST
Special Fire Protection Systems		DOES NOT EXIST
Electrical		
Electrical Service and Distribution	3	
Lighting and Branch Wiring	3	
Communication and Security Systems	4	
Special Electrical Systems	3	
E Equipment and Furnishings:	**2.0**	

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
BROOKS LIBRARY Facility
BROOKS LIBRARY — **Building ID** A06018

Equipment and Furnishings		
Fixed Furnishings and Equipment	2	
Moveable Furnishings (Capital Funded Onl	2	
E Special Construction:	**2.0**	
Special Construction		
Integrated Constr. & Special Constr. Syste	2	DISTANCE ED ROOM
Special Controls and Instrumentation		DOES NOT EXIST

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
FARRELL HALL Facility
FARRELL HALL — **Building ID** A02449

Building Size - Gross	34,952	**Building Size- Assignable**	19,250
Year Of Original Construction	1976	**Year Of Last Renovation**	
Building Use Type	Teaching Labs		
Construction Type	Heavy		

Survey Date	04/15/20	**Survey By**	FMD

Building Condition Summary

Condition Index	**0.12**
Relative Condition Score	**3**
Weighted Avg Condition Score	**2.9**

Building Components

Systems	Scores	Comments
A Substructure:	**1.6**	
Foundations		
Standard Foundations	2	
Slab on Grade	1	
B Shell:	**3.4**	
Superstructure		
Floor Construction	4	
Roof Construction	2	
Exterior Closure		
Exterior Walls	4	
Exterior Windows	4	
Exterior Doors	2	
Roofing		
Roof Coverings	3	
Roof Opening	3	
Projections	3	
C Interiors:	**2.2**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
FARRELL HALL Facility
FARRELL HALL — **Building ID** A02449

Interior Construction		
Fixed and Moveable Partitions	2	
Interior Doors	2	
Specialties	2	
Staircases		
Stair Construction	1	
Stair Finishes	2	
Interior Finishes		
Wall Finishes	2	
Floor Finishes	3	
Ceiling Finishes	3	
D Services:	**3.2**	
Vertical Transportation		
Elevators and Lifts	3	
Plumbing		
Plumbing Fixtures	2	
Domestic Water Distribution	2	
Sanitary Waste	2	
Rain Water Drainage	4	
Special Plumbing Systems		DOES NOT EXIST
HVAC		
Energy Supply	3	
Heat Generating Systems		DOES NOT EXIST
Cooling Generating Systems		DOES NOT EXIST
Distribution Systems	5	
Terminal and Package Units	4	
Controls and Instrumentation	4	
Special HVAC Systems and Equipment	3	
Fire Protection		
Fire Protection Sprinkler Systems	4	Wet Stand Pipe
Stand-Pipe and Hose Systems	2	
Fire Protection Specialties		DOES NOT EXIST
Special Fire Protection Systems		DOES NOT EXIST
Electrical		
Electrical Service and Distribution	3	
Lighting and Branch Wiring	3	
Communication and Security Systems	3	
Special Electrical Systems	3	
E Equipment and Furnishings:	**2.0**	

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
FARRELL HALL Facility
FARRELL HALL — **Building ID** A02449

Equipment and Furnishings

Fixed Furnishings and Equipment	2
Moveable Furnishings (Capital Funded Onl	2

E Special Construction:

Special Construction

Integrated Constr. & Special Constr. Syste	DOES NOT EXIST
Special Controls and Instrumentation	DOES NOT EXIST

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
LANGUAGE & LITERATURE Facility
LANGUAGE & LITERATURE — **Building ID** A05420

Building Size - Gross	52,904	**Building Size- Assignable**	28,346
Year Of Original Construction	1971	**Year Of Last Renovation**	
Building Use Type	General Classroom		
Construction Type	Heavy		

Survey Date	04/15/20	**Survey By**	FMD

Building Condition Summary

Condition Index	**0.15**
Relative Condition Score	**3**
Weighted Avg Condition Score	**2.9**

Building Components

Systems	Scores	Comments
A Substructure:	**1.0**	
Foundations		
Standard Foundations	1	
Slab on Grade	1	
B Shell:	**2.7**	
Superstructure		
Floor Construction	3	
Roof Construction	3	
Exterior Closure		
Exterior Walls	2	
Exterior Windows	4	
Exterior Doors	4	
Roofing		
Roof Coverings	2	
Roof Opening	2	
Projections	1	
C Interiors:	**3.0**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
LANGUAGE & LITERATURE Facility
LANGUAGE & LITERATURE — **Building ID** A05420

Interior Construction		
Fixed and Moveable Partitions	3	
Interior Doors	2	
Specialties	3	
Staircases		
Stair Construction	4	
Stair Finishes	3	
Interior Finishes		
Wall Finishes	3	
Floor Finishes	3	
Ceiling Finishes	3	
D Services:	**3.3**	
Vertical Transportation		
Elevators and Lifts	4	ELEVATOR FREQUENTLY MALFUNCTIONS
Plumbing		
Plumbing Fixtures	2	
Domestic Water Distribution	2	
Sanitary Waste	3	
Rain Water Drainage	2	
Special Plumbing Systems		DOES NOT EXIST
HVAC		
Energy Supply	2	
Heat Generating Systems		DOES NOT EXIST
Cooling Generating Systems		DOES NOT EXIST
Distribution Systems	3	
Terminal and Package Units	4	
Controls and Instrumentation	4	
Special HVAC Systems and Equipment		DOES NOT EXIST
Fire Protection		
Fire Protection Sprinkler Systems	3	1st Floor Only
Stand-Pipe and Hose Systems		DOES NOT EXIST
Fire Protection Specialties		DOES NOT EXIST
Special Fire Protection Systems		DOES NOT EXIST
Electrical		
Electrical Service and Distribution	4	
Lighting and Branch Wiring	4	
Communication and Security Systems	4	
Special Electrical Systems	4	
E Equipment and Furnishings:	**2.7**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
LANGUAGE & LITERATURE Facility
LANGUAGE & LITERATURE — **Building ID** A05420

Equipment and Furnishings

Fixed Furnishings and Equipment	3
Moveable Furnishings (Capital Funded Onl	2

E Special Construction:

Special Construction

Integrated Constr. & Special Constr. Syste	DOES NOT EXIST
Special Controls and Instrumentation	DOES NOT EXIST

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
INTERNATIONAL CENTER Facility
INTERNATIONAL CENTER — **Building ID** A04244

Building Size - Gross	12,846	**Building Size- Assignable**	8,175
Year Of Original Construction	1948	**Year Of Last Renovation**	
Building Use Type	Office		
Construction Type	Light		

Survey Date	04/15/20	**Survey By**	FMD

Building Condition Summary

Condition Index	**0.27**
Relative Condition Score	**3**
Weighted Avg Condition Score	**3.3**

Building Components

Systems	Scores	Comments
A Substructure:	**2.6**	
Foundations		
Standard Foundations	3	
Slab on Grade	2	
B Shell:	**2.9**	
Superstructure		
Floor Construction	3	
Roof Construction	3	
Exterior Closure		
Exterior Walls	2	
Exterior Windows	4	
Exterior Doors	4	
Roofing		
Roof Coverings	3	
Roof Opening		DOES NOT EXIST
Projections	2	
C Interiors:	**3.0**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
INTERNATIONAL CENTER Facility
INTERNATIONAL CENTER — **Building ID** A04244

Interior Construction		
Fixed and Moveable Partitions	4	
Interior Doors	4	
Specialties	4	
Staircases		
Stair Construction	3	
Stair Finishes	3	
Interior Finishes		
Wall Finishes	2	
Floor Finishes	2	
Ceiling Finishes	2	
D Services:	**4.0**	
Vertical Transportation		
Elevators and Lifts		DOES NOT EXIST
Plumbing		
Plumbing Fixtures	4	
Domestic Water Distribution	4	
Sanitary Waste	3	
Rain Water Drainage	4	
Special Plumbing Systems		DOES NOT EXIST
HVAC		
Energy Supply	3	
Heat Generating Systems		DOES NOT EXIST
Cooling Generating Systems		DOES NOT EXIST
Distribution Systems	4	
Terminal and Package Units	4	
Controls and Instrumentation	5	
Special HVAC Systems and Equipment		DOES NOT EXIST
Fire Protection		
Fire Protection Sprinkler Systems		DOES NOT EXIST
Stand-Pipe and Hose Systems		DOES NOT EXIST
Fire Protection Specialties		DOES NOT EXIST
Special Fire Protection Systems		DOES NOT EXIST
Electrical		
Electrical Service and Distribution	5	
Lighting and Branch Wiring	5	
Communication and Security Systems	1	
Special Electrical Systems	5	
E Equipment and Furnishings:	**3.4**	

Building Detail

Central Washington University — **Institution ID** 375
CENTRAL WASHINGTON UNIVERSITY — **Site ID** 375
INTERNATIONAL CENTER Facility
INTERNATIONAL CENTER — **Building ID** A04244

Equipment and Furnishings

Fixed Furnishings and Equipment	4
Moveable Furnishings (Capital Funded Onl	2

E Special Construction:

Special Construction

Integrated Constr. & Special Constr. Syste	DOES NOT EXIST
Special Controls and Instrumentation	DOES NOT EXIST

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDIX I

Structural Assessment of L&L and Farrell Hall

Putnam Collins Scott, Structural Engineers

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Putnam Collins Scott Associates
Tacoma · Seattle

JANUARY 2002

CENTRAL WASHINGTON UNIVERSITY

LANGUAGE ARTS & LITERATURE BUILDING

The following report was prepared in July 1999 based upon a much more in-depth scope of evaluation than the scope of the current evaluation efforts, but has been included in the current set of studies to provide a more comprehensive package of information toward prioritizing renovation/remodel work in the academic buildings on campus. The format varies slightly from the typical report prepared as part of the current set of evaluations; however, the conclusions and recommendations are consistent in scope. Please note that additional information has been provided at the end of the report regarding budgetary estimate and ST Risk™ Information.

A. BUILDING DESCRIPTION

Constructed in 1971, the Language Arts and Literature Building is currently used for a combination of classroom and office space. The building is four stories with a mechanical penthouse above. The building is generally constructed of concrete roof and floors and brick interior and exterior walls, while the penthouse is of steel framed construction.

Vertical Load Resisting System: The vertical load resisting system is comprised of corrugated steel roof decking, steel beams and steel columns at the penthouse level. A combination of structural concrete slabs, concrete pan joists, and concrete beams make up the roof and floor framing throughout the remainder of the building. The concrete roof and floors are supported predominantly by reinforced brick masonry bearing walls. Steel and concrete columns serve to support the structure at several locations throughout the building. The first floor is of concrete slab on grade construction, and the foundation is constructed of conventional continuous and spread concrete footings.

Lateral Load Resisting System: The lateral load resisting system consists of a corrugated metal roof diaphragm and corrugated metal shear walls at the penthouse level. The remainder of the building utilizes concrete roof and floor diaphragms supported by reinforced brick masonry shear walls. The shear walls are supported by conventional continuous concrete footings.

B. GENERAL OBSERVATIONS

Overall, the building is in a very good state of structural repair. There are no significant signs of structural distress. We observed no signs of significant structural deterioration or differential settlement. The University originally noted some concern relating to the deflections of the concrete floors, however, specific locations were not identified. In the course of our investigation, we were unable to find deflections in excess of what would normally be expected due to normal loading and construction tolerances in any of the concrete floors that were checked. The measured deflections fell well within the code prescribed limit of the span length divided by 360.

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- There is a crack in the brick veneer at the north exterior wall of the women's restroom at the second floor (see figure 1). This wall is of steel stud construction and does not act as a structural wall. The crack appears to have been caused by deflection of the supporting concrete beam at the second floor level which cantilevers beyond the main concrete support beam over the courtyard area. There is no visible damage or sign of structural distress that would indicate a problem with the support beam. We would recommend that the crack be repaired to prevent further damage due to water intrusion, and monitored for future movement that may indicate a more significant concern.

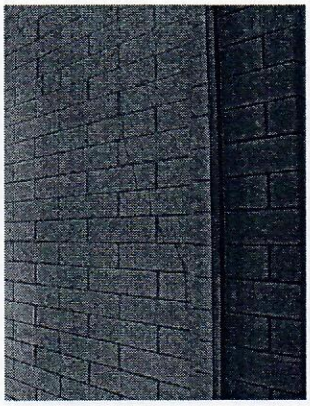

Figure 1 – Veneer Cracking

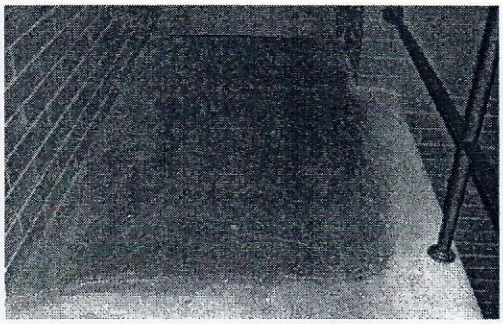

Figure 2 – Stairway Slab Cracking

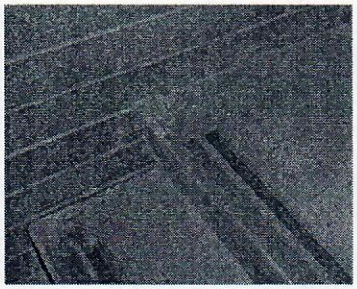

Figure 3 – Stair Damage

- There is some slight damage to the exterior concrete finish in a few locations. This typically consists of spalling that has occurred at the corners of the concrete foundation or concrete edge beams. This appears to be the result of either normally expected expansion and contraction of the concrete and brick, or possibly due to stress concentrations caused by slightly uneven bearing of the masonry on the concrete. Another possible cause may be due to the long term shrinkage of the concrete floor members. This condition does not appear to be of structural concern. These locations, however, should be repaired to help prevent any future damage that may occur due to water intrusion or weathering effects.
- There is cracking present in the concrete slabs at the stair landings typically throughout the building. This cracking typically occurs near the doorway into the stair and is generally parallel to and in line with the masonry wall located nearest the center of the building (see figure 2). It appears as though there have been repairs made at these locations in the past. Additionally, there was some indication from the University that a few of the doors entering the stairs had been adjusted in the past to account for movement that had occurred in the structure. The cracking at these locations appears to be the result of the structural concrete slab changing span direction near the masonry wall corner. This results in a negative moment in the concrete slab creating tension in the top surface resulting in cracking of the concrete. From our calculations, the landings have adequate strength to carry the required loading based upon the reinforcing shown in the existing drawings. It is our understanding, however, that the University is currently in the process of strengthening the landings at the fourth floor stair landings based upon recommendations of a separate consultant.

Additionally, there is some minor damage to the landing slabs at the fourth floor opposite the door (see figure 3). This damage occurs at the top of the slab adjacent to the masonry wall in the form of cracking directly adjacent to the wall. This appears to be the result of normally expected rotation of the concrete slab at the support and bonding between the masonry and the concrete creating tension in the top of the slab. This results in cracking of the concrete. This condition may have been accentuated by the steel reinforcing being placed closer to the surface of the concrete than what would normally be desired, creating a plane for the concrete to crack along. This condition, however, does not appear to be of significant structural concern, and should be repaired.

- There was some minor cracking noted in the underside of the concrete stairs. These appear to be normally expected flexural cracking, and do not appear to be of significant structural concern. Our calculations show that the stair runs typically have in excess of twice the required capacity considering the reinforcing shown in the existing drawings.
- One additional area of concern relates to the reinforcing in the structural masonry walls. The drawings indicate steel reinforcing in the walls typically throughout the building. During our walk-through, we tested a few random locations using a Pachometer for evidence of the reinforcing. We were able to locate what appeared to be steel reinforcing sporadically in the walls with little correlation to what would be expected from the existing drawings. We would note that the building was constructed during a time in which reinforced masonry construction was a relatively new concept, and the reinforcing may not have been placed as detailed in the drawings.

C. FEMA 310 CHECKLIST CONCERNS

The type of construction of the building places it in category RM2 of the FEMA 310 checklists. This category is for Reinforced Masonry Bearing Wall Buildings with Stiff Diaphragms. The FEMA checklist helps to identify building details that have historically resulted in damage or collapse of structures under seismic loading. The checklist identifies each item as being "compliant", having adequate strength or detailing characteristics, or as being "non-compliant". The non-compliant statements are then further analyzed to determine any necessary course of action for the mitigation of the noted structural concern. The completed FEMA 310 Checklist is located at the end of this report. The following are the non-compliant FEMA 310 Checklist statements for the Language Arts & Literature Building.

- The checklist requires that there be minimal change in the length of the lateral force resisting system between stories. There are several cases in which the lengths of shear wall from one story to the next vary by more than the limits established in the requirements of the checklist.
- Under the requirements of the checklist, the elements in the lateral force resisting system should be continuous to the foundation. There are several examples throughout the building where the masonry and concrete shear walls are discontinuous at the second floor level and are supported by steel columns and/or concrete floor beams. This condition violates the requirements of the checklist.
- With the increased floor area from the second floor to the ground floor, there is a substantial increase in mass from the third floor to the second floor/low roof. The checklist requires that there be a minimal change in mass from one story to the next.
- In reference to diaphragm openings adjacent to shear walls, the checklist requires that the length of the opening(s) be limited to less than one fourth the length of the shear wall. At both the north and south stair cores, the openings in the floor diaphragms extend the entire length of the shear walls, violating the requirements of the checklist.

- The checklist requires that any re-entrant corners in the diaphragm be reinforced. The existing drawings do not indicate any special reinforcing at these locations, and while in many cases, reinforcing from the pan joists and beams cross the corners, it does not appear as though the building was detailed to account for the stress concentrations likely to occur at these locations.

D. ANALYSIS RESULTS

Vertical Analysis

The vertical analysis performed consisted of a partial review of the individual framing elements. Several concrete joists from each floor as well as the roof were checked against current design standards to help determine the overall performance of the vertical load carrying elements of the roof and floor structures. The most heavily loaded masonry walls were also analyzed to determine their adequacy to withstand required vertical loads. In addition, several of the vertical load carrying columns and both column and wall footings were reviewed for adequacy to resist required vertical loads. Further, analysis of the concrete stairs and stair landings was performed.

From our analysis, the vertical load carrying system appears to have adequate capacity to carry the required vertical design loads. The only exception is the concrete pan joists at the low roof areas. These joists have adequate capacity to carry normally expected snow loading, however, under consideration of drifted snow loading, the joists are in an overstressed condition. Presumably, drift loading conditions were not included as part of the original design. Beyond this one item, the remainder of the vertical load carrying system appears to be in compliance with the requirements of the current building code.

Lateral Analysis

The lateral analysis performed consisted of static force procedures for wind and seismic forces as prescribed by the 1997 UBC. Per the analysis, code prescribe lateral seismic forces were significantly larger than wind forces for the entire building with the exception of the mechanical penthouse.

Calculations on the penthouse showed that the metal siding used to brace the wall elements has a substantial amount of load under consideration of wind. We were unable to determine the attachment pattern of the decking to the support structure form the existing drawings, and were therefore unable to determine the capacity of the siding in resisting lateral loading. The level of load present, however, seems to indicate a deficiency in the lateral capacity of the penthouse structure.

The results of the analysis for the remainder of the building showed that the masonry shear walls at the third and fourth floor levels are in compliance with the requirements of the current building code. Several of the walls at the second floor level, however, showed to be significantly over-stressed. These were primarily around the stair and elevator cores in both the north and south ends of the building. In addition, these walls are not continuous to the foundation. The walls are supported by the concrete floor structure, which is, in turn, supported by concrete and steel columns. Of note is the current code requirement that columns vertically supporting discontinuous portions of the lateral force resisting system be able to resist

the calculated loads to the individual columns increased by an "over-strength factor." This factor varies depending upon the building type and lateral system varying between 2.0 and 3.0. Additionally, concrete columns are required to meet more stringent reinforcing requirements to insure ductile behavior. These columns do not meet the strength or ductility requirements for members supporting elements of the lateral force resisting system.

The remainder of the shear walls at the second floor level have adequate capacity to resist the required lateral loads. Several of these walls, however, are also discontinuous at the first floor level, and while the columns supporting these walls have ample strength to resist vertical loads alone, they do not meet the strength and ductility requirements as part of the lateral system.

In reference to the concrete roof and floor diaphragms, the diaphragms at the third floor, fourth floor, and roof appear to have adequate capacity to resist the prescribed loads, however, there are several minor detailing deficiencies in the diaphragms. These relate primarily to the openings in the diaphragms at the stair cores, and at the re-entrant corners around the perimeter of the building. The openings in the diaphragms at the stair cores are directly adjacent to several shear walls. The existing drawings show no special detailing at these locations to collect the lateral forces from the diaphragms into the shear wall elements. Additionally, no reinforcing was shown in the exiting drawings to strengthen the diaphragms at the corners of these openings or at the re-entrant corners around the perimeter of the structure. Similarly, the second floor/low roof diaphragm lacks special reinforcing to strengthen the diaphragm at these locations. In addition, there are no collectors detailed to adequately transfer the lateral forces from the discontinuous shear wall elements into the diaphragm. Also, the roof of the northwest classroom area at the first floor level is raised three feet higher than the remainder of the diaphragm. This discontinuity in the diaphragm has not been provided with adequate reinforcing to transfer the forces between the diaphragm elements.

E. STRUCTURAL RECOMMENDATIONS

The following recommendations are based upon two levels of structural concern. The first level of concern is that of "Life Safety" (noted LS1, LS2, etc.), and the second level is that of "Damage Control" (noted DC1, DC2, etc.). Each of the concerns is listed in order from highest level of concern to least concern.

Item	Structural Concern	Structural Recommendation
LS1	The drawings call for both horizontal and vertical steel reinforcing in the brick masonry walls. From the walk-through evaluation, there is some doubt as to whether the walls are reinforced as detailed. Unreinforced masonry would have far less capacity to carry the structure both vertically and laterally, and may be subject to heavy damage or possible partial collapse under moderate to heavy seismic loading.	Provide thorough testing of the masonry walls throughout the building as part of the Phase II evaluation in order to locate any steel reinforcing present in the walls. In the absence of adequate reinforcing, significant work would be required to strengthen the building against both vertical and lateral loading conditions.

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Item	Structural Concern	Structural Recommendation
LS2	There are several shear walls at the second floor level that are discontinuous to the foundation. The columns supporting these walls do not meet the strength requirements of the current building code for vertical support of elements of the lateral force resisting system. These columns are subject to being overstressed under moderate to heavy lateral loading, which may result in damage to the columns, which in turn may propagate partial collapse of the building. The areas affected by this condition include the stairways at both the north and south sides of the building. In addition to the overall threat to the safety of the building's occupants, partial collapse of the structure at these locations would most likely hinder the ability of the occupants to safely exit the building after a seismic event.	The vertical support elements at these walls should be strengthened to meet current code requirements, or steps should be taken to supplement the lateral system to provide direct transfer of lateral loads from these walls to the foundation level. Strengthening of the concrete columns might consist of wrapping the columns with a fiber-reinforced composite strengthening system while strengthening of the steel columns would likely consist of the additional of steel channels welded to the existing columns to provide additional strength. The transfer of lateral loads may be accomplished through the use of steel brace frames or through the addition of concrete or masonry shear walls at the first floor level. Due to the complexity of the building configuration, we would recommend that a dynamic analysis be performed as part of the Phase II evaluation to provide more accurate analysis information and more in depth information as to the best course for the strengthening of the structure at these locations.
DC1	As previously stated, the roof joists at the low roof areas do not have adequate capacity to carry prescribed snow drift loads. Under heavy snow drift conditions, the joists may experience significant damage.	The joists should be strengthened against drift load conditions. This would likely consist of the use of a fiber-reinforced composite strengthening system applied to the joists.
DC2	As noted above, there are several concerns relating to the detailing of the diaphragms throughout the building. These areas are subject to moderate to heavy damage under seismic loading conditions.	Due to the complexity of the building's configuration, further investigation (through a dynamic analysis) is warranted as part of the Phase II evaluation. At locations found to be deficient, strengthening of the diaphragms may be accomplished through the addition of steel or concrete members anchored to the underside of the diaphragms to strengthen it against seismic forces. A second option may be the use of a fiber-reinforced composite strengthening system applied to the top side of the diaphragm at the areas requiring strengthening.

Item	Structural Concern	Structural Recommendation
DC3	From the lateral analysis, it appears as though the metal decking used for the wall panels at the mechanical penthouse is inadequate to carry the required lateral forces. The decking is subject to damage under moderate to heavy wind loading conditions.	The attachment of the decking to the support structure should be verified. If the attachment is found to be deficient, the decking should be provided with supplemental attachment to the structure. In the possibility that it is not possible to strengthen the decking, supplemental lateral resistance should be added to the penthouse structure. This may include the addition of steel braces within the existing steel support framing.

Phase II Evaluation Recommendations

- Provide more thorough testing of the masonry throughout the building to identify existing steel reinforcing. If no reinforcing or inadequate reinforcing is found, the lateral analysis and resulting recommendations will need to be reviewed and revised based upon the findings.
- With the complex and irregular shape of the building, it is recommended to perform a dynamic analysis of the structure to gain a better understanding of the performance of the structure under lateral loading conditions. The focus of such an analysis should be on the discontinuous shear walls elements, and the concrete diaphragms.
- Provide testing to identify anchorage between the brick veneer and the backing walls throughout the building. This likely will entail the use of a Pachometer to determine tie locations and the removal of small areas of veneer at several locations to identify the configuration and condition of any existing means of anchorage.
- Identify the attachment of the metal decking/siding at the mechanical penthouse to determine allowable lateral capacities.
- Develop strengthening schemes for areas noted as deficient, and provide rough cost estimation for the implementation of each recommendation.

F. CONCLUSIONS

Based upon current code requirements, there are substantial concerns relating to the building's lateral load resisting system, and a significant amount of work would be required to strengthen the building to meet the intent of the current building code. It should be noted that the details of construction are consistent with design practices during the time of construction, and that many of the code related deficiencies target details of construction that have historically proven to be problematic in a building's ability to resist lateral loads. Of significant concern is the reinforcing of the masonry walls throughout the building. As noted above, a complete review of this situation is recommended as part of the Phase II evaluation. It is further recommended to refine both the analysis and strengthening recommendations as part of the Phase II evaluation.

Additionally, in light of our involvement in the investigation of several other academic buildings on campus, we would recommend that the University complete evaluations on the remainder of the academic buildings prior to prioritization or allocation of funds for noted repair/strengthening work.

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FARRELL HALL

Figure 1 – Farrell Hall

A. TYPE OF CONSTRUCTION/STRUCTURAL SYSTEMS

Constructed in 1973, Farrell Hall is currently used for a combination of classrooms and offices. The building is four stories with a centrally located mechanical mezzanine at the roof level, and a partial basement. The construction generally consists of concrete and reinforced brick masonry. A full set of structural drawings was available for our review.

Vertical Load Resisting System: The vertical load resisting system consists of concrete pan joists and concrete beams at the roof level and two-way structural concrete slabs with drop panels at the column locations. Concrete columns and beams, along with reinforced brick masonry bearing walls serve to carry the roof and floor framing systems. The ground floor level is generally concrete slab on grade with the exception of the partial basement area, where the floor is constructed of structural concrete slabs, concrete beams, and concrete bearing walls. The foundations are typically constructed of conventional continuous and spread concrete footings.

Lateral Load Resisting System: The lateral load carrying system is comprised of concrete slab roof and floor diaphragms and a combination of concrete and reinforced brick masonry shear walls. There are several locations throughout the building where seismic joints have been provided to account for various plan irregularities, and serve to isolate the various portions of the building laterally from one another.

FARRELL HALL

B. GENERAL OBSERVATIONS

In general, the building is in a good state of structural repair. We observed no signs of significant structural distress, deterioration, or differential settlement.

- There was some cracking noted in the exposed concrete floors at the upper floors. These cracks appear to be the result of normally expected shrinkage, and possibly due to slight under-reinforcing, in which there is adequate reinforcing for strength requirements, but not enough to limit deflections of the floors to prevent cracking. This condition was also noted at the underside of the concrete stairs throughout the building.
- There was some excessive deflection noted in the two-way concrete slabs at the upper floors. This is related to the lack of sufficient steel reinforcing noted with the cracking of the floor slabs above. Based upon our previous involvement in reviewing this condition, it is noted that the reinforcing appears to be adequate for the strength of the floors (possible minor reduction in capacity due to placement of the reinforcing); however, it appears as though long-term creep of the concrete was not adequately considered in the original design of the floor system. This is not noted as a significant structural concern.
- At the exposed concrete floor edges at the exterior of the building, there were some minor cracks observed. These are predominantly hairline in nature, and appear to be the result of normally expected shrinkage. These are not noted as a significant structural concern.

C. FEMA 310 CHECKLIST CONCERNS

Farrell Hall was evaluated as a Reinforced Masonry Bearing Wall Building with a Stiff Diaphragm (Checklist RM2). The FEMA checklist helps to identify building details that have historically resulted in damage or collapse of structures under seismic loading. The checklist identifies each item as being "compliant", having adequate strength or detailing characteristics, or as being "non-compliant". The non-compliant statements are then further analyzed to determine any necessary course of action for the mitigation of the noted structural concern. The completed FEMA 310 Checklist is located at the end of this report. The following are the non-compliant FEMA 310 Checklist statements for Farrell Hall.

- The checklist requires that there be no deterioration in the concrete elements. As noted above, there are some areas noted as having minor deterioration. These areas of minor deterioration are not considered structurally significant.

D. STRUCTURAL RECOMMENDATIONS

Item	Structural Concern	Structural Recommendation
1	As noted above, there are several areas that have minor cracking/deterioration of the concrete elements. If left unattended, these areas may worsen due to such issues as water intrusion and/or freeze/thaw conditions.	These areas should, as a minimum, be sealed to help prevent further deterioration. Epoxy injecting the larger cracks would help serve to bring the building and it's components back to their original condition.

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDIX J

Fire Risk Assessment of L&L and Farrell Hall

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CENTRAL WASHINGTON UNIVERSITY

Facilities Planning & Construction Services

FIRE RISK GUIDELINES, OBJECTIVES AND PRIORITIZATION STUDY

Appendix "B" Academic Buildings

For the purposes of Improving Campus Fire Safety, Establishing Consistent Design Standards and Project Fiscal Worthiness.

Creighton Engineering Inc Contract 6623-A Addendum # 3.

Documents Prepared per the request of:

Bill Vertrees - Director FP & CS
Joanne Hillemann - Manager FP & CS

02 June 2004

Report Prepared by:

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Scott R. Creighton (F) PE

FIRE PROTECTION/SUPPRESSION DESIGN ALTERNATIVES

FIRE SCENARIOS:

Property Protection Fire Scenario "A": First floor fire, north wing.

The north wing of the first floor is comprised of classrooms and labs, many rooms have no exterior windows. These areas are unlikely to be occupied during late evening hours or holidays/breaks. A fire in this area would develop undetected. Notification would not occur until a passerby or building occupant notices smoke or fire. The location of the fire makes it difficult for a occupants in the rest of the building to see smoke or fire. If the fire developed during a school holiday/break the majority of building occupants would be away. A fire developing at night would further hinder notification of a fire as the number of passerbys would be decreased.

Under these conditions a fire has a substantial amount of time to develop prior to notice by a passerby and notification to the FD. Internal fire spread is expected before fire "shows" to the exterior. This time frame of fire growth allows substantial heat development/fire spread. Floor to floor horizontal separation is good however fire can go thru non sealed penetrations.

HVAC equipment is not expected to significantly help or hinder fire growth or smoke spread.

Upon arrival the fire department would find a "well developed" fire requiring application of extensive external hose steams. Interior fire approach would be high risk at first. The fire department has ample water supply and fair access to fire hydrants. Fire department response and set-up times are listed below.

The scenario anticipates physical direct fire damage to over 20% of the fire floor. Substantial structural damage would occur to 05 to 10% of the building. Remaining portions of the building would be heat, smoke or water damaged.

Unchecked Fire Duration:

Fire Origin to FD Notification:.....13 to 16.9 minutes
Fire Department Travel Time:..... 4 to 5 minutes
FD Set Up..... 3 to 4 minutes
Rescue and Evacuation..... 0 to 0 minutes

Total Unchecked Duration..... 20 to 25.9 minutes

Sparse Occupant Life Safety Fire Scenario "B": 1st -3rd floor fire, occupants on 4th flr.

The first and fourth floors are occupied primarily by offices. The remainder of the building is primarily classrooms and labs with some offices. In periods of sparse occupancy the lower levels may have no occupants and there can be sparse occupants on the 4th floor. A fire could develop undetected for a significant time frame. There are very few automatic detection devices. Delayed notification is probable.

A fire developing at late night would further hinder notification as there would typically be few passerbys.

Under these conditions a substantial amount of time can occur prior to notification. Interior brick walls and concrete floors combined with rated stairwells would hinder smoke and fire spread both vertically and horizontally through the building.

This building has the specific risk concern that both stairwells are entered from a common atmosphere on 2nd, 3rd, and 4th floors and the rooms are isolated.

HVAC equipment is not expected to significantly help or hinder fire growth or smoke spread.

Upon arrival the fire department would find a "well developed" fire situation with potential complications of rescue operations. Early fire suppression would be by heavy application of external hose steams. An internal hose line attack would be risky at this point. The fire department has an ample water supply and fair access to fire hydrants.

Unchecked Fire Duration:

Fire Origin to FD Notification:..... 6 to 8.9 minutes
Fire Department Travel Time:..... 4 to 5 minutes
FD Set Up..... 3 to 4 minutes
Rescue and Evacuation..... 3 to 5 minutes

Total Unchecked Duration..... 16 to 22.9 minutes

RISK CONCERN DESCRIPTIONS

Occupant Life Safety: Undetected early spread of smoke throughout floor below occupants is a concern. Building construction is fire resistive. Delayed notification of fire energy will allow smoke and heat passage to all areas. This building has the specific risk concern that both stairwells are entered from a common atmosphere.

Neighbor Building Safety/Community Protection: No significant damage expected at adjacent buildings.

Emergency Responder Life Safety: Early spread of smoke throughout the building would limit the visibility of emergency responders hindering internal hand hose line suppression activities.

Property Protection: The only active property protection is manual fire response suppression. Sprinklers are inconsequential.

Mission Continuity (Displacement, Loss of Services or Profits): Building occupants would have to be relocated during building cleanup and repair.

Community Continuity (Loss of Services or Jobs): Loss of service is expected, as the building houses primarily classrooms and offices.

Institution Reputation: University academic building fires garner immediate and widespread attention from the news media (though not as much attention as dormitory fires.) The attention would be detrimental to the university. This building houses numerous cultural programs.

Insurance: The university is self insured however the university does pay the deductible.

Actual or Perceived Environmental Responsibility (Legal/Moral): No significant issues with water borne or air born pollutants.

Fiscal Responsibility (Rebuild funds from where/Relocation costs, disruption of budgeted funds): Funds would have to be reallocated (raided) from budgeted projects to accomplish immediate repairs. Insurance money does eventually arrive.

Contingent Business Liabilities: No contingent business liabilities expected:

Legal Liabilities: Occupant life safety issues could lead to legal liabilities.

FIRE SCENARIOS:

2 AM Property Protection Fire Scenario "A": Second floor fire in office.

Note: normally the basement would be the worst case. In this case the basement is small and highly compartmented.

A fire would develop until the one detector in that portion of the building activates. The detector is located near the magnetically held open doors to the central stair. This is not a standard smoke spacing but would provide an alarm fairly early in a fire. The detection is connected to reporting.

HVAC equipment is not expected to significantly help or hinder fire growth or smoke spread.

Upon arrival the fire department would find a "moderately developed" fire requiring application of external hose steams. Interior fire approach would be risky to conduct before exterior floe knockdown. The fire department has ample water supply and good access to hydrants. Fire department response and set-up times are listed below.

The scenario anticipates physical direct fire damage to about 50% of the fire floor (north end). Structural damage would occur to 10 to 15% of the building. Remaining portions of the building would be heat, smoke or water damaged.

Unchecked Fire Duration:

Fire Origin to FD Notification: 6 to 8.9 minutes
Fire Department Travel Time:... 4 to 5 minutes
FD Set Up..... 3 to 4 minutes
Rescue and Evacuation..... 0 to 0 minutes

Total Unchecked Duration..... 13 to 17.9 minutes

Occupant Life Safety Fire Scenario "B": Second floor fire in office.

Note: normally the lowest would be the worst case. In this case the basement is small and highly compartmented.

A fire would develop until the one detector in that portion of the building activates. It is likely that an occupant working in an office with a closed door would not notice smoke originating from the opposite hallway side until the alarm activates. At that time, smoke will be impacting the exit path to the central stairwell but should not be down to the level that would make egress impassable but it may be close. A person in the south side offices should be able to escape and the north side has two exits.

A better margin of safety is needed to exit persons before smoke levels impact the doorway to the central stairwell.

The smoke detector spacing is correct for the door hold opens but is not a standard egress path spacing. Detection is connected to reporting.

HVAC equipment is not expected to significantly help or hinder fire growth or smoke spread. (No duct smokes, no HVAC shutdowns).

Upon arrival the fire department would find a "moderately developed" fire requiring application of external hose steams. Interior fire approach would be risky to conduct before exterior floe knockdown. The fire department has ample water supply and good access to hydrants. Fire department response and set-up times are listed below.

Unchecked Fire Duration:

Fire Origin to FD Notification: 6 to 8.9 minutes
Fire Department Travel Time:... 4 to 5 minutes
FD Set Up..... 3 to 4 minutes
Rescue and Evacuation..... 0 to 0 minutes

Total Unchecked Duration..... 13 to 17.9 minutes

RISK CONCERN DESCRIPTIONS

Occupant Life Safety: Early spread of smoke throughout the fire floor is a concern. Building interior construction is not rated. Smoke and heat passage to some areas of the building will be substantial, the one exit scenario does not allow a margin of escape redundancy.

Neighbor Building Safety/Community Protection: no significant damage expected at adjacent buildings.

Emergency Responder Life Safety: Early spread of smoke throughout the building would limit the visibility of emergency responders hindering internal hand hose line suppression activities.

Property Protection: The only active property protection is manual fire response suppression.

Mission Continuity (Displacement, Loss of Services or Profits): Building occupants would have to be relocated during building cleanup and repair.

Community Continuity (Loss of Services or Jobs): Loss of service and jobs is expected, as the building houses primarily offices and classrooms.

Institution Reputation: University fires garner immediate and widespread attention from the news media (though not as much attention as dormitory fires.) The attention would be detrimental to the university.

Insurance: The university is self insured however the university does pay a deductible for fire losses.

Actual or Perceived Environmental Responsibility (Legal/Moral): No significant issues with water borne or air born pollutants.

Fiscal Responsibility (Rebuild funds from where/Relocation costs, disruption of budgeted funds): Funds would have to be reallocated from budgeted projects to accomplish immediate repairs. Insurance money does eventually arrive.

Contingent Business Liabilities: No contingent business liabilities expected:

Legal Liabilities: Occupant life safety issues could lead to legal liabilities.

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
Replacement – Major Project
Design

APPENDIX K

College of Arts and Humanities Academic Plan

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The CAH Compact

The CAH Compact promises every CAH student a personal path to high-caliber success, through innovative pedagogy and distinctive mentoring. We launch students into meaningful futures, where purposeful careers meet community impact.

Classroom Caliber

100% of CAH students graduate from engaged, innovative classrooms, with a signature experience in their major.

College Caliber

CAH gives students of diverse need individual advising, internships, undergraduate research, post-graduation enrichment, and mentoring from faculty, peers, and alumni.

Career Caliber

We guarantee that students leave CWU ready to compete for the career of their choice, with market skills uniquely taught in CAH.

Community Caliber

CAH graduates are ethical leaders who are creative, globally aware, culturally responsive, and problem-solvers.

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
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APPENDIX L

Life Cycle Cost Analysis Report

This Life Cycle Cost Analysis Report supersedes the Life Cycle Cost Analysis in the Humanities & Social Sciences Complex Predesign, Appendix E. This life cycle cost analysis was prepared in accordance with the OFM Predesign Manual for Capital Projects Funded in the 2021-2023 Biennium. The spread sheet utilizes OFM's Life Cycle Cost Model downloaded from this website: https://ofm.wa.gov/facilities/state-agency-facility-oversight/facility-life-cycle-cost-analysis-alternatives-comparison

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Executive Summary

Analysis of Alternative (including the preferred alternative)

LCCM Results. Alternatives #2, #3, and #4 were analyzed using OFM's Life Cycle Cost Model. The No Action alternative (#1) was not analyzed as this solution does not meet the long terms needs of the University. Alternative #2 is the most cost-effective option for both initial costs and 50-year cost of ownership which includes initial costs and costs such as operations that includes maintenance, utilities, and energy.

Alternative #2 (preferred) (NE Brooks Library Expansion) reduces the campus' inventory of buildings by 5,000 square feet by renovating 5,000 square feet of Brooks Library in lieu of new construction. This option also removes Farrell Hall and L&L. While this option increases the aggregate building area by 37% over Farrell and L&L buildings, the new construction will result in a net 31% decrease in energy over current energy costs. The greater savings that is NOT calculated in the Life Cycle Cost Model is the savings that will be achieved due to continual work orders and deferred maintenance in Farrell Hall and L&L created by 30 years of deferred building upgrades. If Farrell and L&L are anticipated to remain in service, a minimum $24,000,000 should be anticipated for modernization in these facilities due to deferred maintenance.

Alternative #3 (West Brooks Expansion) is similar to Alternative #2 in many respects but locates the building in an alternate location, does not involve any renovation of Brooks Library resulting in a slightly larger new building,g and has more complicated site utilities. This alternative also shares the same operational savings of Alternative #2 by removal of Farrell and L&L buildings.

Alternative #4 (Renovation and Expansion of Farrell and L&L) is the least cost effective financially. This alternative was studied in prior pre-design reports and costs were escalated to current construction costs.

	Alternative #1	Alternative #2	Alternative #3	Alternative #4
Estimated Cost	-	$62,866,489	$65,120,860	$80,000,002
50 Year Net Present Value	-	$231,829251	$241,343,573	$274,954,784

Life Cycle Cost Analysis - Project Summary

Agency	Central Washington University
Project Title	Humanities/Social Sciences Complex

Existing Description	The existing facilities of L&L and Farrell lack required office and instructional space, have issues with ADA accessability, and mechanical and electrical systems have reached the end of their life.

Lease Option 1 Description	

Lease Option 2 Description	

Ownership Option 1 Description	Alternative 4-Remodel Farrell and L&L with additions to each building

Ownership Option 2 Description	Alternative 2 (preferred)-NE Brooks Library Expansion and includes demolition of existing L&L and Farrell

Ownership Option 3 Description	Alternative 3-West Brooks Expansion and includes the demolition of Farrell and L&L

Lease Options Information	**Existing Lease**	**Lease Option 1**	**Lease Option 2**
Total Rentable Square Feet	-	-	-
Annual Lease Cost (Initial Term of Lease)	$ -	$ -	$ -
Full Service Cost/SF (Initial Term of Lease)	$ -	$ -	$ -
Occupancy Date	n/a		
Project Initial Costs	n/a	$ -	$ -
Persons Relocating	-	-	-
RSF/Person Calculated			

Ownership Information	**Ownership 1**	**Ownership 2**	**Ownership 3**
Total Gross Square Feet	130,000	114,890	119,980
Total Rentable Square Feet	71,935	71,935	71,935
Occupancy Date	1/1/2025	1/1/2025	1/1/2025
Initial Project Costs	$ -	$ -	$ -
Est Construction TPC ($/GSF)	$ 718	$ 638	$ 633
RSF/Person Calculated	-	-	-

Financial Analysis of Options

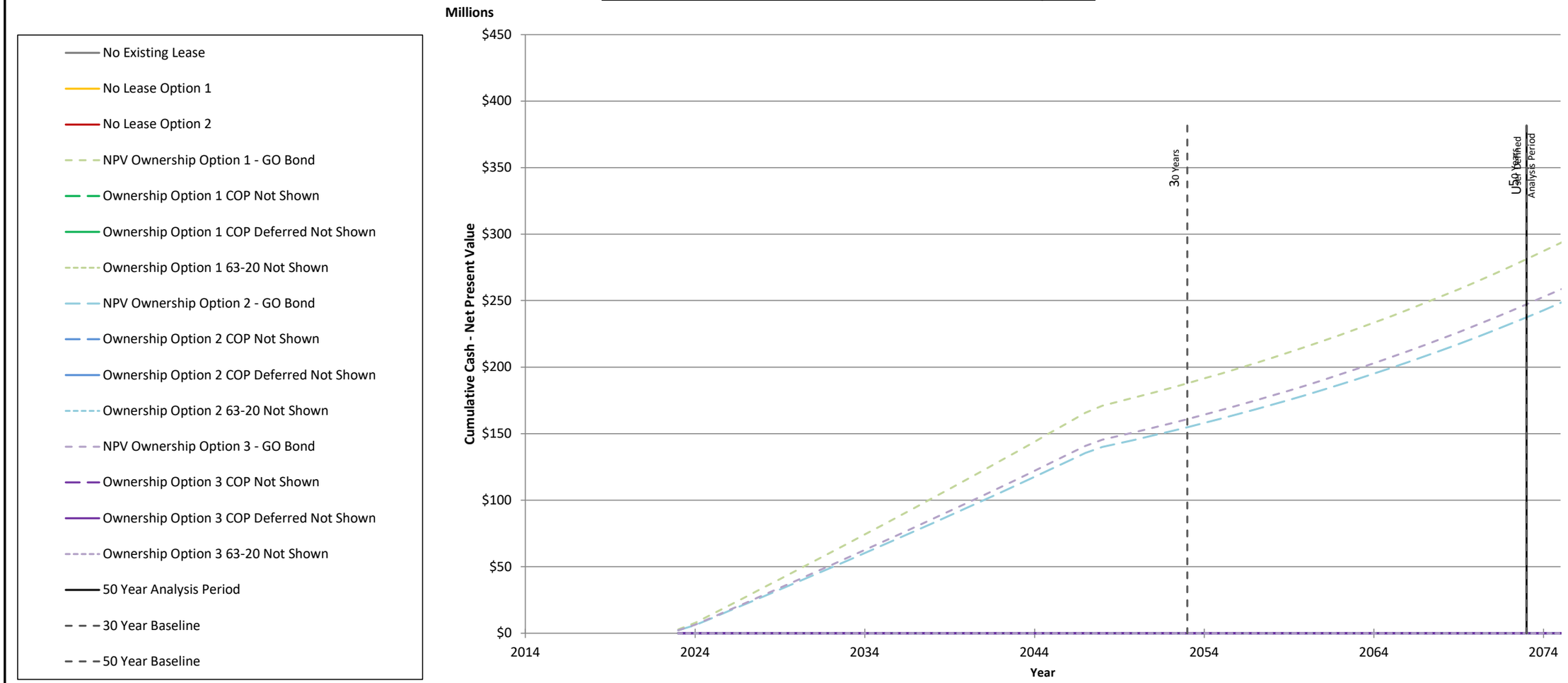
	Display Option?	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No
	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
50	50 Year Cumulative Cash	$ -	$ -	$ -	$ 312,156,285				$ 263,907,545				$ 274,788,780			
	50 Year Net Present Value	$ -	$ -	$ -	$ 274,954,784				$ 231,829,351				$ 241,343,573			
	Lowest Cost Option (Analysis Period)				**3**				**1**				**2**			

	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
30	30 Year Cumulative Cash	$ -	$ -	$ -	$ 199,066,369				$ 163,962,157				$ 170,415,487			
	30 Year Net Present Value	$ -	$ -	$ -	$ 183,970,040				$ 151,419,834				$ 157,371,653			
	Lowest Cost Option (30 Years)				**3**				**1**				**2**			

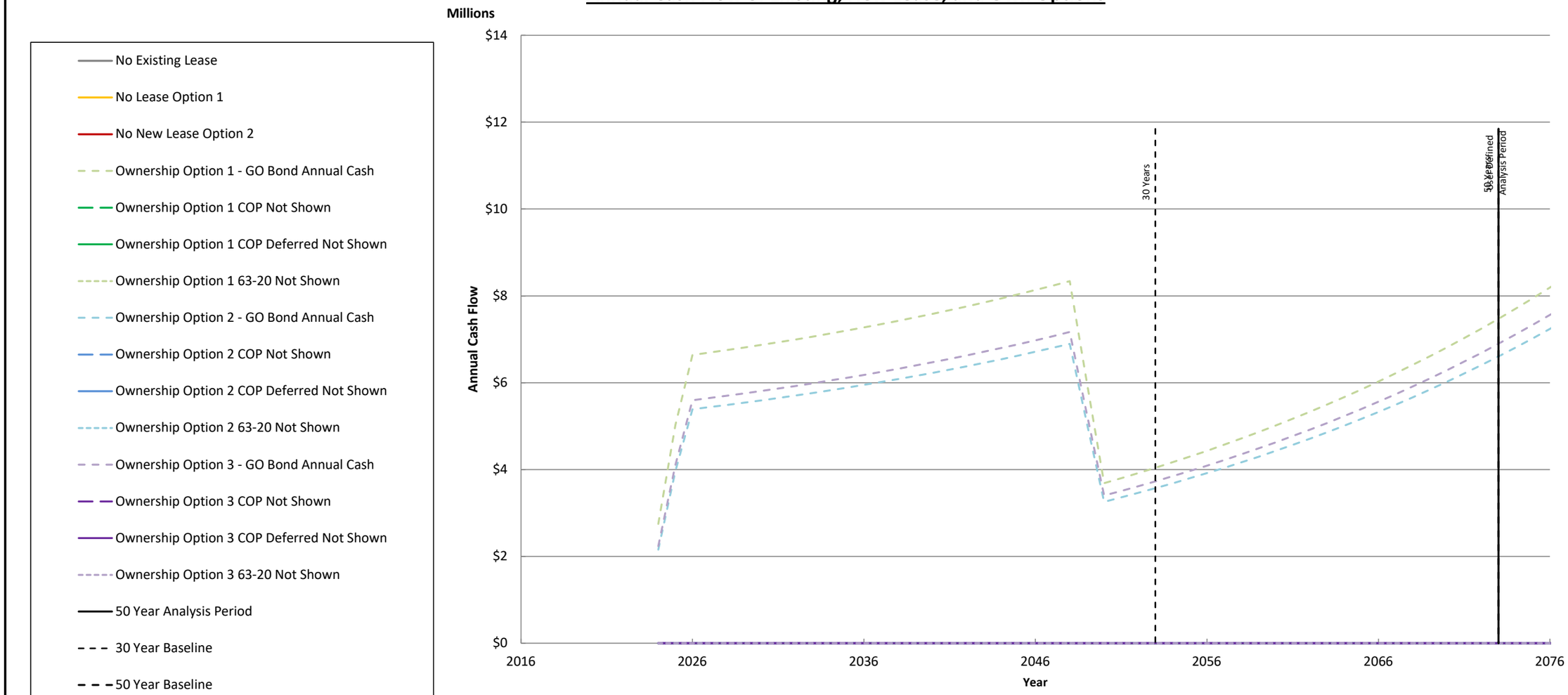
	Financial Comparisons	**Existing Lease**	**Lease 1**	**Lease 2**	**Ownership 1**				**Ownership 2**				**Ownership 3**			
Years	**Financing Means**	**Current**	**Current**	**Current**	**GO Bond**	**COP**	**COP Deferred ***	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**	**GO Bond**	**COP**	**COP Deferred**	**63-20**
50	50 Year Cumulative Cash	$ -	$ -	$ -	$ 312,156,285				$ 263,907,545				$ 274,788,780			
	50 Year Net Present Value	$ -	$ -	$ -	$ 274,954,784				$ 231,829,351				$ 241,343,573			
	Lowest Cost Option (50 Years)				**3**				**1**				**2**			

** - Defers payment on principle for 2 years while the building is being constructed. See instructions on Capitalized Interest.*

Cumulative Cash - NPV of Exist, Lease, and Own Options



Annual Cash Flow of Existing, New Lease, and Own Options



Financial Assumptions

Date of Life Cycle Cost Analysis:	7/1/2020
Analysis Period Start Date	1/2/2023
User Input Years of Analysis	50

All assumptions subject to change to reflect updated costs and conditions.

	Lease Options			Ownership Option 1			Ownership Option 2			Ownership Option 3		
	Existing Lease	**Lease Option 1**	**Lease Option 2**	**GO Bond**	**COP**	**63-20**	**GO Bond**	**COP**	**63-20**	**GO Bond**	**COP**	**63-20**
Inflation / Interest Rate	3.120%	3.120%	3.120%	3.540%	3.670%	3.670%	3.540%	3.670%	3.670%	3.540%	3.670%	3.670%
Discount Rate	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%	0.533%
Length of Financing	N/A	N/A	N/A	25	25	25	25	25	25	25	25	25

See Financial Assumptions tab for more detailed information

COP Deferred and 63-20 Financing defer the payment on principle until construction completion.

New Lease Assumptions

Real Estate Transaction fees are 2.5% of the lease for the first 5 years and 1.25% for each year thereafter in the initial term of the lease.

Tenant Improvements are typically estimated at $15 per rentable square foot.

IT infrastructure is typically estimated at $350 per person.

Furniture costs are typically estimated at $500 per person and do not include new workstations.

Moving Vendor and Supplies are typically estimated at $205 per person.

Default Ownership Options Assumptions

Assumes a 2 month lease to move-in overlap period for outfitting building and relocation.

Assumes surface parking.

The floor plate of the construction option office building is 25,000 gross square feet.

The estimated total project cost for construction is $420.00 per square foot.

See the Capital Construction Defaults tab for more construction assumptions.

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CAPITAL PROJECT PROPOSALS 2021-23

Humanities & Social Sciences Complex
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APPENDIX M

Code Compliance

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Humanities & Social Sciences Complex - Code Compliance

The design and construction of the proposed new Humanities & Social Sciences project will be managed by the university's capital project management team in compliance with health and life safety (including seismic and ADA) codes and energy code requirements, state statutes and local laws, ordinances and university policies and procedures, which include:

- Governor Executive Order 05-05
  This Executive Order requires state agencies to review capital construction projects with the Department of Archaeology and Historic Preservation (DAHP), to determine potential impacts on cultural resources. The university is consulting with DAHP throughout this process as part of the budgeting process outlined and reviewed by the SBCTC and Office of Financial Management (OFM). See **Appendix G – DAHP Letter.**
- Chapter 12, Laws of 2005 (ESSB 5509)
  Humanities and Social Sciences project will be designed and constructed according to ESSB 5509 to LEED Silver standard as a minimum, however CWU has consistently accomplished sustainable facilities at higher levels up to LEED platinum certification. A LEEDv4 Checklist outlining a preliminary program for the project has been developed. See **Appendix H – Humanities & Social Sciences Complex Predesign Study,** Page 35 – High Performance Public Buildings (Chapter 39.35D RCW) and Appendix C LEED Checklist.
- Other State and Federal policies and requirements that will be following throughout this project (see **Appendix H – Humanities & Social Sciences Complex Predesign Study,** Pages 35, 36, 37, and 38), include:
  - State Efficiency and Environmental Performance (Executive Order 20-01)
  - State Energy Standards for Clean Buildings (RCW 19.27 A.210)
  - Greenhouse Gas Emissions Reduction Policies (RCW 10.235.070) and (RCW 70.235)
    - CWU's adopted Greenhouse Gases Policy - CWUP 2-50-020 Energy Conservation
  - Clean Air Act of 1991
    In response to the Clean Air Act of 1991, the university encourages carpooling by providing convenient dedicated spaces. It further encourages non-automobile commuting options by providing bicycle racks, lockers, and parking for carpools, electric vehicles, motorcycles, and scooters. HVAC requirements and material selection for this project will improve indoor air quality and reduce outdoor emissions.
  - Growth Management Act of 1990
    Use regulations adopted pursuant to the Growth Management Act. This project is subject to the plan review and environmental mitigation process of
    Kittitas County and State of Washington. No significant issues are anticipated as the development proposed by this predesign document is in compliance with all major requirements.
  - Governor's Executive Order 90-94 for Protection of Wetlands
    Humanities and Social Sciences project will not impact any wetland. No environmentally sensitive areas will be affected by this project.
  - Clean Water Act
    Humanities and Social Sciences project will include storm water, drainage and erosion control plan requirements into its construction documents. The National Pollutant Discharge Elimination System (NPDES) permit requirements and storm water pollution prevention plans will be implemented through the installation and maintenance of drainage systems.
  - Hazardous Substances

The project will require selective demolition of portions of existing structures. Prior to any demolition to any facilities, CWU will engage an approved outside consultant and/or chemical hygiene expert to prepare an inventory of all hazardous substances to be abated, utilized in, or removed from, the project. This consultant assists in developing a mitigation plan for removal and/or abatement and for adherence to notification requirements.

- Government Options to Landfill Disposal
  Humanities and Social Sciences project will include a Construction Waste Management Plan and Reporting process. It is anticipated the over 90% of the selective demolition of the project will be recycled and diverted away from the landfill.

Other policies to be coordinated with include:

- Washington State Board for community & Technical College – Model Classrooms for Electronic Presentation Classrooms.
- State of Washington Facilities Evaluation and Planning Guide (FEPG)
- State of Washington Department of General Administration – Construction Waste Management Plan
- State of Washington Department of General Administration – Leadership in Energy and Environmental Design (LEED) – Quality Assurance Process Guidelines for State Agency/College and University Facilities.
- State of Washington RCW 39.35 Energy conservation in the design of public facilities.
- Washington State Environmental Policy Act (SEPA)
- CWU Facility Design Guidelines and Construction Standards
- International Building Code (IBC)
- International Fire Code (IFC)
- Americans with Disabilities Act (ADA)
- Local Codes and Ordinances
- Underwriters Laboratories (UL)
- Regulations of the State Fire Marshall
- Washington State Energy Code
- Washington State Department of Labor and Industries
- Washington Administrative Code (WAC)
- WAC 51-50-1604 General Design Requirements
- National Electric Code (NFPA 70)
- Illuminating Engineers Society of North America (IESNA)
- International Mechanical Code
- Uniform Plumbing Code
- Washington State Boiler and Unified Pressure Vessel Code
- ASHRAE Standard 55 – Thermal Comfort
- ASHRAE Standard 62 – Ventilation
- National Fire Protection Association (NFPA) Section 13

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