



Oregon State University

REQUEST FOR PROPOSAL (RFP) #2021-005646

RESER STADIUM WESTSIDE COMPLETION WI-FI SERVICES

ISSUE DATE: 6/10/2021

NON-MANDATORY PRE-PROPOSAL CONFERENCE:
June 17, 2021 at 9:00 AM Pacific Time (PT) via Zoom

RFP DUE DATE/TIME:
June 29, 2021 at 2:00 PM Pacific Time (PT) via
electronic submission to bids@oregonstate.edu

QUESTION DEADLINE: June 24, 2021 at 12:00 PM Pacific Time (PT)

PROJECT NUMBER: 1994-20

CONTRACT ADMINISTRATOR:

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It is the Proposer's responsibility to continue to monitor the [OSU Business and Bid Opportunities](#) website for Addenda. Failure to acknowledge any Addenda in the Transmittal Letter may cause your Proposal to be considered non-responsive.

OSU standards and policies govern this solicitation ([Procurement Thresholds and Methods, Procurement Solicitations and Contracts](#)) unless otherwise referenced or stated.

1.0 INTRODUCTION

1.1 Oregon State University (“OSU” and/or “Owner”) is conducting a competitive **ONE OR TWO-STEP** Request for Proposals (RFP) process to retain ONE (1) firm to provide full design, installation and ongoing monitoring and maintenance services for RESER STADIUM WESTSIDE COMPLETION WI-FI SERVICES (the “Project”).

OSU WILL ONLY BE ACCEPTING SEALED PROPOSALS ELECTRONICALLY - Proposals are to be submitted to bids@oregonstate.edu by the Due Date/Time.

VIRTUAL NON-MANDATORY PRE-PROPOSAL CONFERENCE- A virtual Non-Mandatory Pre-Proposal Conference will be held at 9:00 AM Pacific Time (PT) on June 17, 2021 via Zoom. Firms wishing to attend shall e-mail constructioncontracts@oregonstate.edu no later than 30 minutes in advance to receive the Zoom link. The email subject line should contain the Solicitation Number/Name and Firm Name.

MANDATORY SITE-VISITS – Mandatory Site-Visits shall take place at 2:00 PM PT on June 22, 2021 at Reser Stadium Gate C. Parking and building location information can be found at www.oregonstate.edu. Campus Safety Policies for Face Covering and Physical Distancing requirements related to Covid-19 are located at <https://covid.oregonstate.edu/safety-policies>.

All questions shall be submitted via e-mail to constructioncontracts@oregonstate.edu by the Question Deadline in order to be addressed. The email subject line should contain the Solicitation Number/Name and Firm Name.

1.2 Background. Oregon State University in Corvallis, Oregon is located within the traditional homelands of the Mary's River or Ampinefu Band of Kalapuya. Following the Willamette Valley Treaty of 1855 (Kalapuya etc. Treaty), Kalapuya people were forcibly removed to reservations in Western Oregon. Today, living descendants of these people are a part of the Confederated Tribes of Grand Ronde Community of Oregon (<https://www.grandronde.org>) and the Confederated Tribes of the Siletz Indians (<https://ctsi.nsn.us>).

Founded in 1868 as Oregon’s land grant institution, OSU serves the state, the nation and the world as a premier 21st-century research university. OSU is committed to exceptional research, discovery, innovation and engagement — and to integrating its research and engagement mission with the delivery of a high-quality, globally relevant and affordable education for the people of Oregon and beyond. OSU is one of only two land, sea, space and sun grant universities in the U.S. and is the only university in Oregon to have earned both Carnegie Classifications for Very High Research Activity and Community Engagement.

The university’s 570-acre main campus is located in the city of Corvallis, a vibrant college town of nearly 58,000 in the heart of Western Oregon’s Willamette Valley. Corvallis consistently ranks among the safest, most highly educated and greenest small cities in the nation.

1.3 Location. Home of the Oregon State University football team since 1953, Reser Stadium has been a fixture on the University’s south campus for numerous athletic events, graduation ceremonies, concerts and a wide array of other athletic and non-athletic events.

Numerous fan and student-athlete enhancements have been completed in recent years. In July of 2018, a ribbon board was installed on the façade of the east side of the stadium that runs the entire length of the stadium.

In addition, within the last two years the popular Terrace was introduced to Reser Stadium providing a unique fan experience showcasing the state's premier food and beverage. In 2017 the expanded Valley Football Center opened to further modernize Reser Stadium.

Reser Stadium was originally known as Parker Stadium until June 14, 1999. The stadium, which is located on the south side of campus, was originally built in 1953 at a cost of \$330,463.19 with a seating capacity of 28,000. Following the 1965 Rose Bowl, additional end zone bleacher seats were added to raise the capacity to 33,000. The stadium was expanded to 40,593 in 1967 with a new addition to the west side, including a new press box. Stadium capacity was reduced in 1990 as a result of the construction of the original Valley Football Center. In June of 1996, an enlarged Valley Football Center opened. The stadium's capacity is now 43,363.

1.4 Summary of Work. Oregon State University is seeking proposals from qualified firms to provide a High-Density Wireless Network (Wi-Fi) System ("WNS" or "System") for Reser Stadium ("Project"), as described herein. The Project consists of deploying a fan facing wireless LAN system (WNS) throughout the existing stadium and in the West Side Renovation Project. Hoffman Construction/SRG Partnership/Populous is the Design Build Team (DBT) for the West Side Renovation Project, with PAE Engineering as the Electrical Engineer. OSU's Technology Consultant is WJHW who will assist the awardee with the design review and approvals process. Refer to Exhibits included within this RFP for additional details on the overall stadium renovation project.

1.5 Scope of Services. The detailed Scope of Services shall include, but may not be limited to technical design, installation and ongoing monitoring and maintenance of the WNS upon completion.

1.5.1 Plans and Specifications: The awardee will be responsible for knowledge of all plans and specifications for the West Side Renovation Project that are required to provide a fully functional and complete System. If additional information is needed or critical drawings or documents missing, it is the firm's sole responsibility to request all additional information and/or drawings necessary to provide a complete and working System. The requirements detailed below are considered additional to requirements within specification Section 27 21 33.

1.5.2 Scope of Work for the WNS: The firm shall be required to design and build the WNS, provide equipment and installation services necessary to deliver a complete and working System for the Project, in accordance with the contract documents, as outlined in, but not necessarily limited to, all of the Exhibits in Section in this RFP. The following are specific scope of work items:

1.5.2.1. Design and build a complete High-Density Wireless Network (Wi-Fi) System (WNS) to support the Project. Additionally, the firm shall manage (monitor and maintain as a Managed Services Provider) the WNS for year-1 as a minimum and likely will be contracted to manage the system long term. Bidder shall breakout

proposed cost of contract terms, refer to 7.8.4, with an extended manufacturer warranty that runs concurrent with these terms. The warranty period or Managed Service Agreement does not begin until the WNS is operational and accepted by the University during acceptance testing. Refer to Section 27 21 33 for Acceptance Testing.

1.5.2.2. The firm shall be responsible for overall project management of the WNS design, including but not limited to the following:

- (a) WNS design coordination with DBT to work through all aesthetic and constructability issues.
- (b) Regular project updates, including design/engineering, procurement and installation progress to OSU and DBT.
- (c) The firm shall be responsible for all design services relative to the project including design coordination, production of WNS construction documents and construction administration efforts through project completion.
- (d) WNS construction documents shall include, at a minimum: Symbol legend, Bill of Materials (BOM) and equipment schedule sheets, reference plans (showing equipment rooms, etc.), area plans (depicting floor plans with reflected ceiling plans overlaid, WNS equipment locations, cable and conduit locations, access hatches, steathling, etc.), enlarged plans (for IT equipment rooms), rack elevations and mounting details.

1.5.2.3. Refer to Section 27 21 33 for additional detail on the scope of work.

1.5.3 Technical Requirements:

1.5.3.1. General:

- (a) The WNS and equipment shall provide the platform for the fan facing users, university ticketing and fan facing mobile applications.
- (b) Procure and install all patch cords.

1.5.3.2. Local Area Network (LAN):

- (a) The design will include a dedicated LAN for the dedicated use of the WNS and shall be maintained and monitored as one system.
- (b) The WNS design shall consist of 10G or greater single mode optics for all connectivity, including but not limited to, ties between core switches, aggregation layers, access switches, etc. Any potential value engineering (VE) suggestions shall be proposed and clearly identified as alternates for consideration.

1.5.3.3. Wireless Network (Wi-Fi): Fan Facing WNS, refer to Section 27 21 33.

1.5.3.4. Structured Cabling System: Provide the required pathways and cabling, category horizontal links and Fiber Optic Backbone required to deliver a completed and working WNS, refer to Section 27 21 33.

1.5.4 Design Process Overview:

1.5.4.1. Refer to base building current Architectural drawings for additional information to be used as a general guideline while developing a full predictive site survey heat map concept design. The firm shall work directly with OSU's Technical Representative and Facilities to coordinate final placement of WLAN Access Points (AP's)/antennas so that any updates to the base building WLAN locations can be finalized and issued prior to the start of WLAN device rough-in.

1.5.4.2. An initial concept design for the WNS shall be included as part of the RFP response to assist the evaluation committee in understanding the general approach from each Firm and will provide some level of back-up to the projected system cost.

1.5.4.3. A design review and approval process will be required by OSU and the DBT team prior to completing a final design or initiating any installation. Final coordinated design shall strategically and thoughtfully place components in locations that will minimize aesthetic impact on the building architecture yet also minimize negative impact on the system performance.

1.5.4.4. After award, the firm shall provide the full Radio Frequency (RF) design to the DBT for review. The DBT will assist the awardee with design coordination, in particular coordination relative to aesthetics and constructability.

1.5.5 Construction Process Overview:

1.5.5.1 The firm shall coordinate all pre-construction and construction related activities with the DBT. This includes participating in scheduling meetings and construction BIM work sessions and/or site walks with to work through field coordination issues.

(a) WNS components will not be placed in locations that will interfere with gas, electric, steam, water, fire alarm, signage and wayfinding, architectural elements, or other fixtures in the arena that Owner deems as having priority.

(b) WNS component mock-ups shall be provided as necessary to establish clear expectations on the final install quality. At a minimum this includes all visible devices mounted at the exterior of the stadium and/or within high finish and high traffic areas such as entry lobbies, bars, clubs, suites, concourses and the seating bowl.

(c) Substantial Completion of the WNS must be achieved by 6/30/2023. Liquidated Damages in the amount of \$2,500.00/day shall begin the following

day and accrue each day thereafter until Substantial Completion is granted. The firm shall meet all schedule milestones as established by the DBT.

(d) Coordinate with OSU/DBT to schedule a public event at the venue to allow time for testing and optimization. This requirement will be discussed and detailed further once design is underway.

(e) The firm shall provide a single point of contact Project Manager for the duration of the Project. The Project Manager shall act as a liaison between OSU, the DBT and any other contractors, subcontractors or equipment vendors. The PM shall attend on-site meetings, both scheduled and unanticipated, respective to WNS coordination and other general meetings (as reasonably necessary) such as daily pull planning meetings, MEP Sub-contractor meetings, OAC meetings, etc.

(f) The firm shall coordinate its work with the work of other contractors working in the same or adjacent areas to minimize interference with or suspension of the work of any other contractors.

(g) If any part of the WNS work depends on its proper execution or results upon the work of other contractors, the Firm shall report promptly in writing of any defects in the work of such other contractors that interfere with the proper execution of the work.

(h) Delivery of supplies, equipment, and/or materials to the project site shall be along routes designated by OSU and/or the DBT. The firm shall obtain prior approval for areas proposed for temporary storage, stockpiling, maintenance and/or installation prep work.

(i) The firm shall be responsible for repairing, at no cost to OSU, all damages caused by the work of the firm or its contractors.

(j) The firm shall provide dedicated on-site support for every home game during the 2023 season.

1.5.6 WLAN/LAN Managed Services Agreement:

1.5.6.1. System reliability metric:

- (a) System reliability shall be measured as a percentage of up-time during an event where the system is working and available 99.5% of the time.
1. Up-time calculation will exclude scheduled non-event days.
 2. Develop an event master calendar with OSU for operational readiness and up-time calculations.

1.5.6.2. Support:

- (a) Technical support will be onsite during event(s) to meet the specified WNS

performance requirements. Advanced technical/ Manufacture support to be immediately accessible to on-site support staff during event/gameday.

(b) Support model shall include the ability for the Support (Helpdesk/Advanced support) to securely access the WNS remotely to monitor, perform maintenance and to remedies issues.

1.5.6.3. Average Speed of Answer:

(a) Provide a dedicated support line, email address, helpdesk portal that is staffed during event/gameday.

(b) On-site support staff to provide frequent communications on WLAN performance/health and proactive report issues with issue status updates as needed to OSU's designated staff, before, during and after the event.

(c) On days with no events or during the offseason, provide a helpdesk line that is staffed during normal busies hours and will return all emails and calls within 1 business day.

(d) Provide access to reports that include but are not limited to open/closed tickets, mean time to resolution, Severity, etc.

1.5.6.4. Issue Severity Service Level:

(a) Minor outage:

1. An outage not directly impacting the operations or fan engagement during an event. This can be a configuration issue or hardware failure on a redundant appliance.
2. Remedy prior to or following the event day.
3. Non-event day, remedy within 5 business days

(b) Moderate outage:

1. An outage defined as failure to an appliance or software creating performance degradation on an event day.
2. Remedy within 1 hour during events; 72-hrs on non-event days
3. Remedy may be resolved remotely and/or with onsite support.

(c) Major outage:

1. A catastrophic failure, impacting all or parts of the network. A hardware or software failure not recoverable without appliance replacement.
2. Remote and onsite support shall be provided until resolution.
3. Remedy within 1 hour; 24-hrs on non-event days

(d) All outages are to be resolved a minimum of 24 hours before a scheduled event.

1.5.7 Financial Remedies:

1.5.7.1. If up-time average falls below the stated percentage for any calendar month, Managed Services Provided will credit OSU 1 month of Managed Services fees.

1.5.7.2. Financial remedies will not apply for outages caused by force majeure.

1.5.8 Training: Yearly training of OSU Staff to manage Event/Game Day user helpdesk.

1.5.9 Pre-Season System Performance Review: Perform a pre-season performance review that is to include:

1.5.9.1. RF site survey in order to verify performance metrics specified in Section 27 are met.

1.5.9.2. Report issues to the University.

(a) All issues to be resolved a minimum of 24 hours before day of the first scheduled event.

(b) Retune system as needed.

1.5.9.3. Prior to System Performance Review, install manufacture recommended software/firmware updates.

1.6 RESERVED

1.7 Design Standards. The design of the Project must follow [OSU's Design Standards](#), including OSU's requirements for sustainable development.

2.0 SCHEDULE

Issue Date	June 10, 2021
Non- Mandatory Pre-Proposal Conference	June 17, 2021 at 9:00 AM PT via Zoom
Mandatory Site Visits	June 22, 2021 at 2:00 PM PT at Reser Stadium Gate C
Question Deadline	June 24, 2021 at 12:00 PM PT
Final Addendum Issuance (if necessary)	By June 25, 2021
Proposal Due Date/Time	June 29, 2021 at 2:00 PM PT

The following dates are tentative and subject to change without notice:

Estimated notification of finalists (If applicable)	Week of July 5, 2021
Presentations/Interviews (If applicable)	Week of July 12, 2021
Notice of Intent to Award	By July 31, 2021
Estimated Contract execution	By July 31, 2021
Estimated Notice to Proceed	By July 31, 2021

OSU will make every effort to adhere to the above schedule. It is however, subject to change.

3.0 QUESTIONS, SOLICITATION REVISION REQUESTS, CHANGE OR MODIFICATION, APPEALS

3.1 Questions.

3.1.1 All questions and contacts with OSU regarding any information in this RFP must be addressed in writing via email to constructioncontracts@oregonstate.edu no later than the **Question Deadline** as stated in Section 2.0. If a Proposer is unclear about *any* information contained in this document or its exhibits (Project, scope, etc.), they are urged to submit those questions for formal clarification.

3.2 Solicitation Process Revision Requests.

3.2.1 Proposers may submit a written request for change of particular solicitation process provisions to the **Construction Contracts Manager** at the address or email listed in this document. Such requests for change shall be received no later than the **Question Deadline** listed above.

3.2.2 Such requests for change shall include the reasons for the request and any proposed changes to the solicitation process provisions.

3.3 Change or Modification.

3.3.1 Any change or modification provided by the Owner for this RFP or the documents included as exhibits to this RFP shall be made by a duly issued Addendum made available to all firms on the [OSU Business and Bid Opportunities](#) website. It is the responsibility of each Proposer to visit the website and download any addenda. No information received in any manner different than as described herein shall serve to change the RFP in any way, regardless of the source of the information.

3.3.2 OSU will not be responsible for any other explanation or interpretation of this RFP or the documents included as exhibits to this RFP.

3.4 Appeals.

3.4.1 Appeals related to the OSU solicitation process and award decisions and actions shall be pursuant to OSU Standards ([Procurement Thresholds and Methods, Procurement Solicitations and Contracts](#)). All written appeals must be delivered to the **Construction Contracts Manager**, at the address given in this RFP.

4.0 PUBLIC RECORD

4.1 OSU will retain an electronic copy of this RFP and one electronic copy of each Proposal received, together with electronic copies of all documents pertaining to the award of a contract. These documents will be made a part of a file or record, which shall be open to public inspection after OSU has announced its intent to award a contract. If a Proposal contains any information that is considered a trade secret under ORS 192.345(2), you must mark each trade secret with the following legend: **“This data constitutes a trade secret under ORS 192.345(2), and shall not be**

disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192.”

4.2 The Oregon Public Records Law exempts from disclosure only bona fide trade secrets, and the exemption from disclosure applies only “unless the public interest requires disclosure in the particular instance.”

4.2.1 Therefore, non-disclosure of documents or any portion of a document submitted as part of a Proposal may depend upon official or judicial determination made pursuant to the Public Records Law.

4.3 In order to facilitate public inspection of the non-confidential portion of the Proposal, material designated as confidential shall accompany the Proposal, but shall be readily separable from it. Prices, makes, model or catalog numbers of items offered, scheduled delivery dates, and terms of payment shall be publicly available regardless of any designation to the contrary. Any Proposal marked as a trade secret in its entirety may be considered non-responsive and be rejected.

5.0 FORM OF AGREEMENT

A Sample Public Improvement Agreement is included as an exhibit and contains contract terms and conditions applicable to the work. The sample contract may contain certain notes or alternative provisions. Those alternative provisions will be included at the sole discretion of OSU.

6.0 RESERVED OR BUREAU OF LABOR AND INDUSTRIES (BOLI) PREVAILING WAGES

In compliance with Oregon Prevailing Wage Law, the following is incorporated into this RFP:

The Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates (PWR) as outlined in Sections C.1 and C.2 of the General Conditions. The resulting Supplement is subject to the following BOLI wage rate requirements, which are incorporated herein by reference:

- 6.1** April 1, 2021 PWR Apprenticeship Rates
- 6.2** April 1, 2021 PWR Amendments
- 6.3** January 1, 2021 Prevailing Wage Rates for Public Works Contracts in Oregon
- 6.4** July 1, 2018 Definitions of Covered Occupations for Public Works Contracts in Oregon

These BOLI wage rates are available here:

https://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx.

7.0 INSTRUCTIONS TO OFFERORS

7.1 Summary of Work. The Work contemplated in this document shall be for OSU in connection with the Project described in Section **1.0** of this document.

7.2 Pre-Proposal Conference and Site Visit.

7.2.1 The Pre-Proposal Conference will be administered virtually via Zoom. Proposers

must contact the **Contract Administrator** to request virtual Conference access. This request **must** occur no later than thirty (30) minutes prior to the meeting time, as stated in this RFP.

The Proposer must attend the mandatory Site-Visit. Proposals will not be accepted from those firms who have not had a representative attend the Mandatory Site Visit. Attendance will be documented by checking in with the **Contract Administrator** at the beginning of the Site- Visit. Attendance will be documented by OSU. Proposers who arrive more than five (5) minutes after start time of the Site-Visit as stated in the RFP will have their Proposal rejected.

7.2.2 No statement made by any officer, agent, or employee of OSU in relation to the physical conditions pertaining to the Work site will be binding on OSU, unless included in writing in the documents included as exhibits to this RFP or an Addendum.

7.2.3 Date and Time of a Pre-Proposal Conference is located on the cover sheet of this RFP.

7.2.4 Should on campus site visits occur, Campus Safety Policies for Face Covering and Physical Distancing requirements related to Covid-19 are located here:

<https://covid.oregonstate.edu/safety-policies>

7.3 Proposal Submission.

7.3.1 Submit **one (1) electronic version via email** to be received by the Due Date/Time listed in this document to bids@oregonstate.edu as stated in this RFP. **Electronic versions must be sized appropriately for transfer (under 10 mb).**

7.3.2 All Proposals must be received by OSU before the Due Date/Time. OSU's official clock shall prevail in any time conflict. Any Proposal received after the Due Date/Time will be rejected and will be retained and made part of OSU's archive records in accordance with OSU Standards.

7.3.3 All Proposers must be registered and licensed with the Oregon Construction Contractors Board and have on file with the Construction Contractors Board the required public works bond prior to submitting Proposals. Failure to be licensed and have the bond in place will be sufficient cause to reject Proposals as non-responsive.

7.4 Proposal Submission Requirements.

7.4.1 Your Proposal must be contained in a document not to exceed Twenty (20) single sided pages including pictures, charts, graphs, tables and text you deem appropriate to be part of OSU's review of your Proposal. Resumes of key individuals proposed to be involved in this Project are exempted from the page limit and must be appended to the end of your Proposal. No supplemental information to the page limit will be allowed. Appended resumes of the proposed key individuals, along with a Transmittal letter, table of contents, front and back covers, references, exceptions and blank section dividers will not be counted in the page limit.

7.4.2 Your Proposal must follow the format outlined below and include a Transmittal/Cover Letter signed by an officer of your firm(s) with the authority to commit the firm(s) and must also acknowledge receipt of all addenda. Include an email address for communication purposes.

7.4.3 Any/all exceptions to the Terms and Conditions included in the Sample Contract shall be clearly identified and appended to the Proposal in order to be considered by OSU during the negotiation period.

7.4.4 The electronic Proposal should be **should be sized appropriately for transfer (under 10 MB)** and formatted with page size of **8 ½ x 11 inches** with no fold-outs (except for any large format documents required by evaluation criteria). The basic text information of the Proposal should be presented in standard business font size, and reasonable margins.

7.4.5 OSU may reject any Proposal not in compliance with all applicable OSU solicitation procedures and requirements, and may cancel this solicitation or reject for good cause, all Proposals upon a finding by OSU that it is in the public interest to do so.

7.4.6 Note that throughout this procurement process, OSU will not accept Proposals that require OSU to pay the cost of production or delivery.

7.4.7 Telephone and facsimile transmitted **Proposals will not be accepted**. Proposals received *after* the Due Date/Time **will not be considered**.

7.4.8 Each Proposal shall be emailed to bids@oregonstate.edu. Proposals must be received by the date/time and in the format specified herein. The email line should contain the Solicitation Number/Name and Firm Name. Only those Proposals received at this email address by the Proposal Due Date/Time shall be considered responsive. Proposals submitted directly to the **Contract Administrator** will NOT be considered responsive. It is highly recommended that the Proposer confirms receipt of the email with the **Contract Administrator or designee**. The **Contract Administrator** or designee may open the email to confirm receipt but will NOT verify the integrity of the attachment(s), answer questions related to the content of the Proposal, or address the overall responsiveness of the Proposal.

7.5 Acceptance or Rejection of Solicitation Responses by OSU.

7.5.1 The procedures for Contract awards shall be in compliance with the provisions of OSU standards and policies adopted by OSU.

7.5.2 OSU reserves the right to reject any or all Proposals and to waive minor informalities in compliance with the provisions of OSU standards and policies adopted by OSU.

7.6 Withdrawal of Solicitation Response.

7.6.1 At any time prior to the Due Date/Time, a Proposer may withdraw its Proposal in accordance with OSU Standards. This will not preclude the submission of another Proposal by such Proposer prior to the Due Date/Time.

7.6.2 After the Due Date/Time, Proposers are prohibited from withdrawing their Proposal, except as provided by OSU Standards.

7.7 Evaluation Process. The written response to this RFP is the first in a **potential** two-step process in the selection of a firm for this Project. The Proposals received in response to this RFP will be evaluated by a selection committee with the top scoring firms being invited to advance to further evaluation steps including virtual Proprietary Discussions and Presentations/Interviews should the committee determine they are necessary.

Presentations/Interviews will include a **Twenty (20) minute** presentation period, immediately followed by a separate **Thirty (30) minute** Q&A session.

After all of the Presentations/Interviews are completed, the members of the selection committee will discuss the strengths and weaknesses of the finalists. The members of the selection committee will then score the finalists based on all information received, presented and heard during the Presentations/Interviews. Optional Reference Checks may also be undertaken to aid in final scoring. Upon completion of final scoring, negotiations may commence with all Proposers submitting responsive proposals or all Proposers in the competitive threshold.

Final scoring of the Interviews will be **separate and not cumulative** from the short-listing.

7.8 Evaluation Criteria. The following items constitute the evaluation criteria for the selection committee to score Proposals. For ease in reviewing, provide tabs keyed to each of the following criteria:

7.8.1 Conceptual Design (30 points)

Provide an initial WNS Conceptual Design document that includes the following:

7.8.1.1 Provide bases of design manufacturer;

- (a) Wireless Network System
- (b) Local Arena Network
- (c) Structured Cabling System

7.8.1.2 Wireless Network System:

- (a) Projected Wi-Fi access point (AP) and antenna count totals broken out per floor, including breakout for seating bowl.
- (b) Proposed placement of APS in the seating bowl, i.e. under seat, hand rail, mixed, etc or other
- (c) Proposed pathway routing method to areas of the seating bowl that are on-grade. Boring is not an acceptable method in these areas.
- (d) Proposed AP mounting conditions, wall mount, ceiling (accessible and hard lid), bowl and methods/products to cancel APs in high finish areas. Include pictures from pervious project of these various mounting conditions.

7.8.1.3 Alternates:

- (a) Provide a high level overview of design alternates.
- (b) Provide comnparable anlysis for any alternate system manufacturer.

(b) Separate cost.

7.8.2 Proposed Management Plan and Schedule (25 Points)

Provide a CPM schedule and detailed work plan for how your Firm plans to coordinate, schedule, staff and complete the design/engineering, development, construction, installation and commissioning of the System, all in conjunction with the Project CM/GC's overall project schedule. The proposed management plan shall specifically include a proposed timeline for completing the work, in Gantt chart format, that clearly indicates durations for design finalization, shop drawing submittal, procurement, fabrication, shipping and installation timelines for the Systems.

7.8.3 Experience and Qualifications (15 Points)

Describe your past experience and qualifications for up to three (3) projects of a similar nature and scope. Provide contact information for one or two references for each of these projects.

7.8.4 FEE PROPOSAL (15 Points)

Provide a full system cost **FEE PROPOSAL** on a Fixed Fee basis broken down into THREE (3) Subcategories as follows:

- WNS Technical Design and complete design Documents
- System Installation (material, labor, testing and configuration) - Include any available back-up and assumptions to show how you arrived at this cost (i.e. comparable project, initial designs, etc.).
- Ongoing Monitoring and Maintenance (year-1, years 2-5, years 6-10)

Projected cost breakdown should be structured to provide as much system cost breakdown as possible, but at a minimum cost should be summarized in the following categories and split up between material and labor costs:

1. General Conditions (project management, design coordination, etc.)
2. Aesthetic / Stealth solutions cost allowance (ceiling access hatches, stealth enclosures, painting, etc.)
3. Additional raceway or cabling cost (conduits, pull-boxes, etc.)
4. WLAN equipment installation

Provide one (or multiple) of the following cost model options as part of your response

1. OSU Owned WNS – Capital Expense + Ongoing Management costs
2. Vendor Owed WNS – Annual Operational cost for “leased” WNS
3. *If desired, other cost models may be provided as an alternate such as a “finance” option where OSU owns the WNS but spreads out the Capital Expense over time.

Scoring will be based solely on the total maximum not-to-exceed amount.

NOTE: Formula for scoring Fee Points will be as follows: Lowest Fee for each of the price related items will receive full points with higher cost price related items receiving proportionally lower points according to this formula: **(Low Fee or Fee%/ Fee or Fee%) x Points Available**

7.8.5 Workforce Diversity Plan (15 Points)

(a) Provide a description and identification of Minority Business Enterprise (MBE), Women Business Enterprise (WBE), Emerging Small Business (ESB), or Disabled Service Veterans (DSV) certifications for your team and a description of your nondiscrimination practices. Provide historical information on MBE, WBE, ESB, or DSV Joint Ventures, subcontracting or mentoring plan, and utilization history for projects completed by your firm within the past three (3) years.

(b) Provide a narrative description of your current workforce diversity program/plan, and the plan for obtaining subcontracting, consulting, and supplier diversity for this Project. Include a description of the outreach program or plan, including a schedule of events and specific steps that will be taken to maximize broad based and inclusive participation and the plan to provide mentoring, technical or other business development services to subcontractors/subconsultants needing or requesting such services.

7.9 Point Summary Table.

Criteria	Point Value
Conceptual Design	30 Points
Proposed Management Plan & Schedule	25 Points
Experience and Qualifications	15 Points
Fee Proposal	15 Points
Workforce Diversity Plan	15 Points

7.10 Optional Presentations/Interviews and Reference Checks (60 Points).

7.10.1 Presentations/Interviews (50 Points)

Presentations/Interviews *may* be conducted to aid in determining the Apparent Successful Proposer. Proprietary Discussions may also be conducted with all finalists prior to Presentations/Interviews. Information regarding the Proprietary Discussions and Presentations/Interviews will be provided to the short-listed firms following the initial review and scoring. Final scoring of the Presentations/Interviews will be **separate and not cumulative** from the short-listing.

7.10.2 Optional Reference Checks (10 Points).

In addition to responding to the evaluation criteria above, provide the names, addresses, phone numbers and e-mail addresses of three (3) references. Do not include references from any firms or individuals included in your consulting team for this Proposal or any OSU personnel. OSU may check with these references and with other references associated with past work of your firm.

OSU *may* check with these references or other references associated with past work of your firm.

7.11 Equity Contracting. OSU will require the successful Proposer to comply with OSU Standards, policies, rules and procedures requiring good faith efforts in subcontracting with minority, women, emerging small business or service-disabled veteran owned business enterprises.

7.12 Negotiations.

7.12.1 OSU may commence General and/or Best and Final Offer (BAFO) Negotiations in accordance with OSU Standards ([Procurement Thresholds and Methods, Procurement Solicitations and Contracts](#)) following final scoring under either a one or two-step process.

7.12.2 Any/all exceptions to the Term and Conditions included in the Sample Contract/Agreement shall be clearly identified and appended to the Proposal in order to be considered by OSU during the negotiation period.

7.12.3 OSU reserves the right to deny contract term negotiations with the Apparent Successful Proposer if such contract terms were not received by OSU in the Solicitation response pursuant to Section **7.12.2** above.

7.12.4 OSU reserves the right to defer decision(s) on requests for contract terms and conditions revisions until after a notice of intent to award is published.

7.12.5 If OSU and the Apparent Successful Proposer are unable to reach agreement on contract terms and conditions, OSU may cease negotiations with the Apparent Successful Proposer and enter negotiations with the next highest scoring Proposer, etc.

8.0 MISCELLANEOUS

8.1 Financial Responsibility.

8.1.1 OSU reserves the right to investigate, at any time prior to execution of the contract, the Proposers financial responsibility to perform the anticipated services. Submission of a Proposal will constitute approval for OSU to obtain any credit report information OSU deems necessary to conduct the evaluation. OSU will notify Proposers, in writing, of any other documentation required, which may include, but need not be limited to: recent profit-and-loss history; current balance statements; assets-to-liabilities ratio, including number and amount of secured versus unsecured creditor claims; availability of short and long-term financing; bonding capacity and credit information. Failure to promptly provide this information may result in rejection of the Proposal.

8.1.2 OSU may postpone the selection of finalists or execution of a contract in order to complete its investigation and evaluation. Failure of a firm to demonstrate financial responsibility may render it non-responsible and constitute grounds for Proposal rejection.

8.2 Project Termination.

8.2.1 OSU reserves the right to terminate the Project or contract during any phase in the Project.

8.3 Insurance Provisions. During the term of the resulting contract, the awardee will be required to maintain in full force, at its own expense, from insurance companies authorized to transact the business of insurance in the state of Oregon, each insurance coverage/policy as set forth in the contract.

8.4 Nondiscrimination. By submission of a Proposal, the Proposer certifies under penalty of perjury that the Proposer will not discriminate against minority, women, emerging small business or service-disabled veteran owned business enterprises in obtaining any required subcontracts.

8.5 AA/EEO Employer. OSU is an AA/EEO employer.

8.6 Compliance with Applicable Law. Proposer agrees to comply with all federal, state, county, and local laws, ordinances, and regulations as well as all applicable OSU Standards and Policies while on campus.

8.6.1 Smoke and Tobacco Free Campus. Owner's grounds and premises are smoke and tobacco free. Contractor and Contractor's employees, agents, Subcontractors, if any, agree not to smoke or use tobacco products while on Owner property.

8.6.2 Sexual Harassment Policy. The Owner has policies that prohibit sexual harassment of members of the university community and in keeping with those policies Contractor and Contractor's employees, agents, and Subcontractors are prohibited from engaging in sexual harassment of members of the university community.

8.6.3 Firearms Policy. The Owner has adopted a policy that prohibits Contractor and Contractor's employees, agents and Subcontractors from possessing firearms on Owner's property.

8.7 RESERVED

8.8 Execution of Agreement.

8.8.1 The Proposer shall be required to execute the Contract as provided, within any time period provided in an award notification. The Contract Documents shall be delivered to OSU in the manner stated in an award notification.

8.8.2 Work/Services Commencement. Work/Services shall not commence until execution of a Contract and subsequent issuance of a notice to proceed letter with the selected Proposer.

9.0 EXHIBITS

Exhibit 1 – Sample Public Improvement Agreement

Exhibit 2 – General Conditions/Supplemental General Conditions/Division 1 Requirements

Exhibit 3 – MWESB Instructions and Form

Exhibit 4 – Performance and Payment Bond Forms

Exhibit 5 - Section 27 21 33

Exhibit 6 – Basis of Design

END OF RFP

EXHIBIT 1

**OREGON STATE UNIVERSITY
PUBLIC IMPROVEMENT CONTRACT

PROJECT NAME**

This Public Improvement Contract for the _____ (the "Contract"), made by and between Oregon State University, hereinafter called OWNER, and _____ hereinafter called the CONTRACTOR (collectively the "Parties"), shall become effective on the date this Contract has been signed by all the Parties, whichever is later.

1. Contract Price, Contract Documents and Work.

The CONTRACTOR, in consideration of the sum of \$_____ (the "Contract Price"), to be paid to the CONTRACTOR by OWNER in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the Oregon State University General Conditions referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof if checked for inclusion [X]:

[] (RESERVED)

2. Representatives.

CONTRACTOR has named **(Insert Name)** its' Authorized Representative to act on its behalf. OWNER designates, or shall designate, its Authorized Representative as indicted below (check one):

A. [] Unless otherwise specified in the Contract Documents, the OWNER designates **(Insert Name)** as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment authorization, and to carry out the responsibilities of the OWNER.

B. [X] Name of OWNER'S Authorized Representative shall be submitted by OWNER in a separate writing.

3. Contract Dates.

COMMENCEMENT DATE: Within _____ days of the execution of the Contract ("Execution"). Or certain date.

SUBSTANTIAL COMPLETION DATE: Within _____ days of the execution of the Contract ("Execution"). Or certain date.

FINAL COMPLETION DATE: Within _____ days of the execution of the Contract ("Execution"). Or certain date.

4. Integration

The Contract documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. CONTRACTOR, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

In witness whereof, Oregon State University executes this Contract and the CONTRACTOR does execute the same as of the day and year indicated below.

CONTRACTOR DATA:

CONTRACTOR FEDERAL ID # _____

CONTRACTOR CCB # _____

[Payment information will be reported to the IRS under the name and taxpayer ID # provided above. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 31 percent backup withholding.]

CONTRACTOR SIGNATURE

By _____
Name/Title Date

Oregon State University

By _____

Bruce Daley Date
Associate Vice President for University Facilities, Infrastructure and Operations

OREGON STATE UNIVERSITY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS

June 30, 2017

INSTRUCTIONS: The attached **Oregon State University General Conditions for Public Improvement Contracts ("Public Improvement General Conditions")** apply to all designated Public Improvement contracts. Changes to the Public Improvement General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these Public Improvement General Conditions should not otherwise be altered.

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**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

AMENDMENT, means a writing which, when fully executed by the Parties to this Contract, constitutes a change to a Contract Document. Amendments shall be issued in accordance with the changes provisions of Section D and, if applicable, establish a Contract Price or Contract Time adjustment.

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order issued by the Owner to be later included as an Amendment. A Change Order shall not be effective until codified as an Amendment.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these Public Improvement General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONSTRUCTION SCHEDULE, means the schedule prepared by the Contractor in CPM format and approved by the Owner, and all adjustments thereto approved by the Owner, that describes sequence and timing of the Work.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Public Improvement Contract, Public Improvement General Conditions, Supplemental General Conditions if any, the accepted Offer, Plans, Specifications, Construction Change Directives, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors, the CM/GC's RFQ proposal, the GMP Amendment, and any other Amendment, the Construction Schedule prepared and approved in accordance with the Construction Documents, and all other required Submittals.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates, as indicated in the Contract Documents.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

CPM, means a critical path method format to be used for the Construction Schedule.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, Medicare and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FINAL PAYMENT, means the last payment to the Contractor, including retainage, in connection with the Work.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

MWESB REPORT, means an accurate report by the Contractor to the Owner identifying all Minority, Women and Emerging Small Business (MWESB) enterprises, as those terms are defined in ORS 200.005, receiving contracts throughout the course of the Work. An initial MWESB report is required (see Section E.2.9) and MWESB Reports are required annually (see Section E.2.9) and as a condition of final payment (see Section K.1). The initial report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts. The annual reports shall include the total number of contracts and subcontracts awarded to MWESB enterprises, the dollar value of each, and the expenditure toward each contract and subcontract during the previous twelve (12) months. The final report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts including all Contracts and Amendments incorporated during the course of the project. The reports shall only include enterprises certified with the State of Oregon as MWESB enterprises and shall include individual identification of each enterprise as a Minority business enterprise, a Women business enterprise, and/or an Emerging Small Business Enterprise, as applicable.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals.

OFFEROR, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means Oregon State University(OSU). Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these Public Improvement General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PROJECT, means the development, design, construction

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, MWESB Reports, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these Public Improvement General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Offerors or a Request for Proposal or a Request for Quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a

supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACT, means a contract between the Contractor and a subcontractor for the performance of a portion of the Work.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBMITTAL, means a shop drawing, product data, sample, catalog cut, or similar item for specific portions of the Work as required by the Construction Documents.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

PUBLIC IMPROVEMENT SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these Public Improvement General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents. Execution of the Contract by the Contractor is an express representation (1) that the Contractor understands the intent stated herein with respect to the Preconstruction Phase Services, and (2) the Contractor's execution of an Amendment, including the GMP Amendment, shall be an express and unqualified representation that the Contractor understands the intent stated herein and therein.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract

Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) Amendments and Construction Change Directives, with those of later date having precedence over those of an earlier date;
 - (b) The Supplemental General Conditions;
 - (c) Public Improvement General Conditions;
 - (d) The Public Improvement Contract;
 - (e) Construction Change Directive;
 - (f) Division One (General Requirements) of the Specifications;
 - (g) Detailed Schedules of finishes, equipment and other items included in the Specifications;
 - (h) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
 - (i) Large-scale drawings on Plans;
 - (j) Small-scale drawings on Plans;
 - (k) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
 - (l) The Solicitation Document, and any addenda thereto.
 - (m) The Contractor's RFQ proposal.
- A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.
- A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner in writing. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).
- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication,

shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner and confirmed in writing, including without limitation, any nonconformity with Applicable Laws.
- A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600.

Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the State of Oregon for purposes of performing Work under this Contract

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until Final Payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work. Inspection of the progress, quantity, or quality of the Work done by the Owner, any Owner representative, and public agency, the Architect/Engineer, or any inspector, shall not relieve the Contractor of any responsibility for the compliance of all Work with the Contract Documents.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by

and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.2 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts. CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.
- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their

facilities.

ORS 671.560.

- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-00100. You may obtain copies of the rules by calling the center at (503)232-1987.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project.

Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities.

- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

- B.5.1 Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659; as amended; (vi) ORS Chapter 659A; as amended; (vii) all regulations and administrative rules established pursuant to the foregoing laws; and (viii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.

B.7 INSPECTION

- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and

- B.7.1 Owner shall have access to the Work at all times.

- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.

- (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.

- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.

- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.021 to 701.068 at the time they submit their bids to the Contractor.

- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.

- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to

- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the

Owner, the uncovering and restoration will be paid for pursuant to an Amendment.

- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar Submittals, and shall at all times give the Owner access thereto.
- B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these Public Improvement General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

- B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this

Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Benton County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the State of Oregon on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Amendment. The amount of the Amendment shall reflect
 - (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2)
 - (ii) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of

Submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review Submittals. Owner reserves the right to finally approve the schedule and list of Submittals. Submittals include, without limitation, Shop Drawings, product data, and samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar Submittals are not Contract Documents. The purpose of their Submittal is to demonstrate for those portions of the Work for which Submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of Submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's Submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational Submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar Submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 Approving and submitting shop drawings, product data, samples and similar Submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar Submittals until the respective Submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved Submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar Submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) an Amendment or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar Submittals by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the written consent of the Owner, after evaluation by the Owner and only in accordance with an Amendment or Construction Change Directive. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of

this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and terminate the Contract.

B.21 FUNDS AVAILABLE AND AUTHORIZED

If Owner fails to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may other reserved rights, in addition to copyrights, are retained by Owner.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C *WAGES AND LABOR*

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(c), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of

hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements. Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.3 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract.

Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

(a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or

(b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and

(c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

**SECTION D
CHANGES IN THE
WORK**

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. An Amendment or Change Order is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Amendments shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes,
- (h) Changed conditions.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing, the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall

be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.

- (c) In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

- (d) When adjustments to or deletions from the Work under D.1.3(c) are invoiced by an authorized Subcontractor at any level, each ascending tier Subcontractor or Contractor will be allowed a supplemental mark-up on each piece of subcontract Work covered by an Amendment as follows:

\$0.00 - \$5,000.00	10%,
and then Over \$5,000.00	5%

Notwithstanding the foregoing, the maximum aggregate markup to be billed shall not exceed 10% regardless of the number of Subcontract tiers.

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to an Amendment or Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of an Amendment or Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. Contractor agrees that this thirty (30) Day notice period is adequate time for it to request and document the amount of additional compensation or adjustment of Contract Time. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the

thirty (30) Day time limit, Contractor agrees its requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's timely request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time and the request is timely as set forth herein, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 Contractor agrees that no request or Claim for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of Final Payment application under this Contract. Final Payment

application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

- D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

- D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work or the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted CPM Construction Schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

- D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions that differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor agrees to notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether the conditions differ materially from either the conditions stated in the Contract Documents or those that could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agree that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site

condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the Project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty- five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the Project site shall be considered the official agency of record for weather information.

D.2.2 Contractor agrees it is not entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor must submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This

written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor agrees to submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process, provided Contractor has complied with the requirement in this Section D.2.3. Contractor agrees any Claim it may have is barred if Contractor does not comply with the requirements herein.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these Public Improvement General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Contractor agrees that, unless the Claim is made in accordance with these time requirements, Contractor voluntarily waived all rights to prosecute its Claim.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment,

recommend approval of all or part of the Claim; or
(5) propose an alternate resolution.

D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.

D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work.

Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two-thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty-five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received;
or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 .2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of

payment covering the material and/or equipment stored and of payment for the storage site.

(g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.

(h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents,
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.);
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e)) damage to the Work, Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by an Amendment or Change Order;

- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.2.9 Contractor shall submit its initial MWESB Report within ten (10) Days of Contractor's execution of the Contract, or if there will be a Guaranteed Maximum Price (GMP) Amendment, then within ten (10) Days of Contractor's execution of the GMP Amendment. Contractor shall submit annual MWESB Reports on June 30 of each year the Contract is active. Contracts (or GMP Amendments) first executed by Contractor within ninety (90) Days before June 30 of the year of execution by Contractor may at the discretion of Owner be exempt from submitting the annual MWESB Report otherwise due on that June 30. The final MWESB Report shall be filed with the application for final payment. Timely receipt of MWESB Reports by Owner shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed

under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in OSU Standard 580-063-0045.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed at Owner's sole discretion and only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established through the State Treasurer for state agencies, in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option

(a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the Final Payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two-thirds of one percent per month on the final payment due Contractor, interest to commence forty-five (45) Days after the date which Owner receives Contractor's final approved application

for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty-five (45) Days after the end of the 15- Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the controller of the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to the Owner a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for Final Payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither Final Payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after Final Payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to Final Payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver

required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

E.6.3 Acceptance of Final Payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay Final Payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its Final Payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.

F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.

F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.

F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.3 CUTTING AND PATCHING

F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorneys' fees), or any of them, resulting from

all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-142- 0050, to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or Stat, local or federal officials other than

Owner.

- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

- F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well-being of Contractor's or any Subcontractor's work force, property or the environment.
- F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

**SECTION G INDEMNITY,
BONDING, AND INSURANCE**

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

- G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, sub-subcontractors of any tier, suppliers, employees, guests, visitors, invitees and agents.
- G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer's consultants, and their respective

officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor or its Subcontractors, sub-subcontractors of any tier, suppliers, employees, or consultants to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor, sub-subcontractor of any tier, a supplier, a consultant, or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

- G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

**G.2 PERFORMANCE AND PAYMENT SECURITY;
PUBLIC WORKS BOND**

- G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects), the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.
- G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.
- G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2015, Chapter 279C, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the

Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor and Subcontractors under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor or its Subcontractors are negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at their sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 Loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the

Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and

by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their sub-subcontractors of any tier in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

G.3.4.1 Commercial General Liability: Upon issuance of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance covering bodily injury and property damage in the amount of \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, no subcontractors' limitations, and blanket contractual liability coverage for the indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.

G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.

G.3.4.4 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).

G.3.4.5: Umbrella Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.

G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and

keep in effect during the term of this Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.

- G.3.5 Additional Insured: The general liability insurance coverage, professional liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this Contract, and shall include completed operations coverage.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for at least 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for this contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included

hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract. The Owner has the right to require the Contractor at any time during the performance of the Work to furnish to Owner copies of the Contractor's actual policies.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.
- H.1.2 Unless specifically extended by an Amendment or Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.
- H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

- H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned Construction Schedule for review and acceptance by the Owner. The submitted Construction Schedule must illustrate Work by project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the Construction Schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Construction Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The Construction Schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Construction Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Construction Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.3 PARTIAL OCCUPANCY OR USE

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

**SECTION I
CORRECTION OF
WORK**

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent re-inspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of

notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions. In the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations.

I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.

I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J
SUSPENSION AND/OR TERMINATION OF THE
WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

J.2.3 COMPENSATION FOR SUSPENSION

J.2.4

J.2.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or

remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.

The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they

relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed, and accurate MWESB Reports.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all Submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices

must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.

K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. In addition to any off-site training required by the Contract Documents, training shall include a formal session conducted at the Work site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the sole fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the

Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

OREGON STATE UNIVERSITY

SUPPLEMENTAL GENERAL CONDITIONS

To The

PUBLIC IMPROVEMENT GENERAL CONDITIONS

Project Name RESER STADIUM WESTSIDE COMPLETION WI-FI SERVICES

The following modify the 6/30/2017 Oregon State University General Conditions (“OSU Public Improvement General Conditions”) for this Contract. Where a portion of the OSU General Conditions is modified by these Supplemental General Conditions, the unaltered portions shall remain in effect.

SG-1 Section G.3 is modified as follows: Add the following G.3.4.7:

G.3.7 Professional Liability: Contractor shall obtain, at Contractor’s expense, Professional Liability/Errors & Omissions insurance covering damages caused by any negligent error, omission, or professional misconduct of the Contractor. The policy may be either a practice based policy or a policy pertaining to the specific Project. Professional Liability insurance shall have minimum limits of \$3,000,000 each claim and \$3,000,000 aggregate.

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY OF WORK

- A. The Summary of Work and Schedule are provided for in the Public Improvement Agreement.
- B. Work shall be started within ten (10) calendar days after signing of Contract on behalf of Oregon State University. The Contract may not be signed prior to approval of the Contractor's Certificate of Insurance by Construction Contract Administration (CCA), Oregon State University.

1.02 CONTRACTORS USE OF PREMISES

- A. Contractor shall limit use of the Premises for work and storage to allow for:
 - 1. Owner occupancy, day and night.
 - 2. Public use, day and night.
 - 3. Security.
 - 4. Safe entry and exit for vehicles and pedestrians.
 - 5. Fire egress.
- B. Coordinate all operations with the Owner's Authorized Representative during the construction period. A 96-hour notification is required prior to scheduled utility shutdowns or street closures, but more lead time is often required to schedule around other critical activities.
- C. Limit Contractor's employee parking to locations designated at the Pre-construction Conference.

1.03 OWNER OCCUPANCY

- A. The Owner will occupy the Premises during the entire period of construction for the conduct of normal operations. Cooperate with Owner's Authorized Representative in construction operations to minimize conflict and to facilitate the Owner's usage especially in the following areas:
 - 1. Restricted access and parking.
 - 2. Use of stairs.
 - 3. Storage space availability.
- B. Conduct operations in such a way to ensure the least inconvenience to the general public, including:
 - 1. Limitations and easements.
 - 2. Emergency vehicle access.
 - 3. Building access to the public, day and night.

1.04 ASBESTOS AND OTHER HAZARDOUS MATERIAL

- A. The Owner has made a reasonable attempt to locate and identify asbestos or other hazardous material that may be encountered during the course of the Work.
- B. If the Contractor observes or suspects the existence of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials in the structure or components of the building, the Contractor shall immediately stop work and notify the Owner's Authorized Representative.
- C. The Owner will arrange for the removal of asbestos, polychlorinated biphenyl (PCB) or other hazardous materials as required by Facilities Services personnel or by separate contract.
- D. Schedule ten (10) days of slack or "down" time for the removal of hazardous materials without penalty to Owner for the delay of the Contract.

1.05 LEAD BASED PAINT

- A. The Owner may have tested existing paint in the project area and if levels are found the following conditions apply.
- B. Contractor shall remove paint as specified for surface preparation and capture removed material for disposal.
- C. Contractor shall follow OSHA guidelines involving exposure to workers.
- D. Owner will provide containers for Contractor's use at project site.
- E. Contractor shall comply with the requirements of DEQ and EPA and shall submit a lead abatement plan.
- F. Contractor shall separate lead contaminated material from effluent and water.
- G. Owner will dispose of lead paint and effluent resulting from stripping operation.
- H. Soil contaminated by stripping operations shall be replaced with topsoil.

END OF SECTION

SECTION 01 24 76

APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Work of this Section includes forms and procedures for progress payments.
- B. Related work specified elsewhere.
 - 1. For the primary discussion of payments, refer to OSU General Conditions, Section E, as supplemented.
 - 2. In compliance with OSU General Conditions, Section K, no payments beyond 75% will be made by the Owner before draft Operation and Maintenance Manuals have been received for review by the Owner.

1.02 APPLICATION FORMS

- A. For applications for payment, use sample Contract Payment Request (see below), contract payment request on company letterhead, or AIA Document G702, supported by AIA Document G703, Continuation Sheet, or similar document.
- B. Prepare the Schedule of Values in such a manner that each major item of Work and each subcontracted item of Work is shown as a line item broken down in terms of material and labor costs on AIA Document G703, Application Certification of Payment, Continuation Sheet or similar format. The sample continuation sheet shall be the minimum Schedule of Values breakdown.
- C. The Schedule of Values shall be submitted for review by the Owner prior to the first application for payment; and may be used when, and only when, accepted in writing by the Owner.
- D. Payment request is to include the Contractor's Federal Tax Identification number and return address.

1.03 PAYMENTS

- A. The Owner will make progress payments on account of the Contract once monthly for the scheduled duration of the project (i.e. three (3) payments on a three-month project), based on the value of work accomplished or materials on the job site, as stated in the Schedule of Values on the Application and Certificate Payment.
- B. RESERVED
- C. Complete and forward Application to the Owner on or about the 15th day of each month for work performed the previous month and include certified payroll statements as specified in the OSU General Conditions.
- D. Submit one (1) copy of forms requesting payment to the Owner.

- E. Payments will be made on protected materials on hand at the job site properly stored, protected, and insured.
- F. Estimated quantities shall be subject to the Owner's review and judgment.

1.04 EARLY PURCHASE AND PAYMENT OF MATERIALS AND EQUIPMENT

- A. Order materials and equipment requiring a long lead or waiting time early so as not to delay progress of the Work.
- B. The Contractor will be reimbursed for early order materials or equipment upon receipt and verification of quality and quantity against submittals and shipping documents by the Owner's Authorized Representative.
- C. Receipt shall be to the job site or stored at Owner's other premises in an orderly and safe manner, secured from normal weather damage.
- D. Security remains the responsibility of the Contractor.

END OF SECTION

CONTRACT PAYMENT REQUEST

DATE: _____

TO: University Financial Services
Oregon State University
850 SW 35th Street
Corvallis, OR 97333

Payment Request No. _____ Contract No. _____ Period from _____ to _____

Project: _____

Original Contract Amount \$ _____

Change Orders (Net Amount)..... \$ _____

Contract Total to Date \$ _____

=====

Total Completed and Stored to Date \$ _____

Less Retainage (5%), if applicable \$ _____

Total Earned, Less Retainage (if applicable) \$ _____

Less Previous Payments..... \$ _____

Net Amount Due this Request..... \$ _____

The undersigned Contractor certifies that, to the best of his/her knowledge, information, and belief, the Work covered by this request has been completed in accordance with the Contract Documents, that all amounts have been paid for Work for which previous applications for Payment were issued and payments received from the Owner, and that the amount shown herein is now due.

Contractor: _____

By: _____ Date: _____

Federal Tax ID Number: _____

Address: _____

CONTINUATION SHEET

NOTES:

Amounts are stated to the nearest penny.

Use Column I on Contracts where variable retainage for line items may apply, or if retainage is required.

Change Orders are usually listed as the last items of the basic schedule.

Project Name: _____

Application No.: _____

Date: _____

Period To: _____

WRN No.: _____

A	B	C	D	E	F	G	H	I	J	
Item No.	Description of work	Scheduled Value	Work Completed		Materials Presently Stored (Not in D or E)	TOTAL Completed & Stored (D+E+F)	% Completed (G/C)	Balance to Finish (C-G)	Retainage	Current Payment Due (E – I)
			From Previous Applications	This Period						
TOTALS										

SECTION 01 25 00

PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General requirements for the Work in relation to substitutions and product options.
- B. Submit to the Owner's property insurance carrier shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- C. Related Work Specified Elsewhere
 - 1. Instructions to Bidders.
 - 2. OSU General Conditions.

1.02 REQUESTS FOR SUBSTITUTIONS

- A. Requests for substitution of products in place of those specified shall be in accordance with Instructions to Bidders, and as specified herein.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Investigate proposed products and determine that they are equal or superior in all respects to products specified.
- B. Provide same guarantee for accepted substitutions as for products specified.
- C. Coordinate installation of accepted substitutions into the Work, making such changes as may be required for the Work to be complete in all respects.

1.04 SUBSTITUTIONS DURING BIDDING

- A. Submit two (2) copies of the following information with each request to the Owner:
 - 1. CSI substitution request form.
 - 2. Comparison of proposed substitution with product, material or system specified.
 - 3. Complete data, substantiating compliance of proposed substitution with the Contract Documents.
 - 4. Test numbers and supporting reports, indicating compliance with referenced standards.
 - 5. Evidence that warranty requirements are acceptable.
 - 6. Details indicating specific deviations proposed for the substitution.
 - 7. Reference and applicable Specification sections.
 - 8. Applicable product samples.
- B. All substitution requests shall be received in the Owner's office no less than ten (10) calendar days before bid opening. Requests received after this date will not be considered.

1.05 SUBSTITUTIONS DURING CONSTRUCTION

- A. Substitutions will normally not be considered after date of Contract except when required due to unforeseen circumstances.
- B. Within a period of thirty (30) days after date of Contract, the Owner may, at its option, consider formal written requests for substitution of products in place of those specified, when submitted in accordance with the requirements stipulated herein.
- C. One or more of the following conditions must be documented in any such request:
 - 1. Required for compliance with final interpretation of code or insurance requirements.
 - 2. Required due to unavailability of a specified product.
 - 3. Required because of the inability of the specified product to perform properly or to fit in the designated space.
 - 4. Substitution would be substantially in the best interest of the Owner in terms of cost, time, or other considerations.

1.06 SUBSTITUTIONS NOT PERMITTED

- A. If implied on submittals without first requesting approval thereof.
- B. If acceptance will require substantial revision of the Contract Documents.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: _____

PROJECT: _____

SPECIFIED ITEM:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents which proposed substitution will require for its proper installation.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

Submitted by:

Signature _____

Firm _____

Address _____

Date _____

Telephone _____

For use by Design Consultant:

Accepted Accepted as noted

Not Accepted Received too late

By _____

Date _____

Remarks _____

Attachments:

SECTION 01 31 19

PROJECT MEETINGS

PART 1 GENERAL

1.01 PRE-CONSTRUCTION MEETING

- A. Architect/Engineer/Designer, Contractor and Owner will meet prior to start of the Work (within seven (7) days after notice to proceed) to discuss at least the following topics and any others of mutual interest.
1. Schedule of Values
 2. Permit Status/tree protection/erosion control
 3. List of sub-contractors
 4. Job inspections.
 5. Early purchase of, and/or lead time requirements for material and equipment/prepurchase of equipment
 6. Monthly payment date/SOP for pay requests
 7. Portion of site to be occupied by construction.
 8. Parking/Staging areas
 9. Non-smoking campus requirements
 10. Maintenance of access and safety.
 11. Processing of field decisions and change orders
 12. Labor provisions/labor rates for subs
 13. Material submittals/deferred submittals
 14. Owner access during construction.
 15. Review of Contract Documents/review ADA requirements/cross-slopes
 16. Coordination procedures and separate contracts.
 17. Progress schedules.
 18. Critical Work sequencing.
 19. Safety and emergency procedures/24 hour contact numbers
 20. Security procedures.
 21. Hazardous materials.
 22. Progress meetings.
 23. Contract close-out.
- B. Location of Meeting: Project site

1.02 PROGRESS MEETINGS

- A. The Contractor will schedule and administer progress meetings and will:
1. Prepare agendas.
 2. Schedule progress meetings, frequency, time and day to be determined during pre-construction meeting.
 3. Make physical arrangements for and preside at meetings.
 4. Record minutes and include decisions.

5. Distribute copies of minutes to participants within four (4) days after meetings.
- B. Location of Meetings: Project site.
- C. Attendance:
1. The Owner or Owner's Authorized Representative.
 2. Contractor.
 3. Subcontractors affected by agenda.
 4. Project Architect/Engineer/as necessary.
 5. Owner will attend meeting to ascertain Work is expedited consistent with progress schedule and with Contract Documents.
- D. Minimum Agenda:
1. Review and approve minutes from previous meeting.
 2. Review Work progress since previous meeting.
 3. Discuss field observations, and problems.
 4. Review delivery schedules, construction schedule, and identify problems which impede planned progress.
 5. Review proposed changes.
 6. Material submittals.
 7. Note all new subcontractors performing Work at the job site.

END OF SECTION

SECTION 01 33 23

SHOP DRAWINGS, PRODUCT DATA, SAMPLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submit to the Owner shop drawings, samples, and product data (such as manufacturer's standard schematic drawings and other literature) when required by individual Specifications sections.
- B. Related Work Specified Elsewhere
 - 1. Instructions to Bidders.
 - 2. OSU General Conditions.

1.02 SUBMITTAL SCHEDULING

- A. For items requiring review by the Owner only, submittals shall be sent to the Owner at least 15 calendar days before the date each is required for fabrication or installation.
- B. Submittals to be reviewed by Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.
- C. Submittals to be reviewed by Owner's property insurance carrier shall be sent to Owner as directed in individual specification sections.
- D. Submittals involving Substitution requests or other modifications requiring review by the Owner and/or the Owner's consultants shall be sent to the Owner at least 20 calendar days before the date each is required for fabrication or installation.

1.03 SUBMITTAL CONTENT AND FORMAT

- A. General Requirements:
 - 1. Shop Drawings: Submit in electronic format and, if requested by Owner's Authorized Representative, submit one reproducible transparency and 1 print of each drawing.
 - 2. Product Data: Submit electronically, and if requested by Owner's Authorized Representative, up to 6 hard copies.
 - 3. Samples: Submit the number and type stated in each Specification Section. Submit a minimum of three sets of color samples where color selection is required.
 - 4. Submittals shall include:
 - a. Date and revision dates return date requested.
 - b. Project title and number.
 - c. The names of the Contractor, subcontractor, supplier, and manufacturer.
 - d. Identification of product or material, with Specification Section number.
 - e. Relation to adjacent critical features of work or materials.
 - f. Field dimensions, clearly identified as such.

- g. Applicable standards, such as ASTM number or Federal Specification.
 - h. Identification of deviations from Contract Documents, and for products accompanied by Substitution request as required by Section 01 25 00.
 - i. Contractor's stamp legibly signed, essentially as follows:
 - 1) The undersigned, acting on behalf of the Contractor, certifies that this submittal has been reviewed and is approved; products have been verified as being as specified, field measurements and field construction criteria have been or will be coordinated, and the submittal is in compliance with Contract Documents.
5. Re-submission Requirements:
- a. Revise initial drawings as required and resubmit as specified for initial submittal.
 - b. Indicate on drawings any changes which have been made other than those requested by the Owner or the owner's consultants.
6. The Owner may return without review any submittal not meeting the requirements listed above.
- B. Shop Drawings:
- 1. Present data in a clear and thorough manner.
 - 2. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Contract Documents.
 - 3. Structural items shall be identified by location in the completed structure. Identify details by reference to contract sheet and detail numbers.
 - 4. Minimum sheet Size: 8 ½ x 11".
- C. Product Data:
- 1. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data:
 - a. Clearly mark each copy to identify pertinent product or models.
 - b. Show dimensions, weights, and clearances required.
 - c. Show performance data consisting of capabilities, ROM, KW, pressure drops, design characteristics and consumption; conforming as closely as possible to the test methods referenced in the Plans and Specifications.
 - d. Show wiring or piping diagrams and controls.
 - 2. Manufacturer's standard schematic drawings and diagrams:
 - a. Modify to delete information which is not applicable.
 - b. Supplement standard information to provide information specifically applicable to the Work.
- D. Samples:
- 1. Insure that samples are of sufficient size to indicate the general visual effect or color.
 - 2. Where samples must show a range of color, texture, finish, graining, or other property, submit sets of pairs illustrating the full scope of this range.

3. One (1) sample or one (1) set of approved samples will be retained by the Owner; final work will be measured against approved samples.

1.04 QUALITY ASSURANCE

- A. Process submittals in ample time for review, as applicable, so as to not delay the Work. All submittals shall be received by the Owner within ten (10) days after pre-construction.

1.05 DEFINITIONS

- A. The Owner will mark reviewed materials as follows:
 1. "No Exception Taken," which means fabrication, manufacture and/or installation may proceed.
 2. "Make Revisions Noted," which means fabrication, manufacture and/or installation may proceed with revisions as noted.
 3. "Revise and Resubmit," which means that fabrication, manufacture and/or installation may not proceed.
 4. "Rejected," which means do not proceed; make arrangements for the review of the proposed Work with the Owner as soon as possible.

1.06 PROCESSING

- A. Review submittals, make necessary corrections, and become familiar with the content of the submittals.
- B. Mark each item with Contractor's stamp.
- C. Accompany submittals with a transmittal letter bearing the project name, Contractor's name, number of items, and other pertinent data.
- D. Keep one copy of each reviewed submittal on the job site at all times.
- E. Be responsible for obtaining and distributing prints of shop drawings to the various suppliers, and the Owner once review process has been completed. Make prints of reviewed shop drawings only from transparencies which carry the appropriate stamp and endorsement.

END OF SECTION

SECTION 01 42 13

ABBREVIATIONS AND SYMBOLS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

A/C	air conditioning	CB	catch basin
AB	anchor bolt	CEM	cement
AC	asphaltic concrete	CF	cubic foot
ACT	acoustical tile	CFOI	contractor furnished owner installed
AD	area drain	CG	corner guard
ADD	addendum	CH	ceiling height
ADD'L	additional	CI	cast iron
ADH	adhesive	CJ	control joint
AFF	above finish floor	CKBD	chalkboard
AGG	aggregate	CL	centerline
AL	aluminum	CLG	ceiling
ALLOW	allowable	CLR	clear(ance)
ALT	alternate	CM	construction manager
ANOD	anodized	CMT	ceramic mosaic (tile)
AP	access panel	CMU	concrete masonry unit
APPRX	approximate	COL	column
ARCH	architect(ural)	COM	communications
ASPH	asphalt	CONC	concrete
AUTO	automatic	CONN	connect(ion)
AVE	avenue	CONST	construction
BD	board	CONT	continuous or continue
BIT	bituminous	CONTR	contract(or)
BLDG	building	CPT	carpet
BLKG	blocking	CRS	course(s)
BM	bench mark, beam(s)	CS	countersink
BOT	bottom	CSMT	casement
BRZ	bronze	CT	ceramic tile
BS	both side	CTR	center
		CVG	clear vertical grain
		CW	cold water

CWT	ceramic wall tile	EXH	exhaust
CY	cubic yard	EXP	exposed
		EXT	exterior
D	depth	FA	fire alarm
DEMO	demolish, demolition	FAF	fluid applied flooring
DEP	depressed	FARF	fluid applied resilient floor
DF	drinking fountain	FAS	fasten, fastener
DIA	diameter	FBD	fiberboard
DIAG	diagonal	FBT	finished blowing temperature
DIM	dimension	FD	floor drain, fire damper
DISP	dispenser	FE	fire extinguisher
DIV	division	FEC	fire extinguisher cabinet
DL	dead load	FF	factory finish
DMT	demountable	FGL	fiberglass
DN	down	FHMS	flathead machine screw
DP	dampproofing	FHWS	flathead wood screw
DR	door	FIN	finish(ed)
DS	downspout	FLCO	floor cleanout
DT	drain tile	FLR	floor(ing)
DTL	detail	FLUR	fluorescent
DW	dumbwaiter	FND	foundation
DWG	drawing(s)	FOC	face of concrete
DWR	drawer	FOIC	furnished by owner/installed by contractor
EA	each	FOIO	furnished by owner/installed by owner
EB	expansion bolt	FOM	face of masonry
EF	each face	FP	fireproofing, flash point
EJ	expansion joint	FPHB	freeze-proof hose bib
EL	elevation	FR	fire resistive, fire rated
ELEC	electric(al)	FRM	frame(d), (ing)
EMBED	embedment	FS	full size
EMER	emergency	FSS	finished structural slab
ENCL	enclose(ure)	FT	foot
EP	electrical panel board	FTG	footing
EQ	equal	FTS	finished topping slab
EQUIP	equipment		
EST	estimate	GA	gage, gauge
EVT	equiviscious temperature	GALV	galvanized
EW	each way	GB	grab bar or gypsum board
EWC	electric water cooler		
EX.EXIT	existing		

GC	general contractor	LAM	lamine(d)
GI	galvanized iron	LAV	lavatory
GL	glass, glazing	LBS	pounds
GLS	glass resin wall surfacing		
GP	gypsum	LH	left hand
		LL	live load
HB	hose bib	LONGIT	longitudinal
HBD	hardboard	LP	low point
HC	hollow core	LW	lightweight
HD	heavy duty		
HDR	header	MAX	maximum
HDW	hardware	MB	machine bolt
HM	hollow metal	M. MECH	mechanic(al)
HOR	horizontal	MFR	manufacture(r)
HP	high point	MH	manhole
HR	hour	Min	minimum, minute
HT	height	MISC	miscellaneous
HTG	heating	MO	masonry opening
HVAC	heating, ventilating, air conditioning	MO#	model number
		MOD	modular
HWD	hardwood	MPH	miles per hour
HWH	hot water heater	MS	machine screw
		MTL	metal
ID	inside diameter, identification	MULL	mullion
IN	inch	MWP	membrane waterproofing
INCIN	incinerator		
INCL	include(d), ion)	NAT	natural, natural finish
INT	interior	NIC	not in contract
INV	invert	NO	number
		NOM	nominal
JB	junction box	NTS	not to scale
JC	janitor's closet		
JT	joint	OA	overall
		OBS	obscure
KD	kiln dried	OC	on center(s)
KCP	Keene's cement plaster	OD	outside diameter
KO	knockout	OF	overflow
KP	kick plate	OFCI	owner furnished contractor installed
		OFOI	owner furnished owner installed
LAB	laboratory	OHMS	ovalhead machine screw

OHWS	ovalhead wood screw		
OPG	opening	SC	solid core
OPP	opposite	SCHEM	schedule
OZ	ounce(s)	SEC	section
		SF	square feet (foot)
P	paint(ed)	SHT	sheet
PB	push button	SHTHG	sheathing
PCF	pounds per cubic foot	SIM	similar
PCP	putting coat plaster	SL	sleeve
PERF	perforate(d)	SOG	slab on grade
PL	plate, property line	SPEC	specification(s)
PLAM	plastic laminate	SQ	square
PLAS	plaster	SS	storm sewer
PNL	panel	S4S	finished 4 sides
PP	push plate	SD	storm drain
PR	pair	ST	steel, street
PREP	prepare	ST ST	stainless steel
PSF	pounds per square foot	STD	standard
PSI	pounds per square inch	STR	structural
PT	point, pressure treated	SUPP	supplement
PTN	partition	SUPT	support
PVC	polyvinyl chloride	SUSP	suspended
PWD	plywood	SV	sheet vinyl
QT	quarry tile	T	tread
		TBM	top bench mark
R	rise	T&G	tongue and groove
RA	return air	TB	towel bar
RAD	radius	TC	top of curb
RCP	reflected ceiling plan	TEL	telephone
RD	roof drain	TEMP	tempered
REF	reference	THK	thickness
REFR	refrigerator	TKBD	tackboard
REINF	reinforce(ing)	TO	top of
REQ	required	TP	top of paving
RET'G	retaining	TRANS	transverse
REV	revision(s), revised	TS	top of slab
RH	right had	TV	television
RM	room	TW	top of wall
RO	rough opening	TYP	typical
RSF	resilient sheet flooring		

UNO	unless noted otherwise	W/	with
VAT	vinyl asbestos tile	W/O	without
VB	vapor barrier	WC	water closet
VCT	Vinyl Composition Tile	WD	wood, wood finish
VERT	vertical	WP	waterproof(ing)
VG	vertical grain	WNS	wainscot
VIF	verify in field	WR	water resistant
VWC	vinyl wall covering	WS	waterstop
W	width, wide, water	WW	window wall
		WWC	wood wall covering
		WWF	woven wire fabric

B. Words which may be found elsewhere in the Project Manual and Drawings are abbreviated in accordance with the standards set forth in the following table:

&	and
λ	angle
@	at
ι	diameter, round
"	inches
:	is, shall b
'	feet
ζ	perpendicular
/	per
%	percent
#	pound, number
X	by (as in 2 by 4)

END OF SECTION

SECTION 01 42 16

DEFINITIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Words which may be found elsewhere in the Contract Documents are defined in accordance with the standards set forth in the following table:

Approve:

Where used in conjunction with Architect's response to submittals, requests, applications, inquiries, reports and claims by Contractor, the meaning of term "approved" will be limited to the Architect's responsibilities and duties as specified in General and Supplementary Conditions. In no case will "approval" by Architect be interpreted as a release of Contract requirements.

As Detailed, As Shown:

Where "as detailed", "as shown" or words of similar importance are used, it shall be understood that reference to the Drawings accompanying the Specifications is made unless otherwise stated.

As Directed, As Required, As Authorized, As Reviewed, As Accepted:

Where "as directed", "as required", "as authorized", "as reviewed", "as accepted" or words of similar importance are used, it shall be understood that the direction, requirement, permission, authorization, review, or acceptance of the Architect is intended, unless otherwise stated.

As Indicated:

Where "as indicated" is used it shall be understood that reference to Drawings and/or Specifications is made unless otherwise stated.

Directed, Requested, etc.:

Terms such as "directed," "requested," "authorized," "selected," will be understood as "directed by Architect," "requested by Architect," and similar phrases shall not be interpreted to extend Architect's responsibility into Contractor's responsibility for construction supervision.

Furnish:

Except as otherwise defined in greater detail the term "furnish" is used to mean supply and deliver to project site, ready for unloading, unpacking, assembly, installation, etc., as applicable in each instance.

Indicated:

The term "indicated" is a cross-reference to graphic representations, notes or schedules on drawings, to other paragraphs or schedules in the specifications and to similar means of recording requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used in lieu of "indicated," it is for purpose of helping reader locate cross-reference and no limitation of location is intended except as specifically noted.

Install:

Except as otherwise defined in greater detail, the term "install" is used to describe operations at project site including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations, as applicable in each instance.

Installer:

The term "installer" is defined as the entity (person or firm) engaged by Contractor, or its subcontractor or sub-subcontractor for performance of a particular unit of Work at project site, including installation, erection, application and similar required operations. It is a general requirement that such entities (Installers) be expert in operations they are engaged to perform.

Provide:

Except as otherwise defined in greater detail, term "provide" means furnish and install, complete and ready for intended use, as applicable in each instance.

END OF SECTION

SECTION 01 42 19

REFERENCE STANDARDS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Quality Assurance.
- B. Location of References.
- C. Schedule of References.

1.02 QUALITY ASSURANCE

- A. For products or quality of work specified by association, trade, or federal standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents.
- C. General Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable standards of the construction industry have the same force and effect as if bound or copied directly into Contract Documents.
- D. Such standards are made a part of the Contract Documents by reference.
- E. Individual sections indicate which codes and standards the Contractor must keep at the project site, available for reference.
- F. Referenced industry standards take precedence over standards which are not referenced but recognized in industry as applicable.
- G. Non-referenced standards are not directly applicable to the Work, except as a general requirement of whether the Work complies with standards recognized in the construction industry.

1.03 LOCATION OF REFERENCES

- A. Valley Library, Oregon State University.

1.04 SCHEDULE OF REFERENCED ASSOCIATIONS

AIA	American Institute of Architects WWW.AIA.ORG
AISC	American Institute of Steel Construction WWW.AISC.ORG
AISI	American Iron and Steel Institute WWW.STEEL.ORG
ANSI	American National Standards Institute WWW.ANSI.ORG
APA	American Plywood Association WWW.APAWOOD.ORG
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers WWW.ASHRAE.ORG
ASTM	American Society for Testing and Materials WWW.ASTM.ORG
AWPA	American Wood Protection Association WWW.AWPA.COM
AWS	American Welding Society WWW.AWS.ORG
BIA	Masonry Institute of America WWW.MASONRYINSTITUTE.ORG
BOLI	Oregon Bureau of Labor and Industries WWW.BOLI.STATE.OR.US
CCB	Construction Contractors Board WWW.OREGON.GOV.CCB/
CDA	Copper Development Association WWW.COPPER.ORG
CISPI	Cast Iron Soil Pipe Institute WWW.CISPI.ORG

CSI	Construction Specification Institute WWW.CSINET.ORG
DEQ	Department of Environmental Quality (Oregon) WWW.OREGON.GOV/DEQ/
DHI	Door and Hardware Institute WWW.DHI.ORG
DOT	Department of Transportation WWW.DOT.GOV
EPA	U.S. Environmental Protection Agency WWW.EPA.GOV
FM	Factory Mutual System WWW.FMGLOBAL.COM
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) WWW.GSA.GOV/PORTAL/CONTENT/103856
IBC	International Building Code WWW.ICCSAFE.ORG
ICBO	International Conference of Building Officials PUBLICECODES.CITATION.COM/ICOD/IBG/INDEX.HTM
IRS	Internal Revenue Service WWW.IRS.GOV
ISA	Instrumentation Systems and Automation Society WWW.ISA.ORG
NAAMM	National Association of Architectural Metal Manufacturers WWW.NAAMM.ORG
NBFU	National Board of Fire Underwriters WWW.NFPA.ORG
NEC	National Electric Code WWW.NECPLUS.ORG
NEMA	National Electrical Manufacturers' Association WWW.NEMA.ORG

NESC	National Electrical Safety Code WWW.IEEE.ORG
NFPA	National Fire Protection Association WWW.NFPA.ORG
NRCA	National Roofing Contractors' Association WWW.NRCA.NET
OAR	Oregon Administrative Rules ARCWEB.SOS.STATE.OR.US/404.HTML
OESP	State of Oregon Electrical Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
ORS	Oregon Revised Statutes LANDRU.LEG.STATE.OR.US/ORS/
OSHA	Occupational Safety and Health Administration WWW.OSHA.GOV
OSSC	Oregon Structural Specialty Code http://www.bcd.oregon.gov/programs/online_codes.html
PS	Product Standard STANDARDS.GOV/STANDARDS.CFM
SDI	Steel Door Institute WWW.STEELDOOR.ORG
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association WWW.SMACNA.ORG
SPRI	Single Ply Roofing Institute WWW.SPRI.ORG
SSPC	Steel Structures Painting Council WWW.SSPC.ORG
SWRI	Sealing, Waterproofing and Restoration Institute WWW.SWIRONLINE.ORG
UBC	Uniform Building Code (See ICBO)
UFC	Uniform Fire Code WWW.NFPA.ORG

UL	Underwriters' Laboratories, Inc. WWW.UL.COM
UMC	Uniform Mechanical Code WWW.UBC.COM
UPC	Uniform Plumbing Code WWW.UBC.COM
WHL	Warnock Hersey Laboratories WWW.INTEK.COM/MARKS/WH/
WCLIB	West Coast Lumber Inspection Bureau WWW.WCLIB.ORG
WWPA	Western Wood Products Association WWW.WWPA.ORG

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Codes, regulations and permits.
- B. Procedures for quality control.

1.02 OWNER RESPONSIBILITIES

- A. Owner will employ and pay for services of an independent testing laboratory to perform inspection, sampling and testing as required by local building authority.
- B. Owner's Authorized Representative will provide on-site observation during construction.

1.03 CODES, REGULATIONS AND PERMITS

- A. All Work shall conform with the Oregon Structural Specialty Code (OSSC) based on the International Building Code (IBC), as amended by the State of Oregon Building Codes Division and the edition designated by the governing authority.
- B. Contractor shall comply with all applicable state and local construction codes.
- C. References to codes, Specifications and standards referred to in the Contract Documents shall mean, and are intended to be, the latest edition, amendment or revision of such reference standard in effect as of the date of these Contract Documents.
- D. The Owner shall be responsible for all permits and City of Corvallis plan review fees; the Contractor shall be responsible for all licenses and associated fees required for the Project.
- E. Contractor shall arrange and attend all required permit inspections and furnish evidence of approved City inspection reports per Section 01 77 00.

1.04 QUALITY OF WORK

- A. It is the true and specific intent of these Specifications that quality of Work on all phases of the construction and embracing all the trade sections shall be of high quality performed by workers skilled in their trade and performing their Work only according to the standard of best practice of the trade.
- B. All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with manufacturer's directions unless otherwise specified.
- C. If Work is required in a manner to make it impossible to produce first quality Work, or

should discrepancies appear among Contract Documents, request interpretation from Architect before proceeding with Work.

- D. Failure to secure interpretation may cause rejection by Architect or owner of installation.

1.05 LAYOUT

- A. Be responsible for properly laying out the Work and for lines and measurements for the Work.
- B. Verify the figures shown on the drawings before laying out the Work and report errors or inaccuracies to the Architect before commencing Work.
- C. Strict compliance with maximum slopes is required. Accessible parking spaces and adjacent access aisles with slope exceeding 2% in any direction, as determined by OSU, shall be removed and replaced by the contractor at their expense.
- D. Strict compliance with maximum slopes is required. New sidewalks exceeding 1:20 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense. Ramps exceeding 1:16 slope or with cross slope exceeding 2%, as determined by OSU, shall be removed and replaced by the contractor at their expense.

1.06 SUPERVISION

- A. The Contractor shall maintain effective supervision on the project at all times Work is being performed.
- B. The superintendent shall be the same person throughout the project and shall attend the preconstruction conference.

1.07 INSPECTIONS AND TESTING

- A. Contractor shall notify the Owner at least twenty-four (24) hours in advance of any required progress inspection or final inspection including final punch list inspection.
- B. Cooperate with laboratory personnel, provide access to Work and furnish incidental equipment material and labor required for field testing and sample taking.

1.08 EVALUATION OF TESTS AND INSPECTIONS

- A. Results of laboratory and/or field control tests and inspections shall be the principal basis upon which satisfactory completion of Work shall be judged.
- B. If results of tests and inspections indicate Work is below requirements of Contract Documents, that portion of Work is subject to rejection.

1.09 ADJUSTMENTS

- A. Remove and replace Work so rejected at Contractor's expense including costs of subsequent tests and inspections until Work meets requirements of Contract

Documents.

- B. The Owner reserves the right to perform any testing as may be required to determine compliance with the Contract Documents.
- C. Costs for such testing will be the Owner's responsibility unless testing indicates noncompliance. Cost for such testing indicating noncompliance shall be borne by the Contractor.
- D. Noncomplying Work shall be corrected and testing will be repeated until the Work complies with the Contract Documents.
- E. Contractor will pay costs for retesting noncomplying Work.

END OF SECTION

SECTION 01 51 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
- C. Electrical Service: Comply with NEMA, NEC and UL standards and regulations for temporary electric service; install service in compliance with National Electric Code (NFPA 70).
- D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use; obtain required certifications and permits if required.

1.03 PROTECTION

- A. Protect sidewalks, asphalt paving, concrete, trees, shrubs, and lawn areas at all times from damage resulting from construction activities.
- B. Prevent materials from clogging catch basins and yard drains; leave drains clean and in proper working condition.
- C. Protect Existing Irrigation Systems:
 - 1. In the event damage occurs to an underground irrigation system as a direct result of a Contractor's activities, the Contractor shall repair/replace or be assessed a charge at the discretion of the Owner.
 - 2. If repairs are to be made by the Contractor, the repairs will be inspected by the Owner's Authorized Representative prior to backfilling.
 - 3. Any galvanized pipe that requires repair shall be repaired at a threaded coupling, not by use of a compression coupling.
- D. Protect Existing Air Handling Systems:
 - 1. Contractor shall be responsible for protection of the cleanliness of the existing air handling system at all times. This protection shall include:
 - a. During site work or building demolition, prefilters shall be provided and maintained on all building outside air intakes at all times throughout the

- construction duration.
- b. During any interior work that may create dust in the interior space and adjacent corridor/hallways, air filters shall be provided and maintained on all affected air return and exhaust grilles. Where air flow in or out of the space is not required, all air duct openings shall be temporarily blanked off with plywood or sheet metal.
 - c. Prior to starting any work, the Contractor shall record and submit to the Owner's Authorized Representative, pressure readings across all existing air handler air filter banks before installation of new prefilters.
 - d. Upon completion of all Work affecting existing air handling systems, the Contractor shall remove all temporary filters, covers and associated parts and restore the system to its original operating condition unless otherwise stated elsewhere in the Contract Documents
- E. Clean, repair, resurface, or restore existing surfaces to their original, or better, condition, or completely replace such surfaces to match existing, where damaged by construction operations.
- F. Security is the responsibility of the Contractor.
- G. Construction Debris:
- 1. Debris shall not be allowed to remain around the buildings during performance of Work, but shall be disposed of as rapidly as it accumulates.
 - 2. On completion of Work, the buildings and grounds shall be left in a condition that is equal to or better than original condition.
 - 3. In case of failure to do so, the Owner may remove rubbish and charge the cost to the Contractor.
- H. The Contractor shall manage a safe job environment for both the safety of all the people around the Work site as well as the safety of the Owner's and general public's property.
- I. The Contractor shall provide and maintain suitable barricades, shelters, lights, and danger signals during the progress of the Work; they shall meet the requirements of the local building code and OSHA.

1.04 DRAINAGE

- A. Verify that all rain drains in the construction areas are in working order and notify the Owner's Authorized Representative in writing of any rain drains that are plugged, prior to the start of the Work.
- B. Start of Work will be considered as acknowledgment that all drains are clear and in good working order.
- C. All drains shall be left in a clean and proper working condition.

1.05 CONSTRUCTION PROJECT SAFETY FORM

RESER STADIUM WESTSIDE COMPLETION WI-FI SERVICES JUNE
2021

- A. Contractor shall submit to the Owner, prior to signing the Contract, the completed "Construction Project Safety Form", which is provided with instructions at the end of this Section.

1.06 TEMPORARY UTILITIES

- A. Temporary Utilities:
 - 1. Prepare a schedule indicating dates for implementation and termination of each temporary utility.
 - 2. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.
- B. Conditions of Use:
 - 1. Keep temporary services and facilities clean and neat in appearance.
 - 2. Operate in a safe and efficient manner.
 - 3. Take necessary fire prevention measures.
 - 4. Do not overload facilities or permit them to interfere with progress.
 - 5. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.
- C. Electrical Service:
 - 1. Service limited to 20 amp 120V circuits will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.
- D. Water Service:
 - 1. Service in reasonable quantities for the Project will be paid for by the Owner.
 - 2. Connection to the service shall be the responsibility of the Contractor, with the Owner's approval.
 - 3. Coordinate with the Owner's Authorized Representative.

1.07 TEMPORARY SUPPORT FACILITIES

- A. Temporary Sanitary Facilities:
 - 1. Provide and maintain an adequate number of facilities for the use of all persons employed on the Work during construction.
 - 2. Provide enclosed, weatherproof facilities with heat as required.
 - 3. Use of new or existing Owner's facilities will not be permitted.
- B. Temporary Heat and Ventilation:
 - 1. As necessary, provide temporary heat and ventilation required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the

ambient condition required and minimize consumption of energy.

- C. Telephone Equipment: Provide telephone communications at project site.
- D. Existing Services:
 - 1. Do not interrupt any existing service.
 - 2. Prior request and approval of the Owner's Representative will enable the Owner to shut down any utility required by the Work.
 - 3. Contractor shall not shut down utilities.

1.08 TEMPORARY BARRIERS AND ENCLOSURES

- A. Provide barriers and fencing to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage.
- B. Provide Commercial grade chain link fence construction.
- C. Provide 6 foot high fence around construction site as directed by Owner's Authorized Representative; equip with vehicular and pedestrian gates with lock.
- D. Exterior Closures: Provide temporary secured, weather-tight closures at exterior openings, to permit acceptable working conditions and protection of the Work.
- E. Interior Closures:
 - 1. Provide temporary floor to ceiling partitions (not plastic sheeting) and ceilings as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, to reduce construction noise, and to prevent damage to existing materials and equipment.
 - 2. Paint surfaces exposed to view from Owner occupied areas.

1.09 ODORS

- A. Work that causes excessive odors shall be performed only after coordination with the Owner's Authorized Representative. Filtering of air intakes to units may be required to prevent odors and vapors from entering the buildings.
- B. Contractor shall provide 7 days advance notice to the Owner's Authorized Representative in order for advance notice to be forwarded to building occupants. Work stoppage may occur if advance notification has not been coordinated or odors and vapors from the work are found to generate complaints from building occupants.

1.10 FIRE SAFETY

- A. Ensure that required exit routes remain unobstructed while building is occupied.
- B. Abide by all fire safety requirements for buildings under construction, alteration or demolition as required by Article 87, of the Uniform Fire Code as adopted by the State of Oregon.
- C. An emergency telephone shall be provided on site. Cellular telephone equipment is acceptable.

D. Fire Suppression Equipment:

1. Install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers", and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations".
2. Maintain equipment in working condition with current inspection certificate attached to each.
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
4. Store combustible materials in containers in fire-safe locations.
5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires.
- 6.
6. Provide continual supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
7. When possible, relocate hot work to a designated hot work area.
8. If the materials or equipment cannot be relocated to a designated hot work area, use the least hazardous form of hot work that will get the job done and prepare the area properly.
9. Manage mobile hot work using the formal hot work permit system. (mentioned in the next bullet point and also a directive in the OSU Hot Work Safety Program)
10. Make sure both fire protection and hot work equipment work properly.
11. Train all personnel involved in hot work operations and activities so that they have the understanding, knowledge, and skills necessary to safely perform their jobs.

1.11 CONSTRUCTION AIDS

- A. Scaffolding: comply with applicable OSHA requirements.
- B. Material Handling Equipment:
 1. Provide necessary cranes, hoists, towers, or other lifting devices.
 2. Use only experienced operators.
 3. Remove equipment as soon as possible after task is ended.
 4. Coordinate placement of such equipment with Owner's Authorized Representative.
 5. Obtain required permits and meet requirement of governing authorities regarding applicable regulations.
- C. Materials or debris shall not be allowed to free fall from building.
- D. The use of chutes or conveyors must be approved by Owner.

1.12 TEMPORARY CONTROLS

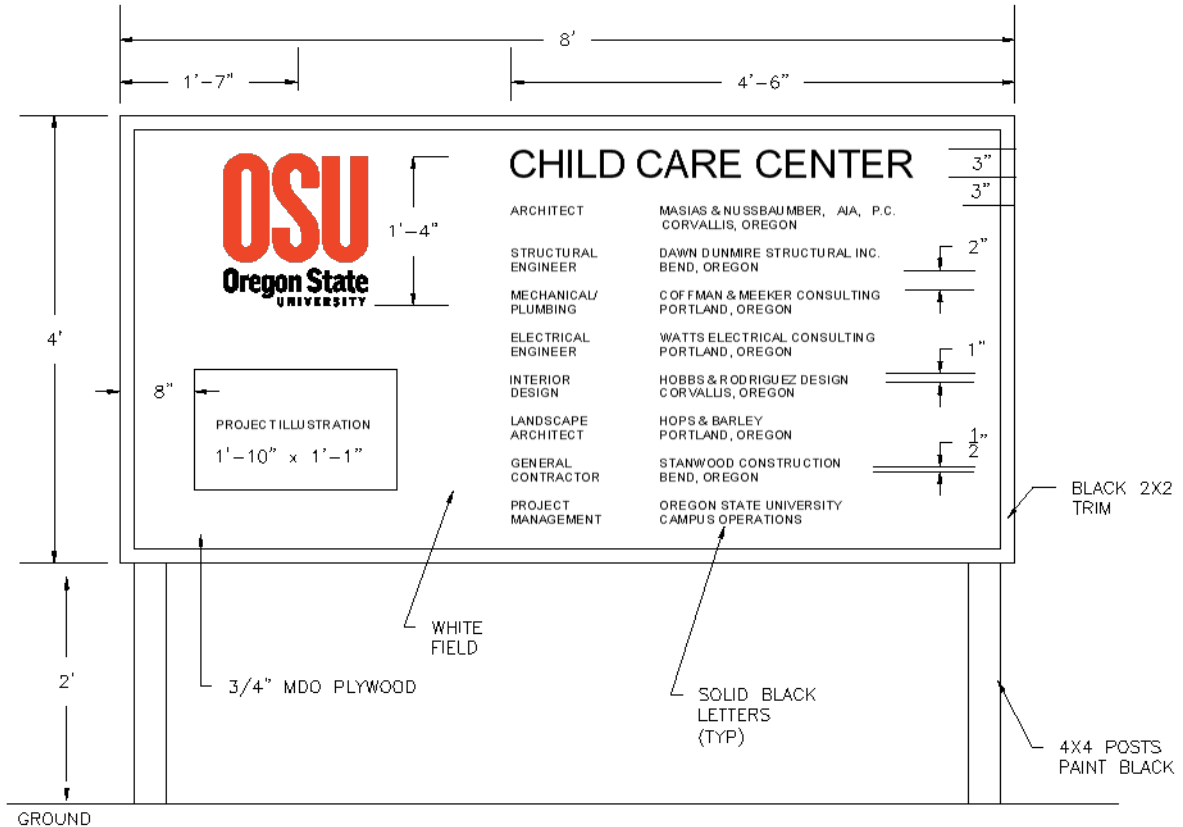
- A. Water Control:

1. Maintain excavations free of water.
 2. Provide, operate, and maintain necessary pumping equipment.
- B. Protection:
1. Protect installed Work and provide special protection where specified in individual specification sections.
 2. Prohibit traffic or storage upon waterproofed or roofed surfaces.
- C. Security:
1. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism, or theft.
 2. Coordinate operations with Owner's Authorized Representative.
- D. Temporary Traffic Control /Pedestrian Accessibility
1. A continuous route for all pedestrians, including persons with disabilities and bicyclists, shall be maintained at all times. When existing pedestrian facilities are disrupted, closed, or relocated in a construction zone, temporary pedestrian facilities shall be provided.
 2. Temporary pedestrian facilities should be safe and accessible. There should be no curbs or abrupt changes in grade that could cause tripping or be a barrier to wheelchair use.
 3. Signage shall be provided directing people to the temporary accessible route. The signage shall include the International Symbol of Accessibility.
 4. Contractors shall not block temporary walkways with vehicles, equipment, construction materials, signs, trash, or other objects that might prohibit pedestrian passage.
 5. Construction equipment and equipment operation must be separated from any open walkways. At construction zones, pedestrian fences or other protective barriers shall be provided to prevent access into the construction zone.

1.13 PROJECT SIGNAGE

- A. Contractor is permitted to post only one project identification sign based on the following example:

OSU TYPICAL JOB SIGN



1.14 PREPARATION

- A. Consult with Owner to review jobsite areas required for field offices, material storage and stockpiles, equipment storage, access to different locations, etc.

1.15 PERFORMANCE

- A. Confine equipment, apparatus, and storage of material to work limits. The Owner will not be responsible for protection of materials and equipment from damage, pilfering, etc.
- B. Install temporary facilities in such a manner that the installed work will not be damaged.
- C. Do not use facilities of existing building unless authorized in writing by the Owner.
- D. Effective September 1, 2012, OSU became a non-smoking campus and smoking is prohibited on all Campus property.
- E. Keep facilities well maintained.

- F. Relocate temporary facilities as required during job progress.
- G. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - 1. Replace air filters and clean inside of ductwork and housings.
 - 2. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
 - 3. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION

Oregon State University Construction and Maintenance Safety Requirements

EH&S, 130 Oak Creek Building, Corvallis, OR 97331-7405, (541) 737-2505,
FAX (541) 737-9090

Complete OSU Construction and Maintenance Safety Form - Send completed documents (including Site Safety Plan and all separate answer pages) to Construction Contract Administration along with the signed contract and bonds.

Project Isolation - All construction and remodeling activities regardless of size and/or scope must be fenced, barricaded, or otherwise protected to restrict entrance and to ensure the safety of those in the general area. See isolation requirements.

Site Safety Plan - A site safety plan will be required and will address:

- General Information
- Emergency Information
- Key Organization Personnel
- Hazard Evaluation/Facility Impact
- Emergency Procedures
- Work Zones
- Security Measures
- Fire Protection

A model plan is attached. This form can be used if another plan has not already been prepared. Contact OSU Environmental Health & Safety for more information 737-2505.

Isolation Requirements

General: All construction, maintenance, and remodeling activities, regardless of size or scope, must be fenced, barricaded, or otherwise isolated to restrict entrance and to ensure the safety of those in the general area.

Outdoor Activities: Outdoor projects require the following perimeter isolation:

- A six foot chain-link fence, with controlled access points, extending in all directions around the excavation or building site such that no area of the construction is accessible to pedestrians or unauthorized personnel or vehicles.
- Isolation area will include vehicle loading and unloading areas.
- At the University's option, other barricading plans may be accepted. These may apply to projects such as road resurfacing, parking lot striping, exterior building water proofing, deliveries, etc. Contact EH&S regarding other barricading plans.

Overnight: Any excavation across or adjacent to sidewalks or pathways which must be left open overnight, must be identified with working, blinking construction lights in addition to solid barricades

Indoor Activities: Indoor construction or maintenance projects which will create dust, potentially hazardous fumes or vapors, or offensive odors are subject to the following isolation:

- Areas where existing doors can provide isolation will be labeled "Construction Area--Authorized Personnel Only".

- All other areas will be isolated by a solid barrier. The minimum barrier allowed is 4 mil poly sheeting sealed to prevent migration of dust.
- Mechanical ventilation may be required.
- A solid wall is required if building envelope is opened to the outside.

Contractor Responsibilities

- The contractor will provide all barricading, isolation, and fencing material. OSU will not provide any materials.
- The contractor will also provide all appropriate warning and detour signs when sidewalks, exits, or roads are closed.
- Contractor will provide all other construction area signs.

OSU Construction and Maintenance Safety Form

Send completed safety documents to Construction Contract Administration with contract and bonds.

Date: _____ Project: _____

Start Date: _____ Completion date: _____

Contractor: _____ Contact: _____

Work # _____ 24 hr #: _____

OSU Project Mgr: _____ Work / 24hr #'s: _____

Dept Contact: _____ OSU EH&S Contact: _____

Preconstruction meeting? **Y N** Date/Time/Location: _____

For the following items, prepare answers on a separate sheet for all items marked "Yes". Precede each answer with the appropriate item number. All boxes need to be checked

Y	N	For This Project	If YES, then:
		1 Will any confined spaces be accessed?	Describe location of entry Specify location of permit Notify EH&S prior to entry See SAF 209
		2 Will hot work be performed (welding, cutting, brazing, etc.)?	Provide min. 5# 2A10BC extinguisher within 10 ft If indoors - provide and describe ventilation See SAF 214
		3 Any products brought to campus?	Provide MSDS on site prior to first use; Make available to OSU on request
		4 Will lead paint be impacted?	Describe plan to limit contamination
		5 Will asbestos-containing-material be impacted?	Coordinate with OSU asbestos manager
		6 Will <u>any</u> materials (construction debris, soil, water, etc) be removed from campus?	Describe in detail identity and disposition of material (how, where)
		7 Any open trenches or holes?	Describe isolation procedures (see Page 1)
		8 Will a crane be used?	Describe crane safety plan (include plan to prevent loads above occupied areas)
		9 Is this project building a new facility, a major remodel?	Provide Site Safety plan Describe isolation procedures (see Page 1)
		10 Is this a minor remodeling project?	Provide, or fill out model Site Safety Plan form (see Page 3) Describe isolation procedures (see Page 1)
		11 Will air contamination be produced (e.g. dust, CO, solvent vapors, VOCs, odors)?	Describe project ventilation and isolation Indicate position of building air intake(s)
		12 Will there be noise > 85 dB?	Describe noise minimization plan
		13 Will this project use a scaffold or an external chute?	Describe isolation, dust control, installation
		14 Will this project involve a working surface >6' above a lower level	Describe fall protection
		15 Will any "blind" saw-cuts or penetrations be made in existing foundations, floors, ceilings and/or walls?	Describe plan for detecting and protecting power lines or other building utility lines.

EH&S Review: _____ Date: _____

Model Site Safety Plan

1. General Information

Contractor name _____
 Address _____
 City, State, Zip _____
 Site Safety Officer _____ Project Dates _____
 Project Name _____

2. Emergency Information

Emergency Response	911	OSU EH&S and OSU Facilities Services must be notified in the event of an emergency
Hazardous Materials Spill		
MSDS on-site location		
OSU EH&S	(541) 737-2505	
Facilities Services	(541) 737-2969	

3. Contractor Key Personnel

	Name	Phone	Emergency Contact
Company Owner			
Project Manager			
Job Supervisor			
Site Safety Officer			
Other Responsible Individual			
24 Hour Notification			

List of employees on site _____

4. Hazard Evaluation/ Facility Impact	
Physical	Yes / No
Heavy Equipment	
Noise	
Heat	
Elevation	
Radiation Materials	
Excavations	
Underground Utilities	
Confined Spaces	
Fire Prevention	
Electrical	

5. Emergencies
Services
Evacuation Route
First Aid Location
Hazardous Materials Spill Procedure

6. Work Zones

Material Storage _____
 Parking locations _____
 Individuals with OSU keys _____
 Access issues _____

7. Security measures

8. Fire protection

SECTION 01 56 39

TREE AND PLANTING PROTECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Section includes temporary fencing, barricades, and guards to protect trees, plants and groundcovers not indicated to be removed, as necessary and required to prevent damage above and below grade.

1.02 DEFINITIONS

- A. Dripline: Outer perimeter of branches of any tree or plant.
- B. Groundcover: Includes but not limited to plants and grass.

1.03 PERFORMANCE REQUIREMENTS

- A. The Contractor shall exercise utmost care to protect existing trees and plants designated to remain and shall comply with all protection requirements provided by Owner and City of Corvallis as conveyed through the Owner's Authorized Representative.
- B. The Contractor shall install tree protection fencing as detailed and shall prevent damage to shrubs, groundcover, trees, root systems, soil, bark, foliage, branches and limbs due to construction activities, including but not limited to:
 - 1. Soil contamination, erosion, and compaction.
 - 2. Excessive wetting, and ponding due to storm water, and construction run-off.
 - 3. Alteration of grade, stockpiling of soil, debris, and materials.
 - 4. Damage to soil, roots, bark, trunk, limbs, branches, and foliage.
 - 5. Prevent unauthorized cutting, breaking, skinning and bruising of roots, branches, and bark.

1.04 SUBMITTALS

- A. Procedural proposal for tree and plant protection, describe methods of protection, and stabilization, provide drawings and supporting documentation as directed.
- B. Contractor's Condition Inspection; include written report and color photographs.

1.05 PROJECT CONDITIONS

- A. Install protection during initial mobilization at the Work site, and maintain until substantial completion.
- B. If, in the opinion of the Owner's arborist, additional protection is required, the Contractor shall install additional fencing as directed and without cost to the Owner.
- C. The location and requirements for additional fencing shall be determined by the

Owner's arborist prior to, and at any time during the course of the Work.

- D. Fencing:
 - 1. Fencing shall be installed at the tree and plant protection areas as detailed on Plans, or as directed by the Owner's Authorized Representative.
 - 2. Tree and plant protection fences shall remain in place until all Work is completed and shall not be removed or relocated without the approval of the Owner's Authorized Representative.
- E. Driving and Parking:
 - 1. Not permitted off paved surfaces without the approval of the Owner's Authorized Representative.
 - 2. When approved, the Contractor shall place plywood of sufficient thickness and width to support vehicles and prevent rutting on the area to be driven on.
 - 3. Care shall also be taken with respect to existing lawn sprinkler systems.
- F. Storage of materials and Debris: Not permitted off paved surfaces.

PART 2 PRODUCTS

2.01 MANUFACTURED COMPONENTS

- A. Chain Link Fencing: 11 gage galvanized chain link, six feet. tall, and 1.5 inch inside diameter galvanized steel line posts and 2.5 inch inside diameter corner posts, provide lockable gates as necessary.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Inspect trees, plants, and groundcovers, document existing conditions prior to installation of protection.

3.02 EXECUTION

- A. Pruning and Cutting of Roots, Branches and Foliage:
 - 1. Review conditions with Architect or Owner prior to need for work, and proceed as directed.
 - 2. All pruning to be done by Owner's landscape maintenance personnel or ISA Certified arborist under the direction of Owner's Landscape Management Department.
 - 3. Perform pruning and cutting with sharp instruments intended for the purpose; do not break or chop.
- B. Root Cuttings:

1. Carefully and cleanly cut roots and branches of trees indicated to be left standing where such roots and branches obstruct new construction.
 2. Protect exposed roots with wet burlap until they can be covered with soil.
- C. Excavation and Trenching Within Drip Lines:
1. Permitted where indicated, and at other specifically approved locations.
 2. Tunnel under or around roots by hand digging or boring.
 3. Do not cut main lateral roots and tap roots over one inch diameter; cut smaller roots which interfere with installation of new Work.
 4. Do not allow exposed roots to dry out before permanent backfill is placed; provide temporary earth cover, or pack with peat moss and wrap with burlap.
 5. Water and maintain roots in moist condition and temporarily support and protect from damage until permanently relocated and covered with backfill.
- D. Existing Grading: Maintain within drip line of trees and plants unless otherwise indicated on the drawing and approved by the Owner's Authorized Representative.
- E. Tree Protection:
1. Provide temporary fence complying with Section 01 51 00 for protection of trees to remain.
 2. Extend fencing ten feet beyond dripline, except where greater distance is required for protection of Elm trees.
 3. Prevent entry into protected areas except as authorized in writing by the Owner's Authorized Representative.

3.03 REPAIR AND REPLACEMENT OF TREES AND PLANTS

- A. Repair trees or shrubs damaged by construction operations as directed by the Owner.
- B. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
- C. Damaged Trees, Shrubs and Groundcover:
1. Replace where Owner's Authorized Representative determines restoration to normal growth pattern is not possible; plant and maintain as directed.
 2. Replacement trees up to 13 inches caliper and shrubs up to 4 feet tall: Same size as damaged tree or shrub, species selected by the Owner's Authorized Representative.
 3. Trees over 13 inch caliper and shrubs greater than 4 feet tall: Compensate Owner as determined by an acceptable consulting arborist registered with the American Society of Consulting Arborists.
 4. Replacement groundcovers: Same size and quality as damaged species selected by Owner's Authorized Representative.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary:
 - 1. Product options.
 - 2. Owner-furnished products.
 - 3. Product delivery, storage and handling.

1.02 PRODUCTS

- A. Products:
 - 1. New material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
 - 2. Products may also include existing materials or components specifically identified for reuse.
- B. Use interchangeable components of the same manufacture for similar components.
- C. Unless otherwise specified, all material and equipment shall be new; free from defects impairing strength, durability, and appearance; of current manufacture.
- D. Items specified shall be considered minimum as to quality, function, capacity, and suitability for application intended.
- E. Items incorporated into the Work shall conform to applicable specifications and standards designated, and shall be of size, make, type, and quality specified.
- F. Design, fabricate, and assemble in accordance with current best engineering, industry, and shop practices.
- G. Manufacture like parts of duplicate units to standard size and gauge to make them interchangeable.
- H. Two or more items of the same kind shall be identical and made by the same manufacturer.

1.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- C. Products Specified by Naming One [or More] Manufacturer[s]: Products of

manufacturer[s] named and meeting specifications, no options or substitutions allowed.

D. Substitution Procedure: Under Section 01 25 00.

1.04 REUSE OF EXISTING PRODUCTS

- A. Except as specifically indicated or specified, materials and equipment removed from existing construction shall not be used in the completed Work.
- B. For material and equipment specifically indicated or specified to be reused in the Work:
 - 1. Use care in removal, handling, storage, and reinstallation to assure proper function in the completed Work.
 - 2. Arrange for transportation, storage, and handling of products which require off-site storage, restoration, or renovation.
 - 3. Remove and reinstall mechanical units, vents, guys, antennae, and electrical and grounding wires or conduits.

1.05 OWNER FURNISHED PRODUCTS

- A. Designate delivery dates of Owner-furnished items in the construction schedule.
- B. Receive, unload, store and handle Owner-furnished items at the site; protect from damage.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Transport, handle, store and protect products in accordance with manufacturer's instructions.
- B. Arrange deliveries in accordance with construction schedules; coordinate to avoid conflict with Work and site conditions.
- C. Deliver and store products in undamaged condition in manufacturer's original containers or packaging with identifying labels intact and legible.
- D. Inspect shipments to assure compliance with Contract Documents and reviewed submittals, and that products are undamaged.
- E. Prevent soiling or damage to products or packaging.
- F. Interior Storage: Maintain required temperature and humidity ranges. Verify that Owner furnished storage meets product manufacturer's requirements.
- G. Exterior Storage:
 - 1. Store materials above ground to prevent soiling and/or moisture infiltration.
 - 2. Cover materials with waterproof breathable sheet coverings; provide adequate ventilation.
 - 3. All storage locations to be approved in advance by the Owner.

- H. Arrange storage to provide access for inspection.
- I. Coordinate with Owner's Authorized Representative all on-site storage activities.
- J. Provide for security of stored products.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

- A. Section 01 25 00, Product Substitution Procedures.
- B. Section 01 33 23, Shop Drawings, Product Data, Samples

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of the Work.
 - 2. Efficiency, maintenance, or safety of any operational element.
 - 3. Visual qualities of sight exposed elements.
 - 4. Work of Owner or separate contractor.
- B. Include in request:
 - 1. Identification of project.
 - 2. Location and description of affected work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed work, and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on work of Owner or separate contractor.
 - 7. Written permission of affected separate contractor.
 - 8. Date and time work will be executed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01 25 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.

- B. After uncovering existing work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work.
- B. Provide devices and methods to protect other portions of the Work from damage.
- C. Provide protection from elements for areas which may be exposed by uncovering work.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting and patching to complete work.
- B. Fit products together, to integrate with other work.
- C. Remove and replace defective or non-conforming work.
- D. Provide openings in the work for penetration of mechanical and electrical work.

3.04 PERFORMANCE

- A. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools are not allowed without prior approval from Owner's Authorized Representative.
- C. Restore work with new products in accordance with requirements of Contract Documents.
- D. At penetrations of fire rated walls, partitions, ceiling or floor construction, completely seal voids with approved fire rated material, to full thickness of the penetrated element.
- E. Refinishing:
 - 1. Refinish surfaces to match adjacent finish.
 - 2. For continuous surfaces, refinish to nearest intersection or natural break.
 - 3. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 74 00

CLEANING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Related requirements specified elsewhere, cleaning for specific products or work: Specification section for that work.
- B. Maintain premises and public properties free from accumulations of waste, debris, and rubbish, caused by operations.
- C. At completion of Work remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 QUALITY ASSURANCE

- A. Standards: Maintain project in accord with applicable safety and insurance standards.
- B. Hazard Control:
 - 1. Store volatile wastes in covered metal containers.
 - 2. Provide adequate ventilation during use of volatile or noxious substances.

1.03 MATERIALS

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

1.04 DURING CONSTRUCTION:

- A. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- B. At reasonable intervals during progress of Work clean site and public properties, and dispose of waste materials, debris and rubbish.
- C. Provide on-site containers for collection of waste materials, debris and rubbish.
- D. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- E. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on an as-needed basis until project is ready for Substantial Completion or occupancy.
- F. Handle materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

1.05 FINAL CLEANING

- A. Employ experienced workers, or professional cleaners, for final cleaning.
- B. In preparation for Substantial Completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces.
- C. Remove grease, dust, dirt, stains, labels, and other foreign materials from exposed interior and exterior finished surfaces.
- D. Remove putty, paint, labels, lubricants, etc., from windows, mirrors, and sash, and then polish, taking care not to scratch glass.
- E. Vacuum carpeting (shampoo where required), removing debris and excess nap.
- F. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- G. Replace air filters where units were operated during construction.
- H. Maintain cleaning until project, or portion thereof, is occupied by Owner.

END OF SECTION

SECTION 01 77 00

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 DESCRIPTION

- A. The requirements specified in this section relate to all Contractors individually performing under these Contract Documents:
 - 1. Project Record Documents.
 - 2. Final review and payment.
- B. Related work specified elsewhere:
 - 1. OSU General Conditions.
 - 2. Shop Drawings, Product Data and Samples, Section 01 33 23.

1.02 PROJECT RECORD DOCUMENTS

- A. The Project Record Documents shall be organized to include the following information as applicable:
 - 1. Table of Contents
 - 2. Project Team List
 - 3. Specifications (Including Addenda and Change Orders)
 - 4. Drawings
 - 5. Inspection Reports, as applicable
 - 6. Signed Warranty(ies)
 - 7. Maintenance Instructions
- B. Draft Project Record Documents shall be submitted for review upon 75% completion of the Work.
- C. Project Record Documents shall be submitted electronically to the Owner. Hard copies will not be accepted.
- D. The project team list shall include the name, address, and phone number of the Owner, Contractor, Inspector, Subcontractors, and the materials manufacturers.
- E. Legibly mark each Specification section to indicate actual as-built condition indicating changes in the Work made by addenda or change order or actual materials used and actual manufacturer(s) used.
- F. Maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative upon request.
- G. Legibly mark the drawings to indicate actual as-built conditions indicating changes in the Work made by addenda or change order or actual conditions which differ from the drawings.
- H. Redraw or provide new drawings as required for a complete as-built set of drawings.

The Contractor shall maintain current and accurate as-built mark-ups during construction and make available to Owner's Authorized Representative.

- I. Include inspection reports if applicable.
- J. Include, in a single section, all copies of the Project's labor and material warranties clearly marked to identify the Owner's responsibilities under the terms of each warranty and the section of Work that each warranty covers. One set must be clearly marked as containing original documents.
- K. In the case of an elevator installation, the Contractor's and manufacturer's warranty shall provide for the Owner's right to respond to emergency/car failure situations for the purpose of extricating individuals trapped in the elevator.
- L. Include maintenance instructions complete with technical information and name, address, and phone number of the Contractor(s) and manufacturer(s) of each material and product.

1.03 FINAL REVIEW AND PAYMENT

- A. Prior to completion, the Contractor shall inspect the Work and make a Punch-list noting all items that are incomplete and/or incorrect.
- B. The Contractor shall notify all Subcontractors in writing of incomplete and/or incorrect items. Notify far enough in advance of the completion date that the Work can be completed on schedule. Said Work shall be immediately corrected.
- C. Should conditions prevail which prohibit some elements of the Work from being accomplished, but the work-in-place will perform the primary function (i.e., painting cannot be completed due to high moisture content of masonry walls.) the Contractor shall record the reason with this Punch-list item requesting temporary delay in completion from the Owner in writing.
- D. Notify the Owner in writing that all items are completed and ready for final review or else that the Work product is fully usable, but some listed deficiencies remain to be completed. Submit all record documents at this time.
- E. The Owner will review all documents. When the documents include a Contractor's request for delay in completion, the Owner will review all Work which is certified as complete to the best knowledge of the Contractor. The Owner will also review the listed incomplete Work and assign a value to such uncompleted work.
- F. The Contractor shall make the required corrections to the Work expeditiously. A letter will be addressed to the Contractor informing the Contractor of the project status.
- G. When Contract closeout procedures are completed and all Punch-list deficiencies have been corrected, provide Owner with final corrected Project Record Documents based on Owner's preliminary review. Correct Project Record Documents shall be in electronic format.

- H. Final Completion by the Owner will be documented and the Contractor will receive written notice of acceptance of the Work and notification that final payment may be billed and released.
- I. All warranties shall commence and become effective beginning on the date of Substantial Completion.

END OF SECTION

As indicated in the General Conditions of your contract(s) Section E.2.9, OSU requires that we gather MWESB (Minority, Women's Emerging Small Business) Contractor/Subcontractor information. This is an Oregon State University requirement and the information will be gathered annually and at time of final payment.

- **You must do this step first or the report will not let you add any information:** In Row 1 Column B there is a drop down menu. You must select yearend (if the job has not been completed) or final (if the job is completed and you have submitted for retention). Once you choose yearend or final in the drop down menu there will be areas highlighted in light green and red. Those are the areas that you are required to fill out. If you did not use or planning to use any MWESB then the left side of the report (Light Green area) still needs to be filled out and the red area needs to remain blank.
- If your agency is an MWESB or if you are using/used an MWESB subcontractor then you need to fill out the information in the report that is highlighted in light green and red (see instructions in the next bullet). If you are not an MWESB or used a Subcontractor that is an MWESB then you need to fill out the left side of the form (Light Green areas) and leave the red area blank.
- In row 2 Column B there is another drop down menu, click the drop down menu and choose Fiscal Year 2015.
- In Row 4 Column B there is another drop down menu, click there and choose OSU.

OREGON STATE UNIVERSITY

PERFORMANCE BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
<i>* If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Oregon State University (OSU), the sum of (Total Penal Sum of Bond)

(Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into contract No. _____ with the OSU, the plans, specifications, terms and conditions of which are contained within the Contract resulting from the above-referenced Solicitation;

WHEREAS, the terms and conditions of the Contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of Contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall (1) faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, (2) shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, (3) shall save, defend, indemnify and hold harmless OSU and its officers, board members, employees, agents and other representatives, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by

the Principal or its subcontractors, and (4) shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall OSU be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 352, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____

[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City State Zip

Phone Fax

OREGON STATE UNIVERSITY

PAYMENT BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1) Bond Amount No. 1: \$ _____
_____ (Surety #2)* Bond Amount No. 2:* \$ _____
* *If using multiple sureties* Total Penal Sum of Bond: \$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Oregon State University (OSU) the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into contract No. _____ with OSU, the plans, specifications, terms and conditions of which are contained within the Contract resulting from the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall (1) faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, (2) shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, (3) shall save, defend, indemnify and hold harmless OSU, and its officers, board members, employees, agents and other representatives, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, (4) shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; (5) shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its

subcontractors in connection with the performance of the Contract; (6) shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167;(7) shall permit no lien nor claim to be filed or prosecuted against the State or OSU on account of any labor or materials furnished; and (8) shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall OSU be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 352, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax

SECTION 27 21 33 - DATA COMMUNICATIONS WIRELESS LOCAL AREA NETWORK

PART 1 - GENERAL**1.1 SUMMARY**

- A. Design and build a high-density Wireless Local Area Network (WLAN) system with a dedicated Local Area Network (LAN) for an open air collegiate football stadium as described in these performance specifications and as prescribed by manufacturer's best practices.
- B. The WLAN solution shall be delivered as a managed services to the University, refer to RFI for University contract requirements.
- C. The WLAN system shall provide 100% coverage of the areas of stadium as describe in this section and shown on related drawings, optimized as a high density WLAN solution and designed to support the specified simultaneous users and through-put.
 - 1. Seating Bowl – 45,674 seats.
 - a. Lower bowl rows below portals/vomitories are on grade with no existing access from below. The design/build solution shall provide the required infrastructure (conduit/pathways, structure, etc.) to support the designs placement of access point, i.e. handrails, under seat or other localized access point configuration, as prescribed by manufacturer's best practices.
 - 2. Public spaces:
 - a. Suites
 - b. Exterior spaces such as ticketing and entrance gates
 - c. Concourses
 - d. Concession areas
 - e. Clubs
 - f. Toilets
 - g. Press areas
 - 3. WLAN design-build of the West Side renovation project is to be included in this scope.
 - a. Design Build integrator to provide the Architect's Design Team access point locations and pathway requirements.
 - b. Provide the Architect's design team the WLAN and LAN equipment requirements such as rack space requirements, telecom enclosure placement, cooling and power requirements.
 - c. Coordinate work with project GC, Hoffman Construction Company, following project safety guidelines.
- D. The dedicated LAN shall be designed to support the anticipated traffic load of the WLAN system. The system shall include a fiber optic backbone and the required active and passive equipment to provide a complete and working WLAN.
- E. The WLAN system shall be IEEE 802.11ax ("Wi Fi 6") compliant. Access points, antennas and overall solution shall be certified by the Wi-Fi Alliance.
- F. The WLAN engineering design is to be approved by the primary antenna/access point manufacturer and installed by an authorized manufacturer reseller.
- G. This is a design/build project. Installer is responsible for final design and engineering and as-built performance of the system.
- H. Work related to the installation of the system pathways and equipment placement shall be subject to the inspection and approval of the University and the Authority having jurisdiction (AHJ).

- a. Coordinate work with the University, following Hoffman Construction Company safety guidelines.
- I. Design/Builder Integrator shall provide the University with design optimization options i.e. to improved performance, reduces cost by aligning AP count with anticipated density.
- J. The existing stadium University Education WLAN supports back-of-house spaces and the Valley Football Center. This system is to remain operational as a separate system WLAN in the stadium. Design of new WLAN will need to take into consideration this criteria.

1.2 RELATED DOCUMENTS

- A. University contract requirements as referenced by the project Request for Proposal (RFP).
- B. Drawings with the areas of coverage and anticipated levels of density.

1.3 RESPONSIBILITY

- A. Notwithstanding any detailed information in the RFP documents, it is the responsibility of the design/builder to supply all materials, equipment, transportation, final design and engineering and labor necessary to provide a fully working, tested, and calibrated system.
- B. Supply accessories and minor equipment items (such as, but not limited to: power strips, adapters, connectors, mounting hardware, etc.) required for a complete and working system, even if not specifically mentioned in these Specifications.
- C. Notify the University's designated technical representative of any discrepancies in the documents before bid. Failing to provide such notification, supply items and quantities according to the intent of the Specifications, without claim for additional payment.
- D. Execute all work in accordance with the National Electrical Code (NEC), the National Electrical Safety Code, the Occupational Safety and Health Act (OSHA) and all applicable State and Local codes, ordinances, and regulations.
- E. Required licenses, insurance, and permits including payment of charges and fees.
- F. Coordinate location and installation of equipment, power, grounding, and raceways with other building elements.
- G. Preparation of submittal information.
- H. Installation to be in accordance with the contract document, manufacturer's recommendation, and in conformity with University standards, applicable codes and authority having jurisdiction (AHJ).
- I. Final tests and adjustments, written reports, and documentation.
- J. Instruction of operating personnel.
 - 1. Provision of manuals.
 - 2. Maintenance services and warranty.
 - 3. related work
- K. Electrical

1. The Contractor shall be responsible for installation of required breaker panels, etc. and distribution of electrical power from the panels to the equipment as required.
 - a. AC power services available are as existing in the stadium
 - b. Power service for the active LAN and WLAN equipment will not be on the Stadium standby generator. Provide necessary UPS in the design for a minimum run time of 1hr.
2. The contractor shall be responsible for connecting ground point to all equipment in accordance with NEC Code, local codes, and standards specified herein.
3. Conduit infrastructure system, including wire for AC Power and grounding for the System, are provided by the contractor.
4. All electrical installation shall be in accordance with University standards and the National Electric Code.

L. Conduit and Cable Management

1. Provide conduit/raceway/tray/wire management required for a complete and working system, meeting University standards and by code, is to be included in this scope of work.
2. System cabling exposed to public view is to be in conduit.
3. Exterior junction boxes, conduit/raceway, terminations, etc. and those within enclosures where enclosures are exposed to outdoor conditions are to meet NEMA ratings for outdoor electrical applications.
4. Exception – West Side Renovation project, provide requirements to the Architect Design Team on equipment placement and pathway requirement, as this will be included in the project's base.

M. Structural

1. The Design/Build Integrator shall be responsible for design and Structural Engineering for all brackets attaching the equipment to the building structure. Coordinate equipment weight loads with the University Structural Engineer.
2. Approval by the University Structural Engineering is required before coring;
 - a. The Design/Build Integrator shall following University guidelines and will be responsible at not additional cost to the project to x-ray building structure at coring locations as required by the University.

1.4 RELATED SYSTEMS

A. Systems that may interface with the High-Density WLAN System include, but not limited to:

1. Ticketing
2. Fan experience applications, but not limited to:
 - a. Wayfinding
 - b. Mobile ordering
 - c. Game feed streaming video

1.5 REFERENCED CODES AND STANDARDS:

A. Execute work in accordance with the following standards:

1. IEEE 802.11-2016 standard compliant standard for Information Technology - Telecommunications and Information Exchange between Systems.
2. IEEE 802 standards including 802.3 Ethernet and 802.11 Wireless LANs.
3. IEEE 802.3at, af and bt Power over Ethernet.
4. Telecommunications Industry Association (TIA):
 - a. ANSI/TIA-568-C (series), Telecommunications Cabling Standards.

- b. ANSI/TIA-569-D, Commercial Building Standard for Telecommunications Pathways and Spaces
 - c. ANSI/TIA-606-C, Administration Standard for Commercial Telecommunications Infrastructure
 - d. ANSI/TIA-607-C, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
 - e. ANSI/TIA-758-B, Customer-owned Outside Plant Telecommunications Infrastructure Standard
 - f. TIA-526-7-A, Measurement of Optical Power Loss of Installed Single-mode Fiber Cable Plant
 - g. TIA-526-14-C Optical Power Loss Measurements of Installed Multi-mode Fiber Cable Plant
 - h. TIA/TSB-140 Additional Guidelines for Field-Testing Length, Loss and Polarity of Optical Fiber Cabling Systems
- B. BICSI Telecommunications Distribution Methods Manual (TDMM), 13th Edition
 - C. OSU Campus Wiring Standard 12-1-2018
 - D. National Electrical Code, including Article 800 Communications circuits.
 - E. American National Standards Institute (ANSI).
 - F. American Society of Testing and Materials (ASTM).
 - G. National Electrical Manufacturer's Association (NEMA).
 - H. National Fire Protection Association (NFPA).
 - I. Underwriters Laboratories (UL).
 - J. Requirements of the local Authority Having Jurisdiction (AHJ).
 - K. Institute of Electrical and Electronics Engineers (IEEE), IEEE 1100 Emerald Book.

1.6 DEFINITIONS

- A. In addition to those Definitions of project Request for Proposal, the following list of terms as used in this specification shall be defined as follows:
 - 1. Furnish: To purchase, procure, acquire, and deliver complete with related accessories.
 - 2. Install: To set in place, join, attach, link, set up, or otherwise connect and test until complete before turning over to the University's designated technical representative. All parts, items, or equipment supplied by Contractor.
 - 3. Provide: To furnish and install.
- B. The following terms and acronyms may be used in this specification:
 - 1. AHJ Authority Having Jurisdiction
 - 2. AP Access Point
 - 3. BER Bit Error Rate
 - 4. BICSI Building Industry Consulting Service International
 - 5. BYOD Bring Your Own Device
 - 6. CNR Carrier-to-Noise
 - 7. IEC International Electrotechnical Commission
 - 8. IEEE Institute of Electrical and Electronics Engineers
 - 9. IGMP Internet Group Management Protocol

10.	IP	Internet Protocol
11.	ISM	Industrial, Scientific, and Medical
12.	LAN	Local Area Network
13.	MAC	Medium Access Control
14.	MIMO	Multiple Input and Multiple Output
15.	NEMA	National Electrical Manufacturers Assoc.
16.	PCI	Payment Card Industry
17.	PCI DSS	Payment Card Industry Data Security Standard
18.	POE	Power-over-Ethernet
19.	RADIUS	Remote Authentication Dial-In User Service
20.	RF	Radio Frequency
21.	RRC	Radio Reservation Control
22.	RTLS	Real Time Locating System
23.	SCS	Structured Cabling System
24.	SFP	Small Form-Factor Pluggable
25.	SNMP	Simple Network Management Protocol
26.	SSID	Service Set Identification
27.	SINR	Signal to Interference plus Noise Ratio.
28.	TIA	Telecommunications Industry Association
29.	UPS	Uninterruptable Power Supply or System
30.	VLAN	Virtual LAN
31.	Wi-Fi	Wi-Fi Alliance
32.	WIPS	Wireless Intrusion Prevention System
33.	WLAN	Wireless Local Area Network

1.7 SCOPE OF WORK - GENERAL

- A. The nature of this scope of work is a turnkey “design-build” high density WLAN and dedicated LAN system.
- B. The WLAN integrator is responsible for all final engineering and design, this will include;
 - 1. AC power service to equipment and equipment end-points (if existing is not adequate or does not exist).
 - 2. Low voltage/data cabling and conduit/raceway (exposed cabling is not acceptable).
 - 3. Fully engineered installation details and documentation in accordance with this specification, and related documents.
- C. The Design/Build Integrator is responsible for making all field observations necessary and coordination with the University and other trades to determine exact mounting locations, power and heat loads and other details required for the installation of the WLAN and LAN equipment.
- D. The University's designated technical representative will consider a subjective assessment of hardware and software capabilities as part of the overall evaluation process of the proposed WLAN solution.
- E. Coordinate and schedule work with University's designated technical representative and other trades working in the building.
- F. Obtain permits necessary for the execution of any work pertaining to the installation of the system in this scope of work.
 - 1. Permitting shall be submitted through the University.

- G. Materials that are listed by UL must bear the UL label. In the event UL has no published standard for a particular item, then other independent testing standards are to apply, and the applicable labeling utilized.
- H. Provisioning is required for labor, equipment, materials, supplies and plant.
- I. Report any conflicts between the documents and applicable codes and report to the University's designated technical representative at the time of proposal. Where a conflict is discovered after the contract is awarded, build system in accordance with code and the performance requirements at no additional cost, unless conflict could not be discovered in advance of starting work and propose a solution for review and approval.
- J. Equipment and materials are to be purchased new for this project.
- K. Provide operations and maintenance training to University's designated technical representative staff.
- L. Submission of information required by public agencies or AHJ.
- M. Preparation of submittal information.
- N. Installation, anchorages, and attachments in accordance with University standards, manufacturer's recommendations/best practices and applicable code requirements.
- O. Provide lightening arrestors to outdoor mounted enclosures and access points.
- P. Initial tests and adjustments with written report of necessary changes.
- Q. Provide specified length of warranty on workmanship and materials from the date of acceptance by the University's designated technical representative. Acceptance will occur after completion of the first successful use during a regular season football game.
- R. Furnish and install mounting hardware for enclosures. Coordinate mounting locations with the University's designated technical representative, Facilities, IT and structural engineer. Provide project state registered PE stamped drawings for seating bowl and exterior space structural attachments to the existing building.
- S. Ensure equipment attached to structure above where public may gather are secured by a safety strap, meeting AHJ requirements. This shall include, but not necessarily be limited to, antennas and supports mounted on or around catwalks and gantries secured to structure.

1.8 SCOPE OF WORK – WIRELESS LOCAL AREA NETWORK

- A. The intent of the following is to clarify design intent and is not an exhaustive description of the WLAN system.
- B. The Design/Build integrator shall submit for the University's designated technical representative approval a predictive three-dimensional WLAN computerized design model of the proposed solution and floor plans/drawings to include:
 - 1. Proposed access point locations and associated antennas.
 - 2. Coverage areas
 - 3. Signal level "heat" map of access points with predicted signal levels signal to noise ratio and expected throughput
- C. Access points shall operate using IEEE 802.3 at, af and bt Power over Ethernet (POE) as required by the access point manufacturer.

- D. In the event that the existing stadium IDF rooms/equipment cannot serve access points (supporting access switches) either due to distance or space limitations, installer is to propose placement of environmental enclosure locations, positioned within existing spaces of the stadium, etc. and shall require University's designated technical representative, Facilities and Structural Engineer approval.
- E. Equipment and services furnished and installed must include the necessary licensing for the system for the duration of the system base installation warranty.
 - 1. All licensing's and warranties will be held by the Managed Service provider of the WLAN/LAN solution.
- F. The WLAN system components shall be manufactured no later than 6 months prior to substantial completion date of the system.
- G. WLAN equipment is not to be purchased prior to approval from the University's designated technical representatives.
- H. Provide 7x24 support services, firmware upgrades and replacement parts during the project warranty period.
- I. The WLAN System shall come with a parts and labor warranty including equivalent maintenance/technical support/firmware upgrade for the first year following system acceptance.
- J. Furnishing and installation of any software required to achieve specified capabilities of system, licensing of software shall be included.
- K. Provision of system fine tuning and optimization.
 - 1. Provide services to fine-tune the design after the first three football games and three non-football events. These events will be determined by the University during system installation.
- L. Engineering and technician required to be on-site during the first four large scale public events.
 - 1. After each event provide a report of the WLAN performance metric, noting areas of deficiencies with recommended corrective action.
- M. Provide on-site attic stock/spares equal to 1% of the total access points, antennas and enclosures for quick break/fix replacement. Total quantities are defined by the number of devices installed.
- N. Provide high density 2.4 GHz, 5 GHz and 6 GHz access points and antennas capable of various gain depending upon the particular use case.
 - 1. It is expected only the 5 GHz and 6 GHz channels will be implemented at the time of installation unless the University determines some unique application that requires the 2.4 GHz channels.
- O. Access points in public interior spaces and concourses are to be equipped with Bluetooth Low Energy Beacons for location-based services.
- P. The WLAN design shall provide redundant, commonly available WLAN controllers, as well as required devices and servers/software necessary for wireless intrusion prevention, user authentication, network management, radio frequency management, location tracking services, IP address management including high density DNS/DHCP capabilities.

- Q. Access point enclosures placed in outdoor environments shall be weatherproof NEMA 4 thermoplastic enclosures compliant with IEC IP67 unless the access point and associated external antenna is similarly rated for use without an enclosure.
- R. Access point enclosures shall have the capacity to house the access point, associated external antenna and necessary antenna cabling within enclosures.
- S. Indoor or outdoor access point enclosures shall be painted using non-metallic material using an RAL number as directed by the University's designated technical representative, prior to mounting. Multiple colors may be required depending on housing location.
- T. Take care during installation of equipment to prevent scratches, dents, chips, etc.
- U. Where access point enclosures may not be required, access points may be required to be painted or concealed by architectural matching paint or stretch fabric as dictated by the University. As such, the Design/Build integrator will be required to;
 - 1. Obtain in writing from manufacturer approval the device can be painted, and it will not void product warranties.
 - 2. Test a painted device to ensure it does not impede the function of the device as specified by the manufacturer.
- V. Provide for University review and approval a mockup of an access point and/or enclosure proposed in the design for concourses and the seating bowl locations, i.e. below seat, handrail, etc.
 - 1. Handrail AP placement shall not obstruct sight lines nor create ADA compliance issues.
- W. Determine how best to serve WLAN coverage in the seating bowl. Rail, under seat and overhead configurations will be considered along with hybrid approaches to achieve the desired performance.
- X. Pathways to devices to existing on-grade cast-in-place seating bowl section.
 - 1. Directional boring is unacceptable.
 - 2. Surface pathways are acceptable, with University Approval.
 - a. A mockup of surface mount pathways to be provided to the University for review and approval.
 - b. Surface mount pathways crossing a row or aisle will meet AHJ and ADA requirements.
- Y. Installation and configuration of Wireless Intrusion Prevention and Detection capabilities.
- Z. Meet the high-density design reference guidelines as published by the manufacturer. Failure to meet design goals and criteria shall be rectified by the installer and/or manufacturer at no cost to the University.
- AA. Provide centralized wireless access control server/framework for enforcement of wireless access policies.
- BB. Provide wireless network management, reporting, user analytics system to control, analyze and monitor the WLAN infrastructure.
 - 1. All user data collected by the WLAN system shall be the property of the University.
- CC. Provide a means to identify rogue access points, notify University's designated technical representative, taking corrective measures to preserve the radio frequency environment for the High-Density WLAN System.

- DD. The high-density WLAN system shall accommodate;
1. Wi-Fi Alliance Certified Passpoint and Certified Vantage roaming solutions (sometimes referred to as Hotspot 2.0) should the University elect to use such features as cellular off-loading.
 2. Eduroam as directed by the University.
- EE. Installer shall manage the design to avoid RF interference. Potential sources of radio frequency interference in the stadium include wireless telephone headsets, DECT handsets, wireless intercoms, wireless microphones, microwave ovens, Bluetooth devices, assisted listening devices, cordless phones, rogue WLAN and University Edu access points and mobile hotspots/Mi-Fi units.
- FF. The WLAN system shall be connected and integrated into design/build dedicated LAN and as such POE access switch shall be provided.
- GG. The WLAN is to support numerous functions and applications within the stadium including Bluetooth beacon location services, Wi-Fi offloading by mobile carriers, public internet access from patrons using 802.11 client-equipped smart phones, tablets, laptops and other wearable devices. As such require numerous SSID's to be configured and secured.
- HH. WLAN solution shall be capable of supporting advanced functions including location services/wayfinding, food and drink ordering and custom developed smartphone applications for the venue. These future applications have not yet been defined or developed but may be defined by the time the system is deployed for public use.
- II. This specification requires the Contractors bidding this project to design a comprehensive WLAN solution based on the design standards and best practices of the manufacturer whose components shall be furnished and installed. As part of this scope of work, the WLAN contractor is responsible to design, furnish, build, install and configure for the following:
1. 802.11ax compliant High-Density WLAN system including access points, controllers, enclosures, wireless network management, authentication servers, DHCP/DNS servers, wireless application servers and antennas.
 2. 100% coverage of the projects scope, as defined in the coverage drawings, with an average of -65dBm RSSI based on random test points.
 - a. Seating bowl coverage includes football field areas from out of bounds line on each sideline of the stadium, between the 20 yard lines.
 3. 100% simultaneous concurrent users, accommodating a peak of 50 megabit per second download application throughput per user and 25 megabits per second upload application throughput per user.
 4. Based upon a best server SINR average of greater than 25dB for 100% of the coverage area based on random test points.
 5. The system design shall attempt to limit bleed outside the covered areas for a maximum of -95dBm within 10 meters of the property coverage areas to prevent Wi-Fi interlopers, while still providing coverage to exterior areas that require high density WLAN coverage such as entrance gates, box office queues, tailgating areas and concourses.
 6. A dedicated LAN to support the WLAN design meeting University Standards, that includes the required switches, routers and firewalls, etc. as required for a complete and working system.
- JJ. Design, furnish, build, install and configure 802.11ax compliant capacity, coverage, throughput, co-channel interference and noise analysis using active WLAN analytical tools such as Air Magnet, iBwave, Ekahau or equivalent tools. Perform active surveys as necessary during construction process to verify predictive modeling.

- KK. Provide submittal drawings detailing the results of the survey and locations of AP's and enclosures, as well as detail on special requirements such as lightning arrestors and directional antennas.
- LL. The design the WLAN to support game day streaming video feed services as specified by the University Video Production technical representative.

1.9 SCOPE OF WORK - LOCAL AREA NETWORK

- A. The intent of the following is to clarify design intent and is not an exhaustive description of the LAN system.
- B. The Design/Build Integrator is to design, engineer and construct a dedicated LAN solution to support the WLAN. The LAN shall be designed meeting industry standards and best practices, University standards and of the manufacturer whose components are to be furnished and installed.
- C. Provide the necessary active and passive LAN equipment to support the WLAN design-build system;
 - a. Core switches
 - b. POE access switches
 - c. Routers
 - d. Firewalls
 - e. Fiber optic backbone
 - f. Fiber optic POE extenders
- D. The network shall utilize IEEE, IETF and ITU standard-based protocols for interconnectivity and route distribution. The open standards-based interconnectivity and route distribution software used must be fully featured in capability. Routing protocol cannot possess any distance vector-based features.
- E. The LAN may need to support PCI-DSS functions and as such must be able to pass any PCI audits.
- F. The LAN shall provide port and network security to prevent content interception by unauthorized parties.
- G. Provide Spectrum analysis functionality.
- H. Provide the capability to distribute multicast IP streams of multiple video feeds to mobile clients in the stadium without inhibiting the performance of other streams or other public or private applications
- I. Meet TIA, IETF and major wireless operator/carrier standards as well as public safety standards.
- J. The LAN shall be capable of supporting both IPv4 and IPv6.
- K. The LAN shall support standards-based management protocols (i.e. SNMP v3, Syslog, etc.).
- L. The LAN shall support redundant, highly available active/standby connectivity to the internet.
- M. Determine the actual number of access switch ports and uplinks required.
- N. Provision, installation and configuration of access switches in telecommunications spaces and other spaces in sufficient quantity to provide IP transport for WLAN.

- O. The core switches shall implement a highly available design with redundant links and active/active load balancing.
- P. Uplinks from access switches to core switches shall use single mode fiber optic cable.
 - 1. Fiber optic backbone to design and installed by Design/Build Integrator, as such, provide the cable, terminations, patch panel and patch cords.
- Q. Provide UPSs and associated Power Distribution Units to support the LAN and WLAN systems. Size rack mount UPSs for minimum runtime of 1 hr.
- R. Each UPS should be equipped with a Web/SNMP Management card. The Design/Build Integrator shall connect each Web/SNMP management card to an Ethernet port and shall test functionality to allow control and monitoring of all UPS's within telecommunications spaces.
- S. Connect and test ISP service to WLAN dedicated LAN. Configure and connected to firewall, meeting University IT requirements.
- T. Coordinate with University's IT Technical representative placement of new WLAN and LAN equipment racks in existing Telecommunication Spaces.

1.10 SCOPE OF WORK - STRUCTURED CABLING SYSTEM (SCS)

- A. Provide required equipment racks, enclosures, fiber optic backbone and Category horizontal link cabling, panels/faceplates, connectors, adapter, patch panels, etc. meeting University Standards as required for a complete and working system.
- B. Coordinate final access point and enclosure locations (as determined by the predictive survey) and as approved by University. Provide data outlet placement and pathways to support access point locations.
 - 1. The design of the SCS shall provide a minimum of (1) Category horizontal link cable to each access point or multiple horizontal link cables as required to support the access point location, meeting access point manufacturer guidelines.
- C. Ceiling mounted access points shall be mounted above the ceiling where acoustic tile ceilings are existing, with a minimum 10' slack loop. Where ceilings are indicated to be gypsum or other non-panelized or RF transparent materials, mount access points below the ceiling.
- D. Provide ceiling flush mount access point enclosures as required/directed by University in high finish areas, install conduit from enclosure to accessible ceiling/cable tray.
- E. Determine the actual number of Category horizontal link cables required and reflect on shop drawings.
 - 1. SCS products of one type must be from the same manufacturer throughout the entire project and meeting manufacturer warranty requirements.
- F. Provide Category cables homerun from device outlet to the nearest new or existing telecommunications space.
 - 1. Install in compliance with manufacturers installation procedures.
 - 2. Do not install cables with a total length greater than 295 feet without written permission from the University's representative.
 - 3. Install cable so that the pulling tension applied to the cable does not exceed 25 lbf or the manufacturer's guidelines whichever is lesser.

4. Install cable so that a radius bend of no less than six times the cables outside diameter is maintained during and after installation.
 5. Maintain the following distances from sources of electrical interference
 - a. 6 inches from fluorescent lighting
 - b. 6 inches from grounded conduit cable used for electrical power distribution
 - c. 12 inches from unshielded electrical power cables
 - d. 48 inches from electric motors and transformers
- G. The system design shall:
1. Provide 99.9% system uptime/availability.
 2. Be fully PCI-DSS compliant, capable to successfully pass a PCI compliance audit.
 3. .
 4. Provide functionality to support full functioning of IPv4 or IPv6 on devices.
 5. Provide a high availability, high-density DHCP/DNS/IP address management server solution, engineered to support as many as 7000 client requests over a one-hour period.
 6. Provide capability to support both the WPA2 and WPA3 security standard from the Wi-Fi Alliance.
- H. Provide horizontal cable managers for patch cord management
1. Install 1RU and 2RU cable managers as shown on the drawings.
- I. Furnish Category rated patch cords in the quantities lengths required. Provide blue in color.

1.11 SUBMITTALS

- A. The successful Contractor must make one single, complete pre-construction Submittal package as defined and described in this Section.
- B. Provide a Drawing-List of submitted drawings. Include the title of large-sheet drawings that are packaged separately. The submittal shop drawings are to be used by the Contractor as a basis for revision mark ups to create the “as-built” conditions.
1. Execute drawings at an appropriate scale but no smaller than 1/8”.
 2. Submit drawings rendered in a 3-dimensional compatible drawing application.
 3. Create drawings using a color scheme and industry-standard graphics with varied line types and weight so the attributes of the various elements of the image are readily discernible.
- C. Provide floor plan sheets by building area that depict:
1. RSSI level coverage, signal level “heat” maps;
 2. AP and antenna/enclosure mounting locations with AP numbers;
 3. Notes, enclosure types/model numbers, antenna types and other details;
 4. Depict any special installation/mounting details or unique means and methods necessary to successfully complete the WLAN system installation.
- D. Provide LAN and WLAN functionals drawings that depict;
1. Lan and WLAN network typology drawing that includes the model number, placement , of the cores, access switches WLAN controllers;
 2. Fiber optic backbone, points of termination and cable type with strand count.
- E. Provide an Excel spreadsheet of access points including, but not limited to floor, stadium sector, IDF closet, cable number, AP number, AP type, MAC address, mounting type, antenna type, model number and other pertinent information.

- F. Submit representative nomenclature with labeling as defined in TIA/EIA-606-revision C Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
 - 1. Include font sizes and styles, an explanation of the rationale for the nomenclature, and a key, which defines the descriptors and designators of the labeling system.
 - 2. Proposed labels must be permanently installed and not handwritten.
 - 3. Submit examples of the proposed labels, tags and markers for access points and antennas.
- G. Submit appropriate cut sheets and samples of products as detailed in project specifications. Submittals shall be in electronic PDF format.
- H. Work shall not proceed without the approval of the submitted items.
- I. Project Submittals Requirements:
 - 1. The pre-construction submittal is required to verify the Contractor will obtain the required product, understands the processes and procedures, and understands the requirements to install, test, certify and create test record documentation for the WLAN System.
- J. The Submittal package is to be delivered for approval prior to commencement of Work, no later than twenty (20) days after issuance of Notice to Proceed.
- K. Submittals beyond the original submittal and one resubmittal will result in charges to the Contractor (charged for third and any subsequent reviews).
 - 1. Additional review fees will be at the prevailing rate in effect at the time that the additional review(s) is (are) required.
- L. Provide a chronological schedule of work in bar chart form. Revise and resubmit schedule as required to reflect construction progress.
- M. Provide Mean Time between Failure rates on all proposed equipment.

1.12 QUALIFICATIONS

- A. Project Manufacturer's Qualifications:
 - 1. Installer's qualifications information to be provided with RFP Response. Installer must be a certified reseller of equipment manufacturer. Provide all up to date certifications received from manufacturer(s). Firms and individuals must be experienced in the installation of systems similar in complexity to those required for this project and meet the following:
 - a. At least five years' experience with equipment and systems of the specified types.
 - b. Successful installation of at least two comparable scale projects within the last five years.
 - c. With the bid return, demonstrate the potential Installer has:
 - 1) Adequate plant and equipment to complete the work.
 - 2) Adequate staff with commensurate technical experience and certifications; they shall remain assigned to the project for the duration of the project.
 - 3) Financial status (i.e., bonding and materials purchase capacity) to meet the obligations of the work.
 - 4) References from three (3) or more users of similar scale projects performed by Installer including company, contact name, title, phone number and email address.

1.13 ALTERNATES

- A. WLAN 001 – Portable Field Coverage WLAN System - The playing field areas may require temporary WLAN coverage for concerts and other events where attendees are located on the playing field. Assume 9,000 on-field seats worst case when configured for a mid-field stage (in the round).
 - 1. Assume 70% concurrent users' worst case. Design, furnish and install a portable system that can be temporarily deployed for field Wi Fi coverage. Solution must consider sightline obstructions to stage locations.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Products quantity is as required. Some product listed may not be required to fulfill the obligations of the Scope of Work.
- B. Equipment and materials shall be new and conform to applicable UL or ANSI provisions.
- C. Regardless of the length or completeness of the descriptive paragraph herein, provide Products complying with the specified manufacturer's published specifications.

2.2 WIRELESS LAN CONTROLLERS

- A. Acceptable Manufacturers:
 - 1. Cisco
 - 2. Ruckus
 - 3. Aruba
 - 4. As Approved by University

2.3 WI-FI APPLICATION SERVERS

- A. Acceptable Manufacturers:
 - 1. Cisco Systems
 - 2. Ruckus
 - 3. Aruba
 - 4. As approved by University

2.4 ACCESS POINTS

- A. Acceptable Manufacturers:
 - 1. Cisco Systems
 - 2. Ruckus
 - 3. Aruba
 - 4. Everest
 - 5. As approved by University

2.5 ANTENNAS

- A. Acceptable Manufacturers:

1. Cisco Systems
2. Ruckus
3. Aruba
4. Everest
5. As approved by University

2.6 ENCLOSURES, ACCESS POINTS

- A. Acceptable Manufacturers:
1. AMPThink
 2. Oberon
 3. As approved by University

2.7 LAN CORE SWITCHES

- A. Acceptable Manufacturers:
1. As approved by University

2.8 LAN POE ACCESS SWITCHES

- A. Acceptable Manufacturers:
1. As approved by University

2.9 LAN ROUTER

- A. Acceptable Manufacturers:
1. As approved by University

2.10 LAN FIREWALL

- A. Acceptable Manufacturers:
1. As approved by University

2.11 STRUCTURED CABLING SYSTEM – HORIZONTAL LINKS

- A. Acceptable Manufacturers – Ortronics-Superior Essex
1. Minimum Category 6A
 2. Connectors compliant with selected Category of horizontal link cabling
 3. Rack mount patch panel 24 or 48 and compliant with selected Category of horizontal link cabling
 4. Faceplates and surface mount connector housing
 5. Patch cords at devices and at patch panel end, for 100% of APs installed
 6. As approved by University

2.12 STRUCTURED CABLING SYSTEM – FIBER OPTIC BACKBONE

- A. Acceptable Manufacturers – Corning

1. Single-mode armored fiber optic cable from each WLAN telecom space to the WLAN fiber optic MDF. Size to accommodate LAN design requirement.
 - a. Cabling strand count sizing to accommodate a minimum of 6 spare strands.
2. LC connectors, factor terminated splice connectors
3. Fiber optic patch panel with LC shuttered duplex splice cassettes
4. Fiber optic patch panels compatible with splice cassettes

PART 3 - EXECUTION

3.1 GENERAL

- A. Coordinate incorporation of the Work specified herein with existing systems and any other, ongoing discipline/trade work.
- B. Mount equipment and enclosures plumb and level.
- C. Permanently installed equipment to be firmly and safely held in place. Design equipment supports to support loads imposed with a safety factor of at least five.
- D. Take appropriate precautions against electrostatic discharge (ESD). Establish a personal ground before handling electronic equipment using a grounded wrist wrap and/or an anti-static floor pad.
- E. Any enclosure mounted above seating bowl and over the public's head must be secondarily secured to structure with aircraft grade cable/safety strap.
- F. Take appropriate precautions to protect the equipment from damage during installation. Equipment shall be installed free of damages, scratches, dents, etc.
- G. All miscellaneous outdoor mounting parts that are metal must be grade 316 stainless steel.

3.2 INSTALLATION OF WLAN SYSTEM

- A. Provide manufacturer-certified professional labor services:
 1. Provide a single project team that will manage implementation of the network as specified.
 2. Coordinate any 3rd party resources or subcontractors.
 3. Provide a single project manager for duration of project.
 4. Prepare, maintain, and update the Project Timeline.
 5. Attend weekly project meetings as directed by University.
 6. Create meeting minutes, action items and distribute.
 7. Perform site survey of low voltage infrastructure and of all telecom spaces. Perform inspections for power, rack space, fiber connections, and other interconnection issues. Notify University WLAN technical representative of any problems in writing.
 8. Attend multiple client meetings to discuss specific applications and functionality as well as technical coordination issues.
 9. Attend multiple technical meetings with 3rd parties to assure technical coordination and configuration.
 10. Participate in technical review meetings to assist in determining network and wireless requirements. Review business requirements and technical architecture with University.
 11. Perform WLAN predictive survey and modeling; obtain University approval. Perform active WLAN RF survey to prove predictive model and document results including drawings with RSSI coverage heat maps.

12. Create high-level wireless design and low-level wireless design documentation; obtain University.
13. Furnish WLAN enclosure, AP and antenna drawings and mounting details.
14. Provide University drawings of the various types of enclosures and mountings.
15. Review University security requirements that impact wireless network configuration and operation.
16. Develop detailed wireless network design including physical connectivity, IP addressing, VLAN schemes, access point to controller access method and access point power issues.
17. Identify and label all AP and antenna locations on drawings.
18. Recommend enclosure, antenna, and mounting hardware for University approval.
19. Develop channel and AP power plan.
20. Design, configure, test, review and document WLAN system and software.
21. Develop WLAN authentication and security plan with access privileges.
22. Develop WLAN security roles & policies and submit for approval.
23. Create SSID names and pass phrases.
24. Coordinate WLAN internet access rate limiting for various SSID's.
25. Send all submittals and surveys to University WLAN technical representative for approval prior to ordering equipment.
26. Track hardware orders, delivery dates and manage delivery issues, as required.
27. Prepare implementation and testing plans.
28. Receive and inventory equipment.
29. Record equipment serial numbers, maintain records as part of the managed service agreement
30. Unpack and assemble each device.
31. Perform on and off-site equipment staging, configuration, burn-in and testing.
32. Deliver equipment to secured location at job site and inventory.
33. Install equipment into provided equipment racks, coordinate with University IT.
34. Rent scissor lifts to mount enclosures, access points and antennas as required.
35. Install enclosures, access points and antennas.
36. Record all access point and other MAC addresses in an Excel spreadsheet or equivalent database as specified elsewhere herein.
37. Configure IP addresses for management interfaces.
38. Configure time synchronization for all servers and other network equipment.
39. Ensure all equipment provided is configured properly for SNMP community names, VLAN's, and 802.1Q VLAN Trunks.
40. Test all wireless systems and 3rd party applications.
41. Test internet connectivity from Wi-Fi clients.
42. Test Wi-Fi clients for connectivity using 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax clients, specifically Apple, Samsung, and LG smartphones, as well as Microsoft and Apple tablets and laptop devices. Roam and troubleshoot, as necessary.
43. Test 3rd party Wi-Fi handheld ticket scanning devices and ensure they reliably interoperate with the intended system.
44. Test 3rd party food and beverage handheld ordering devices and ensure they reliably interoperate with the intended system.
45. Execute test and redundancy failover plans.
46. Cutover network.
47. Troubleshoot and optimize system.
48. Turn over complete system documentation and as-built drawings to University.
49. Perform acceptance testing until University is satisfied and accepts wireless network.
50. Ensure system is designed and operating per manufacturer's best practices and design guide references.

3.3 LABELING OF WLAN EQUIPMENT

- A. Provide identifiers, labeling and records following University's technical design guidelines and meeting TIA 606-A standard.
- B. Provide typed label on access point and enclosure detailing access point identifier and associated cable number. Label shall be permanent engraved plastic type.
- C. Label horizontal link and backbone fiber optic backbone cabling provided as part of this project.
- D. Handwritten labels are not acceptable.

3.4 COMMISSIONING

- A. Prior to energizing or testing the System ensure the following:
 - 1. Products are installed in proper and safe manner according to manufacturer's instructions.
 - 2. Dust, debris, device packaging, etc. is removed.
 - 3. Antenna and access point cabling are dressed, routed, and labeled; connections are consistent with regard to polarity.
 - 4. Labeling has been provided.
 - 5. Products are neat, clean, and unmarred and parts securely attached.
 - 6. Finishes marred during installation, including ceiling tiles and supports, walls, doors, railings, and previously painted surfaces, etc. have been replaced or properly repaired, and debris cleaned up and discarded.
 - 7. Store extra materials, attic stock, equipment, tools, and spares on the premises as directed by the University.

3.5 ACCEPTANCE TESTING

- A. Notify University's project technical representative upon completion of the Scope of Work and system is ready for inspection and testing.
- B. Provide two persons familiar with aspects of the system to assist the University IT technical representative during acceptance testing. One of the available individuals must have specialized knowledge of the WLAN system and function of the system.
- C. Prior to conducting acceptance testing Contractor must deliver to the University's project technical representative in a written notification of the test commencement date and the sequence of testing.
 - 1. If the Contractor elects to commence testing in a phased approach, prior to completion of cable installation, a test sequence schedule must be provided.
 - 2. Notification must be delivered to the University's project technical representative at least three weeks prior to the scheduled test date.
 - 3. Upon receipt the University's project technical representative will confirm within 72 hours the University's technical representative staff is available.
- D. The process of acceptance testing the WLAN System may necessitate moving and adjusting certain component parts; perform such adjustments without claim for additional payment.
- E. Final Acceptance shall occur after system has functioned substantially for six (6) events chosen by the University.
- F. Substantially is defined as;

1. 95% successful test connections made by random mobile smartphones of various types during major events with a minimum of 50 megabits per second download and 25 megabits per second upload throughput rates.
 2. WLAN system usage reports proving 50% simultaneous connections or maximum incurred during a sold-out event, whichever is less.
 3. 99.9% system uptime as measured between completion of the scope of work and acceptance testing.
- G. Other acceptance tests include:
1. SSID's are being received by clients in the appropriate areas of the stadium.
 2. Verification of VLAN assignments.
 3. Verification of RSSI signal strength in all areas.
 4. Testing of IP address management/DNS and DHCP capabilities.
 5. Network management usage statistics will be provided to University.
 6. Verification that excessive RF bleeding beyond perimeter of stadium is not occurring.
 7. Verification of connectivity by a number of different tablets, smartphones, scanners, and laptops with varying operating systems.
 8. Installed and loose equipment will be inventoried for correct quantity.
 9. Verification of manufacturer support and break/fix response times and coverage duration.
- H. In the event the need for further adjustment or work becomes evident during setup and/or acceptance testing, the Installer will continue work until the system is acceptable at no addition to the contract price. If approval is delayed because of defective equipment, or failure of equipment or installation to meet the requirements of these specifications, the Installer shall pay for additional time and expenses incurred by consultants or University's representatives.
- I. Final Inspection Notification Report. Provide a PDF of a tabular or spreadsheet commissioning report for each piece of equipment and the entire system including:
1. A complete listing of every piece of equipment indicating manufacturer's model number, part number and serial number, the date it was tested and by whom, the results and date re-tested (if failure occurred during any previous tests).
 2. The IP address submittal for each access point. This copy shall be marked with IP addresses during Final Inspection and returned as the record of deficiencies that occurred during inspection.
 3. Horizontal link and fiber optic cable test report.
 4. The final report shall indicate that every device tested successfully.
 5. Certification indicating the WLAN System has met manufacturer testing requirements and best practices.
 6. Certification that the Scope of Work is complete, physical inspection of each component of the system has been made and is properly installed, and each component is properly functioning as published by the manufacturer of the component.

3.6 TEST AND CERTIFICATION – STRUCTURED CABLING SYSTEM

- A. Horizontal twisted pair testing
1. The horizontal distribution cable must be tested to perform in accordance with ANSI/TIA-568-C. Cables must meet or exceed the requirements for horizontal, twisted pair cabling as specified in ANSI/TIA 568-C for a "PERMANENT LINK" test.
 2. Any cable, which fails any given test, must be corrected or replaced. Such activity must be performed at no additional cost to the University.
 - a. Only cables with PASS results will be accepted. Results that show PASS* will be considered a failed test.

- b. PASS* tests will be accepted if written approval is provided from the manufacturer providing the extended performance warranty on the system stating that these cable segments will be covered by the extended warranty.
- B. Fiber cable testing
- 1. Fiber-optic cabling must be tested with power meter and OTDR (Tier 2) bi-directionally at both 1310 nanometer (nm) and 1550 nm operating windows in accordance with ANSI/TIA-568-C.3.
 - 2. The Contractor must submit a cable certification report for each cable/strand both A-B and B-A with test results for the following categories:
 - a. Max. Attenuation
 - b. Min. BW (Db/km)
 - c. (Mhz-km)
 - d. OTDR traces
 - 3. Cable certification reports must bear the location/room number and cable identifier for each cable tested. Test results/reports in electronic copies by closet must be delivered according to the submittal procedures.
 - 4. Deliver an electronic file containing all individual test records and the software required to display and print the test records using a typical personal computer (PC).
 - a. Deliver test results in a PDF format.

3.7 CLOSEOUT SUBMITTALS

- A. Provide each submittal PDF file with the project title and submittal number.
 - 1. Transfer media, CD/DVD, or memory stick shall be labeled with same information.
- B. Segregate documents into separate folders containing data relevant to operational, maintenance, and warranty issues.
 - 1. Manufacturer's data sheets for all equipment installed shall be included.
 - 2. Where manufacturer registration or licensing is required, provide copy.
 - a. Register warranty in the Managed Service Provider's name and address
 - 3. Provide system network typology and wiring diagrams.
 - 4. Provide as-built drawings that indicate:
 - a. The actual locations of device/device data outlet
 - b. Pathways and pathway fill
 - c. Media identification information at each device/device data outlet
 - d. Locations of equipment racks with room number with rack identifier
 - e. Equipment rack layout detail drawings
 - f. Provide University copies of "as-built" drawings on CD media in AutoCAD, Revit and PDF format.
 - 5. Warranty and Maintenance:
 - a. Statement of warranty commencement date, length of warranty, and all warranty certificates issued by manufacturer.
 - b. Provide a list of contact names, telephone numbers, and hours of operation for normal warranty service.
 - c. Provide a contact name/number for 365/7/24 emergency warranty service with an explanation of limiting conditions if applicable.
 - d. Include maintenance phone number(s) and hours; maintenance schedule; description of products recommended or provided for maintenance purposes, and instructions for the proper use of these products.
 - e. Manufacturer data sheets and installation manuals/instructions for all equipment installed shall be included.
 - 6. Structured Cabling System Test Report CD(s)

- a. Results of fiber optic tests;
 - 1) The test records are to be a full test report of individual copper media and fiber optical media test results for each fiber-optic cable strand.
 - 2) The test record must include information regarding the building, closet, patch panel and "port" number of the patch panel; the test device type and ID, the name of the test technician performing the test, and the date and time that the test was conducted.
- b. The test records are to be placed in a "Test Record" file in ascending sequential order by building, closet and patch panel.
- c. Provide an electronic file containing all individual test records and the software required to display and print the test records using a typical personal computer (PC).

3.8 TRAINING

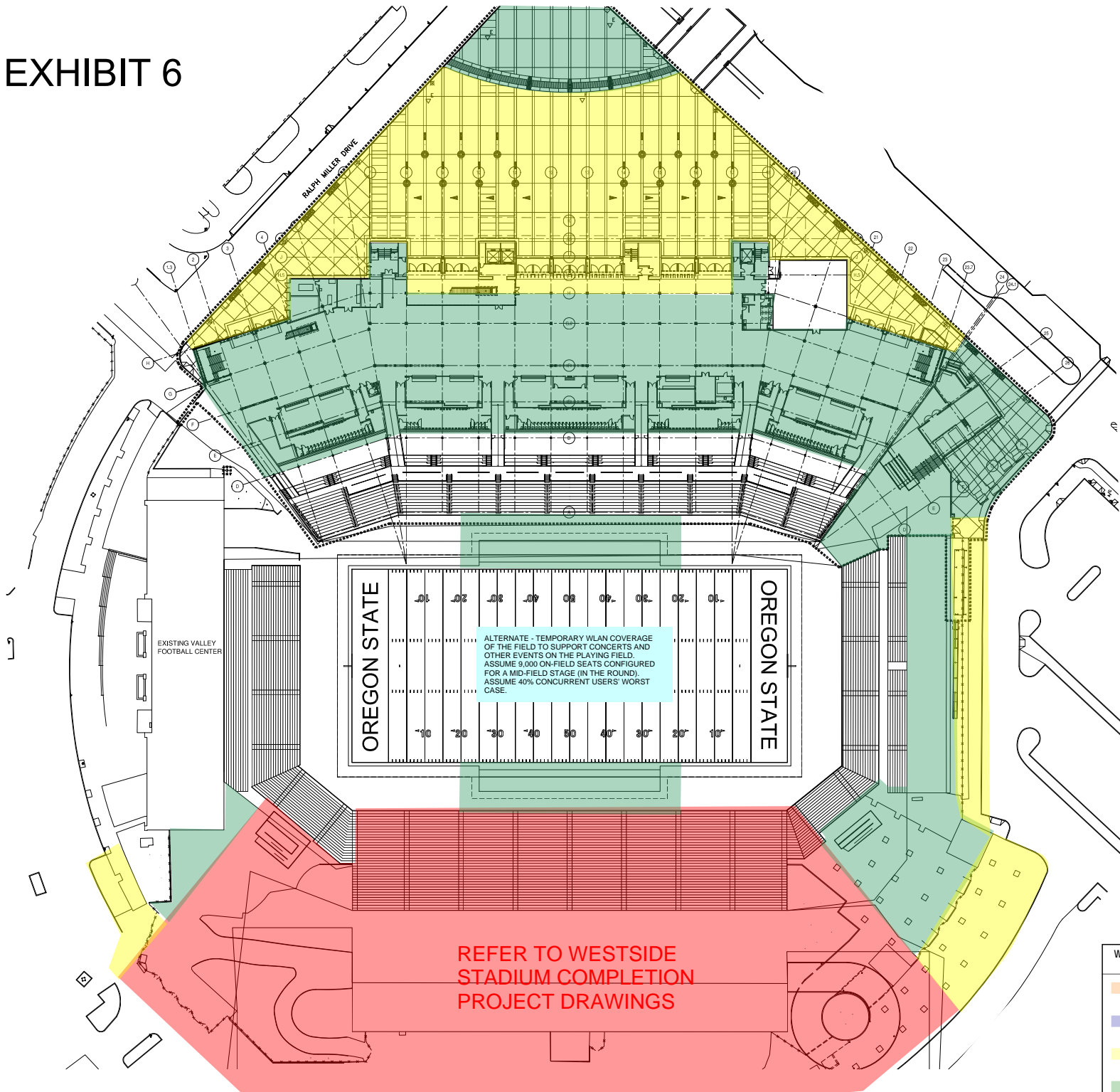
- A. Refer to RFI

3.9 WARRANTY

- A. Refer to RFI

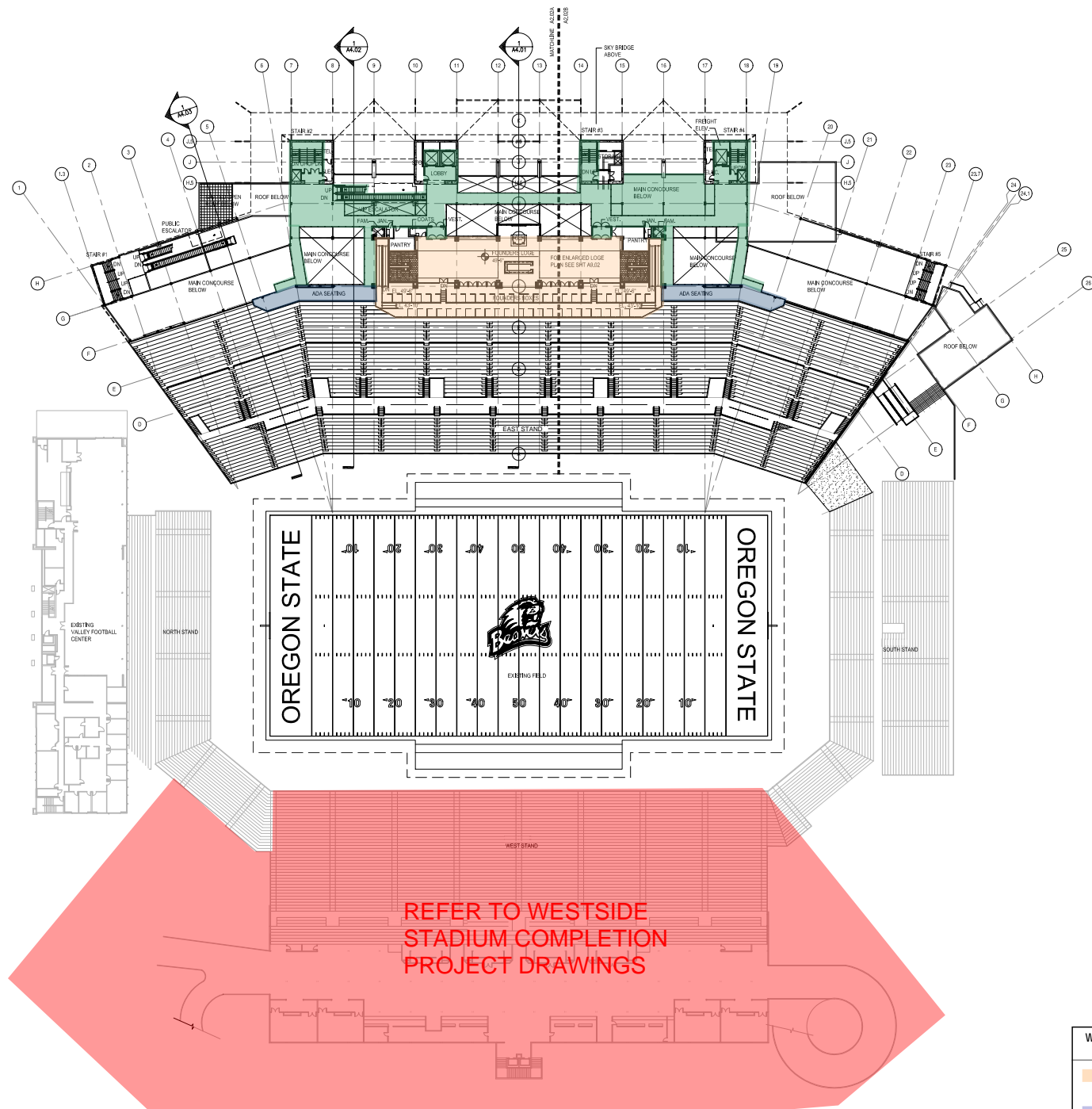
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EXHIBIT 6



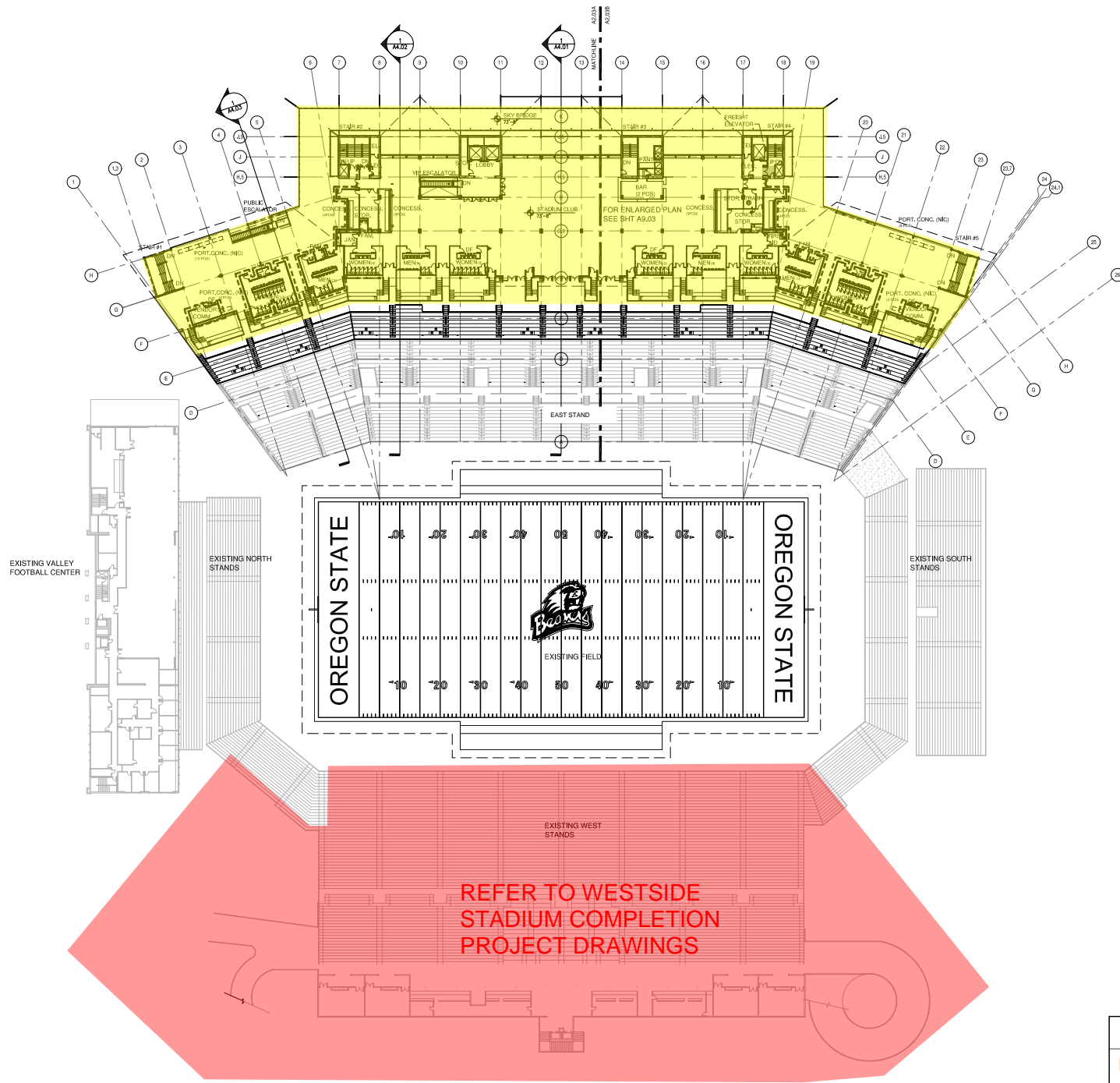
WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
■	(1) AP PER 30 SEATS
■	(1) AP PER 50-75 SEATS
■	(1) AP PER 400 SQ FT
■	(1) AP PER 1200 SQ FT

OVERALL PLAN-MAIN CONCOURSE



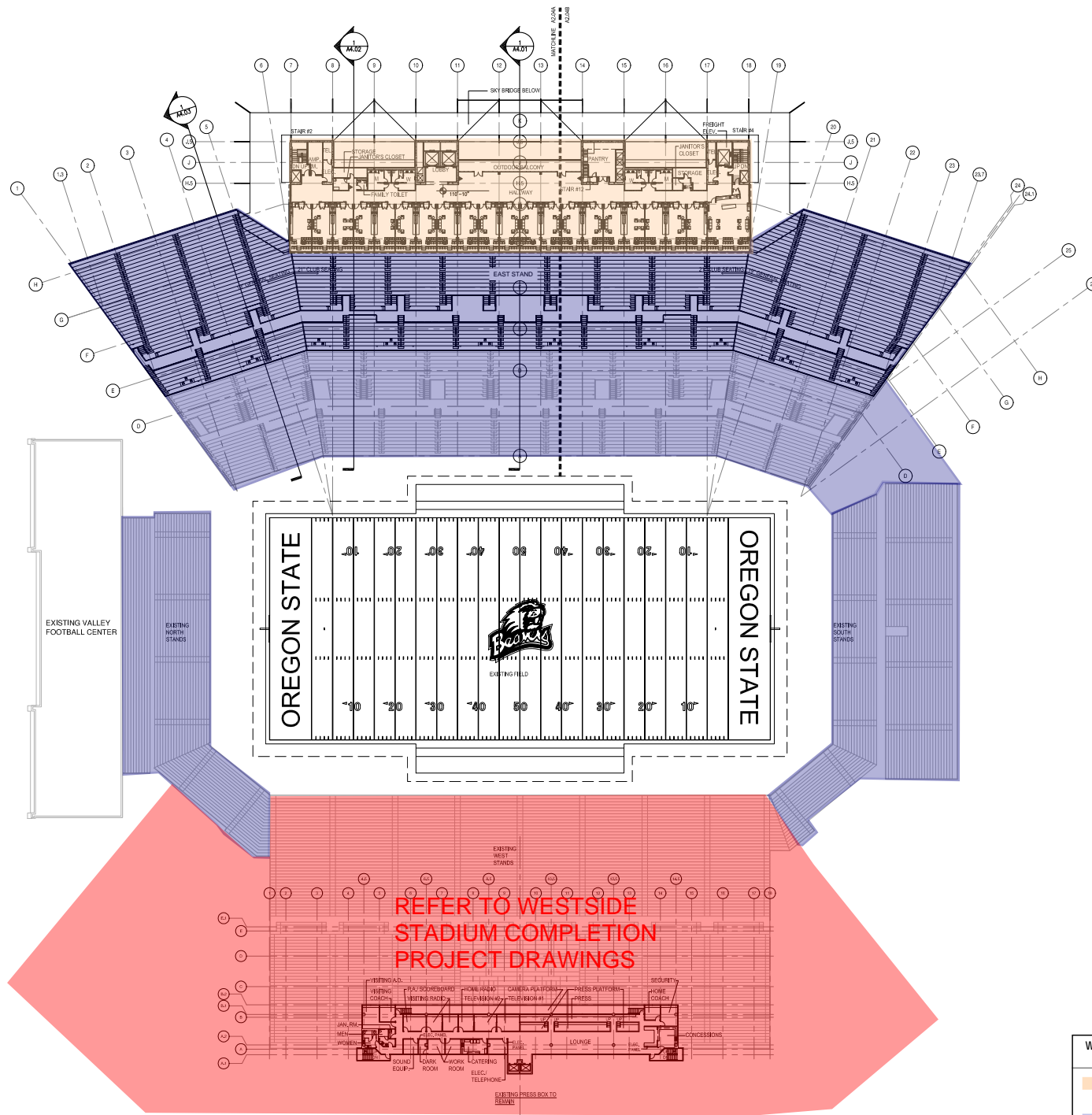
OVERALL PLAN - FOUNDER'S CLUB

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
	(1) AP PER 30 SEATS
	(1) AP PER 50-75 SEATS
	(1) AP PER 400 SQ FT
	(1) AP PER 1200 SQ FT



OVERALL PLAN - CLUB/UPPER CONCOURSE

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
	(1) AP PER 30 SEATS
	(1) AP PER 50-75 SEATS
	(1) AP PER 400 SQ FT
	(1) AP PER 1200 SQ FT

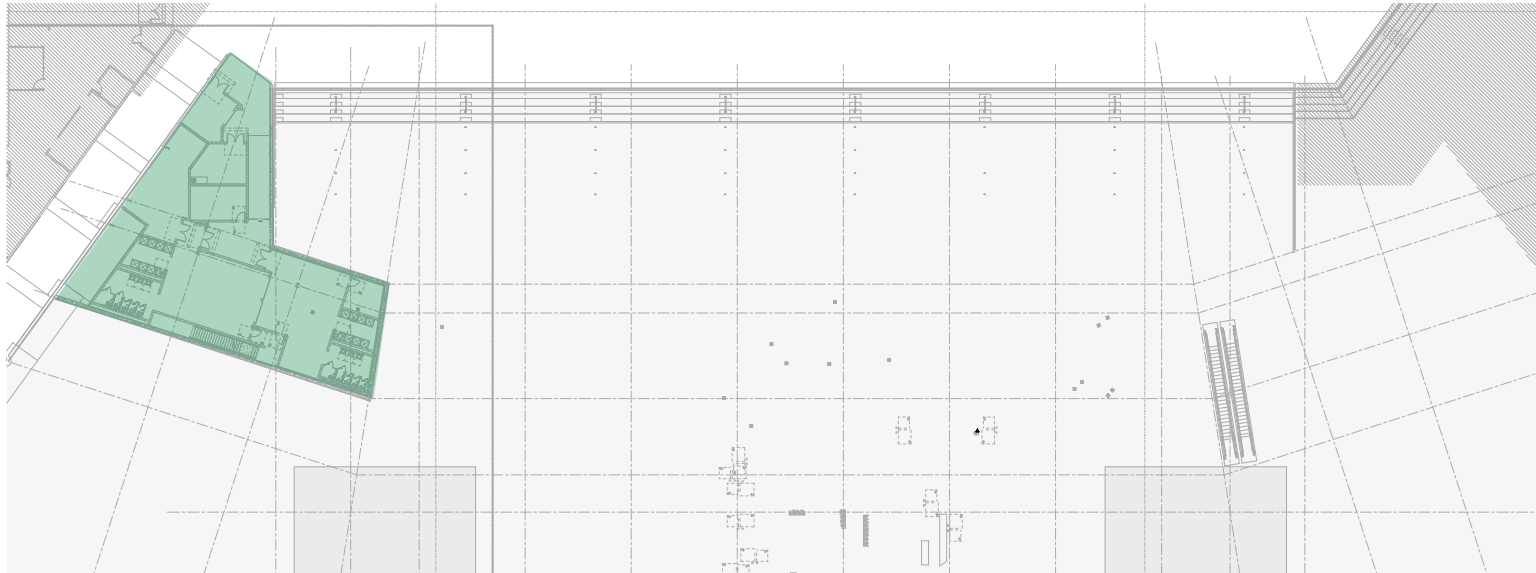


**REFER TO WESTSIDE
STADIUM COMPLETION
PROJECT DRAWINGS**





**WIFI ACCESS POINT DENSITY
BASIS OF DESIGN**

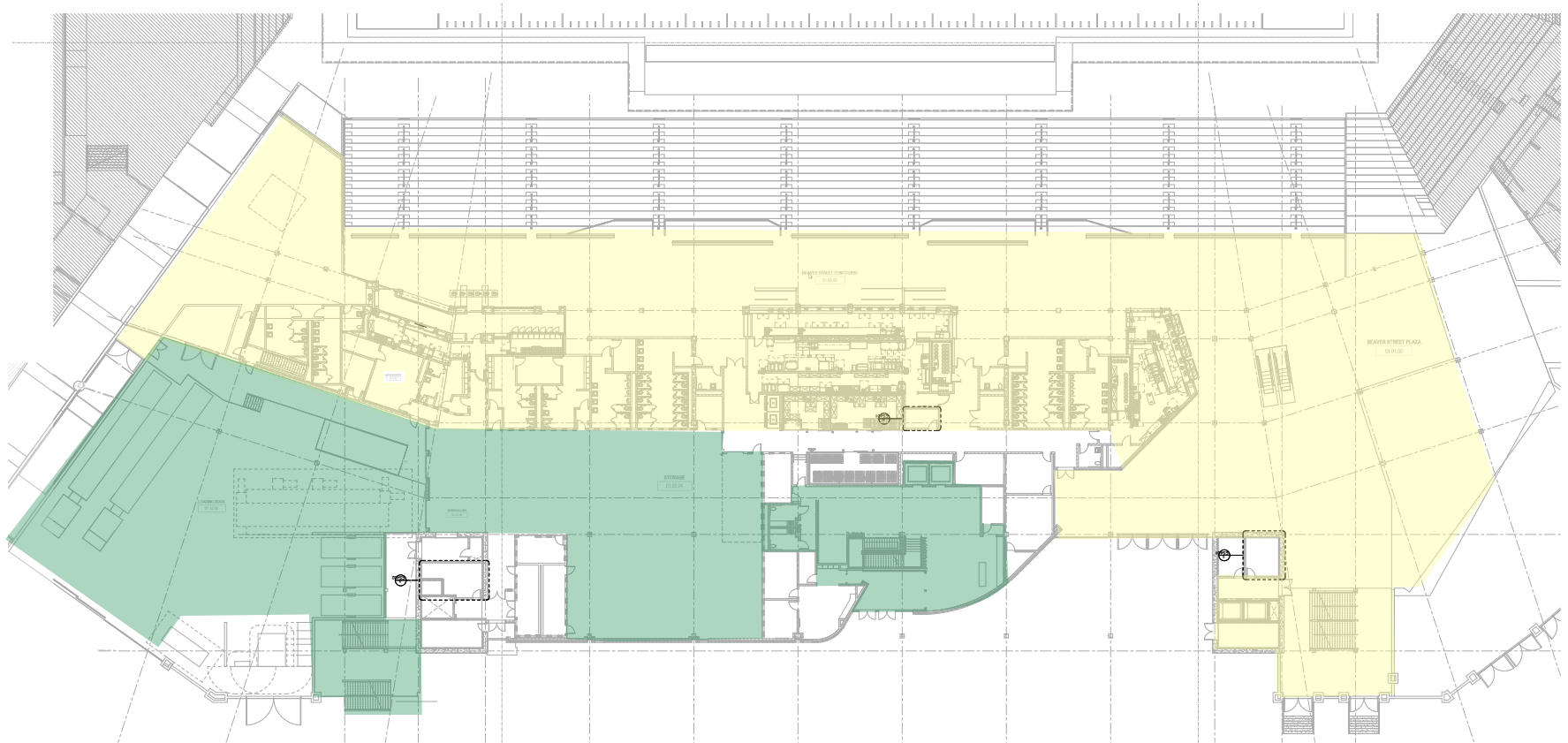
- (1) AP PER 30 SEATS
- (1) AP PER 50-75 SEATS
- (1) AP PER 400 SQ FT
- (1) AP PER 1200 SQ FT

OVERALL PLAN - SUITE LEVEL



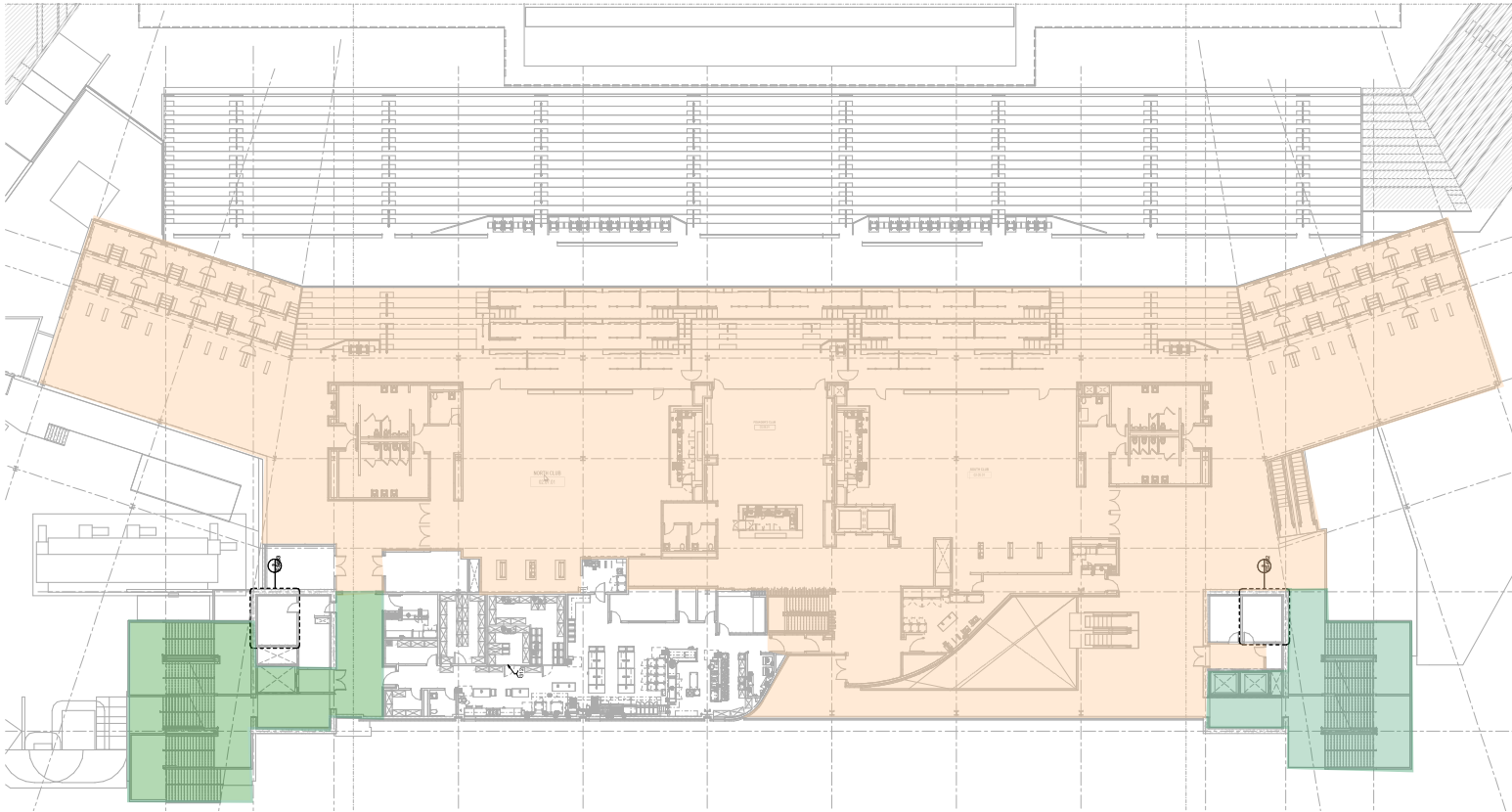
WESTSIDE STADIUM COMPLETION PROJECT SERVICE LEVEL

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
	(1) AP PER 30 SEATS
	(1) AP PER 50-75 SEATS
	(1) AP PER 400 SQ FT
	(1) AP PER 1200 SQ FT



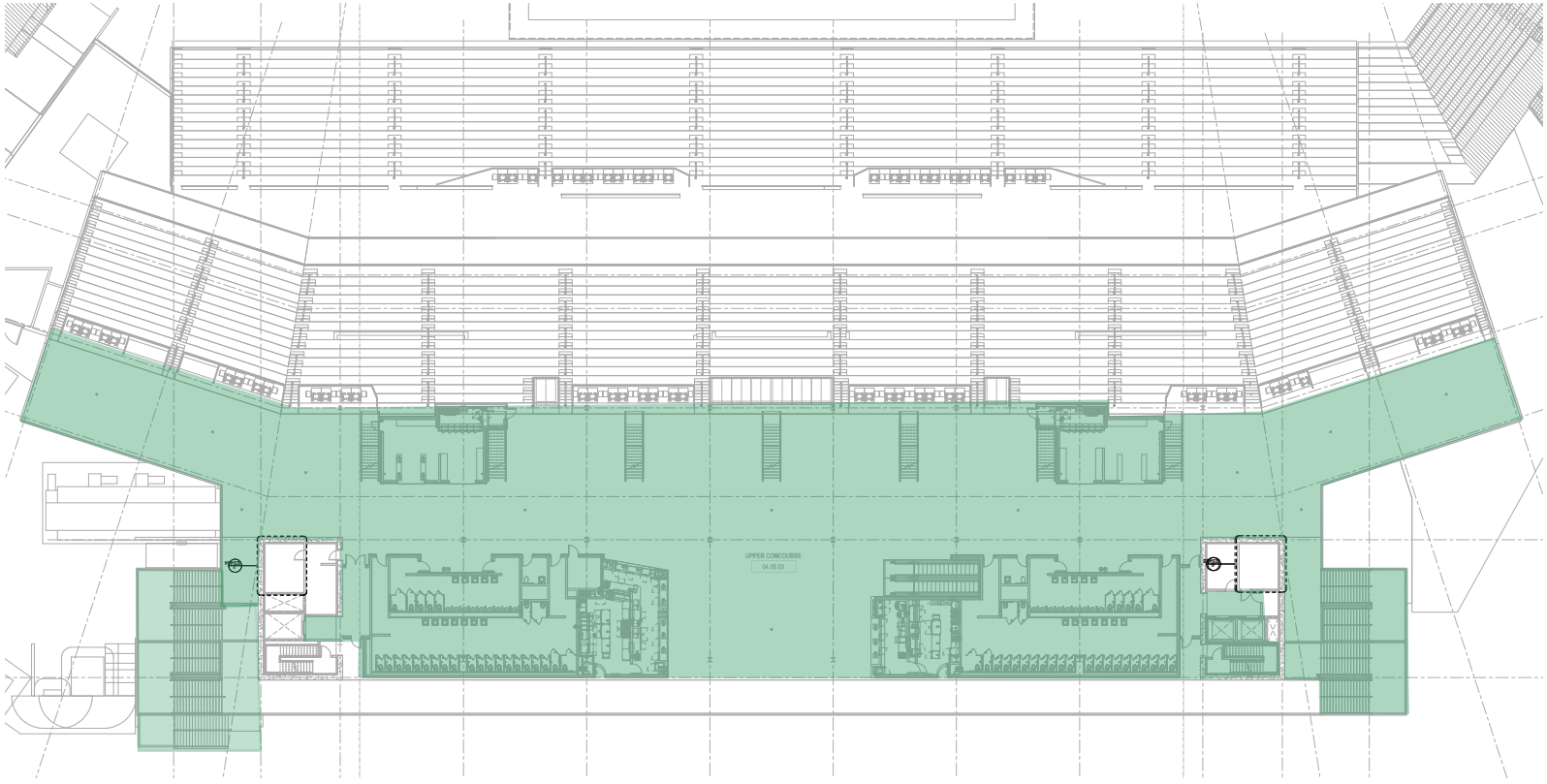
WESTSIDE STADIUM COMPLETION PROJECT BEAVER STREET LEVEL

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
■	(1) AP PER 30 SEATS
■	(1) AP PER 50-75 SEATS
■	(1) AP PER 400 SQ FT
■	(1) AP PER 1200 SQ FT







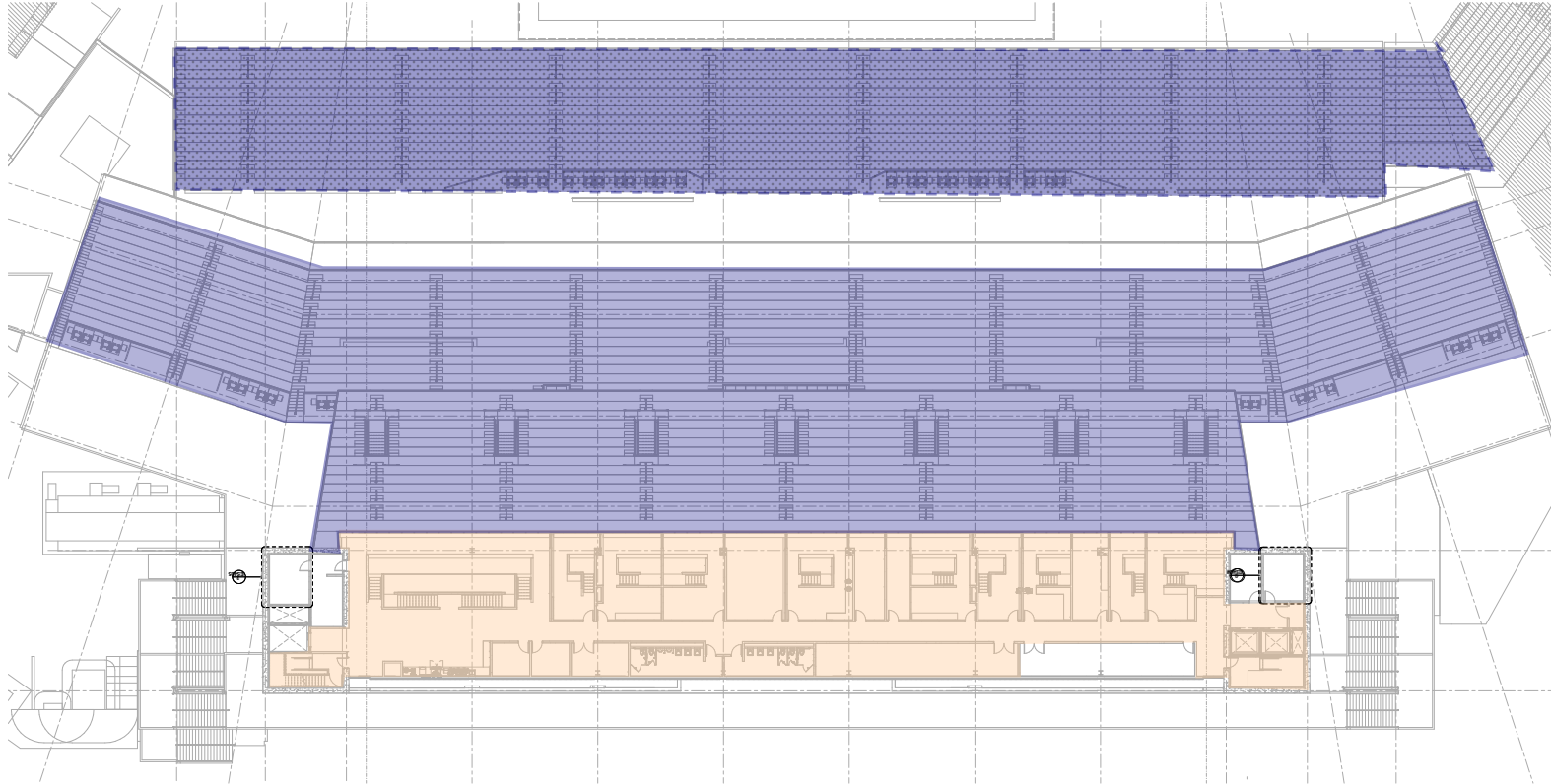
WESTSIDE STADIUM COMPLETION PROJECT CLUB LEVEL

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
Orange	(1) AP PER 30 SEATS
Blue	(1) AP PER 50-75 SEATS
Yellow	(1) AP PER 400 SQ FT
Green	(1) AP PER 1200 SQ FT



WESTSIDE STADIUM COMPLETION PROJECT UPPER CONCOURSE LEVEL

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
	(1) AP PER 30 SEATS
	(1) AP PER 50-75 SEATS
	(1) AP PER 400 SQ FT
	(1) AP PER 1200 SQ FT



WESTSIDE STADIUM COMPLETION PROJECT PRESS LEVEL

WIFI ACCESS POINT DENSITY BASIS OF DESIGN	
	(1) AP PER 30 SEATS
	(1) AP PER 50-75 SEATS
	(1) AP PER 400 SQ FT
	(1) AP PER 1200 SQ FT