

Attachment 05:

Owner Project Requirements

Bates Technical College

Fire Services Training Center

Project # 2023-166

Contents

1.	OWNER’S PROJECT REQUIREMENTS INTRODUCTION	3
2.	UNDERSTANDING BATES TECHNICAL COLLEGE & THIS PROJECT	4
3.	PROJECT DESCRIPTION	6
4.	PROJECT SPECIFIC DESIGN GOALS	7
5.	OCCUPANCY & USE	9
6.	SUSTAINABILITY & ENERGY EFFICIENCY	9
7.	BUILDING SITE	10
8.	TRANSPORTATION & PARKING	10
9.	BUILDING AS-BUILT	10
10.	INDOOR ENVIRONMENTAL QUALITY	11
11.	EMERGENCY or BACKUP POWER	13
12.	TELECOMMUNICATIONS and AUDIO/VISUAL SYSTEMS	13
13.	SECURITY & HARDWARE	14
14.	HAZARDOUS MATERIALS	14
15.	FURNISHINGS & EQUIPMENT	14
16.	COMMISSIONING, INSPECTION, and QUALITY ASSURANCE	14
17.	CONSTRUCTION COMPLETION and TURNOVER	15
18.	OPERATION & MAINTENANCE	15
19.	OWNER TRAINING	16
20.	POST-OCCUPANCY and WARRANTY	17
21.	PERFORMANCE GUARANTEE	17

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

1. OWNER'S PROJECT REQUIREMENTS INTRODUCTION

This Owner's Project Requirements (OPR) document outlines the project's functional requirements and expectations of how the facility and its systems will be used and operated. This document is considered a "living" document throughout the design phase; thus, it is subject to change with the Owner/DES approval. By establishing goals for the Fire Training Services Center Project, the OPR becomes a record by which Bates Technical College and other parties involved in the project can judge the degree of success in meeting the Owner's defined objective and criteria.

The OPR serves three primary and vital purposes:

1. Provides the design team with the information necessary to develop the Basis of Design (BOD) during program verification and schematic design, which serves as a "road map" for developing the design and construction documents.
2. Provides the commissioning (Cx) team with tangible benchmarks to measure success & quality and confirms that the building and systems constructed will align with Bates Technical College's expectations and requirements.
3. BOD, and contractor deliverables such as "as-built" documents are outlined below as the foundation for the O&M Manuals.

The Owner will develop and update the OPR through program verification and schematic design. When selected, the design-build team will then assume responsibility for refining and augmenting the OPR throughout the design, construction, and post-occupancy period of one year following Substantial Completion of construction.

Please refer to the Outline Specifications included in Section 5 in the Pre-Design Document. The Owner and successful Design-Build Team will jointly review the Outline Specifications and may amend them with the Owner's authorization during the program and project verification phase.

As decisions are made during the life of this project, this document shall be updated to reflect the College's current requirements. For this project, the Owner is Bates Technical College. Primary stakeholders include the Leadership Team, and the Fire Services and EMS Training Team. The entity responsible for project management and delivery is Bates Technical College Facilities Capital Projects in conjunction with the Engineering and Architectural Services (E&AS) division of the Department of Enterprise Services (DES). The organization responsible for the operation and maintenance of the facility is Bates Technical College Facilities Department.

Basis of Design (BOD)

The BOD records the concepts, calculations, decisions, and product selection used to meet the Owner's project requirements and to satisfy applicable regulations, standards, and guidelines. This document shall include the designers' narrative descriptions and specific assumptions during design development. The BOD documents the assumptions the designers make as well as the reasoning behind these assumptions. This includes appropriate studies that the designers conducted to determine which building components best suit the new facility, such as seismic, heat loss mitigation, live fire training tower utilities, HVAC system, etc. The studies then become part of the BOD, which is compared with the OPR. For any criterion exceeding the requirements or those criteria could not be achieved, documentation detailing what was performed, its impact on the OPR, and how the OPR was modified and yet still meets the project and OPR intents shall be included.

3D Building Information Modeling (BIM)

This project shall be designed and documented using BIM to the extent and level determined practicable by the Owner and Design-Build Team. The Design-Builder is expected to develop a BIM Execution Plan that clearly defines Level of Development (LOD) appropriate for this project. It is expected that the Professional build the project in virtual 3D to ensure conflict mitigation and that the Builder's real-world

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

construction process goes smoothly. The BIM shall be the Owner's property and available to the Builder and their subcontractors to understand better the design and details for the bidding process and construction.

Project & Construction Management

The Design-Build Team shall utilize suitable construction management software to permit cloud-based collaboration and to store project data at minimum. Bates Technical College shall be granted permission to access project documentation, collaborate with team members and as deemed necessary to assist in supporting the project.

2. UNDERSTANDING BATES TECHNICAL COLLEGE & THIS PROJECT

Mission

Bates Technical College enriches our diverse communities by inspiring student learning, challenging greater achievement, and educating for employment.

Vision

Bates Technical College helps students realize their potential for growth and success through innovative instruction in a nurturing, diverse environment. Students achieve their career and personal goals, strengthening the region's social and economic vibrancy. Strong local and global partnerships with business, industry, labor and the public make the college a respected contributor to community vitality

Strategic Goals

Bates measures mission fulfillment through four strategic goals.

- **Workforce Education:** We are committed to providing high quality training that helps students realize their potential for growth and success through innovative instruction.
- **Student Centered:** Bates supports students, enabling them to succeed, to aspire to education, to reach their educational goals and transition successfully to further education or employment.
- **General Education:** Bates recognizes that the skills and knowledge attained through general and related education are essential to success and ensuring well-rounded learners.
- **Community Relationships:** Strong local and global partnerships with business, industry, labor and the public make the college a respected, effective community resource, contributing to local community vitality.

Values

We strive to ensure that we exceed customer expectations and to ensure that every person benefits from their contact with Bates. We fulfill our mission, vision, and goals by being committed to the following values:

Value Education:

We enthusiastically embrace the education and training needs of students, staff, employers, and the community by:

- providing opportunities for students to satisfy diverse educational goals by offering competency-based education in career, academic, developmental, and extended learning programs
- providing career education that is delivered by faculty who are industry experts, in an environment that replicates the workplace
- promoting a philosophy that values lifelong learning among students and staff

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

- hiring and developing faculty and staff who are committed to the education of students as well as their own professional development

Develop Life Skills:

We promote those qualities that help one be successful in life by:

- helping students to master human relations, communication, mathematical, and computer skills such that they can participate fully in the world around them
- helping students recognize when information is needed and facilitating the ability to locate, evaluate, and use information effectively and efficiently
- modeling behaviors consistent with community and workplace expectations
- infusing an appreciation for the diversity that exists within our society into program curriculum and staff development activities

Responsive:

We respond to the changing needs of the community by:

- periodically reviewing and validating curriculum to ensure that it meets industry needs and is consistent with best practices
- encouraging economic development through partnerships with business and industry

Honor Our Customers:

We satisfy customer expectations by:

- effectively assisting students in their educational endeavors
- providing services that meet the complex and changing needs of students, in a warm and welcoming environment
- prudently managing college resources

Nurture a Positive Environment:

We provide a collegial environment in which all people are treated with respect and encouraged to excel by:

- providing an environment in which a diverse body of students, faculty and staff can thrive
- committing to shared decision-making and interest-based problem-solving processes

Diversity Statement:

Diversity supports the mission of Bates Technical College. Respecting and promoting diversity is vital to the education of our students and to the learning environment of our campus community. We foster an atmosphere where each of us is valued for our intellectual and cultural perspectives, increasing our ability to reflect critically and resolve challenges. We share a wealth of experiences that strengthens us individually and as a society. As students and educators, we commit to building a diverse and engaged community.

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

3. PROJECT DESCRIPTION

Bates Technical College's (BTC) Fire Services Training Center (FSTC) has a robust program, training professional firefighters and emergency medical technicians for jobs in the Pacific Northwest with a current enrollment capacity of 225 students per year.

Bates Technical College offers hands-on and classroom training for those interested in pursuing an entry-level career in Fire Service and continuing education and certification. Upon the successful completion of the entire curriculum, students will have certificates in the following areas: emergency vehicle operations, Emergency Medical Technician certification (eligible to test for National Registry certification) and entry-level (red card) wild land firefighter certification. Students who complete the program are eligible to take the IFSAC (International Fire Service Accreditation Congress) tests for Hazardous Materials Awareness and Operations level as well as Firefighter I. The training and certification allows the student a great foundation in the fire field and shows prospective employers your commitment to and preparation for the job of firefighter.

Students prepare for careers as fire fighters, or in closely related occupations that require certification as a firefighter in this program that is accredited by the International Fire Service Accreditation Congress. Training incorporates all entry-level requirements according to nationally recognized standards. Students who choose the management option are prepared for leadership in the fire service with emphasis on the administration and management of fire service organizations. The program is intended to develop skills in critical and analytical reasoning as they apply to fire and emergency medical services.

Degrees & Certificates:

- Associate of Applied Science: Fire Service
- Associate of Applied Science: Fire Service Supervision
- Certificate of Training: Fire Recruit Academy
- Certificate of Training: Wildland Firefighter II
- CIP: 43.0203 EPC: 828

The FSTC occupies 14,500 sf of Building D in BTC's South Campus and uses a modular building for additional program space.

The current fire training facilities do not comply with WA State WAC 296-305 Safety Standards for Firefighters nor NFPA 1402 Standard on Facilities for Fire Training and Associated Props. The proposed project would bring the FSTC up to WAC and NFPA safety standards, meet the needs of the program and future growth projections, and expand opportunities for training partnerships with regional fire districts.

A successful solution must address the three necessary firefighter training areas: Classroom and Administrative space, a Live Fire Training Facility, and Training Support spaces. The preferred option proposes:

34,600 gsf new Academic & Fire Training Support Building
18,900 gsf new 5-story live fire training tower
<hr/>
53,500 gsf Total

The Owner/DES will work with the selected Design-Build team to optimize value to the Owner. The Owner/DES fully embrace a collaborative project delivery that emphasizes a cooperative approach to problem solving. The Owner/DES expect the team contributes its best efforts for the benefit of the Project.

"The foundation of the design-build delivery system is a culture of team alignment, open communication and mutual respect between the project Owner, the architect/engineer and the contractor. Design-build delivery carries with it a team-wide responsibility to gain a full understanding of the Owner's intentions and the factors that will drive value into the process and

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

outcome. Because collaborative, integrated development of the design and construction program is the cornerstone of design-build delivery this methodology provides the best possible environment for design excellence to occur as it spreads the responsibility, and opportunities, for design excellence across the entire project team."

Excerpted from DBIA Position Statement on Design Excellence

4. PROJECT SPECIFIC DESIGN GOALS

1. Objectives:

Preparing students for careers as firefighters, emergency medical technicians or in closely related professions, is the overarching goal of this project. In pursuit of this goal, the following objectives will be met:

- **Firefighter and Emergency Medical Technician Training in Real-world Settings:** Facilities will provide hands-on training replicating a wide variety of building types and occupancies, including commercial, residential, high-rise, suburban, and multi-family. Facilities will incorporate live-fire training, search and rescue, laddering, and fire ground operations.
- **State-of-the-Art Instruction:** Facilities will inspire student learning through interactive educational spaces, active learning labs, and traditional classrooms.
- **Degrees and Certifications:** Associate Degrees, Certifications, and future Bachelor's Degrees in fire service training will be provided. The project will be designed to support these programs.
- **Testing:** Students will be eligible for International Fire Service Accreditation Council (IFSAC) testing, meeting NFPA Standards. The project will provide facilities to support successful outcome in testing.
- **Job Qualifications:** Students gain the skills and experience necessary for employment as an entry-level firefighter, EMS and continuing education in these fields. The project will be designed to enhance this objective.
- **Safety:** Facilities will provide challenging yet safe and controlled environments for students to gain confidence and skills in firefighting fundamentals meeting NFPA 1402-2019 Standard on Facilities for Fire Training and Associated Props.

2. Features:

The proposed Fire Service Training Center (FSTC) buildings will bring Bates Technical College's fire and EMS training programs up to contemporary standards for safety, instruction, and quality of space. Administration, instruction, fire training and support are central features of the proposed FSTC buildings and will create cohesive facilities and programs for student safety and success.

Focus Learning Lab. This lab will be a flexible learning space that can be used for instruction, independent student learning and collaboration.

The new academic building will offer a variety of flexible, informal, and contemporary learning environments. In tandem with modern technology, the new building will foster student success, create connections, and possibly provide alternative revenue. For example, a large, flexible classroom could be rented to outside groups.

The current configuration in bldg. D lacks Decon space, gender-neutral showers and restrooms, hose dryer and storage, a "dirty classroom", small equipment repair, and adequate heated storage. New

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

facilities will incorporate these missing spaces and create more area for fitness and showers to meet FTE needs and future enrollment.

The fire training tower will allow direct proximity to similar programs and immediate access from the fire training structure to decontamination, showers, hose storage, fitness, gear storage, and the apparatus bay. These buildings' proximity enhances the dedicated fire training zone on campus.

A fire training structure will provide dedicated space for a variety of training scenarios that meet current safety standards. A main feature of this new building will be a mock two-story house connected by a bridge to a mock five-story commercial tower. The array of different space configurations provides flexibility to run a multiple of training scenarios.

3. Quality and Context

The site is located at the Bates Technical College South campus, 2201 S 78th St, Tacoma, WA 98409. When complete, it is critical that the building interior be constructed of quality materials, ample natural light and spaces that inspire students to meet their goals. Owner objective is to develop a high-quality teaching facility and successful project by applying sustainable, maintainable principles in a practical, well planned, and cost-effective manner that will meet:

- The occupants need to fulfill the mission of Bates Technical College.
- Operation and maintenance needs, featuring an easily maintainable facility that has the lowest possible utility and maintenance costs
- An excellent indoor environmental quality requirement that facilitates occupants' productivity by providing a comfortable environment while avoiding the design attributes related to poor HVAC system performance, low space utilization, poor acoustical qualities, inconsistent interior style, and low durability finishes.
- Bates Technical College desires to minimize environmental impacts and maximize energy savings where possible. Features such as water-efficient plumbing, energy-efficient HVAC and lighting systems, and design for pathways and strategies to support future onsite-energy production. Additionally, there should be a focus on designing systems to be in compliance with the Washington State Clean Buildings Act.
- The program requirements outlined in the Predesign document – Fire Service Training Center authored by Rice-Fergus-Miller architects. Note the program, like this OPR is a baseline for the Design-Build Team as a starting point and defines minimum requirements at the time it was published. The Design-Build Team is encouraged to verify and challenge this baseline within the limits of the MADCC.
- A full understanding and innovative use of the existing utility infrastructure serving the project site from other campus buildings and interconnected utilities.
- The project will address street frontage deficiencies identified by the City of Tacoma Pre-Application Comment Memo (see Pre-Design Appendix).
- The overall facility shall be served by infrastructure (wireless telephone and data, electricity, chilled water, etc.) that must be capable of meeting current and future requirements of all areas in the building. For example, conference rooms used for A/V presentation shall include the ability to dim/turn off lighting around the projector screen or other areas with a lighting model to satisfy general occupancy requirements. The mechanical, electrical, controls, and piping system shall be flexible and functional enough to accommodate future expansion; all systems shall be easily accessed for maintenance without removing walls or equipment. Design of the HVAC system shall include efficient methods such as energy recovery devices, and integration of a platform for monitoring and adjusting purposes. The integration of the Building Automation System (BAS) shall allow remote monitoring of critical building systems, energy usage, preventive maintenance, scheduling, and distribution of required information to maintenance staff and outside service providers. All utilities will have meters and submeters as appropriate.
- Design Build Institute of America (DBIA) Best Practices for Design-Build Done Right

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

5. OCCUPANCY & USE

The facility will be normally occupied from 7:00 AM to 6:00 PM on Mondays through Friday, except for Holidays and scheduled College breaks. The HVAC system shall be designed to allow for occupied and unoccupied periods for breaks, evenings and weekends, and holidays. The design shall focus on maximizing energy savings while maintaining adequate environmental and comfort standards along with providing a MERV 13 or higher filtration level for indoor air quality.

The HVAC system will bring the occupied space to within the occupied setpoint temperature range from 6:30 AM to 5:30 PM initially on Monday through Friday. An informal study of class schedules vs building occupancy should be conducted to identify opportunities for reduction in energy use.

The Design-Build Team shall review and evaluate building occupancy schedules in the Program Validation phase of the project. Off hour training sessions may occur outside typical occupancy parameters.

6. SUSTAINABILITY & ENERGY EFFICIENCY

As part of Washington State's Energy Performance Standards, sustainability, and the goal of achieving "carbon neutrality" by the year 2030, Bates Technical College constructs its buildings to last and promotes environmental quality and resource conservation through sustainable design and construction.

The Design-Build Team, in collaboration with Bates Technical College will determine which LEED rating system and version are most applicable to this project to meet or exceed LEED Silver certification. Specific, high-priority goals for this project include, but are not limited to:

- Maximizing State and Tacoma Power (TPU) grants or programs.
- Provide Indoor Environmental Quality (IEQ) monitoring to include air temperature, humidity, CO2 concentration, air pollutants concentration, airflow rates, ambient noise levels, and daylighting maximization.
- Utilization of the Building Automated Systems (BAS) and other controls to efficiently maintain and track key building systems' performance, particularly HVAC and lighting.
- Use of low-VOC, regionally available, and high recycled content materials.
- Adoption of "daylight harvesting" to minimize electric lighting usage where functionally practical.
- High-efficiency lighting shall be used appropriately to reduce lighting power densities. Utilize daylighting strategies wherever applicable. Options for a range of light color temperatures to enhance learning and creativity is encouraged, as are CPTED principles in consideration of the site and fire drill training areas.
- Override light switches will be placed in a location not accessible to the general public.
- Careful consideration of controlled plug loads in classrooms and offices.
- Other sustainable initiatives and design innovations as identified by the Design-Build Team

The Basis of Design (BOD) shall establish specific plans and strategies for achieving these goals, and the construction documents should incorporate LEED best practices for construction systems and techniques, including:

- Segregated collection and recycling of construction waste
- Proper erosion and sedimentation control techniques
- Procurement and use of low-VOC, regionally available, and high recycled content materials

Process Energy –components of the new construction may require energy efficiency requirements, including:

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

- Lighting
- Motors
- Energy recovery ventilation
- Solar, green, or cool roofs
- Demand control ventilation
- High efficient chillers
- Occupancy sensors
- Thermal energy storage

To verify compliance and conformance with rebates available to this project, the design-build team, with support from the Cx team, will review the 45% Construction Documents with TPU to determine eligibility for any grants or programs. The Cx team will measure and report a final energy model and will inspect the building at completion to ensure all design and specifications were achieved. Specific portions of the final MEP drawings/schedules, energy model, and other information will be used to perform calculations necessary to determine each component's available rebates. Bates Technical College expects all components of this project/building to be the most efficient and highest quality systems to qualify for applicable rebates.

7. BUILDING SITE

The building site is located on the Bates Technical College South campus, generally located on the west side of Tacoma Mall Boulevard, north of South 78th Street and south of South 74th Street. The site address is 2201 South 78th Street.

2201 South 78th Street (Parcel Number 0320304091)

2302 South 74th Street (Parcel Number 0320304093)

There is an approved Conditional Use Permit (127.239) for the site from 1985 and a revision in 2005 (CUP2003-00017), which includes original conditions of approval.

8. TRANSPORTATION & PARKING

The Design-Builder is expected to manage and maintain the project site perimeter, including laydown area to minimize disruption to campus operation, and to keep it fenced to deter intruders. Parking on campus for the Design-Builder and their employees is available at no-charge. Bates Technical College cannot guarantee parking will be available in the parking lot nearest to the project site.

Bates South Campus is served by bus routes 202 and 53.

9. BUILDING AS-BUILT

As-built drawings will provide accurate information in an understandable drawing technique, allowing future contractors to perform construction tasks. For this project, maintain and submit as-built in accordance with the procedure per DES and contract requirements. If modifications are made, mark the contract drawings to show the actual installation when installation varies from that shown on the

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

conformed set of contract drawings. Include a cross-reference on contract drawings to identify that a modification has occurred. Identify and date each record drawing. Record and check markups before enclosing concealed installation. The Contractor is responsible for maintaining a record of redlined as-built during construction. All redline drawings will be inspected monthly by the Owner and associated consultants. The Contractor is responsible for providing the final hard copies and digital copies of the as-built to the Owner.

In addition to As-Built drawings, virtual twin or 360 degree "in progress" construction documentation at key construction milestones is required to document concealed conditions. The platform, format and milestones of this documentation will be determined in design as mutually acceptable to the Design-Build Team and Bates Technical College.

10. INDOOR ENVIRONMENTAL QUALITY

1. Indoor Lighting and Lighting Controls

Occupancy sensors to control lighting usage in accordance with the demand in fully occupied spaces. All other spaces with no occupancy sensors shall have "time-of-day" lighting controls with temporary overrides located at the thermostat, which places the HVAC and lighting system into the occupied mode.

2. Thermal Comfort

The HVAC system shall provide outside air volume that meets ASHRAE standards and maintains the necessary level of building pressurization. The humidity level in the space must be maintained. The system shall never allow condensation to form on HVAC equipment or any other building components or elements such as piping, interior glazing, etc. Building HVAC shall be designed to contribute to overall building energy efficiency goals as defined in this document. The HVAC system shall have a low life-cycle cost and provide an excellent indoor environmental quality to facilitate occupant's productivity while minimizing maintenance requirements. The HVAC system shall support future reconfiguration of offices and labs to meet the organization's changes with minimum HVAC modification needed to maintain comfort associated with indoor environmental quality.

- HVAC system shall be designed to provide the required cooling and heating to meet varying load requirements while maximizing energy efficiency.
- HVAC system shall be zoned to maximize comfort while minimizing the cost of operation.
- Effectively maintain building pressurization and humidity control 24/7.
- Provide at minimum MERV 13 air filtration and locate fresh air intakes away from the path of potential exhaust containing odors or other irritants as best practice.
- Building occupancy schedule for the HVAC system will be easily modified by zones. The system must be designed so the Facilities Department, not the users, make these modifications.
- Provide energy use, demand, and environmental data via BAS.
- All MEP systems and components must be accessible for maintenance.
- Separate HVAC systems for office areas and teaching lab areas that use hazardous materials or other contaminants.
- Consider the use of solar power for building heating / re-heating requirements. Provide cost and savings.

3. Acoustics

Soundproofing and acoustical treatments shall be incorporated in the design and construction of all private offices, small group session areas, conference rooms, and specific laboratories requiring acoustic treatments to prevent sound transmission to adjacent offices, corridors, or other space in the building. Do

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

not design bathrooms adjacent to private offices, conference rooms, or lecture rooms. The acoustic engineer shall discuss all acoustical criteria with the Owner users and project manager during design.

4. Accessibility Requirements

The building design shall be assessed for all ADA requirements. This project may be subject to State Facilities Accessibility Committee (SFAC) review at the Design Development stage. In addition, a meeting shall be held with the Bates Technical College Facilities Department and the college ADA representative to review all design aspects before approval of the 40% (or closest established milestone) design.

Systems requiring routine maintenance, such as HVAC, shall be designed to provide adequate access and clearance for all the maintenance tasks (i.e., space to remove, replace, or service system components such as filters, coils, fans, motors, valves, controls, cleanouts, etc.) while minimizing interference with staff, faculty, students, and building operations. Systems must be designed with the consideration that maintenance activities will occur during regular business hours.

5. Health, Hygiene, and Indoor Environmental Requirements

The creation of good indoor environmental quality requires the coordination of many design parameters and construction activities, including acoustic quality, ventilation rates, and materials used to construct the facility, installation sequence, and other parameters that may affect occupant comfort.

The following are the known activities that generate pollutants in or near the facility that impact the health, hygiene, and indoor environments of occupants and the countermeasures which will be utilized during the construction process:

Specifically:

- Non-toxic caulk, paint, adhesives, sealants, and cleaning products shall be used. Paint surfaces that have frequent contacts must be durable and may require other types of paint.
- Smoking or the use of smokeless tobacco is prohibited on all Bates Technical College campuses. Smoking will only be allowed in designated areas. This includes construction sites and parking lots.
- The construction manager and the contractors shall implement procedures to minimize construction-related contaminants in the building. These procedures include control of moisture, dust, regular cleaning activities, and protection of delivered equipment and material before and after installation, starting with HVAC systems. All HVAC systems and components will be kept clean and sealed before and after installation. The Contractor will be required to clean all ductwork and associated equipment if they fail to keep the system free of dust.
- Moisture sensitive material shall be stored in weather-tight, temperature controlled and clean areas before unpacking for installation.
- Any porous construction materials such as insulation, drywall, carpet etc., shall be protected from moisture in a clean and dry area. Should these materials be found to get wet, they shall be replaced at no cost to the Owner.
- Approved VOC emitting finish material shall be installed during non-business hours. Schedule all VOC emitting elements before installing any absorbent material such as ceiling tiles, carpets, wall insulation, gypsum products, fabric-covered furnishing, etc.
- Outside-air (OA) intakes shall not be accessible from grade.
- OA intakes shall be located at a distance sufficient enough, so pollutants emitted from exhaust points and bathroom exhaust fans, or any other harmful emissions are not mixed with outside air entering the HVAC system.
- All building entry points to employ design strategies to reduce the amount of outside dirt, dust and particulates and toxins brought into the building. Exceeding the LEED requirements is

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

encouraged to create a cleaner environment and cut down on the amount of routine cleaning necessary to maintain the facility.

6. Vibration Requirements

Prevent occupants adjacent to any HVAC equipment and corridors, chases, roof, etc., from sensing vibrations from structural deflection due to occupant traffic and equipment operation. Scheduling of any portion of the construction that would cause any vibration to adjacent buildings must be considered for off-hour periods. The construction manager will coordinate all activities and provide a monthly schedule to be presented to appropriate occupants of the adjacent buildings showing the approximate level of vibration (and noise) for all conditions during the construction. Each of the monthly schedules shall be updated weekly, showing the next four weeks of activity.

11. EMERGENCY or BACKUP POWER

Integrate existing emergency power into the new design. Identify and prioritize critical systems requiring emergency power.

12. TELECOMMUNICATIONS and AUDIO/VISUAL SYSTEMS

Each installing Vendor/Contractor for their section shall possess a current and valid Washington State 06 Electrical Low Voltage License. The Low Voltage Contractor shall have a BICSI certified RCDD (Registered Communications Distribution Designer) assigned to the project. The installing vendor/contractor shall be manufacturer approved to purchase the equipment, have a local office staffed with manufacturer-certified installers that are capable of maintaining, servicing, and warranting the equipment being installed; and are capable of programing, testing, inspecting, maintaining, warranting, and inventorying parts for the life of the system and shall be located within a 100 mile radius of the project site.

Bates Technical College IT Services Department shall approve standard and design for all Low Voltage, A/V systems and materials to be installed. The Contractor shall be responsible for all pathways and installation of all fiber, low voltage and A/V wiring, testing, and warranty for the building cabling systems per the Bates Technical College approved design. The design professional will coordinate with the Bates Technical College IT Services Department and Facilities Project Manager during the design process to ensure that proper rough-ins, raceways, and backbone are included as part of the building design, which will be installed by the Contractor before any A/V or Network hardware installation work by Bates Technical College IT Services and Media Department. All IDF rooms and racks must be clean prior to installation of any Bates Technical College network equipment.

All structured cabling within the building to be Cat 6e. Maintain existing fiber and network to other buildings during construction. Any scheduled power or network service outages shall be coordinated with Owner's Representative a minimum of 10 working days prior.

The Design-Build Team to establish color coding of systems cabling with Bates Technical College IT Services prior to procurement and installation of any materials.

Bates Technical College standard clock and paging system is Alertus.

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

13. SECURITY & HARDWARE

All exterior doors and floor level entrances, IDF's, entrances to office suites, custodial closets and maintenance spaces shall be secured utilizing the existing Bates Technical College system.

All occupied spaces including but not limited to offices, classrooms and labs to be secured with door hardware with an inside ADA compliant thumb turn lock, and outside key lock override.

Touchless auto-operators at exterior entrances doors, restrooms and other common access areas are preferred.

All keyed doors shall utilize the existing door and hardware system for Bates Technical College. The college, in conjunction with the Design-Builders hardware consultant, will develop the key-core schedule for the Design-Builder to provide all permanent cores.

14. HAZARDOUS MATERIALS

The Owner will obtain a Good Faith Hazardous Materials Survey of existing site structures and soils to the extent deemed necessary and jointly between the Design-Builder and Owner early in the project.

15. FURNISHINGS & EQUIPMENT

All casework and fixed equipment will be shown with solid lines on drawings and will be furnished and installed by the Builder as Contractor Furnished and Contractor Installed (CFCI).

All building movable furniture (e.g., office furniture, classroom furnishings) and equipment will be shown as dashed lines on the drawings and will be purchased and installed by the Owner as Owner Furnished and Owner Installed (OFOI). Training equipment items to be relocated from the current Fire Services area will be identified by the Owner prior to GMP. If any such items are to be Contractor Installed the drawings shall show them as dashed lines and noted (OFCI). The design shall incorporate all necessary utilities, space, etc., for all user OFOI and OFCI equipment. The OFOI and OFCI items' installation will occur between the substantial and final completion of the project. The delivery and installation will be coordinated with the Contractor. As part of the project, the Owner and Design-Builder will jointly identify and determine infrastructure requirements for Owner furnished equipment.

16. COMMISSIONING, INSPECTION, and QUALITY ASSURANCE

The Commissioning (Cx) consultant will be selected prior to completion of the Conceptual/Advanced Schematics phase and will be responsible for:

- Peer review of the design and construction documents
- Development of the project specific Cx Specification
- Development of the project specific Cx Plan
- Construction and acceptance phase commissioning and documentation
- Development of the facility's Systems Manual
- Post-occupancy commissioning, testing, and documentation.

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

It is anticipated that the following building systems will be commissioned:

- Mechanical and HVAC systems
- Electrical (including generator, if applicable), controlled outlets and lighting systems
- Domestic hot water systems
- Building Automation System
- Lighting Controls
- Access Controls
- Building Envelope, air barrier testing, if applicable
- Others, as required by the design

17. CONSTRUCTION COMPLETION and TURNOVER

Substantial completion is determined by the conditions of the contract. This date establishes both the beginning of the warranty period and commencement of operation and maintenance by Bates Technical College. Details on the project closeout process can be found on the DES website.

Starting from the date of Substantial Completion for this project, the Contractor will have a specified number of days per the schedule to complete all punch list items. The Design-Builder is expected to pre-punch their own work prior to requesting a punch list inspection by the Owner/DES.

18. OPERATION & MAINTENANCE

The entity responsible for the maintenance and operation of the Fire Services Training Center and its systems is the Facilities Department. Operation and Maintenance Criteria will be established by the project team based on the installed equipment requirements. The Facilities Department will monitor, maintain, and perform preventive maintenance on the building systems and building envelope. To ensure maintenance does not compromise class instruction schedules, the following maintenance issues must be considered during the design:

- Designers shall ensure access and clearances are provided by design to perform routine maintenance tasks (e.g., Filter replacements, clearance to equipment motors). These access areas shall be outside of student, faculty, and staff workstations to the best extent practicable.
- Building Information Model (BIM) shall be developed to coordinate building equipment and components to maximize the space available for service.
- Systems manuals shall include any changes made to components and systems after substantial completion and shall comprise the final set points established through the Cx process.
- Updated as-built drawings that detail any subsequent changes must be provided to the Facilities Department as the changes are made.
- In addition to the Cx Plan, field reports, and test reports, the Cx consultant's primary deliverable is an electronic Systems Manual. This manual provides the College with a single source of information and instructions for proper operation and maintenance of primary building systems. As opposed to equipment-oriented "O&M manuals," the Systems Manual is to be systems-oriented to provide operators with easy access to both narrative and technically detailed reference material, descriptions, diagrams, schedules, and other information on stand-alone and, particularly, integrated systems.

Like the OPR and BOD, the Systems Manual will be a living document. Unlike the OPR and BOD, though, the Systems Manual should evolve throughout the life of the building— compiled by the Cx from

Owner Project Requirements

Fire Services Training Center

Bates Technical College, Tacoma WA

Project No. 2023-166

documentation developed by the Owner, design team, contractors, and the Cx process itself, then turned over for perpetual use and upkeep by building operators and future consultants and contractors throughout the building's life.

Maintenance and replacement costs must be considered over the life of the facility, and selection of materials will be based on minimizing life cycle costs. Design of mechanical, electrical, and plumbing systems shall allow required maintenance and replacement of key system components to be performed without deconstruction. All systems and their components shall be easily accessible for adjustments to the respective system components. Access to the building exterior, specifically on the south and east sides of this new building, shall be provided in such a way to allow easy maintenance, repair, replacement of the building exterior, including windows, sealants, etc.

19. OWNER TRAINING

Bates Technical College Facilities Department will provide preventive maintenance after building acceptance in addition to required repairs after the warranty period. Facilities personnel must receive detailed training on all systems so these systems can be properly maintained. The training provided will educate Facilities staff on systems and assemblies which will be installed in the facility. Training shall include a description and overview of system components and locations, safety provisions and concerns, as well as normal operating and energy conservation procedures.

Training shall also include a review of the written O&M instructions, discussion of relevant health and safety issues or concerns, discussion of warranties and guarantees, discussion of common troubleshooting problems and solutions. Hands-on training shall include start-up, operation in all possible modes (including manual, shut-down process, and any emergency procedures), and preventive maintenance for all pieces of equipment. Training is a progressive on-going process that will occur during construction and after substantial completion inspection, but prior to final completion inspection. A final training exercise will be conducted for special systems onsite before Owner occupancy. This is typical of a training exercise for all components of the building.

The intent of the training is to instruct the Owner's Staff and Users clearly and completely on all capabilities of the mechanical, electrical, plumbing, controls, fire protection, elevators, and all other equipment requiring maintenance. Training will also be conducted on user-specific equipment if applicable. It is not expected that the attendees will memorize everything from the training sessions, but that they know where the information is, can find it, and understand how to walk through the key steps to troubleshoot the problem and resolve it. Facilities and IT requires that all training sessions be videotaped and converted to DVD (or as agreed upon) format for the Owner's use as part of the deliverables prior to Project final completion. Relevant training will be witnessed and documented by the Commissioning authority; the Contractor will develop and execute the training program. All persons performing tasks related to building operations and maintenance shall receive the required number of hours of training related to building systems to comply with the latest LEED requirement at the time the training is conducted.

Building systems that the Facilities Department shall be trained on includes, but is not limited to:

- HVAC / Mechanical Systems
- BAS/controls
- Electrical systems, including Emergency Power system
- Lighting controls
- Security System
- Live Fire Special Function Construction & Support Systems
- Elevators or Wheelchair Lifts

Owner Project Requirements

Fire Services Training Center
Bates Technical College, Tacoma WA
Project No. 2023-166

- Other systems as appropriate

Building systems that the occupants/users shall be trained on include but not limited to:

- Lighting controls
- Audio/Visual System
- Security System
- Other systems as appropriate

Warranty Requirements

Generally, the warranty period provided by the Construction Manager, equipment suppliers, and all trade contractors for building materials and systems is for a period of one year after substantial completion acceptance. However, some specific systems have longer warranty periods through either the trade contractor or the manufacturer. Longer warranty periods will be determined prior to acceptance of the GMP.

20. POST-OCCUPANCY and WARRANTY

The Contractor shall ensure that final completion construction deliverables are documented, coordinated, assembled, and delivered to the Owner at or prior to Substantial Completion. Draft deliverables will be submitted to Bates Technical College and reviewed by Facilities Staff and their consultants.

During the warranty period, the Contractor shall respond to the Owner's request to review design and construction issues. The Contractor will also coordinate and participate at the end of warranty period inspection in accordance with the DES Terms & Conditions of the Contract. The Contractor will produce a summary report documenting deficiencies, problems, or other outstanding items. All deficiencies discovered will be corrected at no additional cost to the Owner.

The Cx consultant, Design-Builder, and all subcontractors whose systems were commissioned shall meet with the Owner's O&M staff quarterly during the first year after Substantial completion to offseason test, optimize, and otherwise troubleshoot all commissioned systems.

The Cx agent shall also provide a list of warranty issues at the 10-month milestone and provide a copy to the Owner, Professional, and Builder to review and immediately perform corrective action as required. The final commissioning report shall be produced and distributed after the warranty period to document the final result of commissioning.

21. PERFORMANCE GUARANTEE

The Performance Guarantee will be a separate contract outside the Design-Build contract, held with the Design-Build entity. The terms, extent of verification and performance will be determined in cooperation with the Design-Builder after acceptance of the GMP. The preliminary goals for the Performance Guarantee are enhanced energy savings, enhanced data capture for benchmarking, predictive maintenance, and the implementation of a smart building analytics package. The Design Builder and Bates Technical College will work together to define objectives for the program, terms, and the most suitable platform. The design of all equipment and systems shall be developed to support a smart building analytics package.

END OF OPR