CONTRACT DOCUMENTS
FOR THE
CONSTRUCTION OF

Public Safety Center
3rd Floor Improvements

Project No.: 24ARPA12

CITY OF ROSEBURG
PUBLIC WORKS DEPARTMENT
DOUGLAS COUNTY, OREGON

PREPARED BY:
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Wilson Architecture Inc.
86530 Sanford Rd.
Eugene, OR 97402

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CITY OF ROSEBURG
ADVERTISEMENT FOR BID

Project Name: **Public Safety Center 3rd Floor Improvements**
Project Number: **24ARPA12**
Project Description: The project is located on the 3rd floor of the Roseburg Public Safety Center in downtown Roseburg. The improvements include office improvements for the north end of the building that is currently partially finished (approximately 1,775 sf), and converting a storage room into two single occupant shower rooms (approximately 175 sf).

The proposed work generally consist includes wall framing, roofing repair at new equipment and penetrations, interior relites, doors and frames, gypsum board finishes, flooring, ceiling, tile, painting, toilet accessories, plumbing, HVAC, lighting, power, fire alarm modifications, and fire sprinkler modifications in the impacted areas.

If applicable: Non-Mandatory Prebid Meeting: Thursday, October 17, 2024
Location: Lobby at 700 SE Douglas Ave.

Bids are due by 2:00 p.m. on Tuesday, November 5, 2024
All bids will be opened at 2:00 p.m.
Additional forms disclosing first tier subcontractors are due by 4:00 p.m.
No bids shall be received after this date and time.

Contact – Submit bids to:
City of Roseburg City Recorder
900 SE Douglas
Roseburg OR 97470
(541) 492-6866
bids@roseburgor.gov

Address Technical Questions to:
Curt Wilson
Wilson Architecture Inc.
86530 Sanford Rd.
Eugene, OR 97402
541-912-0878
curt@wilson-architecture.com

SOLICITATION DOCUMENTS: Solicitation documents, including contract terms, conditions, specifications, all attachments and/or addenda for the Invitation to Bid are available for review at the above contact address. Bid documents will not be mailed to prospective bidders, but may be downloaded from OregonBuys through the following internet address: https://www.oregon.gov/das/Procurement/Pages/oregonbuys.aspx. Bidders without access to OregonBuys may download the documents at a Plan Center or the City of Roseburg's website at www.cityofroseburg.org under "Bidding Opportunities."

Bidders are not required to be pre-qualified in accordance with the laws of Oregon and the Information to Bidders at least ten days prior to the date of bid opening. Bidders must be licensed with the Oregon Construction Contractors Board and comply with City of Roseburg Municipal Code.

The resulting public works contract is subject to ORS 279C.800 to 279C.870 or the Davis-Bacon Act (40 U.S.C. 3141 to 3148). No bid will be considered unless the bid contains a statement that the bidder will comply with the provisions of ORS 279C.840 (Prevailing Wage Rates).

INVITATION TO BID

The City of Roseburg will receive sealed bids or bids submitted via email marked **"Bid for Public Safety Center 3rd Floor Improvements. 24ARPA12** until the hour of 2:00 p.m. on **Tuesday, November 5, 2024**, at which time they will be publicly opened and read in person or virtually. If opened virtually, a link will be posted on the City's website at https://www.cityofroseburg.org/bidding no later than 24 hours prior to the opening. When required by ORS 279C.370, bidders must submit a list of their first-tier subcontractors providing labor, or labor and materials, no later than 4:00 p.m. that same day. Bids shall be addressed and delivered to Amy Nytes, City Recorder, City Hall, 900 SE Douglas Avenue, Roseburg, Oregon 97470, or emailed to bids@roseburgor.gov. Any and all bids received after the 2:00 p.m. deadline for submission, or for which the list of first-tier subcontractors has not been submitted by 4:00 p.m. that same day, shall be considered nonresponsive and returned to the bidder. All bidders must list their "Construction Contractors Board" or "State Landscape Contractors Board" license number as required by ORS 701.021 or 671.530 on the bid form.

The project is located on the 3rd floor of the Roseburg Public Safety Center in downtown Roseburg. The improvements include office improvements for the north end of the building that is currently partially finished (approximately 1,775 sf), and converting a storage room into two single occupant shower rooms (approximately 175 sf).

The proposed work generally consist includes wall framing, roofing repair at new equipment and penetrations, interior relites, doors and frames, gypsum board finishes, flooring, ceiling, tile, painting, toilet accessories, plumbing, HVAC, lighting, power, fire alarm modifications, and fire sprinkler modifications in the impacted areas. The bids will be evaluated as lump sum without additive or deductive alternates pursuant to OAR 137-049-0380(2)(a). The proposed work will require the bidder to meet the highest standards prevalent in the industry or business related to the work to be performed. Failure to meet such standards may result in a reduction or withholding of payment; require bidder to provide, at bidder's own expense, additional work required to meet such standards; or termination of the contract, with damages being sought. Technical questions regarding the work to be performed should be addressed to:

Curt Wilson
Wilson Architecture
86530 Sanford Rd.
Eugene, OR 97402
541-912-0878
curt@wilson-architecture.com

Bids must be accompanied by a certified check, cashier's check, irrevocable letter of credit or Bid Bond in an amount equal to not less than ten percent (10%) of the total amount of the bid. Bidders shall state as part of the bid that the provisions of ORS 279C.800 to 279C.870 (Prevailing Wage Rates) shall be complied with; provided however, if the project is subject to the federal prevailing rates of wage under the Davis-Bacon Act (40 U.S.C. 3141 et seq.) or if the project is subject to both the state and federal prevailing rates of wage, the bid must contain a statement by the bidder that contractor and every subcontractor shall pay the higher of the applicable state or federal prevailing rate of wage to all workers on the project. Bidders must also certify as part of the bid that the requirements of ORS 279C.505(2) (Employee Drug Testing Program) shall be complied with. Bidders are not required to be pre-qualified in

accordance with the laws of Oregon and the Information to Bidders. Each bid must contain a statement as to whether the bidder is a resident bidder, as defined in ORS 279A.120. Bidders are not required to be licensed under ORS 468A.720 (Asbestos Abatement). However, the successful bidder shall at all times during the project provide qualified staff on site that is able to identify asbestos containing material. Bidders are hereby notified there are underground pipelines and structures containing asbestos within the City of Roseburg. If any such material is encountered during the project, the bidder shall thereupon be required to notify the City and comply with all requirements of applicable laws and regulations. Unless exempt under ORS 279C.800 to 279C.870, the successful bidder must file a $30,000 Public Works Bond with the Construction Contractors Board prior to beginning work on the project, and certify that all sub-contractors have also filed such bond. Bidders must agree to use recyclable products to the maximum extent financially feasible**. Bidders with 50 or more employees and for contracts over $500,000, are required to possess a certificate issued by the Department of Administrative Services for completion of pay equity training (NEW).**

The City of Roseburg may reject any bid not in compliance with all public bidding procedures and requirements, including the requirement to demonstrate the bidder's responsibility under ORS 279C.375(3)(b), may waive any irregularities, and may reject for good cause any or all bids upon a finding of the City it is the public interest to do so. The City may also cancel this invitation in accordance with OAR 137-049-0270.

Dated this 10th day of October, 2024.

CITY OF ROSEBURG, DOUGLAS COUNTY, OREGON
/s/ Amy Nytes, City Recorder

INFORMATION TO BIDDERS

1. FORM OF BID

All bids must be made upon the blank Bid Form attached hereto and must give a price for each item and an aggregate amount or a lump sum price as required in the Bid Form.

The City reserves the right to reject any or all bids or to accept the bid deemed in the best interest of the City. Without limiting the generality of the foregoing, the City may reject any bid which is incomplete, obscure or irregular; which omits any one or more items in the price sheet; in which unit prices are obviously unbalanced; or which is accompanied by an insufficient or irregular Bid Bond.

The bidder shall sign the Bid Form in the blank space provided therefore. All bids must contain the bidder's tax identification number. Bids made by a corporation, general or limited partnership, or L.L.C., shall contain the name and address of such organization, together with names and addresses of officers, partners or managing members. If the bid is made by a corporation, it must be signed by one of the corporate officers with the authority to sign for the corporation; if made by a partnership, by one of the partners.

All bids must be submitted at the time and place, and in the manner prescribed in the Invitation to Bid.

2. BID PROTEST; REQUEST FOR CHANGE OR CLARIFICATION

A bidder may protest, or request a change in items in the bid documents, including contract terms and conditions or specifications, by filing a written protest with the City not less than ten (10) calendar days prior to the bid submission deadline. Such written protest or request for change must include a detailed statement of the grounds for the protest and a statement of the desired changes to the contract terms and conditions or specifications.

The City shall not consider a bidder's protest or request for change after the deadline for submitting such protest or request. The City shall provide notice to the bidder if it entirely rejects the bidder's protest or request for change. If the City agrees with the bidder's protest or request, in whole or in part, the City shall issue a written Addendum to the bid documents or specifications.

Prior to the deadline for submitting a written protest or request for change, a bidder may request that the City clarify any provision of the bid documents. The City's clarification to a bidder, whether orally or in writing, shall not change the bid documents and is not binding on the City unless the City amends the bid documents by issuing a written addendum.

If a written addendum is issued by the City, all bidders must provide written acknowledgement, with their bids, of receipt of all issued addenda.

3. CONTRACT DOCUMENTS

The Contract Documents for this Project consist of, but are not necessarily limited to, the Invitation to Bid, Information to Bidders, Bid Form, Construction Contract including Exhibit "A" Standard City Contract Provisions, First-Tier Subcontractor Disclosure Form, Drug Testing Program Certification Form, Bidder's Responsibility Form, Performance Bond, Payment Bond, Public Works Bond Filing Certification form (when required), Pay Equity Compliance Certification (when applicable), General Conditions, Technical Provisions, Special Conditions, Standard Drawings, Specifications and Plans and Supplemental Specifications, all as required for the full execution and satisfactory completion of the Project. Any person contemplating the submission of a bid and being in doubt as to the meaning or intent of said Contract Documents should request of the City, in writing, an interpretation thereof. Any interpretation of said Contract Documents shall be made only in writing by the City.

4. ESTIMATE OF QUANTITIES

The estimate of quantities of work to be done as stated in the Bid Form, although stated with as much accuracy as possible, is approximate only and is assumed solely for the purpose of comparing bids. The quantities on which payments will be made to the Contractor are to be determined by measurement of the work actually performed and paid at the unit price bid, regardless of the amount of increase or decrease in the estimated quantities as specified in the Contract Documents. The City reserves the right to increase or diminish the amount of any class of work as may be deemed necessary.

5. CONSTRUCTION CONTRACTORS' BOARD - STATE LANDSCAPE CONTRACTORS' BOARD

All contractors bidding on public contracts must be licensed with the Construction Contractors' Board or the State Landscape Contractors Board as required by ORS 701.021 or 671.530. Bids must be identified with the Contractors' Board license number. No bids will be considered without this information.

6. DISCLOSURE OF FIRST-TIER SUBCONTRACTORS

When a public improvement contract value is greater than $100,000, all bidders are required to disclose information about first-tier subcontractors, providing labor or labor and materials, when the contract amount of such first-tier subcontractor is equal to or greater than:

1) 5% of the project bid, or $15,000, whichever is greater; or
2) $350,000 regardless of the percentage of the total bid.

Bidders must disclose the following information about such subcontracts, on the First-Tier Subcontractor Disclosure Form provided by the City and included herein, within two hours of the bid submission deadline:

1) The subcontractor's name;

2) The subcontract dollar value; and
3) The category of work to be performed by the subcontractor.

Any bidder not using subcontractors subject to the above disclosure form, must write "NONE" on the Disclosure Form and sign and submit the form. The City will reject a bid if the bidder fails to submit the Disclosure Form before the deadline.

7. DRUG TESTING PROGRAM

ORS 279C.505(2) requires public improvement contracts to include a provision requiring contractors to demonstrate that they have an employee drug and alcohol testing program in place. All bidders are required to certify, on the Drug Testing Program Certification Form provided by the City and included herein, that they have such program in place. This certification will become part of the Contract if awarded and contractor will be required to maintain such program throughout the performance of the Contract. Failure to maintain a program shall constitute a material breach of the Contract.

8. PROMPT PAY POLICY - TIMELY PROGRESS PAYMENTS

ORS 279C.570 and 279C.580 require prompt payment to contractors and subcontractors and provides for settlement of compensation disputes between the parties. The City is required to automatically calculate and pay interest on invoices from the contractor when payments become overdue. The interest commences thirty (30) calendar days after receipt of the invoice from the contractor, or fifteen (15) calendar days after the payment is approved by the City, whichever is earlier. The rate of interest charged to the City on the amount due shall equal three times the discount rate on 90-day commercial paper, but shall not exceed 30 percent.

The City is also required to ensure that the contractor includes a clause in each subcontract that obligates the contractor to pay first-tier subcontractors for satisfactory performance under its contract. Contractors must pay subcontractors within ten (10) calendar days of receiving payment from the City. Contracts between primary contractors and subcontractors must also contain an interest penalty clause that obligates the contractor, if payment is not made to the subcontractor within thirty (30) calendar days after receipt of payment from the City, to pay the first-tier subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the subcontract payment clause. The contractor is also required to ensure that first-tier subcontractors include these requirements in each of its subcontracts with lower-tier subcontractors or suppliers.

If requested in writing by a first-tier subcontractor, within ten (10) calendar days after receiving the request, the contractor must provide the first-tier subcontractor, a copy of that portion of any invoice or request for payment submitted to the City, or pay document provided by the City to the contractor, specifically related to any labor or materials supplied by the first-tier subcontractor.

9. PRE-QUALIFICATION OF BIDDERS

When required, bidders shall pre-qualify under ORS 279C.430 and 279C.435, by completing the Oregon Department of Transportation (ODOT) Prequalification Application online at:
https://www.oregon.gov/odot/business/procurement/pages/bid_award.aspx
Proof of prequalification shall be submitted to the City at least ten (10) calendar days prior to the date of bid opening.

10. BID BOND, PUBLIC WORKS BOND, PAYMENT BOND AND PERFORMANCE BOND

A Bid Bond, Public Works Bond Filing Certification, Payment Bond and Performance Bond shall be provided as specified in Subsection 5.4 of the General Conditions. No waivers, special requirements or emergency provisions have been established for this Contract.

11. PAY EQUITY COMPLIANCE CERTIFICATION (NEW)

ORS 279A.167 requires businesses with fifty (50) or more employees, and a contract valued at more than $500,000, to provide proof they are properly trained on Oregon's pay equity laws. A certificate proving the contractor has completed the training shall be provided as specified in Subsection 26 of the "Bid Form".

12. HIGHEST STANDARDS OF WORK AND CONSEQUENCES FOR FAILURE

The work to be performed must meet the highest standards prevalent in the industry or business most closely related to the work to be performed. Failure to meet such standards may result in consequences including, but not limited to a reduction or withholding of payment; a requirement that bidder perform, at bidder's own expense, additional work required to meet such standards; or termination of the contract, with damages being sought.

13. CONDITIONS OF WORK

Bidders must make their own determination of the nature of the work proposed under this Contract, the local conditions which can be encountered in this area, and all other matters which can in any way affect the work proposed under this Contract. It shall also be the bidder's responsibility to be thoroughly familiar with the Contract Documents. Failure to make the examination necessary for this determination or to examine any form, instrument or document of the Contract shall not release the bidder from the obligations of this Contract.

14. REVIEW OF BIDS; BASIS FOR AWARD; NOTICE OF INTENT TO AWARD; AND RIGHT TO PROTEST AWARD

In reviewing all bids received and determining the lowest responsible bidder, the City reserves the right to take into account and give reasonable weight to the extent of the bidder's experience on work of the nature involved, on the bidder's record as to dependability in carrying out of contracts, and evidence of present ability to perform the Contract in a satisfactory manner.

The City may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the Contract, to complete the work contemplated therein, and to do so in a timely manner. The City specifically reserves the right to reject a bid from a bidder who, at the time bids are opened, has failed to complete work in a timely manner under a contract previously awarded to the bidder by the City. Conditional bids will not be accepted.

In accordance with ORS 279A.120(2)(b), in determining the lowest responsible bidder, the City shall, for the purpose of awarding the Contract, add a percentage increase on the bid of a non-resident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides.

Within forty-five (45) calendar days after the bid opening, the City will accept one of the bids or reject all of the bids received. If the City intends to accept one of the bids, it shall issue a Notice of Intent to Award the Contract to all bidders. The City's award will not be final until seven (7) calendar days after the date of the notice if no protest is filed; or if a protest is filed, until the City provides a written response to all timely-filed protests that denies the protest and affirms the award.

A bidder may submit a formal written protest to the City's Notice of Intent to Award the Contract within seven (7) calendar days of the date of the City's Notice of Intent. The written protest must specify the grounds upon which the protest is based and must show that the protesting party is an adversely affected or aggrieved bidder. A bidder is adversely affected or aggrieved only if the bidder is eligible for award of the Contract as the responsible bidder submitting the lowest responsible bid, is next in line for award and claims that all lower bidders are ineligible for award in accordance with law.

Such protest must be submitted to the City Recorder, 900 SE Douglas, Roseburg, OR 97470 or by email at info@roseburgor.gov. Any protest received after the 7-day deadline will not be considered. The City Recorder shall forward such protest to the City Manager who shall have the authority to settle or resolve the protest by written decision.

15. EXECUTION OF CONTRACT, BONDS AND DAMAGES FOR FAILURE TO EXECUTE

The bidder whose bid is accepted will be required to appear within ten (10) calendar days after notice that the Contract has been awarded to bidder and to execute the Contract with the City for the full and complete performance of all work specified, and as required by Subsection 5.4 of the General Conditions, deliver the Public Works Bond Filing Certification form, the Payment Bond to assure payment of the obligations incurred in the performance of the Contract and the Performance Bond and to ensure performance of the Contract.

Should the successful bidder fail or refuse to execute the Contract and furnish the Public Works Bond Filing Certification form, Payment Bond and/or Performance Bond when

required, then the Bid Bond deposited by said bidder shall be retained by the City as liquidated damages.

16. COMMENCEMENT DATE AND EXPIRATION DATE OF CONTRACT

This Contract shall be in effect from the time the Contract is signed until the Project is completed. The Contractor must be capable of commencing construction on the work contemplated in the Contract Documents within ten (10) calendar days after the execution of the Contract and receipt of the City's notification to proceed and shall complete the same within the time specified in the bid.

17. DURATION OF BIDS; RETURN OF BID BONDS

All bids will be binding until the later of:

1) the day the contract is executed; or
2) sixty (60) calendar days after the date of bid opening.

Bid bonds will be returned to unsuccessful bidders not later than the date on which the bids are no longer binding.

18. PUBLIC RECORDS

These Contract Documents and each bid received in response to it, together with copies of documents pertaining to the award of a contract shall be kept on file as a public record by the City Recorder; provided however, such records shall not be disclosed until after the notice of intent to award the contract has been issued.

19. RECORDS REVIEW; CONFIDENTIALITY

After notice of intent to award the resulting contract has been issued, all bids shall be available for public inspection except for those portions of a bid that the bidder designates in its bid as trade secrets or as confidential proprietary data in accordance with applicable state law. If the City determines such designation is not in accordance with applicable law, the City shall make those portions available for public inspection. The bidder shall separate information designated as confidential from other non-confidential information at the time of submitting its proposal. Prices, makes, models or catalog numbers of items offered, scheduled delivery dates and terms of payment are not confidential, and shall be publicly available regardless of a bidder’s designation to the contrary.

20. MATERIALS CONTAINING ASBESTOS

Materials containing asbestos may be present in underground pipe systems. All appropriate Federal, State, County and Municipal rules, regulations and guidelines must be followed when working with asbestos containing material. Non friable material must be handled, transported and disposed of in a way that prevents it from becoming friable and releasing asbestos fibers. If AC pipe is shattered, damaged or badly weathered, it is considered to be friable and will likely release asbestos fibers. A DEQ licensed

asbestos abatement contractor using DEQ certified workers must remove all friable asbestos material. Any and all permits and fees that are required by the DEQ, Douglas County and any other regulatory agency must be obtained and paid for by the Contractor prior to disposing of the asbestos containing material. For information about asbestos rules, contact the DEQ Western Region office in Medford, Oregon.

21. CRIMINAL JUSTICE INFORMATION SERVICES (CJIS)

All contract employees that will working on-site will be required to be fingerprinted, go through a state and federal background check and pass a CJIS Security training before beginning on-site work. If an employee has done work for a business requiring CJIS testing they will not need to take the certification again as long as their certification is current and active during the project.

BIDDER'S CHECK LIST

Bidder's attention is called to the following forms, which must be executed in full as required with the bid:

A. **BID FORM(S):** Each bidder shall complete the bid form(s). Prices must be shown in the spaces provided and must be expressed in figures.

B. **BID BOND:** This form is to be executed by bidder and bidder's Surety. The amount of cash, certified check, cashier's check, irrevocable letter of credit or Bid Bond shall not be less than 10% of the total Bid amount.

C. **FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM:** When required by law, this form must be submitted by the bid submission deadline, at which time bids will be opened and read, or within two (2) working hours of such submission deadline. If no subcontractors for labor or for labor and materials will be used, the bidder must write "NONE" on the disclosure form, sign and submit the form as required. Failure to submit this form within two hours of the bid submission deadline will result in the bid becoming non-responsive and such bid will be returned to the bidder.

D. **DRUG TESTING PROGRAM CERTIFICATION FORM:** This form must be submitted with the bid to demonstrate that bidder has an employee drug and alcohol testing program in place and will continue to keep the program in place throughout the duration of performing the Contract awarded.

E. **PUBLIC WORKS BOND PRE-BID NOTICE & CERTIFICATION FORM:** This form must be submitted with the bid to demonstrate contractor's awareness of and intended compliance with the requirement to file a Public Works Bond with the Construction Contractors Board prior to beginning work on the project if awarded the bid.

F. **PAY EQUITY COMPLIANCE CERTIFICATION FORM (NEW): If applicable pursuant to Section 11 of "Information for Bidders",** this form must be submitted with the bid to demonstrate contractor has completed required training regarding pay equity and the prohibition against discrimination in compensation or wage benefits.

The following forms are to be executed after the Contract is awarded, prior to beginning work on the project:

A. **CONSTRUCTION CONTRACT:** This agreement is to be executed by the successful bidder.

B. **PERFORMANCE BOND AND PAYMENT BOND:** Both a Performance Bond and a Payment Bond are to be executed by the successful bidder and bidder's Surety Company and submitted at the time the Contract is executed.

C. **PUBLIC WORKS WAGE CERTIFICATION FORM:** This form is to be completed in accordance with state law and submitted monthly during the duration of the contract, by the fifth business day of the following month, with request for payment.

D. **CERTIFICATE OF INSURANCE:** This certificate is to be executed by the successful bidder and bidder's insurance company and submitted at the time the Contract is executed.

E. **PUBLIC WORKS BOND FILING CERTIFICATION:** This form is to be executed by the successful bidder and submitted at the time the Contract is executed to certify if

Contractor has filed the required Public Works Bond or elected not to file the Bond due to qualifying under ORS 200.055.

BID FORM

City of Roseburg
900 SE Douglas Avenue
Roseburg, Oregon 97470

The undersigned bidder has carefully examined the Contract Documents for the construction of the

Public Safety Center 3rd Floor Improvements
24ARPA12

referred to in the Invitation to Bid dated October 3, 2024, inviting bids on such Project and also the site of the Project. Bidder will provide all necessary labor, equipment, tools, apparatus and other means of construction, do all the work and furnish all the materials called for by said Contract Documents in the manner prescribed therein to provide a complete Project.

The undersigned bidder understands that the quantities of work as shown herein are approximate only, unless noted otherwise, and are subject to increase or decrease. The bidder offers to perform the work, at the unit price stated in the following schedule, whether the quantities are increased or decreased.

BASE BID:

Bidder will complete the entire Project as identified in the Project Manual and Standard Drawings for the following total price.

Base Bid: $ _____

The undersigned also declares and agrees as follows:

1. That the only persons or parties interested in this bid are those named herein, that the bid is in all respects fair and without fraud, and that it is made without any connection or collusion with any person making another bid on this Contract.

2. That the bidder, and any subcontractor upon which the bidder is relying, have carefully examined and had an opportunity to comment on, the Contract Documents for the construction of the proposed improvements including a full set of the plans and specifications, including all addenda thereto; that bidder has personally inspected the contemplated construction area or areas; that bidder is satisfied as to the adequacy and completeness of the plans and specifications, the feasibility of the work described therein, quantities of materials, items of equipment and conditions of work involved, including the fact that the description of work and materials as included herein are approximate only; and that this bid is made according to the provisions and under the

terms of the Specifications which are hereto attached and hereby made a part of this bid.

3. All of the Specifications and Plans which are listed herein have been examined by the undersigned bidder and the terms and conditions thereof are hereby accepted.

4. It is understood that the Plans may be supplemented by additional Drawings and Specifications in explanation and elaboration of the Plans and it is agreed that such Supplemental Drawings, when not in conflict with those referred to in Paragraph 3 above, will have the same force and effect as if completed and attached hereto, and that when received, will be considered a part of the Contract Documents.

5. It is understood that all work will be performed under the price schedule outlined herein and that all services, materials, labor and equipment and all work necessary to complete the Project in accordance with the Plans and Specifications shall be furnished for the prices named in the bid. If there is a change in the scope of work or work which cannot be properly classified under the price schedule then bidder agrees to do this work as "extra work". The undersigned bidder agrees to do any extra work and furnish materials, and to accept as full compensation therefore at such prices as may be agreed upon in writing by the City and the Contractor before extra work begins. Each party binds itself to agree to reasonable prices.

6. It is understood the work to be performed must meet the highest standards prevalent in the industry or business most closely related to the work to be performed. It is further understood that failure to meet such standards may result in consequences including, but not limited to, a reduction or withholding of payment; a requirement that bidder perform, at bidder's own expense, additional work required to meet such standards; or termination of the contract, with damages being sought.

7. The bidder agrees that if this bid is accepted, the bidder will, within ten (10) calendar days after the notification of acceptance, execute the Construction Contract with the City in the form of Contract specified, and will, at the time of execution of the Contract, deliver to the City the Performance Bond, Payment Bond and Public Works Bond Filing Certification form as required herein, and will furnish all the materials necessary to complete the Project in the manner, in the time and according to methods as specified in the Specifications and required by the City.

8. The cash, certified check, cashier's check, irrevocable letter of credit or Bid Bond shall be payable to the City to the extent of 10% of the amount of the bid in case this bid is accepted by the City and the undersigned shall fail or refuse to execute the Contract and furnish a Payment Bond, a Performance Bond or the Public Works Bond Filing Certification form as required by the Specifications within the time limit named therein after notification that said bid is accepted, all in accordance with the provisions of this bid and the Plans and Specifications which are a part hereof.

9. All items for the Contract for which forms are provided herein have been completed in full by the showing of prices for each and every item thereof, and for the showing of other information indicated by the Bid Form.

10. Bidder agrees to begin work within ten (10) calendar days after the execution of the Contract proposed herein and receipt of the City's notification to begin work and to complete work in all respects within **ninety (90)** calendar days after "Notice to Proceed" has been issued by the City.

11. In the event the bidder is awarded the Contract and fails to complete the Project within the time limit or extended time agreed upon, as more specifically set forth in the General Conditions, liquidated damages shall be paid to or withheld by the City pursuant to Paragraph 4 of the Construction Contract (Time of Performance - Liquidated Damages) at the rate of **five hundred Dollars ($500.00)** per day, until the Project has been completed as provided in the General Conditions.

12. The undersigned bidder hereby states, as part of this bid, that the applicable provisions of Oregon's Prevailing Wage Law (ORS 279C.800 to 279C.870) and the Federal Prevailing Wage Law (Davis-Bacon Act, 40 U.S.C. 3141-3148), shall be complied with. When the Project is subject to both the State and Federal Prevailing Wage Laws and rates, workers in each trade will be paid the higher of the two rates.

13. The undersigned bidder and bidder's subcontractors shall comply with ORS 656.017, which requires them to provide Workers' Compensation coverage for all their subject workers.

14. The undersigned bidder hereby states, as part of this bid, that bidder shall comply with ORS 279C.505(2) which requires bidder to have an employee drug testing program in place.

15. The undersigned bidder and bidders' subcontractors shall comply with ORS 279C.570 and 279C.580, which require timely progress payments for public improvement projects and provide interest penalties for late payment.

16. The undersigned bidder hereby states, as part of this bid, bidder and bidder's subcontractors shall comply with the provisions of Exhibit "A" - "Standard City Contract Provisions".

17. **If applicable** pursuant to Section 11 of "Information for Bidders", the undersigned bidder hereby states, as part of this bid, that bidder has completed pay equity compliance training and received a certificate of completion from the Oregon Department of Administrative Services.

18. If the bidder is awarded the Contract for this work, the name and address of the Surety who will provide the Payment Bond, Performance Bond and Public Works Bond (if required) will be:_____.

19. The name and address of the bidder who is submitting this bid is: _____, which is the address to which all communications pertinent to this bid and the Contract shall be sent. The bidder's email address is:_____.

20. The names of the principal officers of the corporation submitting this bid or of the partnership, or of all parties interested in this bid as principals are as follows:

_____.

21. The undersigned bidder acknowledges that Addenda No. _____ through _____ have been delivered to bidder and have been examined as part of the Contract Documents.

22. In the prosecution of this work, the bidder proposes to use the subcontractors listed on the First-Tier Subcontractor Disclosure Form presented within two working hours of the bid submission deadline as set forth in the Invitation to Bid. Any bidder not using subcontractors subject to the above referenced Disclosure Form shall indicate "NONE" on the Disclosure Form and sign and submit the form as required.

23. Declaration of Residency: I "am" or "am not" (circle one) a "resident bidder"* as defined by ORS 279A.120, a contractor that has paid unemployment taxes or income taxes in Oregon during the 12 calendar months immediately preceding submission of the bid, has a business address in this state and has stated in the bid whether the bidder is a "resident bidder" pursuant to ORS 279A.120.

24. The bidder's Construction Contractors Board License Number or Landscape Contractors Board License Number is: _____.

25. Bidder's Tax Identification Number: _____. Email:_____.

26. Public Works Bond: If the bid is accepted, prior to beginning work on the project, the bidder will file with the Construction Contractors Board, a Public Works Bond in the amount of $30,000 with a corporate surety authorized to do business in the State of Oregon; and before permitting a subcontractor to begin work on the project, the bidder will verify that the subcontractor has also filed the aforementioned bond. If the bidder, as a certified disadvantaged, minority, women or emerging small business enterprise, elects not to file the Public Works Bond, bidder will file written verification of such certification with the Construction Contractors Board and provide the Board and the City of Roseburg with notice of such election.

If sole Proprietor or Partnership:

In witness hereto, the undersigned as set his/her hand this _____ day of _____, 2024.

Printed name of bidder:_____

Signature of bidder:

_____

Title:_____

If Corporation:

In witness whereof, the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this ____ day of _____, 2024.

Name of Corporation:_____

Printed name of person signing:_____

Signature:_____

Title:_____

Attest: _____
Secretary

STANDARD BID BOND

We, _____, "as Principal,"
(Name of Principal)
and _____, an _____Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto the City of Roseburg ("Obligee") the sum of ($_____) _____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No. _____) for the project identified as:
_____ which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten percent (10%) of the total amount of the bid pursuant to the procurement document and ORS 279C.365(5) for competitive bidding or 279C.400(5) for competitive proposals.

NOW, THEREFORE, if the proposal or bid submitted by Principal is accepted, and if a contract pursuant to the proposal or bid is awarded to Principal, and if Principal enters into and executes such contract within the time specified in the procurement document and executes and delivers to Obligee its good and sufficient performance bond, payment bond and public works bond as required by Obligee within the time fixed by Obligee, then this obligation shall be void; otherwise, it shall remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____ day of _____, 2024.

PRINCIPAL: _____ SURETY: _____

By _____ BY ATTORNEY-IN-FACT:
Signature

_____ _____
Official Capacity Name

Attest: _____ _____
Corporation Secretary Signature

_____
Address

_____
City State Zip

_____
Phone Email

FIRST TIER SUBCONTRACTOR DISCLOSURE FORM INSTRUCTIONS

Instructions for First-Tier Subcontractor Disclosure:

Bidders are required to disclose information regarding certain first-tier subcontracts (ORS 279C.370). Specifically, when the contract amount of a first-tier subcontract furnishing labor or labor and materials would be great than or equal to: (1) 5% of the project bid, but at least $15,000; or (2) $350,000 regardless of the percentage, the bidder must disclose the following information about that subcontract either in its bids submission, or within two hours after bid closing:

(A) The subcontractor's name;

(B) The category of work that the subcontractor would be performing; and

(C) The dollar value of the subcontract.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate "NONE" on the accompanying form.

THE CONTRACTING AGENCY MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE (OAR 137-049-0360).

**** The subject form is on the following page.***

FIRST TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT NAME: _____

BID#: _____

BID CLOSING: DATE: _____ **TIME:** _____

This form must be submitted at the location or email specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below: the name of each subcontractor that will be furnishing labor or labor and materials and is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED)

NAME OF SUBCONTRACTOR	DOLLAR VALUE	CATEGORY OF WORK
_____	$_____	_____
_____	$_____	_____
_____	$_____	_____
_____	$_____	_____
_____	$_____	_____
_____	$_____	_____

Failure to submit this form by the disclosure deadline will result in a nonresponsive bid. A nonresponsive bid will not be considered for award.

Form submitted by (bidder name):_____

Contact name:_____ **Phone #:**_____

****

Form Received in the City Recorder's Office:

Time: _____ **Date:** _____ **By:** _____

EMPLOYEE DRUG TESTING PROGRAM
CERTIFICATION FORM

BIDDER'S NAME:_____

PROJECT NAME & NUMBER:_____

ORS 279C.505 (2) provides that every public improvement contract contain a condition that the Contractor shall demonstrate that an employee drug testing program is in place. The City's award of the Contract for which this certificate is required is conditioned, in part, upon the Bidder's demonstration of compliance with the provisions of ORS 279C.505(2). If the Bidder named above is awarded the Contract, this certificate shall become a part of, and shall constitute a continuing representation and warranty under, the Contract.

To induce the City to award the Contract to the Bidder, the undersigned, as the duly authorized representative of the Bidder, hereby represents and warrants, on behalf of the above named Bidder:

1. That Bidder has and enforces, and at all times during the term of the Contract will have and enforce, a written employee drug testing policy that at a minimum, requires compliance with the Oregon Department of Transportation Commercial Drivers License drug testing regulations;

2. A copy of the Bidder's current written employee drug testing policy will be available for inspection by the City at any time upon the City's request; and

3. The Bidder understands and agrees that its representations and warranties herein will become a continuing part of the Contract and that breach of any of the foregoing will be sufficient grounds for disqualification under 279C.440(2)(d).

The City shall not be liable, either directly or indirectly, in any dispute arising out of the substance or procedure of Bidder/Contractor's drug testing program. Nothing in this drug testing provision shall be construed as requiring Bidder/Contractor to violate any legal, including constitutional rights of any employee, including but not limited to, selection of which employees to test and the manner of such testing. The City shall not be liable for Bidder/Contractor's negligence in establishing or implementing, or failure to establish or implement, a drug testing policy, or for any damage or injury caused by Bidder/Contractor's employees acting under the influence of drugs while performing work covered by the Contract. These are Bidder/Contractor's sole responsibilities.

In Witness whereof, the Bidder has caused this document to be executed by its duly authorized representative on the date shown below.

Signature:_____

Printed Name, Title:_____

Date:_____

PAY EQUITY COMPLIANCE TRAINING
CERTIFICATION FORM
(NEW)

BIDDER'S NAME:_____

PROJECT NAME & NUMBER:_____

ORS 279A.167(1) provides that the Oregon Department of Administrative Services shall establish a program to certify that a person that intends to submit a bid or proposal for a public contract understands the prohibition set forth in ORS 652.220 and in other laws or rules that prohibit discrimination in compensation or wage payments. Following completion of the course, a certificate of completion will be provided. This certification is recommended for ANY contractor in the state of Oregon, and **required for any contractor who employs fifty (50) or more people, and for a contract valued at more than $500,000**. Information on how to receive this certification can be found by clicking here.

To induce the City to award the Contract to the Bidder when the certification is required, the undersigned, as the duly authorized representative of the Bidder, hereby represents and warrants, on behalf of the above named Bidder:

1. That Bidder has completed the training on pay equity as outlined in ORS 652.220; and

2. A copy of the Certificate of Completion of the pay equity compliance training will be available for inspection by the City at any time upon the City's request.

In Witness whereof, the Bidder has caused this document to be executed by its duly authorized representative on the date shown below.

Signature:_____

Printed Name, Title:_____

Date:_____

CITY OF ROSEBURG
PUBLIC WORKS BOND - PRE-BID NOTICE AND CERTIFICATION

I, the undersigned contractor, hereby certify that if awarded the contract for which I am submitting this bid, prior to beginning work on such Project, unless exempt under ORS 279C.800 to 279C.870, I will file with the Construction Contractors Board, a Public Works Bond in the amount of $30,000 with a corporate surety authorized to do business in the State of Oregon. I further certify that before permitting a subcontractor to start work on the Project upon which I am submitting this bid, I will verify that the subcontractor has also filed such Public Works Bond or has elected not to file such bond as allowed by state law. The Public Works Bond shall provide that the contractor or subcontractor will pay claims ordered by the Bureau of Labor and Industries to workers performing labor upon public works projects. The bond shall be a continuing obligation and remain continuously in effect.

If, as a contractor, I qualify as a disadvantaged, minority, women, disable veteran or emerging small business enterprise certified under ORS 200.055 and I have elected not to file the aforementioned Public Works Bond, I hereby certify that I will file written verification of such certification with the Construction Contractors Board. I also certify that before beginning any work on the Project, I will provide the City of Roseburg and the Construction Contractors Board written notice that I have elected not to file the Public Works Bond. If so certified under ORS 200.055, I understand that my election not to file the Public Works Bond will expire one year from the date it was filed and that a claim for unpaid wages may be filed against the payment bond I submitted on the Project.

I further certify that I understand the Public Works Bond described above is in addition to any other bond that I am required to provide, or that may be required of a subcontractor, for this Project.

Project Name:_____

Project Number:_____

Contractor's Printed Name:_____

Contractor's Signature:_____

Dated:_____

CITY OF ROSEBURG
CONSTRUCTION CONTRACT
[PROJECT #]

Dated: _____

Parties: City of Roseburg ("CITY")
A municipal corporation in the State of Oregon
900 SE Douglas Avenue
Roseburg, OR 97470

and

[Name of Company] ("CONTRACTOR")

Additional Independent Contractor Information:

A. Type of Entity: ☐ Sole Proprietorship ☐ Partnership ☐ Limited Liability Company ☐ Corporation
B. Address:
C. Telephone:
D. Fax No:
E. Email:
F. Construction Contractor Board No.

This Contract is made and entered into this _____ day of _____, 2024, by and between _____hereinafter called the "Contractor", and the City of Roseburg, a municipal corporation of the State of Oregon, hereinafter called the "City".

WITNESSETH

That the Contractor and City, for the consideration hereinafter described agree as follows:

1. <u>WORK TO BE PERFORMED</u>. The Contractor agrees to do all the work and furnish all necessary labor, materials, tools and equipment for the completion of the Public Safety Center 3rd Floor Improvements in accordance with the bid made by the Contractor on the 29th day of October, 2024, all in full compliance with the Contract Documents referred to herein, and guarantees all materials and workmanship for one year after acceptance of the project.

2. <u>CONTRACT DOCUMENTS</u>. The Contract Documents include the City's Invitation to Bid, Information to Bidders, the Bid Form signed by the Contractor, this Construction Contract with Exhibit A, First-Tier Subcontractor Disclosure Form, Drug Testing Program Certification Form, Bidder's Responsibility Form, Performance Bond, Payment Bond, Public Works Bond Filing Certification form (when required), General Conditions, Technical Provisions, Special Conditions, Standard Drawings, Specifications and Plans and Supplemental Specifications, all as required for the full execution and satisfactory completion of the work. All of the Contract Documents are incorporated herein by this reference and made a part of this Contract.

3. **PAYMENT.** In consideration of the faithful performance of the work herein described, the City agrees to pay the Contractor **(insert cost/bid amount)** as payment in full per the provisions of the Contract Documents. The Contractor may elect to receive payments directly to their bank account by completing the attached Vendor Automatic Payment Authorization form.

4. **TIME OF PERFORMANCE - LIQUIDATED DAMAGES.** The Contractor shall commence work under this Contract upon receiving notification to proceed from the City. The Contractor agrees that the work under this Contract shall be completed within **ninety (90)** calendar days after notification to begin work. If the Contractor fails to complete the Project within the time hereinbefore mentioned, or in the extended time agreed upon, liquidated damages shall be paid to or withheld by the City at the rate of **five hundred dollars ($500.00)** per day until the Project is completed. It has been agreed that the damages arising from a delay in completion would be difficult to ascertain with any degree of accuracy, even after the Project is completed. It has also been agreed that the amount of liquidated damages specified herein is a reasonable forecast of just compensation for the harm that will be caused by a delay in completion of the Project. Any such sum which the Contractor may be obligated to pay under the terms of this Paragraph is paid as liquidated damages, and not as a penalty.

5. **COMPLIANCE WITH LAW.** The Contractor shall comply with all local, state and federal laws, ordinances and regulations applicable to contracts covering municipal contracts, and shall make prompt payment of all amounts that may be due from said Contractor in the way of taxes, other governmental charges or lawful deductions, and shall make prompt payment of all labor and materials and shall save the City harmless from any damages or claims whatsoever in the performance of the Contract. Contractor and all subcontractors agree to comply with the City's Standard Contract Provisions, attached as Exhibit A and incorporated herein by this reference, and Roseburg Municipal Code Regulations relating to business registration.

6. **NOTICE.** Any notice required or permitted by this Contract must be delivered and served personally, or alternatively, deposited in the United States mail, postage prepaid, registered or certified, return receipt requested, addressed to the parties as shown below:

CITY:	**CONTRACTOR:**
City of Roseburg	_____
ATTN: City Manager	_____
900 SE Douglas Avenue	_____
Roseburg OR 97470	_____

Such notice, if mailed within the State of Oregon, shall be deemed delivered upon the second day following the date postmarked. If mailed outside the State of Oregon, notice shall be deemed delivered upon the fifth day following the date postmarked.

7. **GOVERNING LAW; VENUE LOCATION.** Oregon law shall be applied to all actions relating to the Contract, and the venue in any such action shall lie in the Circuit Court of Douglas County, Oregon.

8. **ELECTRONIC SIGNATURES.** This Contract and any amendments may be signed by facsimile, PDF, or other electronic means, each of which will be deemed an original and all of

which when taken together will constitute one contract. Facsimile and electronic signatures will be binding for all purposes.

IN WITNESS WHEREOF, the parties hereto have executed this Contract the day and year first above written.

CITY

_____

Nicole Messenger
City Manager

Date:_____

ATTEST:

_____

Amy Nytes, City Recorder

CONTRACTOR

_____

(Authorized Signature)
Title:_____

Date:_____

_____

Tax Identification Number

Email:_____

EXHIBIT "A"
STANDARD CONTRACT PROVISIONS
PREVAILING WAGE CONTRACT
(ORS 279C.800 - 279C.870)

The following provisions, if applicable, are hereby included in and made a part of the attached public contract which is subject to Prevailing Wage Laws and rates, between the City of Roseburg and the Contractor named therein as provided for in the Roseburg Code, Oregon Revised Statutes, and Federal laws, rules, regulations, and guidelines. If a Contractor or Subcontractor violates the provisions below, the City may, at its option, terminate the contract or a subcontract and said Contractor or Subcontractor in such event shall forfeit all rights under the contract except to payment for actual labor and materials furnished to the City. The City may waive in whole or in part any forfeitures or sanctions provided in this Exhibit.

1. PREFERENCE FOR OREGON GOODS AND SERVICES; NONRESIDENT CONTRACTOR REPORT TO DEPARTMENT OF REVENUE - ORS 279A.120:

1.1 For purposes of awarding the contract the City will:

1.1.1 give preference to goods and services that have been manufactured or produced in Oregon if the price, fitness, availability and quality are otherwise equal; and

1.1.2 add a percentage increase to the bid of a non-resident bidder equal to the percentage, if any, of the preference given to the contractor in the same state in which the contractor lives.

1.2 As used in this Section:

1.2.1 "nonresident contractor" means a contractor that is not a resident contractor;

1.2.2 "resident contractor" means a contractor that has paid unemployment taxes or income taxes in the state of Oregon during the twelve (12) calendar months immediately preceding submission of the bid for the contract; has a business address in this state; and stated in the bid for the contract that it was not a "resident bidder" under ORS 279A.120.

1.3 If the Contractor is a nonresident contractor and the contract price exceeds $10,000, the Contractor shall promptly report to the Department of Revenue on forms to be provided by the Department, the total contract price, terms of payment, length of contract and such other information as the Department may require before the Contractor may receive final payment on the public contract. The City shall satisfy itself that the requirement of this Subsection has been complied with before it issues a final payment on the contract.

2. PAYMENT OF LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS, AND WITHHOLDING TAXES - ORS 279C.505(1):
The Contractor shall:

2.1 Make payment promptly, as due, to all persons supplying to such Contractor, labor or material for the performance of the work provided for in the contract.

2.2 Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the contract.

2.3 Not permit any lien or claim to be filed or prosecuted against the City of Roseburg or any subdivision thereof on account of any labor or material furnished.

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

3. PAYMENT OF CLAIMS BY PUBLIC OFFICERS - ORS 279C.515:

3.1 If the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a Subcontractor by any person in connection with the contract as such claim becomes due, the public officer or officers representing the City of Roseburg may pay such claims to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due the Contractor by reason of the contract. The payment of a claim in the manner authorized shall not relieve the Contractor or his/her surety from his or her obligations with respect to any unpaid claims.

3.2 If the Contractor or a first-tier Subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the contract within thirty (30) days after receipt of payment from the City of Roseburg or the Contractor, the Contractor or first-tier Subcontractor shall owe the person the amount due plus interest charges commencing at the end of the 10-day period that payment is due under ORS 279C.580(4) and ending upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest charged to the Contractor or first-tier Subcontractor on the amount due shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve District that includes Oregon on the date that is thirty (30) calendar days after the date when payment was received from the City of Roseburg or from the Contractor, but the rate of interest shall not exceed 30 percent. The amount of interest may not be waived.

3.3 If the Contractor or Subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The Contractor shall announce the foregoing in any Subcontract issued.

4. HOURS OF LABOR - ORS 279C.520: No person shall be employed for more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency, or when the public policy absolutely requires it, and in such cases the employee shall be paid at time and a half pay:

4.1 For all overtime worked in excess of 8 hours a day or 40 hours in any one week, when the work week is five consecutive days, Monday through Friday; or

4.2 For all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and

4.3 For all work performed on Saturday and on any legal holiday specified in ORS 279C.540, or all holidays specified in a collective bargaining agreement.

The Contractor must give notice to employees who perform work on the contract, in writing, either at the time of hire or before commencement of work on the contract, or by posting a notice in a location frequented by employees, the number of hours per day and days per week that the employees may be required to work.

5. PAYMENT FOR MEDICAL CARE AND ATTENTION TO EMPLOYEES - ORS 279C.530:

5.1 The Contractor shall promptly as due, make payment to any person, co-partnership or 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, of all sums which the Contractor agrees to pay for such services and all monies and sums which the Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

5.2 The Contractor, its subcontractors, if any, and all employers providing work, labor or materials under this Contract who are subject employers under the Oregon Workers' Compensation Law shall comply with ORS 656.017, which requires them to provide workers' compensation coverage that satisfies Oregon law for all their subject workers. Out-of-state employers must provide workers' compensation coverage that complies with ORS 656.126 for their workers. Employer's Liability Insurance with coverage of not less than $500,000 each accident shall be included.

6. PAYMENT TO SUBCONTRACTORS - ORS 279C.580:

6.1 The 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 the public contract:

6.1.1 A payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) calendar days of payment by the City out of such amounts as are paid to the Contractor by the City of Roseburg under the contract; and

6.1.2 An interest penalty clause that obligates the Contractor, if payment is not made within thirty (30) calendar days after receipt of payment from the City of Roseburg, to pay to the first-tier Subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to Paragraph 6.1.1 of this Subsection. A Contractor or first-tier Subcontractor shall not be obligated to pay an interest penalty if the only reason that the Contractor or first-tier Subcontractor did not make payment when payment was due is that the

Contractor or first-tier Subcontractor did not receive payment from the City of Roseburg or Contractor when payment was due. The interest penalty shall be:

6.1.2.1 For the period beginning on the day after the required payment date and ending on the date on which payment of the amount due is made; and

6.1.2.2 Computed at the rate specified in ORS 279C.515(2).

6.2 The Contractor shall include in each of its subcontracts, for the purpose of performance of such contract condition, a provision requiring the first-tier Subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in Paragraphs 6.1.1 and 6.1.2 and requiring each of its Subcontractors to include such clauses in their subcontracts with each lower-tier Subcontractor or supplier.

6.3 None of the provisions of this Section 6 are intended to prevent the Contractor or any Subcontractor from including in its contracts the provisions described in ORS 279C.580(5) and (6).

7. <u>PROHIBITION OF DISCRIMINATORY WAGE RATES BASED ON SEX – ORS 652.220</u>: The Contractor shall not:

7.1 Discriminate between employees on the basis of a protected class in the payment of wages or other compensation for work of comparable character, the performance of which requires comparable skills;

7.2 Pay wages or other compensation to any employee at a rate greater than that at which the employer pays wages or other compensation to employees of a protected class for work of comparable character, the performance of which requires comparable skills. This section does not apply where:

(a) Payment is made pursuant to a seniority or merit system which does not discriminate on the basis of a protected class; or
(b) A system measures earnings by quantity or quality of production, including piece-rate work; or
(c) Travel is necessary and regular for the employee; or
(d) Education, training, experience, or any combination of factors account for the entire compensation differential.

7.3 Discriminate in the payment of wages or other compensation against any employee because the employee has filed a complaint in a proceeding, has testified or is about to testify, or because the employer believes that the employee may testify in any investigation, proceedings or criminal action pursuant to ORS 652.210 to 652.235.

8. <u>DRUG TESTING - ORS 279C.505(2)</u>:

8.1 The Contractor shall demonstrate that an employee drug testing program is in place at the time of submitting its bid, and that such program will be maintained throughout the contract period, including any extensions. The failure of Contractor to have, or to

maintain such a drug testing program is grounds for rejection of a bid or immediate termination of the contact.

8.2 The City of Roseburg shall not be liable, either directly or indirectly, in any dispute arising out of the substance or procedure of Contractor's drug testing program. Nothing in this drug testing provision shall be construed as requiring Contractor to violate any legal, including constitutional, rights or any employee, including but not limited to, selection of which employees to test and the manner of such testing. The City shall not be liable for Contractor's negligence in establishing or implementing, failure to establish or implement a drug testing policy, or for any damage or injury caused by Contractor's employees acting under the influence of drugs while performing work covered by the contract. These are Contractor's sole responsibilities and nothing in this provision is intended to create any third party beneficiary rights against the City.

9. PREVAILING WAGE PROVISIONS - ORS 279C.800 - 279C.870; 40 U.S.C. 3141 – 3148:

9.1 The hourly rate of wage to be paid by the Contractor and all Subcontractors to workers under the contract shall not be less than the prevailing rate of wage for an hour's work in the same trade or occupation in the locality where the labor is performed as set forth in the specifications for the public contract; provided however, if the public contract is also subject to the Federal Prevailing Wage Rate pursuant to the Davis-Bacon Act (40 U.S.C. 3141 - 3148), then the higher of the two rates shall be paid. The Contractor will comply with the provisions of ORS 279C.840 and all applicable provisions of ORS 279C.800 to 279C.870 and/or the Davis-Bacon Act, 40 U.S.C. 3141 - 3148.

9.2 The Contractor or the Contractor's surety and every Subcontractor or the Subcontractor's surety shall file certified statements with the City in writing using the form prescribed by the Commissioner of the Bureau of Labor and Industries certifying the hourly rate of wage paid each worker whom the Contractor or the Subcontractor has employed in the Work under the contract and further certifying that no worker employed under such public contract has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract. The certified statement shall be verified by the oath of the Contractor or the Contractor's surety or Subcontractor or the Subcontractor's surety that the Contractor or Subcontractor has read the certified statement and knows the contents thereof and that the same is true to the Contractor's or Subcontractor's knowledge. 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.

9.3 Each certified statement shall be delivered or mailed by the Contractor or Subcontractor to the City. A true copy of the certified statement shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries. Certified statements for each week during which the Contractor or Subcontractor employs a worker under the public contract shall be submitted once a month, by the fifth business day of the following month. Information submitted on certified statements may be used only to ensure compliance with the provisions of ORS 279C.800 to 279C 870. The City shall retain 25% of the amount earned by the Contractor if the certified statements are not submitted

as required. The City shall pay the Contractor the amount retained within 14 days after the Contractor files the certified statements regardless of whether a Subcontractor has failed to file the required certified statements. The Contractor shall retain 25% of any amount earned by a first-tier Subcontractor until the Subcontractor has filed with the City, the required certified statements. The Contractor shall verify the first-tier Subcontractor has filed the certified statements before the Contractor may pay the Subcontractor any amount retained. The Contractor shall pay the first-tier Subcontractor the amount retained within 14 days after the Subcontractor files the required certified statements.

10. PUBLIC WORKS BOND REQUIREMENTS – ORS 279C.836:

10.1 If the public contract involves public works, unless exempt under ORS 279C.800 to 279C.870, prior to beginning work on the contract, the Contractor shall file with the Construction Contractors Board, a Public Works Bond in the amount of $30,000 with a corporate surety authorized to do business in the State of Oregon.

10.2 Before allowing a Subcontractor to begin work under a public contract involving public works, for which the Contractor has been awarded the contract, the Contractor shall verify that the Subcontractor has also filed a Public Works Bond with the Construction Contractors Board or elected not to file such bond as allowed by state law.

10.3 The Public Works Bond shall provide that the Contractor or Subcontract will pay claims ordered by the Bureau of Labor and Industries to workers performing labor under the public contract involving public works. The bond shall be a continuing obligation and remain continuously in effect.

10.4 If the Contractor or Subcontractor qualifies as a disadvantaged, minority, women, disabled veteran or emerging small business enterprise certified under ORS 200.055 and has elected not to file the Public Works Bond, the Contractor or Subcontractor will file written verification of such certification with the Construction Contractors Board. If the Contractor or Subcontractor elects not to file the Public Works Bond, before beginning any work on the public contract involving public works, the Contractor or Subcontractor shall provide the City and the Construction Contractors Board with written notification of such election.

11. DEMOLITION CONTRACTS; LAND AND LANDSCAPE MAINTENANCE - ORS 279C.510:

11.1 If the public contract includes demolition, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost effective.

11.2 If the public contract includes services for lawn and landscape maintenance, the Contractor shall compost or mulch yard waste material at an approved site.

12. DISCRIMINATION IN SUBCONTRACTING PROHIBITED; REMEDIES - ORS 279A.110:

12.1 The Contractor may not discriminate against a Subcontractor in the awarding of a subcontract because the Subcontractor is a minority, women, disabled veteran or emerging small business enterprise certified under ORS 200.055.

12.2 By entering into the contract, the Contractor certified it has not discriminated and will not discriminate, in violation of Subsection 12.1, against any minority, women, disabled veteran or emerging small business enterprise in obtaining any required subcontract.

12.3 If the Contractor violates the nondiscrimination certification made under Subsection 12.2, the City may regard the violation as a breach of contract that permits the City to terminate the contract or exercise any remedies for breach permitted under the contract.

13. HIGHEST STANDARDS; CONSEQUENCES FOR FAILURE – ORS 279B.060:

13.1 By entering into the Contract, Contractor agrees to perform the work to the highest standards prevalent in the industry or business most closely related to the work to be provided;

13.2 Contractor understands that failure to meet the highest standards in the industry may result in consequences including, but not limited to:

13.2.1 reducing or withholding of payment;

13.2.2 requiring Contractor to perform, at Contractor's own expense, additional work required to meet such standards; or

13.2.3 declaring a default, terminating the Contract and seeking damages and other relief available under the terms of the Contract or other applicable law.

14. COMPLIANCE WITH LAWS: The Contractor and Subcontractor shall comply with all federal, state and local laws, rules, ordinances and regulations at all times and in the performance of the contract.

Committed to Continuous Improvement and Quality Customer Service

Vendor Automatic Payment Authorization

As a City of Roseburg vendor you now have the option to receive payments directly to your bank account. No more waiting for the check to arrive through the mail or need to run to the bank to make the deposit.

Q. How do I sign up?
A. Simply complete and return the attached authorization form. You must include a voided check.

Q. How soon will the Automatic Payment Plan Start?
A. Once we have your authorization and have verified the banking information, we will begin making future payments to you through the Electronic Funds Transfer (EFT) method.

Q. How can I be sure that I have received payment from you?
A. You can request notification of the payment to be sent to you via e-mail or through the postal service at the time the electronic payment is made by selecting the appropriate box on the authorization form. Also, your monthly bank statement will clearly reflect the automatic payment.

Q. What if I have a question about my payment?
A. Simply call the City of Roseburg at (541) 492-6710 and ask to speak to the Accounts Payable Department.

Q. What if I try the Automatic Payment Plan and don't like it?
A. You can cancel your authorization for automatic payments at any time by notifying us in writing.

City of Roseburg, 900 SE Douglas Avenue, Roseburg, OR 97470, Finance@cityofroseburg.org

AUTHORIZATION STATEMENT FOR AUTOMATIC VENDOR PAYMENT

We hereby authorize the City of Roseburg to make credit entries to our bank account for payments owed to us by the City.

Remittance Name

Address

City, State, Zip

Phone Number

Contact

Email Address

Payment Notification Request:
- ☐ Notify via email once payment is made.
- ☐ Notify via postal service.
- ☐ No notification necessary.

Tax ID #
(Federal Tax ID if Business, SSN if Individual)

Bank Name

Bank Address

City, State, Zip

Bank Phone Number

Bank Account Number

Bank Routing Number

Authorized Signature

CITY OF ROSEBURG
PUBLIC WORKS BOND FILING CERTIFICATION

Pursuant to ORS 279C.800 to 279C.870, I, undersigned contractor, do hereby certify that, prior to beginning work on the Project for which I have been awarded the bid by the City of Roseburg:

1. I have filed with the Construction Contractors Board ("Board"), a Public Works Bond in the amount of $30,000 with a corporate surety authorized to do business in the State of Oregon.
_____**Yes** _____**No (Check one)**

2. I have elected not to file a Public Works Bond with the Board because I am a disadvantaged, minority, women, disabled veteran or emerging small business enterprise certified under ORS 200.055. I have provided the Board written verification of such certification and written notification of my election not to file the Public Works Bond. I understand that my election not to file the Public Works Bond will expire one year from the date it was filed and that a claim for unpaid wages may be filed against the payment bond I submitted on the Project.
_____**Yes** _____**No (Check one)**

3. I have verified any subcontractor involved in the Project has, prior to beginning any work on this Project, either filed the Public Works Bond with the Board or has elected not to file the Public Works Bond because the subcontractor is a disadvantaged, minority, women, disabled veteran or emerging small business enterprise certified under ORS 200.055.
_____**Yes** _____**No (Check one)**

(a) I have verified that any subcontractor involved in this Project that has elected not to file the Public Works Bond has provided the Board written verification of its certification under ORS 200.055 and written notification of its election not to file the Public Works Bond. _____**Yes** _____**No (Check one)**

I understand the Public Works Bond described above is in addition to any other bond that I am required to provide, or that may be required by a subcontractor, for this Project.

Project Name:_____

Project Number:_____

Contractor's Printed Name:_____

Contractor's Signature:_____

Dated:_____

CITY OF ROSEBURG
STANDARD PERFORMANCE 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 to the City of Roseburg 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 a contract with the City of Roseburg, the plans, specifications, terms and conditions of which are contained in 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 faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and 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, and shall indemnify and save harmless the City of Roseburg and members thereof, its officers, employees and agents, 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 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 the City of Roseburg be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279A, 279B and 279C, 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 _____, 2024.

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 Email

CITY OF ROSEBURG
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 to the City of Roseburg 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 a contract with the City of Roseburg, the plans, specifications, terms and conditions of which are contained in 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 faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and 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 by the Contract, with or without notice to the Sureties, and shall indemnify and save harmless the City of Roseburg and members thereof, its officers, employees and agents, 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 Contractor or its subcontractors, and 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; and shall promptly pay all contribution due according to workers compensation requirements and the State Unemployment compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and 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, and shall permit no lien nor claim to be filed or prosecuted against the City on account of any labor or materials furnished; and 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 the City of Roseburg be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279A, 279B and 279C, 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 _____, 2024.

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 Email

LOWEST BIDDER RESPONSIBILITY DETERMINATION FORM

(TO BE COMPLETED BY THE CITY UPON NOTICE OF INTENT TO AWARD)

"Lowest responsible bidder" means the lowest bidder who is not on the list established by the Construction Contractors Board pursuant to ORS 701.227 and who has:

1. Substantially complied with all prescribed public contracting procedures and requirements of the State of Oregon and the City of Roseburg;
2. Met the standards of responsibility described in ORS 279B.110 and 279C.375, and Roseburg Municipal Code Chapter 3.06; and
3. Not been disbarred or disqualified from bidding or debarred by the State of Oregon under ORS 279B.130 or 279C.440, or by the City under the provisions of Roseburg Municipal Code Chapter 3.06.

Project Name:_____

Bid/Project Number:_____

Business Entity/ Bidder's Name:_____

CCB License Number:_____

Form submitted by City of Roseburg.
Form submitted by:

Name:_____

Title:_____

Date:_____

The City has (check all of the following):

[ ] Checked the list created by the Construction Contractors Board under ORS 701.227 for bidders who are not qualified to hold a public improvement contract.

[ ] Determined whether the bidder has met the standards of responsibility. In so doing, the City has found that the bidder demonstrated that the bidder:

[ ] Has available the appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain the resources and expertise, necessary to meet all contractual responsibilities.

[ ] Holds current licenses that businesses or service professionals operating in this state must hold in order to undertake or perform the work specified in the Contract.

[ ] Is covered by liability insurance and other insurance in amounts required in the solicitation documents.

[ ] Qualifies as a carrier-insured employer or a self-insured employer under ORS 656.407, or has elected coverage under ORS 656.128.

[ ] Has disclosed the bidder's first-tier subcontractors in accordance with ORS 279C.370.

[ ] Has a satisfactory record of performance.

[ ] Has a satisfactory record of integrity.

[ ] Is legally qualified to contract with the City.

[ ] Possesses a certificate that the Oregon Department of Administrative Services issued under ORS 279A.167 – Pay Equity Compliance (if applicable)**. (NEW)**

[ ] Has supplied all necessary information in connection with the inquiry concerning responsibility.

[ ] Determined the bidder to be (check one of the following):

[ ] Responsible under ORS 279C.375(3)(a) and (b).

[ ] Not responsible under ORS 279C.375(3)(a) and (b).

If the City has found the bidder not to be responsible, please see attached document explaining the City's determination.

Note: This form is to be submitted by the City of Roseburg to the Construction Contractors Board immediately following issuance of the City's Notice of Intent to Award the subject contract. A copy must immediately be filed with the City Recorder.

BUREAU OF LABOR AND INDUSTRIES
PREVAILING WAGE RATES FOR PUBLIC WORKS CONTRACTS

Prevailing Wage Rates are the minimum wages that must be paid to all workers employed in the construction, reconstruction, major renovation or painting of all public works, unless specifically exempted by state or federal law. Rather than including the entire State and/or Federal Prevailing Wage Rate publications in the bid specifications and contract, public entities may make reference to the specific prevailing wage rate publication where the prevailing wage rates are found *or* provide a link to the specific prevailing wage rate publication where the prevailing wage rates are found.

Oregon Bureau of Labor and Industries Prevailing Wage Rates applicable to the subject project/contract are available on BOLI's website at BOLI : Prevailing Wage Rates : For Employers : State of Oregon. The prevailing wages to be applied throughout the duration of this project are those in effect for BOLI Prevailing Wage Rate District 6, (Douglas County Oregon), upon the date the project is first advertised.

Federal Prevailing Wages Rates under the Davis Bacon Act (40 U.S.C. 3141 et seq.) may be found at SAM.gov | Home. The prevailing wages to be applied throughout the duration of this project are those in effect for Federal Prevailing Wage Rates under the Davis Bacon Act (40 U.S.C. 3141 et seq.) at the time the initial specifications were first advertised for bid solicitations.

If the project is subject to both ORS 279C.800 to 279C.870 and to the Davis Bacon Act (40 U.S.C. 3414 et seq.), the contractor and every subcontractor shall pay the higher of the applicable state or federal prevailing rate of wage to all workers on the projects.

For specific information or questions regarding the Prevailing Wage Rate Law, you may log on to the above referenced websites or contact the nearest Oregon Bureau of Labor and Industries office listed below.

BOLI Office Locations

Eugene	1400 Executive Parkway, Eugene, OR 97401	541/686-7623
Medford	700 E. Main, Suite 105, Medford, OR 97504	541/776-6270
Portland	800 NE Oregon St., #32, Portland, OR 97232	503/731-4074
Salem	3865 Wolverine St. NE, Bldg. E-1, Salem, OR 97305	503/378-3292

THIS PROJECT IS SUBJECT TO THE OREGON BOLI PREVAILING WAGE RATES EFFECTIVE ON October 1, 2024

GENERAL CONDITIONS

1. DEFINITIONS

1.1 Whenever used in these General Conditions or in the other Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

"Acceptance" means that the work has been completed in accordance with the Contract Documents and approved in writing by the Owner.

"**Act of God or Nature"** means a natural phenomenon of such catastrophic proportions or intensity as would reasonably prevent performance.

"Addendum" means any written document, signed by all parties, pertaining to additions, deletions, revisions or other issues with the Contract Documents issued after the Contract Documents have been issued.

"Bid" means the offer of a bidder to perform the work described by the Contract Documents when made out and submitted on the prescribed Bid Form and properly signed.

"Bidder" means any person, firm, partnership, corporation, limited liability company, or other entity submitting a bid for the work described hereunder.

"Change Order" means a document recommended by the Project Manager which is signed by the Contractor and the City and authorizes an addition, deletion or revision in the work or an adjustment in the Contract price or Contract times, issued on or after the effective date of the Contract.

"City" means the City of Roseburg located in the State of Oregon, and owner of the Project and work related thereto.

"Contract Documents" means and includes the Invitation to Bid, Information for Bidders, Bid Form, Construction Contract with Exhibit "A" Standard Contract Provisions, First-Tier Subcontractor Disclosure Form, Drug Testing Program Certification Form, Bidder's Responsibility Form, Performance Bond, Payment Bond, Public Works Bond Filing Certification form (when required), General Conditions, Technical Provisions, Special Conditions, Standard Drawings, Specifications & Plans, and Supplemental Specifications all as required for the full execution and satisfactory completion of the Project.

"Contractor" means the firm, partnership, corporation, limited liability company, or other entity executing the Contract with the City for the performance of the work herein described.

"Defective" means, when modifying the work, refers to work that is unsatisfactory, faulty or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test or approval referred to in the Contract Documents; or

c. has been damaged prior to the Project Manager's recommendation of final payment (unless responsibility for the protection thereof has been assumed by the City at Substantial Completion in accordance with the Contract Documents).

"Design Consultant" means the firm who prepared the Plans and Specifications and shall not mean the Project Manager.

"Engineer" means the City's authorized Engineer, as designated by the City Manager or Public Works Director for the Contract, either acting directly or through the inspector, within the scope of assigned duties.

"Final Completion" means that all work has been completed in conformance with the Contract Documents and the Contract has been fully performed.

"Holidays" means any Oregon legal holiday.

"Liquidated Damages" means that which is set forth in Subsection 6.9 herein.

"Milestone" means a principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all of the work.

"Pay Equity Compliance Certificate" means a certificate issued by the Department of Administrative Services pursuant to ORS 279A.167 following completion of pay equity training.

"Payment Bond" means the approved form of security furnished by the Contractor and Contractor's Surety as a guarantee of good faith on the part of the Contractor to make all payments that are the Contractor's obligations, in accordance with the terms of the Contract.

"Performance Bond" means the approved form of security furnished by the Contractor and Contractor's Surety as a guarantee of good faith on the part of the Contractor to execute the work that is the Contractor's obligation, in accordance with the terms of the Contract.

"Plans" means and includes the City approved maps, standard drawings, work order drawings and supplemental drawings and sketches which will show the locations, character, dimensions and details of the work to be done.

"Project" means all work described and specified herein and as indicated on the Plans.

“Project Manager” means the City’s authorized Project Manager for the Contract, as designated by the City Manager or Public Works Director, either acting directly or through a designated representative, within the scope of assigned tasks.

“Proposal Request” means a written statement issued by the Project Manager to the Contractor on or after the effective date of the Contract and signed by the City and the Contractor identifying additions, deletions or revisions in the work, or responding to differing or unforeseen subsurface or physical conditions under which the work is to be performed or to emergencies. A Proposal Request will not change the Contract price or the Contract times but is evidence that the parties expect that the change ordered or documented by a Proposal Request will be incorporated in a subsequently issued Change Order.

“Public Works Bond” means a $30,000 form of security furnished by the Contractor and/or Subcontractor and Contractor’s and/or Subcontractor’s Surety to the Construction Contractors Board to pay claims ordered by the Bureau of Labor and Industries to workers performing labor under a public works project.

“Punch List” means a list developed by the Project Manager after Substantial Completion that identifies defects or deficient workmanship or work not completed in conformance with the Contract Documents.

“Request for Information” means a formal request from the Contractor to the Project Manager requesting clarification and/or direction necessary to complete the work.

“Signature” means either a hand written or electronic signature.

"Specifications" means and includes the directions, provisions and requirements contained herein and referred to herein pertaining to the Project.

“Submittals” means all drawings, diagrams, material data, schedules and other information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the work.

“Substantial Completion” means that the degree of completion of the Project, or portion of the Project as evidenced by the Project Manager’s written notice of Substantial Completion, sufficient to provide the City, the full-time use of the Project, or portion of the Project, for the purpose for which it was intended. Determination of Substantial Completion is solely at the discretion of the Project Manager. Substantial Completion does not mean complete in accordance with the Contract nor shall Substantial Completion of all or any part of the Project entitle the Contractor to final acceptance under the Contract. The criteria the Project Manager may use in exercising his/her discretion in determining Substantial Completion includes, but is not limited to, the completion of all equipment contained in the Project, or portion of the Project, all other components necessary to enable the City to operate the facility in the manner that was intended.

"Superintendent" means the executive representative of Contractor, authorized to receive and fulfill instructions from the Project Manager or Project Manager's representatives.

"Supplemental Specifications" means specific instructions setting forth conditions or requirements peculiar to the Project under consideration when said Project is not completely covered by the Specifications contained herein.

"Surety" means the person, firm, partnership, corporation, limited liability company or other entity that has the requisite authority to execute the bonds required from the Contractor.

2. CONTRACT DOCUMENTS

2.1 Award, Execution of Documents, Delivery of Bonds.

2.1.1 If awarded, the Contract will be awarded to the lowest responsible bidder whose qualifications indicate the award will be in the best interest of the City and whose bid complies with all the prescribed requirements. No award will be made until the City has concluded such investigations as the City deems necessary to establish the responsibility, qualifications and financial ability of the Bidders to do the work in accordance with the Contract Documents.

2.1.2 In determining the lowest responsible bidder for the purpose of awarding the Contract, the City, pursuant to ORS 279A.120 shall:

2.1.2.1 give preference to goods and services that have been manufactured or produced in Oregon if the price, fitness, availability and quality are otherwise equal; and

2.1.2.2 add a percentage increase on the bid of a nonresident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides.

2.1.3 The City reserves the right to reject any and all bids not in compliance with all public bidding procedures and requirements or when such rejection is in the interest of the City; to reject the bid of a bidder who has previously failed to perform properly or complete contracts of a similar nature on time; and to reject the bid of a bidder who is not, in the opinion of the City, in a position to perform the Contract. If the Contract is awarded, the City will give the successful bidder written notice of award within forty-five (45) calendar days after bid opening.

2.1.4 At least three (3) counterparts of the Construction Contract and such other Contract Documents as practicable will be signed by the City and Contractor. The Contractor shall receive one (1) executed counterpart of the Contract Documents.

2.1.5 When required by the specifications, the Contractor shall deliver simultaneously with the execution of the Contract Documents a good and sufficient Payment Bond to ensure payment of the obligations incurred in the

performance of this Contract, a Performance Bond to assure performance of the Contract and the Public Works Bond Filing Certification form executed by the Contractor. No exceptions will be made to this provision.

2.1.6 Failure of the successful bidder to execute the Contract Documents and deliver the required Payment Bond, Performance Bond and Public Works Bond Filing Certification form within ten (10) calendar days of the notification of the award of the Contract shall be just cause for the City to annul the award.

2.2 Correlation, Interpretation, and Intent of Contract Documents.

2.2.1 The intent of the Plans and Specifications as contained herein is to describe the complete Project which the Contractor shall undertake to do in full compliance with the Construction Contract with Exhibit "A", Plans and Specifications. The Contract Documents comprise the entire agreement between the City and the Contractor. The Contract Documents may only be altered as provided in the General Conditions of the Contract.

2.2.2 The Plans and Specifications are intended to be explanatory and complimentary of each other. Contractor shall execute any work indicated in the Plans and not in the Specifications, or vice versa, as if indicated in both. Should any work or materials be reasonably required or intended for carrying the Project to satisfactory completion, which is inadvertently omitted on the Plans and Specifications, Contractor shall furnish the same as fully as if particularly delineated or described. Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall apply to the Project Manager for further explanations as may be necessary and shall conform thereto so far as may be consistent with the terms of the Contract. In the event any doubt or question arising respecting the true meaning of the Plans or Specifications, Contractor may seek a determination by the Project Manager according to Subsection 3.2 and Paragraph 3.3.3. Should the Contractor disagree with the Project Manager's decision, the Contractor may appeal to the City Manager in accordance with Paragraph 3.4.2. In resolving such conflicts, errors and/or discrepancies, the Contract Documents shall be given precedence in the following order: Construction Contract with Exhibit "A", the Plans and the Specifications. Within the Specifications, the order of precedence shall be as follows: General Conditions, Information for Bidders, Special Conditions and Technical Provisions.

2.2.3 Figure dimensions on Plans shall govern over scale dimensions, and detailed drawings shall govern over general drawings. Any work that may reasonably be inferred from the Plans and/or Specifications as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to reference such recognized standards. The Contractor assumes full responsibility for having familiarized himself with the nature and extent of the Contract Documents, work locality and local conditions that may in any manner affect the work to be done.

2.3 Verification and Warranty. The Contractor shall make the determination of the nature of the work proposed under the Contract, local conditions which can be encountered within the Project area and all other matters which can in any way affect the work proposed under the Contract. It shall also be the responsibility of the Contractor to be thoroughly familiar with the Contract Documents. Failure to make the examination necessary for this determination or to examine any form, instrument or document of the Contract with Exhibit "A" shall not release the Contractor from the obligations of the Contract with Exhibit "A". The Contractor warrants that no oral or written agreement or conversation with any officer, agent or employee of the City, either before or after the execution of the Contract, has affected or modified any of the terms or obligations herein contained.

2.4 Documents to be Kept on the Jobsite. The Contractor shall keep at least one (1) copy of the Contract Documents at the jobsite, in good order, available to the Project Manager.

2.5 Additional Contract Documents. The City will furnish to the Contractor, on request and free of charge, up to three (3) copies of the Contract Documents. Additional copies of Contract Documents may be obtained upon request by paying the actual cost of reproduction.

2.6 Surveys. When required for the Project, surveying and staking of the component parts of the work shall be as detailed in the Specifications and on the Plans. The Contractor shall construct the work in accordance with the construction stakes and shall be charged with full responsibility for conformity and agreement of the work with said construction stakes.

3. PROJECT MANAGER-CITY CONTRACTOR RELATIONS

3.1 General. The City has the authority to act as the sole judge of the work with respect to both quantity and quality as set forth in the Contract. It is expressly stipulated that the Plans, Specifications and other Contract Documents set forth the requirements as to the nature of the completed work and do not purport to control the method of performing work except in those instances where the nature of the completed work is dependent on the method of performance.

3.2 Project Manager. The Project Manager is the representative of the City and is employed to act as advisor and consultant to the City in project managing matters related to the Contract. The City has delegated its authority to the Project Manager to make initial decisions regarding all claims and questions, which may arise as to the quality or acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of the work under the Contract. The Project Manager determines the intent and meaning of the Contract and makes initial decisions with respect to the Contractor's fulfillment of the Contract and the Contractor's entitlement to compensation. Should the Contractor disagree with a decision of the Project Manager with respect to the Contract, the Contractor may request that the City Manager review the Project Manager's decision and make a determination in the manner provided under Paragraph 3.4.2.

The Project Manager may designate a field representative as an alternate in his/her capacity on the job site. All notifications required under the Contract shall be made directly to the Project Manager or the designated representative.

3.3 Duties and Responsibilities of the Project Manager

3.3.1 The Project Manager will make periodic visits to the site of the Project to observe the progress and quality of the work and to determine, in general, if the work is proceeding in accordance with the intent of the Contract Documents. The Project Manager shall not be required to make comprehensive or continuous inspections to check the quality or quantity of the work, and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Project. Visits and observations made by the Project Manager shall not relieve the Contractor of obligations to conduct comprehensive inspections of the work, to perform acceptable work and to provide adequate safety precautions.

3.3.2 The Project Manager or the field representative thereof will be assigned to periodically observe the work and to act in matters of construction under the Contract. It is understood the Project Manager or field representative shall have the power to issue instructions and make decisions within the limitations of the authority granted by the City. Such inspection shall not relieve the Contractor of obligations to conduct comprehensive inspections of the work, perform acceptable work and provide adequate safety precautions.

3.3.3 All claims of the Contractor shall be presented to the Project Manager or designated representative, for a decision which shall be made in writing within a reasonable time. All decisions of the Project Manager shall be final subject only to the Contractor's right to appeal the Project Manager's decision to the City Manager in the manner provided in Subsection 3.4.

3.4 Appeal to the City Manager by the Contractor.

3.4.1 Determination by the Project Manager. As provided in Subsections 3.1, 3.2, and 3.3, the Contractor shall refer questions regarding meaning and intent of the Contract Documents in writing to the Project Manager for his/her decision. The Project Manager shall, within a reasonable time, respond to the Contractor in writing with his/her decision. If the Contractor disagrees with the Project Manager's decision or considers the decision requires extra work, Contractor may appeal the decision to the City Manager. Any related work performed by the Contractor prior to the Project Manager's decision is done at Contractor's risk unless otherwise authorized by the Project Manager.

3.4.2 City Manager Appeal Process. In the event the Contractor disagrees with any decision of the Project Manager, the Contractor may, within ten (10) calendar days of the date of such decision, appeal the decision to the City Manager for review. The appeal must be in writing and must set forth the questions referred to the Project Manager, the Project Manager's decision and the Contractor's basis for disagreement. The Contractor shall deliver a copy of

the appeal to the Project Manager at the time it is filed with the City Manager. The City Manager shall make all reasonable efforts to review the appeal and deliver his/her decision in writing to the Contractor within thirty (30) calendar days from the date of receipt of the appeal. Failure of the Contractor to appeal the decision of the Project Manager within the said ten (10) calendar day period constitutes a knowing and voluntary waiver of the Contractor's right to thereafter assert any claim resulting from such decision. This procedure is not meant to preclude or discourage informal resolution of disagreements between the Project Manager and the Contractor.

In the event the City Manager elects to do so, the City Manager may establish a "Claims Review Board" either to assist in reviewing an appeal hereunder or to consider Contractor appeals directly. Once established, the Claims Review Board will hear all future appeals of claims for this Contract.

During the pendency of any appeal, any related work performed by the Contractor shall be done at the Contractor's risk unless otherwise authorized by the Project Manager.

The filing of an appeal does not automatically extend the milestones and/or deadlines set forth in the Contract Documents and the Contractor continues to be subject to liquidated damages for failure to complete the Project within the time allotted.

In the event the City Manager or the Contractor commences arbitration or other legal action against the other for damages or for equitable relief, the prevailing party in such arbitration or other legal action is entitled to recover its reasonable attorney's fees therein and in any appeal therefrom.

The parties hereby stipulate and consent that venue for all arbitration or other legal actions arising under the Contract is in Douglas County, Oregon and that jurisdiction for all legal actions that are brought in or transferred to court is in the Douglas County Circuit Court of the State of Oregon; except, if a claim must be brought in a federal forum, then it must be brought and adjudicated solely and exclusively in the United States District Court for the District of Oregon located in Eugene, Oregon.

3.5 Suspension of Work. The Project Manager shall, in addition to its other authority, have the authority to suspend the work, wholly or in part, for such period or periods as may be deemed necessary due to unsuitable weather or such other conditions as are considered unfavorable for prosecution of the work, or failure on the part of the Contractor to carry out the provisions of the Contract. The Contractor shall not suspend operation without the permission of the Project Manager or Project Manager's authorized representative.

3.6 Notice of Potential Claim for Additional Compensation and/or Time.

3.6.1 The Contractor shall not be entitled to any additional compensation or extension of time for any act or failure to act by the Project Manager or the City,

the happening of any event or occurrence or any other cause, unless the Contractor shall have given the Project Manager a written notice of potential claim.

3.6.2 The written notice of potential claim shall set forth the reasons for which the Contractor believes additional compensation or time will or may be due, the nature of the costs involved and insofar as possible, the amount of the potential claim. If based on an act or failure to act by the Project Manager or the City, except in case of emergency, such notice shall be given to the Project Manager prior to the time that the Contractor starts performance of the work giving rise to the potential claim for additional compensation. In all other cases, notice shall be given within ten (10) calendar days after the happening of the event or occurrence giving rise to the potential claim.

3.6.3 It is the intention of this section that differences between the parties arising under and by virtue of the Contract shall be brought to the attention of the Project Manager at the earliest possible time in order that such matters may be settled if possible or other appropriate action may be taken promptly.

3.7 Examination of Completed Work. If the Project Manager requests it, the Contractor at any time before acceptance of the Project by the City, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standards required by the Contract Documents. Should the work thus exposed or examined prove to be in accordance with the Contract Documents, the uncovering or removing, the replacing of the covering or making good of the parts removed, shall be paid for by the City; but should the work so exposed or examined prove to be not in accordance with the Contract Documents, the uncovering or removing and the replacing of the covering or the making good of the parts removed, shall be at Contractor's expense. Should any work be performed without giving notice of plan of work, thereby eliminating an opportunity of inspection by the Project Manager, the Project Manager may require the Contractor to uncover such work at Contractor's own expense for examination by the Project Manager. Cost of uncovering such work shall be borne by the Contractor, whether or not the work is found acceptable. The work shall also be subject to inspection by appropriate governmental inspectors at all times.

3.8 Contractor's Superintendent. A qualified superintendent, who is acceptable to the Project Manager, shall be maintained by the Contractor on the Project to give efficient supervision over the Project until its completion. The superintendent shall have full authority to act on behalf of the Contractor, and all directions given to the superintendent shall be considered given to the Contractor. In general, the Project Manager's instructions shall be confirmed in writing and always upon written request from the Contractor.

3.9 Information Regarding Existing Facilities and Utilities.

3.9.1 Facilities. Any information relative to the location of other structures as might be shown on the Contract Documents will be obtained from the best information available and field observations; however, the City cannot guarantee the accuracy or completeness of this information.

3.9.2 Utilities. The Design Consultant has endeavored to determine the existence of utilities at the job site from the records of positions of these utilities as derived from such records as are shown on the Drawings. No excavations were made to verify the location shown for underground utilities. The service connections to these utilities are not shown on the Drawings. It is the responsibility of the Contractor to determine the exact location of all utilities and service connections hereto. The Contractor shall make its own investigations, including contacting the owners of appropriate utilities and making exploratory excavations to determine the locations and type of existing utilities, including service connections, prior to commencing work that could result in damage to such utilities and/or surrounding structures. The Contractor shall immediately notify the Project Manager as to any utility discovered by the Contractor that is not shown on the Drawings or that is in a different position than shown on the Drawings.

In the event it is necessary to remove, relocate or temporarily maintain a utility because of interference with the work, the Contractor shall perform the work on the utility and the City shall pay Contractor as follows:

3.9.2.1 When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner thereof, the Contractor bears all expenses incidental to the work on the service connection. The Contractor shall perform the work on the service connection in a manner satisfactory to the owner thereof; if being understood that the owner of the service connection has the option of doing such work with its own forces, or permitting the work to be done by the Contractor.

3.9.2.2 When it is necessary to remove, relocate or temporarily maintain a utility or underground obstruction that is in the position shown on the Drawings, the cost of which is not required to be borne by the owner thereof, the Contractor bears all expenses incidental to the work on the utility. The Contractor shall perform the work on the utility in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with its own forces, or permitting the work to be done by the Contractor.

3.9.2.3 When it is necessary to remove, relocate or temporarily maintain a utility or underground obstruction that is not shown on the Drawings or is in a position different from that shown on the Drawings and were it in the position shown on the Drawings would not need to be removed, relocated or temporarily maintained, the cost of which is not required to be borne by the owner thereof, the City will make

arrangements with the owner of the utility for such work to be done at no cost to the Contractor.

No representations are made that the obligations to move or temporarily maintain any utility and to pay the cost thereof, is or is not required to be borne by the owner of such utility, and it is the responsibility of the Contractor to investigate to determine whether or not said cost is required to be borne by the owner of the utility.

Governmental agencies and owners of utilities reserve the right to enter at any time upon any street, alley, right-of-way or easement for the purpose of making changes in their property made necessary by the work and for the purpose of maintaining and making repairs to their property.

3.10 Use of Premises

3.10.1 All work included under the Contract is to be constructed on land belonging to the City, on public right-of-way administered and regulated by state and/or local government or on easements to the benefit of the City or the public. The Contractor shall abide by special conditions or requirements of the property owner or governing authority. The Contractor shall confine equipment, the storage of materials and the operation of Contractor's workers to the limits as shown on the Plans or as indicated by law, ordinances, permits or directions of the Project Manager and shall not unreasonably encumber the premises with materials.

3.10.2 Any additional land and access thereto which the Contractor might desire for temporary construction facilities or for storage of materials shall be provided by the Contractor with no liability to the City. The Contractor shall pay all costs involved in acquiring such rights and all clean up shall be made as required by these Specifications.

3.11 Private Property. The Contractor shall not enter upon private property for any purpose without obtaining permission and shall be responsible for the preservation of all public property, trees, monuments, etc. along and adjacent to the street and/or right-of-way, and shall use every precaution necessary to prevent damage or injury thereto. The Contractor shall use suitable precautions to prevent damage to pipes, conduits and other underground structures, including but not limited to, verifying with all appropriate utilities where underground structures are located, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

3.12 Assignment of Contract. Contractor shall not sublet, sell or assign the Contract or sublet any of the work to be performed hereunder without the written consent of the City. Any such assignment or subletting of any such work without City's consent shall be null and void and without force or effect.

3.13 City's Right to do Work. If, in the sole opinion of the Project Manager, the Contractor neglects to prosecute the work properly or neglects or refuses at Contractor's own cost, to take up and replace work that has been rejected by the Project Manager, the Project Manager shall notify the City who shall notify the Surety of the condition. After at least ten (10) calendar days written notice to the Contractor and the Contractor's Surety, or without notice if an emergency or danger to the Project or public exists, and without prejudice to any other right which the City may have under the Contract, the City may take over that portion of the Project which has been improperly executed, make good the deficiencies and deduct the actual costs thereof from the payments then or thereafter due the Contractor. If no amount is owed to the Contractor, then the City may still pursue all of its other legal and/or equitable remedies.

3.14 City's Right to Terminate Contract.

3.14.1 Upon occurrence of any one or more of the following, the City may terminate the Contract at any time, immediately or upon such notice as the City in its sole discretion deems appropriate, by providing written notice to the Contractor which describes the reason for termination:

3.14.1.1 Contractor persistently fails to perform the work in accordance with the Contract Documents, including but not limited to, failure to supply sufficient skilled workers, suitable materials or equipment and failure to adhere to the progress schedule as the schedule may be revised from time to time;

3.14.1.2 Contractor fails to comply with applicable laws or the provisions of any of the Contract Documents, including, but not limited to the Construction Contract with Exhibit “A” Standard City Contract Provisions;

3.14.1.3 Contractor disregards the authority of the Project Manager;

3.14.1.4 Contractor violates any provision of the Contract and, after receiving notice of the violation, fails to remedy the breach immediately; or

3.14.1.5 Contractor files for bankruptcy under any chapter of the Bankruptcy Code (Title 11, United States Code); or a petition in bankruptcy is filed against Contractor under the Bankruptcy Code or any other provision of law seeking substantial relief; or Contractor makes a general assignment for the benefit of creditors; or a trustee, receiver or similar agent is appointed to take charge of Contractor's property for the benefit of creditors; or Contractor otherwise admits in writing to being unable to pay its debts as they become due.

3.14.2 Upon the City’s issuance of written notice of termination, the Contractor shall immediately cease all work under this Contract, unless, as shall be specified

in the notice, the City, in its sole discretion, would be harmed by any uncompleted work, in which case, Contractor shall complete those items specified by the City in its notice.

3.14.3 The City may terminate the Contract upon seven (7) calendar days' notice if the City determines for any reason that the completion of the Contract is no longer in the best interests of the City.

3.14.4 If the City terminates the Contract pursuant to Paragraph 3.14.1, the City may choose any remedy available to it under the Contract, applicable statutes, City Code or common law, including but not limited to, completing the Project itself or through another contractor. The Contractor shall pay the City for all additional costs incurred by the City to obtain substitute performance. The Contractor shall be entitled to payment for that portion of the work that the Contractor completed according to the Contract, less the City's costs to obtain substitute performance for the balance of the work.

3.14.5 If the City terminates the Contract pursuant to Section 3.14.3, the City shall pay Contractor for that portion of the work the Contractor has completed according to the Contract, plus Contractor's cost for materials ordered and delivered to the site before Contractor receives the City's notice of termination; provided that such materials shall then belong to the City.

3.15 Contractor's Right to Stop Work or Terminate Contract. The Contractor may suspend work or terminate the Contract upon ten (10) calendar days written notice to the City, for any of the following reasons:

3.15.1 If an order of any court or other public authority caused the work to be stopped or suspended for a period of ninety (90) calendar days through no act or fault of the Contractor or his employees;

3.15.2 If the City should fail to act upon any request for payment within thirty (30) calendar days after its approval by the Project Manager; or

3.15.3 If the City should fail to pay the Contractor any sum within thirty (30) calendar days after its award by arbitrators.

3.16 Rights of Various Interests. Wherever work being done by the City's forces is contiguous to work covered by the Contract, the respective rights of the various interests involved shall be established by the Project Manager to secure the completion of the various portions of the work in general harmony.

3.17 Subcontracts.

3.17.1 The Contractor shall not be permitted to subcontract any of the work to be performed under the Contract without the written consent of the City, submission of the First-Tier Subcontractor Disclosure Form as required prior to the Bid opening deadline and verification that the Subcontractor has filed a Public Works Bond, when required, with the Construction Contractors Board prior to beginning

any work on the Project. The Contractor shall not employ any subcontractor that the Project Manager may object to due to subcontractor lacking the capability of performing work of the type and scope anticipated. No changes will be allowed from the approved subcontractor list without approval of the Project Manager.

3.17.2 The Contractor agrees to be as fully responsible to the City for the acts and omissions of the Contractor's subcontractors or of any persons either directly or indirectly, employed by Contractor's subcontractors as Contractor is for the acts and omissions of persons directly employed by Contractor.

3.17.3 Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the City.

3.18 Unforeseen Difficulties. The Contractor shall protect the work and materials from damage due to the nature of the work, the elements, carelessness of other contractors or from any cause whatever until completion and acceptance of the Project. All loss or damages arising out of the nature of the work to be done under the Contract Documents, from any unseen obstruction or defects which may be encountered in the prosecution of the work, or from the action of the elements, shall be sustained by the Contractor.

3.19 Work During an Emergency. The Contractor shall be responsible for and must have resources available for all emergency work which might occur on the Project under construction for which the Contractor is responsible. The Contractor shall perform any work and furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases the Contractor shall notify the Project Manager of the emergency as soon as practicable, but the Contractor shall not wait for instructions before proceeding to properly protect both life and property.

3.20 Oral Agreements. No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents. No provision of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing. No evidence shall be introduced in any proceeding of any other waiver or modification.

3.21 Liens and Claims Against Contractor. The Contractor shall not permit any lien or claim to be filed or prosecuted against the City on account of any labor or material furnished under this Contract whether the same be furnished by the Contractor or any Subcontractor. If the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a Subcontractor by any person in connection with the Contract as such claim becomes due, the City may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to the Contractor under this Contract. The payment of a claim in this manner does not relieve the Contractor or its surety from obligation with respect to any unpaid claims.

Any claim, by a person claiming to have supplied labor or materials for the performance of the work, for payment asserted against the Contractor’s payment bond must be asserted in conformity with ORS 279C.600 et. Seq.

4. MATERIALS AND WORKMANSHIP

4.1 Materials to be Reviewed Before Use.

4.1.1 Only materials conforming with the specified requirements and conditionally accepted by the Project Manager shall be used in the Project.

4.1.2 Before any material to be used in the Project is delivered, the Contractor shall advise the Project Manager of the source from which the material is to be obtained, furnish such samples as may be required for testing purposes, and receive the Project Manager's conditional acceptance for the use of that particular material. The conditional acceptance of any source of supply by the Project Manager does not imply that all material from that source will be accepted. Should material from any conditionally accepted source fail to maintain a quality meeting the requirements of the Specifications, use of material from that source shall be discontinued and the Contractor shall furnish acceptable material from other sources. Regardless of the source, any material delivered for the Project which fails to meet the requirements will be rejected. Only material meeting all requirements will be allowed to be incorporated in the Project. Any material or item incorporated in the Project which does not meet requirements of the Contract Documents, even if it was used with the consent and/or the presence of an inspector, shall be removed and acceptable material shall be used in its place, with all costs related to such removal and installation being borne by the Contractor.

4.1.3 Any material which, after conditional acceptance, has for any reason become unsuitable for use shall be rejected and not used.

4.2 Tests of Materials.

4.2.1 All tests of materials shall be made in accordance with acceptable methods as described and designated in the Specifications. When tests of materials are required, such tests shall be made by a testing laboratory accepted by the Project Manager and at the expense of the Contractor. The Contractor shall afford such facilities as may be required for collecting and forwarding samples and shall hold the materials represented by the samples until tests have been made and the materials found equal to the requirements of the Specifications or to approved samples. The Contractor in all cases shall furnish the required samples without charge.

4.2.2 In the absence of any definite Specification or reference to a Specification in the Technical Specifications or in the Special Provisions for the particular Project involved, it shall be understood that such materials shall meet the Specifications and requirements of the American Society for Testing Materials. Unless otherwise specified, all tests of materials shall be made in accordance with the methods prescribed by the American Society for Testing Materials.

4.2.3 In cases where compliance of materials or equipment with Contract requirements is not readily determinable through inspection and tests, the Project Manager shall request the Contractor provide properly authenticated documents, certificates or other satisfactory proof of compliance. These documents, certifications and proofs must cover performance characteristics, materials or construction and the physical or chemical characteristics of materials.

4.2.4 If the Specifications require, or the Contractor's request is approved by the Project Manager, inspection or testing may take place away from the job site. The additional cost to the City for such remote inspection or testing includes travel and subsistence expenses and will be paid by the Contractor through a reduction in payment to the Contractor equal to the travel and subsistence expenses. In the event the remote inspection or testing is not specified and is required by the City, the required travel and subsistence expense will be paid for by the City.

4.3 Storage of Materials. Materials shall be so stored as to insure the preservation of their quality and fitness for the Project. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and/or they shall be placed under cover. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the City and the private property owner.

4.4 Character of Workers. The Contractor shall at all times be responsible for the conduct and discipline of Contractor's employees and/or any subcontractor or persons employed by subcontractors. All workers must have sufficient knowledge, skill and experience to properly perform the work assigned to them. Any foreman or worker employed by the Contractor or Subcontractor who, in the opinion of the Project Manager, does not perform the work in a skillful manner, appears to be incompetent or acts in a disorderly or intemperate manner shall, at the written request of the Project Manager, be removed from work on any portion of the Project except as allowed by the Project Manager.

4.5 Construction Means, Methods, Techniques, and Procedures. The Contractor shall have the full power and authority to select the means, methods, techniques and procedures for performing the work covered under the Contract, provided said means, methods, techniques and procedures are in strict compliance with the requirements of all local, state and federal authorities and with these Specifications, and are not in conflict with the recommended installation practices of the manufacturers who are the suppliers of the materials to be utilized on the contemplated Project. The construction means, methods, techniques and procedures utilized shall produce a satisfactory quality of workmanship and shall be adequate to maintain the schedule of progress as required under the provisions of these Specifications.

4.6 Contractor's Tools and Equipment. The Contractor's tools and equipment used on the work covered under the Contract shall be furnished in sufficient quantity and of a capacity and type that will safely perform the work specified, and shall be maintained and used in a manner that will not create a hazard to persons or property, or cause a delay in the progress of the work.

4.7 Rejected Materials and Work. Any material supplied by the Contractor which is condemned or rejected by the Project Manager or the Project Manager's authorized representative because of non-conformity with the Contract Documents shall be removed at once from the vicinity of the Project by the Contractor at his own expense, and the same shall not be used on the Project. Any defective work whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause shall be removed within ten (10) calendar days after written notice is given by the Project Manager, and the work shall be re-executed by the Contractor at his own expense.

4.8 Unnoticed Defects. Any defective work or materials furnished by the Contractor and discovered by the Project Manager before the Project has been given final acceptance or final payment has been made, or during the guarantee period, shall be removed and replaced by work and materials which shall conform to the provisions of the Contract Documents. Failure on the part of the Project Manager or his representative to condemn or reject bad or inferior work or materials shall not be construed to imply acceptance of such work or materials.

4.9 Right to Retain Imperfect Work. If any part or portion of the work done or material furnished by the Contractor under the Contract proves to be defective and not in accordance with the Plans and Specifications, and if the imperfection in the same is not of sufficient magnitude or importance as to make the work dangerous or unsuitable, or if the removal of such work will create conditions which are dangerous or undesirable, the City shall have the right and authority to retain such work but shall make such deductions in the payment therefore as may be just and reasonable.

4.10 Correction of Defective Work. When, and as often as the Project Manager determines through its inspection procedures, material, equipment or workmanship incorporated in the Project do not meet the requirements of the Contract, the Project Manager may give notice of the noncompliance to the Contractor in writing. Within five (5) calendar days of receipt of such notice, the Contractor shall undertake all work necessary to correct the deficiency and to comply with the Contract. The Contractor agrees to pay all costs of correcting the defective work, including wages and overhead charges for inspection. If the Contractor disagrees with the Project Manager’s determination and believes the corrective work should be covered by a Change Order, the Contractor shall immediately notify the City, in writing, setting forth the basis for its position. The City will review the matter and notify the Contractor, in writing, of its determination within thirty (30) calendar days after receipt of the Contractor’s notification. If the City determines the corrective work is required to comply with the Contract, the Contractor shall proceed with such work.

As a condition precedent to the Contractor’s claim for either additional compensation or time extension or both resulting from the performance of such corrective work, the Contractor shall, within fifteen (10) calendar days after receipt of the City’s determination, notify the City in writing of its intent to claim additional compensation, time or both. The Contractor shall document all cost information associated with the corrective work and shall submit such information to the Project Manager on a monthly basis. Receipt of the cost data by the Project Manager does not constitute an

Acceptance of the corrective work or an authorization for a Change Order to cover the corrective work.

4.11 Cutting and Patching. The Contractor shall do, or be responsible for, all cutting, fitting or patching that may be required by, shown on or reasonably implied by the Plans and Specifications. Any defective work performed or material furnished by the Contractor, which is discovered by the Project Manager before final acceptance of the Project or before final payment has been made, shall be removed and replaced or patched at the Contractor's expense in a manner approved by the Project Manager or his representative.

4.12 Cleanup.

4.12.1 As the Project progresses and immediately after completion of the Project, the Contractor shall clean up and remove all refuse and unused materials of any kind resulting from the Project. If the Contractor fails to commence the cleanup within 24 hours after being directed to do so by the Project Manager, the Project Manager may have the cleanup performed by others. The cost shall be borne by the Contractor and may be deducted from payments due or to become due the Contractor.

4.12.2 After the Project is completed and before final acceptance of the Project, all areas affected by the Project shall be neatly finished and all equipment, temporary structures, rubbish and waste shall be removed from the Project area.

4.13 Guarantee.

4.13.1 The Contractor shall fully warrant all work for at least one (1) full calendar year from the City's Final Acceptance of the Project, regardless of the length of manufacturers' or installers' warranties.

4.13.2 In addition to any other warranties that are required, the Contractor shall make all necessary repairs and replacements to remedy any and all defects, breaks or failures of the work occurring within one (1) calendar year following the date of the City's Final Acceptance due to faulty or inadequate materials or workmanship. Such repairs and replacements must conform to the Contract Specifications under which the Contractor originally performed the work.

4.13.3 In the event of a dispute regarding any portion of the work, the Contractor shall nonetheless provide any warranty service, repairs or replacements as described in Paragraphs 4.13.1 and 4.13.2 above, for that portion of the work that is not in dispute. In the event a dispute delays the City's Final Acceptance of the work, the warranty for portions of the work not in dispute runs from the date of the City's Final Acceptance of the remaining portions of the work.

4.13.4 The Contractor shall also repair any damage or remedy any disturbance to other publicly owned property or improvements thereon if caused by the Contractor's work and if the damage or remedy occurs during the warranty period.

4.13.5 If the Contractor performs warranty work, then the warranty work for repetitive defects in materials, workmanship or equipment also shall have a one (1) calendar year warranty period from the date of its completion and the City's Final Acceptance of that work. The Contractor shall continue to provide warranty work pursuant to the terms of the Contract until the defects are completed and the City provides notice of its Final Acceptance of the work.

4.13.6 The City shall provide the Contractor with written notice of the need to perform warranty work unless it is determined that an emergency exists, that delay would cause serious additional loss or damage, or if any delay in performing the work might cause injury to any member of the public. If the Contractor, after written Notice, fails within ten (10) calendar days to comply with the City's request, the City has the right to perform the warranty work either by hiring another Contractor or by using its own forces. In either event, the Contractor and its Surety remain liable to the City for the cost of the work performed and any additional damage suffered by the City.

4.13.7 The Contractor shall provide a bond during the one (1) calendar year warranty period to guarantee the Contractor's performance of warranty work. The Contractor shall provide to the City a bond in the amount of 20% of the final Contract Amount in one of the following ways:

4.13.7.1 Continuance of the Contract performance and payment bond.

4.13.7.2 Any new performance and payment bond, acceptable to the City, which covers the Contractor's warranty obligations imposed by the Contract Documents.

4.13.7.3 Cash deposit to the City Finance Department. A receipt from the City Finance Director constitutes proof of the deposit.

4.13.7.4 Other arrangements proposed by the Contractor that the City finds acceptable in the City's sole discretion.

5. INSURANCE, LEGAL AND FINANCIAL RESPONSIBILITY, AND PUBLIC SAFETY

5.1 Insurance.

5.1.1 Policy Requirements. The insurance policies specified herein shall be approved as to form by the City. Contractor shall deliver a certificate of all required policies to City upon execution of the Contract Documents and prior to commencement of any work under the Contract. If requested by the City, Contractor shall furnish the City with executed copies of such policies of insurance. Coverage provided by the Contractor must be underwritten by an insurance company deemed acceptable to the City. Insurance coverage shall be provided by companies admitted to do business in Oregon and rated A- or better

by AM Best. A thirty (30) day notice of cancellation, termination or non-renewal in coverage clause shall be included in all insurance policies. Failure to maintain any required insurance coverage in the minimum required amount shall constitute a material breach of the Contract and shall be grounds for immediate termination of the Contract. If the insurer is unwilling or unable to provide such commitment, the Contractor shall provide the City with the relevant sections of its policies describing how the insurer may reduce, modify or cancel the insurance. Furthermore, the Contractor has an affirmative duty to provide the City with any notice the Contractor receives regarding the reduction, modification or cancellation of its insurance within 24 hours of Contractor's receipt of such notice. All policies required by these provisions shall:

5.1.1.1 also name the City as an additional insured, protecting City from any and all claims, losses, actions or omissions of Contractor or as a result of the joint concurring or contributory act, omission or negligence of Contractor and City arising with or related to activities specified under the Contract;

5.1.1.2 be written as primary policies, not contributing with, or in excess of, any coverage City may have; and

5.1.1.3 have loss payable clauses in favor of and reasonably satisfactory to City.

5.1.2 Commercial General Liability Insurance. During the performance of the Contract, Contractor shall obtain and maintain continuously in effect a commercial general liability insurance policy, including personal and advertising injury liability and products, completed operations and construction site coverage, with a combined single limit per occurrence of not less than $2,000,000.The aggregate limit shall not be less than $4,000,000.The policy shall be endorsed to state that the aggregate limit of liability shall apply separately to the Contract. Coverage may be written in combination with Commercial Automobile Liability Insurance with separate limits for Commercial General Liability and Commercial Automobile Liability. If available, such policy shall contain a contractual liability endorsement to cover Contractor's indemnification obligations under the Contract. Claims Made policies will not be accepted.

5.1.3 Commercial Automobile Liability Insurance. At all times during the term of the Contract, and at the sole expense of Contractor, Contractor shall maintain continuously in effect, "Symbol 1" commercial automobile liability coverage covering all owned, non-owned and hired vehicles. This coverage may be written in combination with the Commercial General Liability Insurance with separate limits for Commercial Automobile Liability and Commercial General Liability. Combined single limit per occurrence shall not be less than $2,000,000. If this coverage is written in combination with the Commercial General Liability, the aggregate limit for Commercial General Liability shall not be less than $4,000,000 and the policy shall be endorsed to state that the aggregate limit of Commercial General Liability shall apply separately to the Contract.

5.1.4 Workers Compensation. At all times during the term of the Contract, and at the sole expense of the Contractor and Subcontractors, the Contractor and all Subcontractors shall comply with ORS 656.017, which requires them to provide Workers Compensation coverage for all their subject workers.

5.1.5 Pollution Liability. Contractor or appropriate Subcontractor shall obtain, at their expense, and keep in effect during the term of the Contract, Pollution Liability Insurance covering their liability for bodily injury, property damage and environmental damage resulting from sudden accidental or gradual pollution and related cleanup costs incurred by the Contractor or appropriate Subcontractor, all arising out of the work or services (including the transportation risk, when applicable) to be performed under the Contract. Combined single limit per occurrence shall not be less than $2,000,000, with an annual aggregate limit of not less than $4,000,000. If available, such policy shall contain a contractual liability endorsement to cover Contractor's indemnification obligations under the Contract. Claims Made policies will not be accepted.

5.2 Indemnification. The Contractor shall hold the City harmless from, and indemnify it for, all loss, costs, claims, demands, damages, suits, actions and judgments for property damage and/or personal injury, including death, arising out of the Project or performance under the Contract by the Contractor's agents or employees, or any of them. In any event any such action or claim is brought against City, Contractor shall, if City so elects, upon tender by City, defend the same at Contractor's sole cost and expense, promptly satisfy any judgment adverse to City or to City and Contractor jointly and reimburse City for any loss, costs, damage or expense (including legal fees) suffered or incurred by City.

5.3 Taxes and Charges. The Contractor shall pay state and local sales and use taxes on all items as required by the laws and statutes of the state and its political subdivisions. The Contractor shall withhold and pay any and all withholding taxes, whether state or federal; pay all social security charges and state unemployment compensation charges; and pay or cause to be withheld, as the case may be, any and all taxes, charges, fees or sums whatsoever which are now or may hereafter be required to be paid or withheld under the laws.

5.4 Bid Bond, Payment Bond, Performance Bond and Public Works Bond.

5.4.1 Contracts for Under $25,000.00. Except when required by the Purchasing Agent, and except for public improvement contracts, bids on all public contracts under twenty-five thousand dollars ($25,000.00) are exempt from the requirements for a Bid Bond, a Performance Bond to assure performance of the Contract and a Payment Bond to assure payment of the obligations incurred in the performance of the Contract. The Information for Bidders shall state when Bonds are required for contracts under $25,000.00.

5.4.2 Contracts for $25,000.00 or More. Except for public improvement contracts, or except when waived by the Council, bids on all public contracts of twenty-five thousand dollars ($25,000.00) or more, shall be accompanied by a

Bid Bond, and the Contractor shall post a Performance Bond to assure performance of the Contract and a Payment Bond to assure payment of the obligations incurred in the performance of the Contract. The Information for Bidders shall state when the requirement for Bonds have been waived for contracts of $25,000.00 or more.

5.4.2.1 Bid Bonds with Paper Bids. For bids submitted in paper format, the bidder must include a certified check, cashier's check, irrevocable letter of credit or Bid Bond in an amount equal to not less than ten percent (10%) of the total amount of the bid.

5.4.2.1 Bid Bonds with Electronic Bids. For bids submitted electronically, the bidder has the following options:

- Submit an electronic Bid Bond as part of the digitally signed bid document prior to the time of the Bid Closing; or
- Submit a paper Bid guaranty in the form of an irrevocable letter of credit issued by an insured institution as defined in ORS 706.008, or a cashier’s check or certified check made payable to the City of Roseburg prior to the time of Bid Closing.

5.4.3 Public Improvement Contracts & Contracts for Highways, Bridges and Other Transportation Projects:

5.4.3.1 Bids on Public Improvement contracts for one hundred thousand dollars ($100,000.00) or less, and contracts for highways, bridges and other transportation projects for fifty thousand dollars ($50,000.00) or less, are exempt from the requirement of a Bid Bond, a Performance Bond and a Payment Bond.

5.4.3.2 Bids on Public Improvement contracts for more than one hundred thousand dollars ($100,000), and contracts for highways, bridges and other transportation projects for more than fifty thousand dollars ($50,000), must be accompanied by a Bid Bond, Performance Bond and Payment Bond.

5.4.4 Emergency Contracts. For all contracts awarded under Roseburg Municipal Code Subsection 3.06.025(F), the City Council or the Purchasing Agent may waive the requirements for Bid Bond, the Payment Bond and the Performance Bond. Upon receiving the Purchasing Agent's report regarding the emergency conditions necessitating waiver, as required by Roseburg Municipal Code Subsection 3.06.025(F), the Council may modify or reject the Purchasing Agent's decision to waive Bond requirements.

5.4.5 Public Works Bond. Before beginning work on a public works contract, a contractor or subcontractor, unless exempt under ORS 279C.800 to 279C.870, shall submit a $30,000 Public Works Bond to the Construction Contractors Board and certify to the City that such Bond has been submitted. In case of an emergency, or when the City's interest or property would probably suffer material injury by delay or other cause, the requirement to file a Public Works Bond may be excused if the Purchasing Agent has declared an emergency under Roseburg Municipal Code Section 3.06.025.

5.4.6 Submittal and Return of Bid Bonds. When required by the above Subparagraphs, the Bid Bond shall accompany the bid in the form of cash, certified check, cashier's check, irrevocable letter of credit or Bid Bond in a form approved by City, and in an amount equal to ten percent (10%) of the total amount of the bid. There shall be no exceptions to this provision. All required Bid Bonds, excepting that of the Contractor submitting the successful bid, will be returned by mail for paper Bid Bonds, and by email for electronic Bid Bonds, within thirty (30) calendar days after the Contract has been awarded. The Bid Bond from the successful Contractor will be retained until bidder has entered into a satisfactory Contract with the City, and when required, furnished a Performance Bond to assure performance of the Contract, a Payment Bond to assure payment of the obligations incurred in the performance of the Contract and the Public Works Bond Confirmation form executed by the Contractor. Should the successful bidder fail or refuse to execute the Contract and/or furnish the Payment Bond, Performance Bond or Public Works Bond Confirmation form as required, the Bid Bond deposited by said bidder shall be retained as liquidated damages by the City.

5.4.7 Bond Form. The form of all bonds required by the City shall be as the City may prescribe, and shall be with a Surety company satisfactory to the City and authorized to do business in the State of Oregon. Bonds shall be in force for one year after acceptance of the completed Project to cover all guarantees against defective materials and workmanship and all claims by subcontractors or third parties for services or materials provided to Contractor or Contractor's Subcontractors.

5.5 Royalties and Patents. The Contractor shall pay all royalty and license fees, unless otherwise specified. The Contractor shall defend all suits or claims for infringement of any patent rights and shall save the City and the Project Manager harmless from loss on account thereof.

5.6 Permits and Licenses.

5.6.1 The Contractor shall apply for and obtain, but the City shall cover the cost of, all rights-of-way permits, easements, franchises, highway crossing permits and railroad crossing permits as required. The Contractor shall comply with all specifications or requirements stipulated in the permits granted to the City.

5.6.2 The Contractor shall obtain at Contractor's expense, all other permits (such as building permits, burning permits, blasting permits and safety permits),

licenses and inspection fees necessary for construction purposes as required by appropriate local, county, state or federal laws and/or ordinances. The Contractor shall also be registered to do business with the City of Roseburg prior to beginning work on the Contract.

5.7 Laws to be Observed. The Contractor shall keep fully informed of all local and county ordinances, state and federal laws in any manner affecting the Project herein specified. Contractor shall at all times comply with said ordinances, laws and regulations, and the City's Standard Contract Provisions in Exhibit "A" of the Construction Contract; and protect and indemnify the City and City's officers and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, provisions or regulations.

5.8 Safety.

5.8.1 The Contractor will be solely and completely responsible for conditions of the jobsites, including safety of all persons and property during work on the Project. This requirement will apply continuously and not be limited to normal working hours. Safety provisions shall conform to all applicable federal, state, county and local laws, ordinances and codes. The Contractor shall comply with ORS 279C.505(2) drug testing program requirements at all times throughout the completion of the Project.

5.8.2 The Contractor shall also comply with the "U.S. Department of Labor Occupational Safety and Health Act", the "Construction Safety Act" administered by the U.S. Department of Labor, and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, except where these are in conflict with state laws, in which case the more stringent requirement must be followed.

5.8.3 Contractor shall comply with all federal, state and local safety requirements, including but not limited to regulations pertaining to health hazard notification, control of hazardous energy, use of hazardous substances, handling and disposal of hazardous waste, removal and disposal of asbestos, entry into and work in confined spaces and handling of materials containing lead. City will notify Contractor of any hazardous conditions of which City is aware and will provide Contractor with information about City's safety and hazard notification programs. Such notification from the City does not relieve Contractor of any responsibility under the Contract or under federal or state statute, regulation or common law to inform itself of existing and potential hazards, to communicate those hazards to its employees, and to use all reasonable steps to minimize the risk of harm to its employees, other workers and the public.

5.8.4 The Contractor shall maintain at the jobsite all articles necessary for giving first aid to the injured and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons (including employees) who may be injured on the jobsite.

5.8.5 The duty of the Project Manager to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on or near the construction sites.

5.8.6 If death, serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Project Manager and the City. In addition, the Contractor must promptly report in writing to the Project Manager all accidents whatsoever arising out of, or in connection with, work on the Project or adjacent to the sites, giving full details and statements of witnesses.

5.8.7 If any claim is made by anyone against the Contractor or any Subcontractor because of any accident, the Contractor shall promptly report the facts in writing to the Project Manager, giving full details of the claim.

5.9 Equal Opportunity Clause. The provisions of Executive Order 11246 of September 24, 1965, and the Rules and Regulations issued therein are hereby incorporated by reference, and the Contractor agrees, by acceptance of the Contract, to comply with such Executive Order, rules, regulations and amendments thereto, to the extent the same are applicable to the contracting and/or subcontracting of services or work hereunder.

5.10 Warning Signs and Barricades. The Contractor shall provide adequate signs, barricades and lights and take all necessary precautions for the protection of the work under the Project and the safety of the public. All barricades and obstructions shall be protected at night by signal lights which shall be kept burning from sunset to sunrise. Barricades shall be of substantial construction and shall be painted white or whitewashed to increase their visibility at night. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricades or detours exist.

5.11 Flaggers. In addition to furnishing and maintaining adequate signs, barricades and lights, the Contractor is required to furnish any and all flaggers that are required to control traffic. The City is hereby specifically exempted from furnishing any flaggers for the Project. If flaggers are required on any jobsite, they shall be supplied by the Contractor at no additional cost to the City.

5.12 Public Safety and Convenience. The Contractor shall at all times conduct work on the Project so as to insure the least possible obstruction to traffic and inconvenience to the general public and residents in the vicinity of the Project, and to insure the protection of persons and property in a manner satisfactory to the Project Manager. No road or street shall be closed to the public except with the permission of the Project Manager and proper governmental authority. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches and irrigation ditches, which shall not be obstructed except as approved by the Project Manager.

5.13 Protection of Work and City's Property. The Contractor shall at all times safely guard the City's property and equipment from injury or loss in connection with Contractor's

work under the Contract. The Contractor shall at all times safely guard and protect the Project and adjacent property (as provided by law and the Contract Documents) from damage. Contractor shall be responsible for any damage to the City's property and equipment which is a result of the Contractor's negligence.

5.14 Sanitary Provisions. The Contractor shall provide and maintain such sanitary accommodations for the use of its employees and those of its subcontractors as may be necessary to comply with the requirements and regulations of the local and state departments of health and as directed by the Project Manager.

5.15 Payment of Prevailing Wages on Public Works in Oregon.

5.15.1 The Contractor and all Subcontractors on the Project shall pay not less than the "prevailing rate of wage" as that term is defined in ORS 279C.800 to 279C.870, and if applicable, the Federal Prevailing Wage required under the Davis-Bacon Act (40 U.S.C. 3141 - 3148), whichever is higher. The determination and application of such prevailing rate of wage is provided for in ORS 279C.800 through 279C.870, and if applicable, the Davis-Bacon Act (40 U.S.C. 3141 - 3148).

5.15.2 If the Bureau of Labor has made no determination of the prevailing rate of wage, it shall be the obligation of the Contractor to determine the same by making application to the Bureau of Labor or otherwise.

5.15.3 The Contractor or the Contractor’s surety and every Subcontractor or the Subcontractor's surety shall file certified statements with the City in writing using the form prescribed by the Commissioner of the Bureau of Labor and Industries certifying the hourly rate of wage paid each worker whom the Contractor or the Subcontractor has employed in the work under this Contract and further certifying that no worker employed upon such public work has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in this Contract. The certified statement shall be verified by the oath of the Contractor or the Contractor’s surety or Subcontractor or the Subcontractor’s surety that the Contractor or Subcontractor has read the certified statement and knows the contents thereof and that the same is true to the Contractor’s or Subcontractor’s knowledge. 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.

5.15.4 Each certified statement shall be delivered or mailed by the Contractor or Subcontractor to the City. A true copy of the certified statement shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries. Certified statements for each week during which the Contractor or Subcontractor employs a worker upon the public work shall be submitted once a month, by the fifth business day of the following month. Information submitted on certified statements may be used only to ensure compliance with the provisions of ORS 279C.800 to 279C.870 or the Davis-Bacon Act (40 U.S.C. 3141 - 3148), whichever applies.

5.15.5 As provided by ORS 279C.810, the contract amount threshold for application of the state prevailing wage rate law is $50,000.00.

5.16 Subcontractor and Supplier Agreements. The Contractor shall include in its subcontracts for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing the Contract:

5.16.1 A payment clause that obligates the Contractor to pay the first-tier subcontractor for satisfactory performance under its subcontract within ten (10) calendar days of payment by the City out of such amounts as are paid to the Contractor by the City under the Contract; and

5.16.2 An interest penalty clause that obligates the Contractor, if payment is not made within thirty (30) calendar days after receipt of payment from the City, to pay to the first-tier subcontractor, an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause included in the subcontract pursuant to this requirement. The Contractor or first-tier subcontractor shall not be obligated to pay an interest penalty if the only reason that the Contractor or first-tier subcontractor did not make payment when payment was due, is that the Contractor or first-tier subcontractor did not receive payment from the City or Contractor when payment was due. The interest penalty shall be:

5.16.2.1 For the period beginning on the day after the required payment date and ending on the date on which payment of the amount is made; and

5.16.2.2 Computed at the rate specified in ORS 279C.515(2).

5.16.3 The Contractor shall include in each of its subcontracts, for the purpose of performance of the Contract condition, a provision requiring the first-tier subcontractor to include a payment clause and an interest penalty clause conforming to the standards set forth in this section and requiring each of its subcontractors to include such clauses in their subcontracts with lower-tier subcontractors or suppliers.

5.16.4 None of the provisions of this section are intended to prevent the Contractor or any subcontractor from including in its contracts, the provision described in ORS 279C.580 (5) and (6).

5.17 Application for and Processing of Subcontractor and Supplier Payments. The Contractor shall provide each first-tier Subcontractor, including a material supplier, with a standard form that the first-tier Subcontractor may use as an application for payment or as another method by which the Subcontractor may claim a payment due from the Contractor. The Contractor, except as otherwise provided in this Subsection, shall use the same form and regular administrative procedures for processing payments during the entire term of the subcontract. The Contractor may change the form or the regular administrative procedures the Contractor uses for processing payment if the Contractor:

5.17.1 Notifies the Subcontractor in writing at least forty-five (45) calendar days before the date on which the Contractor makes the change; and

5.17.2 Includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

6. PROGRESS AND COMPLETION OF PROJECT

6.1 Contract Time and Commencement of Construction. The Contractor shall be capable of commencing construction on the Project covered under the Contract within ten (10) calendar days after signing of the Construction Contract. The Contract shall be in effect from the time it is signed until the Project is complete and accepted by the City. During periods when weather or other conditions are unfavorable for construction, the Contractor shall pursue only such portions of the work that will not be damaged thereby. Contractor shall not construct any portion of the work during the time unfavorable conditions exist that are likely to adversely affect the quality or efficiency of the work. It is expressly understood and agreed by and between the Contractor and the City that the Contract time specified for completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

6.2 Preconstruction Conference. A preconstruction conference will be scheduled by the City prior to commencement of construction. The Contractor will be notified of the time and place of this conference and shall be required to attend. Ten (10) calendar days prior to the preconstruction conference, the Contractor shall provide to the Project Manager four (4) copies of a project work schedule for review and approval. The Contractor has an affirmative duty to update the construction schedule each time changes occur.

6.3 Prosecution of the Project.

6.3.1 It is expressly understood and agreed that the time of beginning, rate of progress and time of completion of the Project are of the essence of the Contract. The Contractor shall perform the construction of said Project with due diligence and at such a rate and in such a manner as, in the opinion of the Project Manager, is necessary for completion within the time set forth in Paragraph 4 of the Contract.

6.3.2 After commencement of construction on the Project by the Contractor, if the Contractor is delayed by reason of the failure of the City to provide sufficient materials for construction thereof or to provide continuous open right-of-way, then the completion date of said Project shall be extended to the extent that the Contractor is delayed in carrying on said Project by reason of such failure on the part of the City.

6.3.3 The Contractor shall arrange its work and dispose of materials so as to insure the least possible interference and inconvenience to the landowners on or beside whose property the construction is taking place, or to the public where the

construction lies in or near a public thoroughfare. Contractor shall employ only such number of construction crews as are reasonably necessary to construct said Project within the allotted time. The City may require the employment of an additional crew or crews, if in its judgment it is necessary in order to complete said Project with the time required.

6.3.4 If the Contractor desires to carry on work at night or outside the regular hours, timely notice shall be given to the Project Manager to allow satisfactory arrangements to be made for inspecting the Project in progress.

6.4 Provisions for Delays:

6.4.1 Notice of Delays. Whenever the Contractor foresees any delay in the prosecution of the work, and in any event, immediately upon the occurrence of any delay which the Contractor regards as unavoidable, Contractor shall notify the Project Manager in writing on the probability of the occurrence of such delays, the probable duration and cause. The Contractor shall take immediate steps to prevent the occurrence or continuance of the delay. If this cannot be done, the Project Manager shall determine how long the delay will probably continue and to what extent the prosecution and completion of the work are being delayed thereby. The Project Manager shall also determine whether the delay is to be considered avoidable or unavoidable and shall notify the Contractor of his/her determination. The Contractor shall not make a claim for delays that are not called to the attention of the Project Manager at the time of their occurrence.

6.4.2 Avoidable Delays Defined. Avoidable delays in the prosecution or completion of the work include, but are not limited to:

6.4.2.1 All delays that could have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or its Subcontractor;

6.4.2.2 Delays that do not necessarily prevent or delay the prosecution of other parts of the work or the completion of the whole work within the time specified;

6.4.2.3 Reasonable delays resulting from time required by the City and Project Manager for approval of plans submitted by the Contractor and for the making of surveys, measurements, testing and inspections; and

6.4.2.4 Delays arising from interruptions occurring in the prosecution of the work on account of the reasonable interference from other contractors employed by the City which do not necessarily prevent the completion of the whole work within the time specified.

6.4.3 Unavoidable Delays Defined. Unavoidable delays in the prosecution or completion of the work include, but are not limited to, all delays (other than

avoidable delays as defined above) that result from causes beyond the control of the Contractor and that could not have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or its Subcontractors. Delays caused by other contractors employed by the City will be considered unavoidable delays only insofar as they interfere with the Contractor's completion of the work. Delays due to normal weather condition are not regarded as unavoidable delays insofar as they interfere with the Contractor's completion of the work. If the Project Manager determines the Contractor has experienced an unavoidable delay, and further that such delay has affected the controlling operations of the work, the City shall grant to the Contractor an extension of time for Contract performance, not to exceed the number of calendar days of unavoidable delay experienced by the Contractor. The Contractor has no remedy for unavoidable delay except as provided by this paragraph. Delays due to normal weather conditions are not regarded as unavoidable as the Contractor agrees to plan its work with prudent allowances for interference by normal weather conditions. Delays caused by acts of God, fire, unusual storms, flood, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes and freight embargoes are considered unavoidable delays insofar as they interfere with the Contractor's completion of the work. Delays caused by shortages of materials are considered unavoidable providing the Contractor can prove to the City that the Contractor has made reasonable and timely attempts to secure the material(s).

A rainstorm, windstorm, high water or other natural phenomenon for the specific locality of the work, which might reasonably have been anticipated from historical records of the general locality of the work, do not constitute unusually severe weather. For the purposes of this Contract, rainfall data is assumed to be the same as that measured at the Roseburg Regional Airport by the Environmental Data Service of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce.

6.4.4 Time Extension for Delays.

6.4.4.1 Extensions for Avoidable Delays. In case the work is not completed in the time specified, including extensions of time as may have been granted for unavoidable delays, the Contractor will be assessed damages for those costs incurred by the City that are attributable to the fact the work was not completed on schedule. The City may grant an extension of time for avoidable delay if the City deems it in its best interest. The Contractor shall compensate the City, in exchange for granting an extension of time for avoidable delay, for the actual costs to the City of Project management, inspection, general supervision and overhead expenses which are directly chargeable to the work and that accrue during the period of such extension. The actual costs do not include charges for final inspection and preparation of the final estimate by the City.

6.4.4.2 Extensions for Unavoidable Delays. For delays the Contractor considers unavoidable, the Contractor shall submit to the Project Manager, complete information demonstrating the effect of the delay on the controlling operation in its construction schedule. The submission must be made within ten (10) calendar days of the beginning of the occurrence which is claimed to be responsible for the unavoidable delay. The Project Manager shall review the Contractor's submittal and determine the number of calendar days of unavoidable delay, if any, and the effect of such delay on the controlling operations of the work. If the Project Manager determines the Contractor has experienced an unavoidable delay, and further that such delay has affected the controlling operations of the work, the City shall grant to the Contractor an extension of time for Contract performance, not to exceed the number of calendar days of unavoidable delay experienced by the Contractor. The Contractor has no remedy for the unavoidable delay except as provided in this Section. During such extension of time, neither charges for the inspection nor administration nor damages for delay will be assessed against the Contractor. It is understood and agreed by the Contractor and the City that time extensions due to unavoidable delays involve controlling operations that would prevent completion of the whole work within the specified time.

If the Contractor disagrees with the Project Manager's determination, the Contractor may appeal such determination to the City Manager in accordance with Paragraph 3.4.2.

6.5 Changes in the Project. The City may, as the need arises, order changes in the Project through additions, deletions or modifications without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change.

6.6 Extra Work. New and unforeseen items of work found to be necessary but which cannot be covered by any item or combination of items for which there is an established Contract price, shall be classified as extra work. Upon written order from the City and approval from the Project Manager, the Contractor shall do such extra work as may be required for the proper completion or construction of the whole Project contemplated. In the absence of such written order, no claim for extra work shall be considered. Extra work shall be performed in accordance with these Specifications where applicable and work not covered by the Specifications or special provisions shall be done in accordance with the best practice as approved by the Project Manager. Extra work required in an emergency to protect life and property shall be performed by the Contractor as required. Contractor shall notify the Project Manager of the emergency as soon as possible, but shall begin work prior to providing notice if immediate work is necessary to protect life or property.

6.7 Unforeseen Difficulties. A delay beyond the Contractor's control occasioned by an act of God, or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time to complete the Project as determined by the Project Manager, provided however, that the Contractor shall immediately give written notice to the Project Manager of the cause of such delay. In no event shall the Contractor be entitled under the Contract to collect or recover any damages, loss or expense incurred by any delay other than as caused by the City as stipulated hereinabove in Subsection 6.3 "Prosecution of the Project".

6.8 Use of Completed Portions. The City shall have the right to take possession of and use any completed or partially completed portions of the Project. Such use shall not be considered as final acceptance of any portion of the Project, nor shall such use be considered as cause for an extension of Contract completion time unless authorized by a change order issued by the City.

6.9 Liquidated Damages. If the Contractor fails to complete the work, or any part thereof, in the time agreed upon in the Contract or within such extra time as may have been allowed for delays by extensions granted as provided in the Contract, the Contractor shall reimburse the City for the additional expense and damage for each calendar day that the Contract remains uncompleted after the Contract completion date. It is agreed that the amount of such additional expense and damage incurred by reason of failure to complete the Contract is the per diem rate as stipulated in the Bid. The amounts are hereby agreed upon as liquidated damages for the loss to the City.

It is expressly understood and agreed that this amount is not to be considered in the nature of a penalty but as damages for delay which have accrued against the Contractor. The exact amount of damage that would be sustained by the City due to delay is difficult, if not impossible, to accurately ascertain, but the parties believe the specified amount of liquidated damages to be a reasonable forecast of the damage for delay that the City would likely sustain. Such liquidated damages are in addition to any other ascertainable damage, other than for delays that the City sustains for Contractor’s breach of the Contract. The City may deduct such damages from any amount due, or that may become due the Contractor or the amount of such damages becomes due and may be collected from the Contractor of is Surety.

6.10 Substantial Completion. Substantial Completion shall have the meaning set forth in Subsection 1.1 “Definitions” of these General Conditions.

Upon consideration by the Contractor that a determination of Substantial Completion of the Project, or a designated portion thereof, is completed, the Contractor shall so notify the Project Manager in writing. This notice shall include the Contractor’s list of any minor incomplete contract work items to finish the Project. Upon receipt of the written notification, the Project Manager will promptly, by personal inspection, determine the actual status of the work in accordance with the terms of the Contract. If the Project Manager finds that the terms of Substantial Completion of the Contract have not yet been met, the Project Manager will so inform the Contractor. If, instead, the Project Manager determines from the inspection that the work, or the designated portion thereof, has met the terms of Substantial Completion, the Project Manager will issue to the

Contractor a “Written Notice of Substantial Completion” along with a Punch List of any deficient work items needing repair or correction. The Contractor agrees to complete all such corrective work within thirty (30) calendar days after submission of the Punch List to the Contractor by the Project Manager. If the Contractor fails to complete the corrective work within the thirty (30) calendar days, the Contractor is liable to the City in the amount stated in the liquidated damages section of the Contract for each day thereafter until all corrective work is completed. The City shall be entitled to deduct liquidated damages from final payment.

6.11 Final Completion. The Contractor shall notify the Project Manager in writing requesting a designation of Final Completion at the completion of the punch list items related to the Substantial Completion designation, and at the completion of any other items necessary to the completion of the Project. The Project Manager will inspect these remaining items, and upon satisfactory completion, will issue a written “Notice of Final Completion” which shall be subject to the City’s Final Acceptance. In the event some items are not ready for the City’s Final Acceptance the City may, without waiving any of the City’s right to the portion(s) of the Project not yet receiving Final Acceptance, nonetheless provide Final Acceptance for those portion(s) of the items of the Project the City deems appropriate. As stated in Subsection 4.13, the terms of the guarantee commence on the date of the City’s Written Notice of Final Acceptance for that portion of the work.

7. MEASUREMENT AND PAYMENT

7.1 General.

7.1.1 All work acceptably completed under the Contract shall be measured by the Project Manager according to United States Standard Measures, and the quantities of work performed or materials furnished shall be computed on the basis of such measurements.

7.1.2 The Contractor shall accept the compensation as herein provided in full payment for furnishing all materials not provided by the City and all labor, tools and equipment; for performing all work under the Contract; for all loss or damage arising from the nature of the Project other than unforeseeable environmental conditions as described in ORS 279C.525, the action of the elements or any unforeseen difficulties which may be encountered during the prosecution of the Project, until its final acceptance by the City.

7.2 Payments. The City shall make monthly progress payments within thirty (30) calendar days from the date of the pay request for work which has been completed and accepted by the City per ORS 279C.570.

7.3 Final Payment. The City shall retain five percent (5%) of all payments until the entire Project has been given Final Acceptance by the City. The entire Project must be accepted by the City prior to releasing retainage. Upon the City's acceptance of the entire Project, the retainage will be released and the Contractor shall be responsible for the workmanship and materials for one year thereafter as provided in Subsection 4.13.

If the contract price exceeds $500,000, the City will place amounts deducted as retainage into an interest-bearing escrow account. Interest on the retainage amount accrues from the date the payment request is approved until the date the retainage is paid to the Contractor.

7.4 City's Right to Withhold Payment. The City may withhold payment in whole or in part on an approved invoice to the extent necessary to protect City from loss due to any of the following causes discovered subsequent to approval of the invoice by the Project Manager or the Project Manager's representative:

7.4.1 Defective work;

7.4.2 Evidence indicating the probable filing of claims by other parties against the Contractor;

7.4.3 Failure of the Contractor to make payments to Subcontractors, material suppliers or workers; or

7.4.4 Damage to another contractor.

7.5 Payment for Uncorrected Work. Should the Project Manager direct the Contractor not to correct work that has been damaged or that was not performed in accordance with the Contract Documents, the City may make an equitable deduction from the amount due to the Contractor on the Project in order to compensate the City for the uncorrected work.

7.6 Payment for Extra Work. In any case where the Contractor deems additional compensation is due Contractor for work or materials not clearly covered in the Contract Documents or not ordered by the Project Manager according to provisions of the Contract Documents, the Contractor shall notify the Project Manager, in writing, of his intention to make a claim in order that such matters may be settled, if possible, or other appropriate action promptly taken. If such notification is not given, or the Project Manager is not afforded proper facilities by the Contractor for keeping strict account of actual cost, then the Contractor hereby waives the claim for such extra compensation. Such notice by the Contractor, and the fact that the Project Manager has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. Claims for additional compensation shall be made in itemized detail and submitted, in writing, to the City and Project Manager within ten (10) calendar days following completion of that portion of the Project for which the Contractor makes his claim. In case the claim is found to be just, it shall be allowed and paid under a supplemental agreement to be entered into between the parties to the Contract.

7.7 Release of Liens.

7.7.1 Before the City pays the Contractor for the work included under the Contract, the Contractor shall sign and deliver to the City a release of liens or claims sworn to under oath and duly notarized. The release shall state that the Contractor has satisfied all claims and indebtedness of every nature in any way connected with the Project, including but not limiting the generality of the

foregoing, all payrolls, amounts due to subcontractors, accounts for labor performed and materials furnished, incidental services, liens and judgments.

7.7.2 If any lien or claim remains unsatisfied after payment to the Contractor is made, the Contractor shall refund to the City all monies that the City may be compelled to pay in discharging such a lien or claim, including all costs and reasonable attorneys' fees.

7.8 Acceptance of Payment Constitutes Release. The acceptance by the Contractor of a payment for the invoice shall release the City from all claims and liability to the Contractor for all things done or furnished in connection with the work specified on said invoice, and every act of the City and others relating to or arising out of the Project. No payment, however, final or otherwise, shall operate to release the Contractor or his Sureties from obligations under the Contract, the Performance Bond or the Payment Bond as herein provided.

7.9 Correction of Defective Work. The Project Manager's approval of the invoice for work completed and the City's payment to the Contractor on such invoice, shall not relieve the Contractor of the responsibility for faulty materials or workmanship on said work during the one-year guarantee period as stipulated in Subsection 4.13. The one-year guarantee period for each portion of the Project begins when each portion of the Project receives written notice of Final Acceptance from the City. The City shall promptly give notice of faulty materials or workmanship which are discovered within the one-year guarantee period and the Contractor shall promptly replace any such defects. If the Contractor fails to make the repairs and replacements promptly, the City may do the work, and the Contractor and Contractor's Surety shall be liable for the cost thereof.

8. ENVIRONMENTAL MATTERS

8.1 Contractor Compliance. Contractor shall comply with, and require its Subcontractors to comply with, all applicable federal, state and local statues, ordinances, orders, rules and regulations relating to the protection of human health and environment, including but not limited to, the use, storage, release, spill, disposal or other handling of petroleum products and other hazardous substances.

8.2. Unanticipated Regulatory Compliance and Site Conditions.

8.2.1 If Contractor is delayed or additional work is required due to the enactment of new or an amendment to existing statutes, ordinances or regulations relating to the prevention of environmental pollution and the preservation of natural resources occurring after submission of the successful bid, City may, at its sole discretion:

8.2.1.1 terminate the Contract;

8.2.1.2 complete the Project itself;

8.2.1.3 use non-City forces already under contract with the City;

8.2.1.4 require that the underlying property owner be responsible for the additional work;

8.2.1.5 call for bids for a new contractor to provide the necessary services; or

8.2.1.6 issue Contractor a change order setting forth the additional work that must be undertaken.

8.2.2 If Contractor encounters a condition not referred to in the Contract Documents, not caused by Contractor and not discoverable by a reasonable pre-bid visual site inspection, and such condition requires compliance with the regulations referred to in Paragraph 8.2.1 above, Contractor shall immediately provide City notice of the condition. Except as required by any environmental or natural resource regulation, or, in case of an emergency, Contractor shall not commence work or incur any additional job site costs with regard to the condition encountered without written direction from the City. Upon request, Contractor shall estimate emergency or regulatory compliance costs as well as the anticipated delay and costs resulting from the encountered condition, and promptly deliver such estimate to City for resolution.

8.2.3 In the event of an occurrence of an unanticipated site condition as described in Paragraph 8.2.2 above, City, within a reasonable period of time, may do any of the following at its sole discretion:

8.2.3.1 terminate the Contract;

8.2.3.2 complete the Project itself;

8.2.3.3 use non-City forces already under contract with the City;

8.2.3.4 require that the underlying property owner be responsible for the additional work;

8.2.3.5 call for bids for a new contractor to provide the necessary services; or

8.2.3.6 issue Contractor a change order setting for the additional work that must be undertaken.

8.2.4 In the event City terminates the Contract under Subparagraph 8.2.1.1 or 8.2.3.1, Contractor shall be entitled to all costs and expenses incurred to the date of the termination, including overhead and reasonable profits, on the percentage of the Project completed. Contractor shall not be entitled to profits or consequential damages on the uncompleted portion of the Contract. If the City chooses to issue a change order or terminate the Contract for either of the reasons set forth in Paragraph 8.2.1 or 8.2.3, Contractor agrees to provide the City access to Contractor's documentation used to prepare Contractor's bid in

order to assist City in making the City's determination of the additional compensation to be paid.

9. CHANGE ORDERS.

9.1 Authorized Changes in the Work. Changes to the drawings, specifications, quantities or details of the Project are inherent in the nature of construction and may be necessary or desirable during the course of Project construction. Without impairing or invalidating the Contract, the City may at any time, without notice to any surety, by written order designed or indicated to be a Change Order or a Proposal Request, make any change in the work within the general scope of the Contract, including, but not limited to changes:

9.1.1 In the Plans and Specifications (including drawings and designs);

9.1.2 In the time, method, or manner of performance of the work;

9.1.3 In the City-furnished facilities, equipment, materials, services or site; or

9.1.4 Directing acceleration in the performance of the work.

9.2 Unauthorized Changes in the Work. The Contractor shall not be entitled to an increase in the Contract price or an extension of the Contract times with respect to any work performed that is not required by the Contract Documents as amended, modified or supplemented except in the case of an emergency. In the event of an emergency, the Contractor has seven (7) calendar days to notify the Project Manager of the nature and extent of the emergency. If notification is not provided within seven (7) calendar days, no time adjustment or cost compensation will be allowed.

9.3 Execution of Change Orders. The City and the Contractor shall execute appropriate Change Orders and Proposal Requests and upon receipt of an approved Change Order or Proposal Request, the Contractor shall perform the work as modified. If the Change Order increases the Contract amount, the Contractor shall notify Contractor's Surety of the increase and shall provide the City with a copy of any resulting modification to the Bond documents. Change Order and Proposal Requests shall clearly state all costs and schedule adjustments.

9.4 No Oral Change Orders. No oral order, statement or conduct of the City constitutes a Change Order or entitles the Contractor to an equitable adjustment.

9.5 Change of Contract Price.

9.5.1 The Contract price may only be changed by a Change Order.

9.5.2 The value of any work covered by a Change Order or of any claim for an adjustment in the Contract price will be determined as follows:

9.5.2.1 Where the work involved is covered by the unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved; or

9.5.2.2 Where the work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum; or

9.5.2.3 Where the work involved is not covered by the unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Subparagraph 9.5.2.2, time and materials basis plus the Contractor's fee for overhead and profit as defined in Paragraph 9.5.3.

9.5.3 Percentage Allowances. For work negotiated and completed on a time and materials basis the Contractor's maximum allowable percentage markup of such costs shall be as follows:

Materials	15%
Equipment	15%
Labor	20%
Special Services	15%

9.5.3.1 When a subcontractor performs work under a time and materials Change Order, the Contractor will be allowed a supplemental markup of 5% on the subcontractor's charges.

9.6 Lump Sum Change Orders. Whenever practicable, changes in Contract price resulting from extra work will be determined by a mutually agreed-upon lump sum price. The Contractor's proposal for such changes must include a detailed breakdown of all labor and materials to be performed by its forces and by the forces of its Subcontractors and material suppliers.

Costs for labor, material, rentals, approved services, and for overhead and profit for the Contractor, Subcontractor and material suppliers must be calculated as specified under the Subsection 9.7.

When the City desires a price quotation from the Contractor for a proposed change to the Contract, the Project Manager will issue a Proposal Request describing the proposed changes. The Contractor shall respond with a price quote within ten (10) calendar days of the issuance of the Proposal Request.

Contractor's quotations for Change Orders and Proposal Requests must be in writing and firm for a period of thirty (30) calendar days. Any compensation paid in conjunction with the terms of a Change Order compromises the total compensation due the Contractor for the modification defined in the Change Order. By signing the Change Order or Proposal Request, the Contractor acknowledges that the stipulated compensation includes payment for the modification plus all payment for the interruption of schedules, extended overhead, delay or any other impact claim or ripple effect, and by such signing specifically waives any reservation or claim for additional compensation

or claim for Contract time extension in respect to the subject Change Order or Proposal Request.

The City's request for quotations on modifications to the work is not considered authorization to proceed with the work prior to the approval of a formal Proposal Request or Change Order, and such request does not justify any delay in existing work.

9.7 Time and Material Change Orders. Whenever the Contractor is directed by written notice from the Project Manager as the City's representative, to perform extra work on a time and material basis, the Contractor shall furnish labor, equipment and materials necessary to complete the work in a satisfactory manner and within a reasonable period of time. For the work performed, payment will be made for the documented actual necessary expense of the following:

9.7.1 Field and office labor, including estimating and procurement personnel and foremen, who are directly assigned to the time and materials work (actual payroll cost, including wages, fringe benefits as established by law). The cost of labor includes any employer payment to or on behalf of the worker for health and welfare, pension, vacation and similar purposes. Where subsistence and travel allowances are required for performance of extra work, the charges consist of the actual amount paid to each worker. No other fixed labor burdens will be considered unless approved in writing by the City.

9.7.2 Material delivered and used on the designated work, including sales tax, if paid by the Contractor or its Subcontractor.

9.7.3 Rental or equivalent rental cost of equipment, including necessary transportation, for items having a value in excess of $100. When equipment is not rented, the equivalent rental cost of equipment is based on the standard rental rates for Contractor-owned equipment, but in no event exceeds the rental rates set forth in the most current edition of the "Equipment Watch Rental Rate Blue Book", published by Penton Media. For equipment not listed in the Blue Book, the rental rate is as listed by the local section of the Associated General Contractors. If the equipment is not listed by the Associated General Contractors, the rental rate will be mutually agreed upon in writing between the Contractor and City prior to the use of the unlisted equipment. The reasonable cost of moving equipment onto and off the job site may be included, but equipment rental will not be paid when the equipment is inoperative due to breakdowns. Individual pieces of equipment or small tools having a replacement value of $100 or less are considered as included in the overhead allowances and no additional payment therefore will be made.

When equipment is used on the extra work for less than five (5) business days, hourly rates will be used. Less than thirty (30) minutes of operation are considered ½ hour of operation. When equipment is used on the extra work for more than five (5) business days, weekly rates apply. In this case, less than four (4) hours of operation is considered to be ½ calendar day of operation.

Rental or equivalent rental cost will be allowed for only those days or hours during which the equipment is in actual use. Rental and transportation allowances must not exceed the current rental rates prevailing in the locality. The rentals allowed for equipment are understood to cover all fuel, supplies, repairs, and renewals.

The City reserves the right to furnish such materials and equipment as it deems expedient, and the Contractor has no claim for profit or added fees on the cost of such materials and equipment.

9.7.4 The added fixed fees defined in Paragraph 9.5.3 constitute full compensation for the cost of general supervision, overhead, profit and any other general expense.

9.7.5 If a dispute occurs over payment for work provided on a time and material basis, the dispute is not cause for stopping work.

9.7.6 The Contractor shall maintain accurate and detailed records for all work performed on a time and materials basis. These records must reflect all the actual necessary expenses pertaining to the extra work and must at all times be available for audit by the City.

9.7.7 The Contractor shall make clear distinction in its records between the direct costs of work paid for on a time and materials basis and the costs of other work. The Contractor shall furnish the Project Manager report sheets in duplicate of each day's work that itemize the labor, materials and equipment used, and shall make the report sheets available for the City's review. The daily report sheet must provide names or identifications and classifications of workers, the hours worked, the sizes, types and identification numbers of equipment, and hours operated. Daily report sheets must be signed by the Contractor or its authorized agent and verified by the Project Manager.

9.7.8 To receive partial payments and final payment for time and materials work, the Contractor shall submit to the Project Manager, in a manner approved by the Project Manager, detailed and complete documented verification of the Contractor's and any of its Subcontractor's actual cost incurred. Material and rental charges must be substantiated by copies of vendors' invoices. Such costs must be submitted within thirty (30) calendar days after said work has been satisfactorily competed.

Project Manual

City of Roseburg

Public Safety Center 3rd Floor Improvements

October 3, 2024

WILSON
ARCHITECTURE

Wilson-architecture.com • 541-912-0878

SECTION 00 0101

PROJECT TITLE AND INFORMATION PAGE

1. Project Identification

Owner	City of Roseburg 900 S. E. Douglas Avenue Roseburg, OR, 97470
Project Name	Public Safety Center 3rd Floor Improvements
Project Site Location	Roseburg Public Safety Center 700 S.E. Douglas Avenue Roseburg, OR 97470
Architects' Project Number	22022

2. Project Description

The project is located on the 3rd floor of the Roseburg Public Safety Center in downtown Roseburg. The improvements include office improvements for the north end of the building that is currently partially finished (approximately 1,775 sf), and converting a storage room into two single occupant shower rooms (approximately 175 sf).

Generally, the improvements include wall framing, roofing repair at new equipment and penetrations, interior relites, doors and frames, gypsum board finishes, flooring, ceiling, tile, painting, toilet accessories, plumbing, HVAC, lighting, power, fire alarm modifications, and fire sprinkler modifications in the impacted areas.

3. Project Consultants

Architect	**Wilson Architecture** Curt Wilson, AIA curt@wilson-architecture.com
Mechanical Engineer	**Systems West Engineers** Nathan Jenkins, PE
Plumbing Engineering	**Systems West Engineers** Steven Savich, CPD, GPD
Electrical Engineer	**Paradigm Engineering** Jim Krumsick, PE

END OF SECTION

SECTION 00 0110

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PROCUREMENT AND CONTRACTING REQUIREMENTS

SPECIFICATIONS

Volume 2

END OF SECTION

SECTION 00 3100

AVAILABLE PROJECT INFORMATION

1. EXISITING BUILDING DRAWINGS

   A. Pdf version of some of the original drawings from the original building are available for viewing. These are not to be considered Record Drawings, nor “As Builts”;.

   B. Contact the owner for access to the pdf’s.

END OF SECTION

SECTION 01 1000

SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project Information

B. Definitions and declarations

C. Work by Owner

D. Work Limits

E. Owner Occupancy

F. Contractor's Use of Site

G. Products ordered in advance

H. Delegated Design requirements

I. Protection of existing elements

J. Criminate Justice Information Services

1.2 RELATED SECTIONS

A. Section 01 3000 – Administrative Requirements: Misc project requirements.

B. Section 01 5000 – Temporary Facilities and Controls: Dust control and barriers

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 02 4100 – Demolition: Demolition procedures and hazardous material declaration.

1.3 PROJECT INFORMATION

A. Project Name: Public Safety Center 3rd Floor Improvements

B. Owner's Name: City of Roseburg

C. Architect's Name: Wilson Architecture

D. The Project consists of the The project is located on the 3rd floor of the Roseburg Public Safety Center in downtown Roseburg. The improvements include office improvements for the north end of the building that is currently partially finished (approximately 1,775 sf), and converting a storage room into two single occupant shower rooms (approximately 175 sf).

E. Generally, the improvements include wall framing, roofing repair at new equipment and penetrations, interior relites, doors and frames, gypsum board finishes, flooring, ceiling, tile, painting, toilet accessories, plumbing, HVAC, lighting, power, fire alarm modifications, and fire sprinkler modifications in the impacted areas.

1.4 ADMINISTRATIVE REQUIREMENTS – See Section 01 3000 – Administrative Requirements

1.5 DEFINITIONS AND DECLARATIONS

1. Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.

2. Approved: Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General and Supplementary Conditions.

3. Match Existing: Match existing as acceptable to the Owner.

B. Intent: Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

C. Writing Style: Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, 'Provide tile' means 'Contractor shall provide tile.'

1.6 WORK BY OWNER

A. Items noted **OFOI** (Owner-Furnished, Owner-Installed) will be supplied and installed by Owner before Substantial Completion. Some items include:

1. Furniture

2. Building Intrusion Security System

3. Toilet and Shower Accessories

a. Shower Rod and Curtain

b. Wall-mounted Soap Dispenser

c. Wall-mounted Paper Towel Dispenser

B. Items noted **OFCI** (Owner-Furnished, Contractor-Installed) will be supplied by the Owner to the Contractor for installation before Substantial Completion. Contractor is responsible coordinated schedule with owner. Some items include:

1. None identified.

C. Related Projects, Packages, or Contracts

1. None identified

1.7 WORK LIMITS

A. See Drawings A001 and G113.3 for project work limits.

B. The Contractor’s primary work area is the improvements areas, and no other area within the building will be designate for storage nor staging.

C. Hallway 352 will remain a common use area for access to the work group in Rooms 347, 348, and 349, and for egress access to the north stair (302). Hallway 352 can be used as a construction staging area with limited access by others for short durations of time and when planned in advance by the owner.

D. Coordinate extent of use with the Owner at the pre-construction meeting.

1.8 OWNER OCCUPANCY

A. The Owner’s staff will maintain normal business hours and use the campuses during construction. The City of Roseburg police operate in this area of the building with key

facilities in Rooms 347, 348, and 349, and egress from the north stair to the ground goes through secured police areas.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations. Schedule the Work to accommodate Owner occupancy.

1.9 CONTRACTOR USE OF SITE AND PREMISES

A. Except as otherwise stipulated herein, Contractors will have use of the Premises within the boundaries of the work limits for the execution of the Work, except as noted in this Section and where elsewhere noted in the Contract Documents.

B. When the work area is an unsecured work area, the Contractor shall:

1. Secure tools and building materials when work area is vacated.

2. Take down and/or secure ladders and scaffolding when an unsecured work area is vacated.

3. Open holes and other tripping hazards shall be fenced or barricaded when an unsecured work area is vacated.

4. Operations resulting in vapors, emissions or flying objects shall be conducted in such a way as to prevent exposure to any unprotected parties or property.

1.10 PRODUCTS ORDERED IN ADVANCE

A. Products Ordered in Advance: None

1.11 DELEGATED DESIGN REQUIREMENTS

A. Certain components of the Work under this project are Delegated Design. It is the Contractor's responsibility to coordinate and assume or assign to subcontractors the complete responsibilities for the design, calculation, submittals, fabrication, transportation and installation of the Delegated Design portions or components as required. Delegated Design components of the Work are defined as complete operational systems, provided for their intended use.

B. Submit deferred submittals for delegated design elements to the governing agency for the separate approval of each Delegated Design item.

C. Owner shall not be responsible to pay for any delays, additional products, additional hours of work or overtime, restocking or rework required due to failure by the Contractor or the subcontractor to coordinate their work with the work of the other trades on the project or to provide the Delegated Design portion or component in a timely manner to meet the schedule of the project.

D. Where required by requirements of individual Sections within the Contract Documents, but the Agency Having Jurisdiction, or by state law, provide design, drawings, and/or calculation prepared by a professional engineer licensed in the state where the Project is located. The engineer’s work product to be include their stamp as required by state law.

E. Delegated Design components include, but are not limited to the following:

1. Seismic Anchorage for Suspended Acoustical Ceilings, Section 09 5100 – Acoustical Ceilings.

2. Seismic Anchorage Divisions 21, 23, 26, 27 and 28 equipment, hoods, panels and other components of mechanical, plumbing, gas and electrical systems.

3. Fire Alarm System, Division 28.

4. Additional requirements from specific sections.

1.12 PROTECTING EXISTING ELEMENTS

A. Utilities

1. Site survey Drawings indicate approximate location of any known, concealed Utility Lines, including but not limited to ducts, pipes, cables, and wires. Before starting work, Contractor shall determine exact location of any of these Lines that could be damaged by contract work.

2. Contractor shall assume that other unknown Utility Lines do exist, and Contractor shall proceed with caution when working in areas that could conceal unknown Utilities.

3. If such Utility Lines are encountered, immediately request disposition instructions from Architect.

B. Structures

1. Contractor shall protect against damage, existing building parts not scheduled for repair or remodel under this contract.

2. Where necessary to accomplish required protection, provide additional Temporary barricades, cushioning, or other approved Cover over material to be protected.

1.13 CRIMINATE JUSTICE INFORMATION SERVICES

A. All contract employees that will working on-site will be required to be fingerprinted, go through a state and federal background check and pass a CJIS Security training before beginning on-site work. If an employee has done work for a business requiring CJIS testing they will not need to take the certification again as long as their certification is current and active during the project.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 01 3000

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coordination

B. Permits and Fees

C. Construction organization & start-up

D. Submittals for review, information, and project closeout

E. Project meetings

1.2 RELATED REQUIREMENTS

A. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements, including closeout procedures.

B. Section 01 7800 - Closeout Submittals: Project record documents.

1.3 COORDINATION

A. The Contractor is responsible for overall coordination of the Project.

B. The Drawings and Specifications are arranged for convenience only and do not necessarily determine which trades perform the various portions of the Work.

C. Coordinate sequence of work to accommodate agreed-upon Owner occupancy.

D. Perform all necessary work to receive and/or join the work of all trades.

E. Prepare coordination drawings for areas above ceilings where close tolerances are required between building elements and mechanical and electrical work.

F. Coordinate completion and clean-up of work of separate sections.

G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

H. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.

I. Existing Conditions: Notify Architect of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.

J. Coordinating Subcontractors' Work

1. Coordinate the Work of all Subcontractors and make certain that, where the Work of one trade is dependent upon the Work of another trade, the Work first installed is properly placed, installed, aligned, and finished as specified or required to properly receive subsequent Materials applied or attached thereto.

2. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building.

Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

3. Direct Subcontractors to correct defects in substrates they install when Subcontractors of subsequent materials have a reasonable and justifiable objection to such surfaces.
4. Do not force Subcontractors to apply or install products to improperly placed or improperly finished substrates that would result in an unsatisfactory or unacceptable finished Product.
5. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

K. Coordinating Work of Owner or other contracts

1. See Section 01 1000 – Summary for Work by Owner.
2. Coordinate, and make certain that, where Work of either party is dependent upon the other party, the Work first performed is properly placed, installed, aligned, and finished as required to permit the proper installation of the Work following.
3. If the Owner's Work in any way interferes with the Contractor's Work, so notify the Owner sufficiently in advance so that the Owner has reasonable time to make necessary adjustments.
4. If the Contractor's Work in any way interferes with Owner's Work, so notify the Owner as soon as possible. If the Contractor's Work must be modified to accommodate the Owner's Work, except as described elsewhere in this Specification, the Contract Sum and/or the Contract Time will, when necessary be adjusted by a Change Order.

1.4 PERMITS AND FEES

A. The Owner will be responsible for filing and paying for building permits and all fees associated with the building permit, system development charges, impact fees, etc.

B. The Contractor will be responsible for picking up all Project permits and will have full responsibility for requirements of and payments for all trade permits (i.e. electrical, plumbing, mechanical).

1.5 CONSTRUCTION ORGANIZATION & START-UP

A. Responsible Parties:

1. Immediately following Contract execution, Owner will and Contractor shall identify who, within their respective organizations, will be responsible for Project Coordination.

B. The Contractor shall establish on-site Lines of Authority and Communications including the following:

1. Schedule attendance at Preconstruction Meeting and schedule and conduct Progress Meetings.
2. Establish procedures for Intra-project Communications including:
    a. Submittals.
    b. Reports & Records.
    c. Recommendations.
    d. Coordination Drawings.

e. Schedules.

f. Resolution of Conflicts.

3. Technical Documents Interpretation:

a. Consult with Architect to obtain interpretation.

b. Assist in resolution of questions or conflicts which may arise.

c. Transmit written interpretations to Subcontractors and to other concerned parties.

4. Permits & Approvals:

a. Verify that Subcontractors have obtained required Permits and Inspections for Work and for Temporary Facilities.

5. Control use of Site:

a. Supervise Field Engineering and Project Layout.

b. Allocate sufficient field office space and work and storage areas to implement the project.

1.6 CONSTRUCTION PROGRESS SCHEDULE

A. Contractor to schedule the work and provide an overall project schedule at the Pre-Construction Meeting, and updated periodically (minimum of 25%, 50% and 75% complete intervals).

B. Contractor to provide, distribute, and review 3-Week Look-Ahead Schedule at each project meeting.

1.7 SUBMITTALS

A. Submittals For Review

1. When the following are specified in individual sections, submit them for review:

a. Product data.

b. Shop drawings.

c. Samples for selection and/or verification.

d. Other information required in individual specification sections.

2. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

3. Product Data:

a. Clearly mark each copy to identify pertinent Products.

b. Show performance characteristics and capacities.

c. Show dimensions, field dimensions, and required clearances.

d. Show wiring and piping diagrams, and controls.

e. Show standard schematic drawings and diagrams as need to confirm extent of scope of work and application of product.

4. Samples will be reviewed only for aesthetic, color, or finish selection.

5. After review, provide copies and distribute in accordance with Submittal Procedures article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

B. Submittals for Project Closeout

1. When the following are specified in individual sections, submit them at project closeout:
    a. Project record documents.
    b. Operation and maintenance data.
    c. Warranties.
    d. Bonds.
    e. Other information required in individual specification sections.
    f. Other types as indicated.
2. Submit for Owner's benefit during and after project completion.

C. Number of Copies

1. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
2. Samples: Submit the number specified in individual specification sections; two of which will be retained by Architect.
    a. After review, produce duplicates.
    b. Retained samples will not be returned to Contractor unless specifically so stated.
    c. Show full range of color, texture & pattern.

D. Submittal Procedures

1. Shop Drawing Procedures:
    a. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
    b. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.
2. Transmit each submittal with an agreed upon transmittal or cover form that clearly describes submittal contents and the quantity of items delivered. Transmittal of cover form to include:
    a. Sequentially number the transmittal form to align with project manual submittal numbers and sequence of submittals in a manner agreeable to the Owner.
    b. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
    c. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

d. When applicable, any deviations in Submittals from Contract Document requirements.

e. Provide space for Contractor and Architect review stamps.

f. When revised for resubmission, identify all changes made since previous submission.

3. Deliver submittals digitally in a system agreeable to the Owner and Architect.

4. Submittal schedule

a. Schedule submittals to expedite the Project, and coordinate submission of related items.

b. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

c. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

5. Submit Shop Drawings, Product Data, and Samples only for those Items specifically required. The Architect will not be obligated to review Shop Drawings, Product Data, or Samples other than those required by the Contract Documents.

6. Submittals not requested will not be recognized or processed.

7. Perform no Work or Fabrication requiring Submittal until Architect approves Submittal.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.1 PRECONSTRUCTION MEETING

A. Owner will schedule a meeting after Notice of Award.

B. Attendance Required:

1. Owner.

2. Architect.

3. Contractor.

4. Contractor's Superintendent.

5. Major Subcontractors .

C. Agenda:

1. Introductions.

2. Status Owner-Contractor Agreement.

3. Status of post-bid submittals, including list of Subcontractors, list of Products, schedule of values, and progress schedule.

4. Description of Project

5. Distribution of Contract Documents.

6. Designation of personnel representing the parties to Contract, Owner and Architect.
7. Communication procedures, including field decisions
8. Submittal procedures, including substitutions
9. Payments procedures
10. Change management and approval procedure
11. Review of Contractor's scheduling, including key milestones
12. Building permit status.
13. Prevailing wage requirements.
14. Employee Security Screening and Identification Badging.
15. Erosion control procedures
16. Hazardous materials
17. Construction activities, working hours, use of site and building.
18. Waste management procedures, daily clean up and staging and parking areas.
19. Safety and Emergency Procedures.
20. Record drawings and Operations and Maintenance Manuals
21. Tour of Project by Owner's staff and guests (if applicable)
22. Schedule of weekly on-site progress meetings.

D. Architect will record meeting summary and distribute digital copies to Owner, their sub-consultants and Contractor.

3.2 PROGRESS MEETINGS

A. Contractor shall schedule, host on site at appropriate setting, and administer meetings throughout progress of the Work at maximum weekly intervals.

B. Attendance Required:

1. Contractor.
2. Owner.
3. Architect.
4. Contractor's Superintendent.
5. Major Subcontractors.

C. Agenda:

1. Review summary of previous meetings
2. Review of recently completed Work
3. Review of current Work
4. Review of schedule and upcoming Work
5. Identify Work that is at risk of proceeding per schedule and remedies to stay on schedule.

6. Review status of:
    a. Required testing
    b. Permit issues
7. Submittals Procedure, including
    a. Recently returned submittals
    b. Submittals in review
    c. Submittals with highest priority
    d. Upcoming submittals
8. Contract modifications
9. Open and/or unresolved construction issues
10. New items
11. Items to discuss prior to review of site conditions

D. Contractor shall record minutes and distribute copies within five days after meeting to participants, with digital copies to Architect, Owner, participants, and those affected by decisions made.

3.3 PRE-INSTALLATION CONFERENCES

A. When required in individual specification sections, the Contractor shall convene a pre-installation meeting prior to commencing work of that section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Architect minimum seven days in advance of meeting date.

D. The Contractor shall be responsible to prepare agenda and preside at meeting:

1. Review conditions of installation, preparation and installation procedures.
2. Review coordination with related work.

E. The Contractor shall be responsible to record minutes and distribute copies within four days after meeting to participants, with copies to Architect, Owner's Project Manager, participants, and those affected by decisions made.

END OF SECTION

SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittals

B. References and standards

C. Testing and inspection agencies and services

D. Control of installation

E. Tolerances

F. Manufacturers' field services

G. Defect Assessment

1.2 RELATED REQUIREMENTS

A. Document 00 3100 - Available Project Information: Access to available drawings from 2008..

B. Section 01 3000 - Administrative Requirements: Submittal procedures.

C. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.3 REFERENCE STANDARDS

A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2014).

B. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2014.

C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2015ae1.

D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.

E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection and/or Testing; 2014a.

F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2015.

G. OSSC - Oregon Structural Specialty Code, current edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Design Data:

1. Submit for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

C. Test Reports:

1. After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
2. Include:
    a. Date issued.
    b. Project title and number.
    c. Name of inspector.
    d. Date and time of sampling or inspection.
    e. Identification of product and specifications section.
    f. Location in the Project.
    g. Type of test/inspection.
    h. Date of test/inspection.
    i. Results of test/inspection.
    j. Conformance with Contract Documents.
    k. When requested by Architect, provide interpretation of results.
3. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

D. Certificates:

1. When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
3. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

E. Manufacturer's Instructions:

1. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Manufacturer's Field Reports:

1. Submit reports for Architect's benefit as contract administrator or for Owner.
2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.5 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference 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 of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.6 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Owner will employ and pay for services of an independent testing agency to perform other specified testing.

B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.1 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step-in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed bypersons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

1.1 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.2 TESTING AND INSPECTION

A. See individual specification sections and the current building code for testing and inspection required.

B. Testing Agency Duties:

1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.

2. Perform specified sampling and testing of products in accordance with specified standards.

3. Ascertain compliance of materials and mixes with requirements of Contract Documents.

4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.

5. Perform additional tests and inspections required by Architect.

6. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:

1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Agency may not approve or accept any portion of the Work.

3. Agency may not assume any duties of Contractor.

4. Agency has no authority to stop the Work.

D. Contractor Responsibilities:

1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.

2. Cooperate with laboratory personnel and provide access to the Work and to manufacturers' facilities.

3. Provide incidental labor and facilities:

a. To provide access to Work to be tested/inspected.

b. To obtain and handle samples at the site or at source of Products to be tested/inspected.

c. To facilitate tests/inspections.

d. To provide storage and curing of test samples.

4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.

5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.

F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor. Payment for retesting will be charged to the Contractor by deducting testing charges from the Contract Price.

1.3 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect 30 days in advance of required observations.

1. Observer subject to approval of Architect.

2. Observer subject to approval of Owner.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

1.4 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

END OF SECTION

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Utilities and infrastructure

B. Barriers and protection

C. Construction facilities

D. Removal of temporary facilities

1.2 RELATED REQUIREMENTS

A. Section 01 1000 – Summary: Use of site

B. Section 01 3000 – Administrative Requirements: Construction organization and start up

1.3 UTILITIES AND INFRASTRUCTURE

A. Telecommunications Services

1. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization, including internet access, mobile phone, and email.

B. Temporary Power

1. Coordinate use of existing electrical service on site for construction with Owner.

C. Temporary Water

1. Coordinate use of existing water service on site for construction with Owner.

D. Temporary Sanitary Facilities

1. The single occupant restroom immediately south of the elevator on the Third Floor will be signed for Construction Personnel Use. No other restrooms in the building are to be used by construction personnel.

2. Maintain daily in clean and sanitary condition. If Contractor does not maintain acceptable conditions, the owner reserves the right to retract use of the restroom for construction personnel and require the contractor to provide a portable toilet at their expense.

1.4 BARRIERS AND PROTECTION

A. Security

1. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

2. Coordinate with Owner's security program.

B. Safety

1. Visitor Personal Protection Equipment

a. Provide six sets of Personal Protection Equipment (PPE) for use by official visitors to the project site during construction. Visitor PPE shall include as a minimum, hard

hat and protective eye goggles. Provide high visibility garments when moving vehicles are in use on the construction site. Store in Field Office and reserve for use by visitors to the project site.

b. Maintain in good condition through the course of the project and replace equipment that does not meet personal safety requirements.

2. Fire Protection

a. Provide and maintain necessary facilities and equipment to safeguard Project against Fire Damage.

3. See below for separation and barrier requirements.

C. Project Work Area Protection

1. Hallway 352 is the only access to the work areas, and provides access to a egress route used by occupants of the building, therefore Hallway 352 is a common use area.

2. Provide barriers to prevent unauthorized entry to construction areas, but to allow for owner's use of facilities. Protect building occupants from construction-related danger by performing all cutting, grinding, and related activities within the improvement area, and implement provisions to contain dust and debris.

D. Separation of Construction Activity from Occupied/Partially Occupied Facility

1. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

2. Access to the improvement area will be through the elevator in the main lobby at the southeast corner of the building. The north stair is not to be used for construction access. If the lobby stair if used for construction access, the Contractor is required to protect the wood treads from damage while maintaining code requirements for slip-resistance and visual identification of tread edge.

3. Interior Enclosures and Barriers

a. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas.

b. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces with Maximum flame spread rating of 75 in accordance with ASTM E84.

c. The Contractor shall erect temporary Dust and Safety Barriers around all of the Construction Operations to keep dust and debris within the localized work area, and to protect the owner, staff, and the public from construction activities, and to prevent damage to existing materials and equipment.

d. Additional requirements may be required if airborne dust is judged by the Owner to be a problem.

e. The Contractor shall take precautions to protect existing smoke detectors from damage or deterioration from dust caused by work of this contract.

E. Exterior Enclosures

1. When replacing the insulated glazing units, provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and

protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons.

1.5 CONSTRUCTION FACILITIES

A. Project Identification

1. A project sign is not required for this project. No other signs are allowed without Owner permission except those required by law.

B. Field Office

1. Not required.

C. Staging

1. Maintain within improvement area. Do not block exit ways or overload structure.
2. Some of the parking spaces along Rose Street and in the City Staff Parking lot can be used for staging and storage with prior approval by the Owner.

D. Vehicle Access and Parking

1. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
2. Deliveries and staff parking will be available with some of the spaces along Rose Street and in the City Staff Parking lot with prior approval by the Owner.
3. Coordinate access and haul routes with governing authorities and Owner.
4. Do not use Owner's parking Lots for overnight vehicle storage, equipment storage, nor crew parking without prior approval from the Owner.
5. Repair existing facilities damaged by use, to original condition.
6. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.

1.6 WASTE MANAGEMENT

A. Comply with applicable regulatory requirements.

1.7 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition.

D. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Substitution limitations and procedures.

B. General product requirements.

C. Transportation, handling, storage and protection.

1.2 RELATED REQUIREMENTS

A. Section 01 4000 - Quality Requirements: Product quality monitoring.

B. Section 01 6023 - Substitution Request Form

1.3 SUBMITTALS

A. Proposed Products List

1. Submit list of major products that comply with the specifications and are proposed for use, with name of manufacturer, trade name, and model number of each product.

2. Submit within 15 days after date of Subcontract Award Notice.

3. For products specified only by reference standards, list applicable reference standards.

B. Product Data Submittals

1. Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Shop Drawing Submittals

1. Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. Sample Submittals

1. Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

2. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

1.4 SUBSTITUTION REQUEST PROCEDURES – PROCUREMENT PERIOD

A. Considerations

1. Substitutions will be considered when:

a. It benefits the Owner.

b. A product, through no fault of the Contractor, becomes unavailable or unsuitable due to regulatory change.

B. Process

1. Instructions to Bidders specifies process and time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in that section.

C. Format

1. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

2. Each request for substitution approval shall include:

a. Identity of Product for which substitution is requested; include Specification Section.

b. Identity of substitution; include complete Product description, drawings, photographs, performance and test data, and any other information necessary for evaluation.

c. Quality comparison of proposed substitution with specified product.

d. Changes in other Work required because of substitution.

e. Effect on construction progress schedule.

f. Cost of proposed substitution compared with specified product.

g. Any required license fees or royalties.

h. Availability of maintenance service.

i. Source of replacement materials.

D. Declaration

1. A request for substitution constitutes a representation that the submitter:

a. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.

b. Agrees to provide the same warranty for the substitution as for the specified product.

c. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.

d. Waives claims for additional costs or time extension that may subsequently become apparent.

E. Criteria and Evaluation

1. The evaluation will be based on the suitability of the proposed product to meet the intent of the specified product based on submitted documentation.

2. Architect will be sole judge of acceptability of any proposed substitution.

1.5 SUBSTITUTION REQUEST PROCEDURES – AFTER CONTRACT AWARDS

A. Approval will be granted only when:

1. Specified Product cannot be delivered without Project delay, or

2. Specified Product has been discontinued, or

3. Specified Product has been replaced by superior Product, or
4. Specified Product cannot be guaranteed as specified, or
5. Specified Product will not perform properly, or
6. Specified Product will not fit within designated space, or
7. Specified Product does not comply with governing codes, or
8. Substitution will be clearly in Owner's interest.

B. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

1.6 OWNER-SUPPLIED PRODUCTS

A. See Section 01 1000 - Summary for identification of Owner-supplied products.

B. Owner's Responsibilities:

1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
2. Arrange and pay for product delivery to site.
3. On delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

C. Contractor's Responsibilities:

1. Review Owner reviewed shop drawings, product data, and samples.
2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

1.7 CONTRACT COMPLIANCE

A. Substitution approval does not relieve Contractor from responsibility for proper execution of the Work and for compliance with other Contract requirements.

PART 2 PRODUCTS

2.1 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

2.2 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.

2.3 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.1 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

3.2 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on supports above ground to eliminate trapping, including ponding of water on and below the product.

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

H. Prevent contact with material that may cause corrosion, discoloration, or staining.

I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 6023

SUBSTITUTION REQUEST FORM

Project: City of Roseburg Public Safety Center 3rd Floor Improvements

Reviewer Wilson Architecture curt@wilson-architecture.com

Specified Item

Spec Number: _____ Name/Model: _____

Spec Name: _____ Line Item #: _____

Component: _____

Proposed Substitution

Manufacturer: _____ Name/Model: _____

Description: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of request including identification of applicable data portions. Attached data also includes description of changes to Contract Documents the proposed substitution requires for proper installation.

The Undersigned Certifies Following Items, Unless Modified By Attachments, Are Correct:

1 Proposed substitution does not affect dimensions shown on the drawings.
2 Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.
3 Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.
4 Maintenance and service parts are available locally or readily obtainable for proposed substitution.
5 Undersigned further certifies function, appearance, and quality of proposed substitution are equivalent or superior to specified item.
6 Undersigned further certifies that the manufacturer of the proposed substitution is aware of this substitution request and agrees to the statements noted above.
7 Undersigned agrees that the terms and conditions for substitutions found in bidding documents apply to this proposed substitution.

Proposer

Contact Name: _____ Firm/Company: _____

Address: _____ Phone: _____

City, St, Zip: _____ Email: _____

Signature: _____

A/E's Review and Action

☐ Acceptable ☐ Not Acceptable ☐ Received too Late

☐ Acceptable as Noted: _____

END OF SECTION

SECTION 01 7000

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project Conditions

B. Patching materials

C. Examination, preparation, and general installation procedures

D. Requirements for forming openings in existing

E. Surveying for laying out the work

F. Cutting and patching

G. Cleaning and protection.

H. Starting of systems and equipment

I. Demonstration and instruction of Owner personnel

J. Closeout procedures

K. General requirements for maintenance service

1.2 RELATED SECTIONS

A. Section 01 1000 – Summary: Owner occupancy requirements

B. Section 01 3000 – Administrative Requirements: Coordination, submittal procedures and meeting requirements

C. Section 01 5000 – Temporary Facilities and Controls: Dust protection and safety barriers

D. Section 01 7800 – Closeout Submittals: Closeout submittals

E. Section 02 4000 – Demolition: Demolition requirements

1.3 PROJECT CONDITIONS

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

D. Dust Control

1. Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

2. Provide dust-proof enclosures to prevent entry of dust generated outdoors.

E. Noise Control

1. Provide methods, means, and facilities to minimize noise produced by construction operations.
2. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
3. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
4. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am and/or a time agreeable to the owner.

F. Pollution Control

1. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

PART 2 PRODUCTS – Not Used

2.1 PATCHING MATERIALS

A. New Materials

1. As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products

1. Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution

1. For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or mis-fabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.3 PRE-INSTALLATION CONFERENCES

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. See Section 01 3000 – Administrative Requirements for more information.

3.4 DUST PROTECTION AND SAFETY BARRIERS – See Section 01 5000 – Temporary Facilities and Controls

3.5 LAYING OUT THE WORK

A. Contractor is required to layout the work, including arranging, coordinating, and paying for the services of licensed surveyor.

B. Verify locations of survey control points prior to starting work.

C. Promptly notify Architect of any discrepancies discovered.

D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

E. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

F. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.

2. Grid or axis for structures.

3. Building foundation, column locations, ground floor elevations.

G. Periodically verify layouts by same means.

H. Maintain a complete and accurate log of control and survey work as it progresses.

3.6 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.7 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:

1. Complete the work.
2. Fit products together to integrate with other work.
3. Provide openings for penetration of mechanical, electrical, and other services.
4. Match work that has been cut to adjacent work.
5. Repair areas adjacent to cuts to required condition.
6. Repair new work damaged by subsequent work.
7. Remove samples of installed work for testing when requested.
8. Remove and replace defective and non-conforming work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces, unless space is required to allow for movement. Fill residual space with sealant as required.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

I. Sawcutting:

1. Employ experienced sawcutting contractor to make all holes, or slab and pavement cutting shown in drawings for architectural, structural, mechanical and electrical work.
2. Do not use water saws in occupied areas, unless otherwise approved.
3. Cut openings square and plumb with sharp edges. Minimize overcutting at corners.
4. Verify location of existing utilities in work area and make proper precautions to protect, disconnect and relocate, or terminate services as directed.

J. Patching:

1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
2. Match color, texture, and appearance.

3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

K. Maintain adequate Temporary Support necessary to assure structural integrity of affected Work.

L. Protect other portions of Project Work against damage and discoloration.

M. Protect Work exposed by cutting against damage and discoloration.

N. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

O. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

P. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 WASTE MANAGEMENT

A. Contractor's responsibility.

B. Comply with regulatory requirements.

3.9 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.10 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.11 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Architect and owner seven days prior to start-up of each item.

C. If the manufacturer’s warranty period begins at start up, provide an extension to the warranty duration to cover the time between start up and the date of substantial completion.

D. Verify that each piece of equipment or system is ready for start up and use. Coordinate verification and start up requirements with the manufacturer.

E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

F. When specified in individual specification Sections or when require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.12 DEMONSTRATION AND INSTRUCTION

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.

B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

3.13 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

B. Testing, adjusting, and balancing HVAC systems: See requirements in Division 23 for testing, adjusting, and balancing for HVAC.

3.14 FINAL CLEANING

A. Use cleaning materials that are nonhazardous.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Clean interior floors in accordance with flooring manufacturer instructions.

F. Clean filters of operating equipment.

G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and .

H. Clean site; sweep paved areas, rake clean landscaped surfaces.

I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.15 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

E. Mechanical & Electrical Equipment start-up:

1. Coordinate check-out of Utilities, Operational Systems, and Equipment.

2. Assist in initial start-up and testing.

3. Record starting dates of Systems and Equipment operation.

F. At completion of Work of each Subcontract, conduct inspection to assure that:

1. Work is acceptable.

2. Specified cleaning has been accomplished, and Temporary Facilities and Debris has been removed from Site.

G. Substantial Completion:

1. Conduct inspection and prepare list of Work to be completed or corrected.

2. Assist Architect in review of contractor’s inspection list and generation of substantial completion punch list.

3. Supervise correction and completion of Work as established in Architect's Observation Reports and substantial completion punch list.
4. Apply for and receive Final Occupancy Permit from Building Department.
5. Complete submittal of Operations and Maintenance Manuals.
6. Complete submittal of Record Drawings.
7. Complete Owner Training.

H. Final Completion:

1. Assist Architect in checking that all identified deficiencies have been corrected.

END OF SECTION

SECTION 01 7800

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project Record Documents

B. Operation and Maintenance data

C. Warranties and bonds

1.2 SUBMITTALS

A. General

1. Provide searchable pdf format and one set of manuals in their final version.

B. Project Record Documents:

1. Submit documents to Architect prior to Substantial Completion.

C. Operation and Maintenance Data:

1. Submit preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and provide comments.
2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
3. Submit completed documents 30 days prior to scheduled date of substantial completion for review and comments. Revise content of all document sets as required prior to final submission.
4. Submit the revised final documents prior to date of Substantial Completion.
5. Either the draft or final version of the O&M manuals must be on the project site during any of the operator training scheduled for the project.

D. Warranties and Bonds:

1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
2. Provide all other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.
4. Submit final version prior to date of Substantial Completion.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.

B. Maintenance of documents and samples.

a. Store in Contractor's Field Office apart from Documents used for Construction.
b. Provide Files, Shelving and Cabinets necessary to safely and securely store Documents and Samples.
c. Maintain Documents in a clean, dry, legible, and good order.
d. Do not use Record Documents for Construction Purposes.
e. Make Documents available at all time for Architect's inspection

C. Ensure entries are complete and accurate, enabling future reference by Owner.

D. Store record documents separate from documents used for construction.

E. Record information concurrent with construction progress.

F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

G. Record Drawings : Legibly mark each item to record actual construction including:

1. Measured depths of foundations in relation to finish first floor datum.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract drawings.

3.2 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.3 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:

1. Product data, with catalog number, size, composition, and color and texture designations.

2. Information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

F. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data

3.4 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. In addition to requirements called for in other sections of this manual, provide the following:

B. For Each Item of Equipment and Each System:

1. Description of unit or system, and component parts.

2. Identify function, normal operating characteristics, and limiting conditions.

3. Include performance curves, with engineering data and tests.

4. Complete nomenclature and model number of replaceable parts.

C. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

D. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

E. Include color coded wiring diagrams as installed.

F. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

G. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

H. Provide servicing and lubrication schedule, and list of lubricants required.

I. Include manufacturer's printed operation and maintenance instructions.

J. Include sequence of operation by controls manufacturer.

K. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

L. Provide control diagrams by controls manufacturer as installed.

M. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.

N. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

O. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

P. Include test and balancing reports.

3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

D. Prepare data in the form of an instructional manual.

E. Digital O&M Manuals: In addition to binders described below, prepare manuals as PDF documents organized like the printed manuals. Copy to one or more properly labeled CD or DVD discs.

1. Digital copies of O&M Manuals must be organized by section.

F. Paper & 3 Ring Binder O&M Manuals: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size.

1. When multiple binders are used, correlate data into related consistent groupings.

G. Cover; provide the following:

1. Title each volume “WARRANTIES AND BONDS”

2. Owner and Project title as shown in Specification Section 01 1000 – Summary

3. General Contractors name, address and telephone number

4. Volume Name and Number, per CSI Divisions.

H. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.

I. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

J. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

K. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

L. Arrangement of Contents: Organize each volume in parts as follows:

1. Project Directory.
2. Table of Contents, of all volumes, and of this volume.
3. Operation and Maintenance Data: Arranged by system, then by product category.
    a. Source data.
    b. Operation and maintenance data.
    c. Field quality control data.
    d. Original warranties and bonds.

3.6 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's direction, leave date of beginning of time of warranty until the Date of Substantial completion is determined.

B. Retain warranties and bonds until time specified for submittal.

C. Cover; provide the following:

1. Title each volume “WARRANTIES AND BONDS”
2. Owner and Project title as shown in Specification Section 01 1000 – Summary
3. General Contractors name, address and telephone number
4. Subcontractor and equipment supplier; company name, address, telephone number and name of primary company contact.

D. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.

E. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing.

1. Provide full information, using separate typed sheets as necessary.
2. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of primary company contact.

3.7 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ARCHITECT

A. Building Official's Certificate of Mechanical & Electrical Inspections.

B. Building Official's Certificate of Occupancy.

3.8 SPARE PART & MAINTENANCE MATERIAL SUBMITTALS TO OWNER

A. All spare parts and extra material are to be delivered to the owner prior to the date of substantial completion. Provide written confirmation of delivery, noting quantity and description as well as storage location. Obtain written acknowledge from Owner for receipt of stored items. Verification email from the Owner is acceptable.

B. Storage location: where directed by Owner.

C. See individual specifications sections for additional requirements.

END OF SECTION

SECTION 02 4100

DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Select building demo to support alterations

B. Hazardous materials declaration

1.2 RELATED REQUIREMENTS

A. Section 00 3100 - Available Project Information: Access to project records documents.

B. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises; sequencing and staging requirements; description of items to be salvaged or removed for re-use by Contractor.

C. Section 01 3000 – Administrative Requirements: Submittal review procedures

D. Section 01 5000 - Temporary Facilities and Controls: Security, and protective barriers

E. Section 01 6000 – Product Requirements: Substitution request procedures

F. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures

1.3 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; currentedition.

B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Schedule: Submit for approval demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service.

C. Project Record Documents

1. Accurately record actual locations of capped and active utilities and subsurface construction.

1.5 QUALITY ASSURANCE

A. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.

B. Pre-Installation Meetings

1. Convene minimum two weeks prior to starting work of this section.

1.6 SEQUENCING

A. Immediate areas of work will not be occupied during demolition. The public, including children, may occupy adjacent areas.

B. No responsibility for buildings and structures to be demolished will be assumed by the Owner.

C. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION

3.1 SCOPE

A. Remove items indicated, for salvage, relocation, recycling, and to prepare the identified interior building areas for work shown on drawings.

1. Contractor shall maximize use of removed or salvaged products, material, finishes and equipment for use in other parts of this project where similar products, materials, finishes and equipment are shown on the drawings.

3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.

1. Obtain required permits.
2. Provide, erect, and maintain temporary barriers and security devices.
3. Maintain existing circulation systems, or create new passageways for safe access through the building by workers or construction site visitors.
4. Use physical barriers to prevent access to areas that could be hazardous to workers or construction site visitors.
5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
6. Do not close or obstruct roadways or sidewalks without permit.
7. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
8. Use temporary enclosures, and other suitable methods as necessary, to limit the amount of dust and dirt rising and scattering in the air, to the lowest level of air pollution practical for the conditions of work.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Do not begin removal until built elements to be salvaged or relocated have been removed.

D. Protect existing structures and other elements that are not to be removed.

1. Provide bracing and shoring as necessary.

E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

F. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

G. Perform demolition in a manner that maximizes salvage and recycling of materials.

1. Dismantle existing construction and separate materials.

2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

H. Conform to applicable regulations relating to environmental requirements, disposal of debris, and noise control.

I. Burning not permitted.

3.3 EXISTING UTILITIES

A. Protect existing utilities to remain from damage.

B. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

C. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

D. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

E. Remove exposed piping, valves, meters, equipment, supports, conduit, wiring, and foundations of disconnected and abandoned utilities.

3.4 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.

1. Verify that construction and utility arrangements are as shown.

2. Report discrepancies to Architect before disturbing existing installation.

3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Remove existing work as indicated and as required to accomplish new work.

1. Remove items indicated on drawings. Note, not all required demolition is indicated on the drawings.

C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications):

1. Remove existing systems and equipment as indicated.

2. Maintain existing active systems, including necessary components to remain in operation unless specifically noted on the Drawings to be removed; maintain access to equipment and operational components.

3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.

4. Verify that abandoned services serve only abandoned facilities before removal.

5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

6. Where components of operational systems are to be removed, relocated, and re-connected to the operational system, remove in a manner to avoid damage and to facilitate reuse.

D. Protect existing work to remain.

1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch as specified for patching new work.

E. Preparation of Existing Surfaces for New Work

1. Remove existing finishes at surfaces to receive new work.
2. Remove all existing irregular and regular materials which cause rises, depressions, or voids in existing surfaces to receive new finishes. Examples include, but are not limited to:
    a. Irregular or rough concrete slabs.
    b. Fasteners.
    c. Outlet cores, cover plates.
3. Retain existing substrates, unless scheduled to be removed and replaced.

3.5 SALVAGE

A. Salvage for Reuse:

1. Identify materials shown on the drawings for removal that can be reused in the project for a similar use and in a new location as shown on drawings.
2. Coordinate carefully, the removal of items to be reused with the requirements of reinstallation.
3. Carefully remove, clean, pack as necessary and store for reuse. Protect from damage until reinstalled.

B. Damaged items:

1. If items to be reused are damaged during removal, storage or reinstallation, repair or replace with new to match existing condition prior to start of the work.

C. Other Salvage:

1. Title to all other material to be removed is vested in the Contractor upon notice of award.

3.6 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Leave site in clean condition, ready for subsequent work.

C. Clean up spillage and wind-blown debris from public and private lands.

D. Clean remaining structure, equipment, and facilities of all dirt, dust and debris caused by demolition work. Return areas to conditions existing prior to the start of the work.

3.7 HAZARDOUS MATERIALS DECLARATION

A. Materials containing asbestos is not expected in the building, but if the Contractor encounters materials they suspect may contain hazardous material, contractor the City of Roseburg Project Manager immediately, and vacate the suspected area.

B. All appropriate Federal, State, County and Municipal rules, regulations and guidelines must be followed when working with asbestos containing material. Non friable material must be handled, transported and disposed of in a way that prevents it from becoming friable and releasing asbestos fibers. If AC pipe is shattered, damaged or badly weathered, it is considered to be friable and will likely release asbestos fibers. A DEQ licensed asbestos abatement contractor using DEQ certified workers must remove all friable asbestos material. Any and all permits and fees that are required by the DEQ, Douglas County and any other regulatory agency must be obtained and paid for by the Contractor prior to disposing of the asbestos containing material. For information about asbestos rules, contact the DEQ Western Region office in Medford, Oregon.

END OF SECTION

SECTION 06 1000

ROUGH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Structural dimension lumber framing.

B. Rough opening framing for doors, windows, and roof openings.

C. Standard sheathing (construction panels).

D. Preservative treated wood materials.

E. Miscellaneous framing and sheathing.

F. Concealed wood blocking, nailers, and supports.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 06 1733 – Wood I Joists

E. Section 06 1736 – Metal-Web Wood Joists

F. Section 06 1800 - Glued-Laminated Construction.

G. Section 06 2000 - Finish Carpentry

H. Section 07 2500 - Weather Barriers: Air barrier over sheathing.

I. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

1.3 REFERENCE STANDARDS

A. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2015.

B. AFPA (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2012.

C. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.

D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.

E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2016.

F. AWPA U1 - Use Category System: User Specification for Treated Wood; 2016.

G. OSSC - Oregon Structural Specialty Code; latest edition.

H. PS 1 - Structural Plywood; 2009.

I. PS 20 - American Softwood Lumber Standard; 2015.

J. WWPA G-5 - Western Lumber Grading Rules; 2011.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

2. Structural Composite Lumber:

a. Submit manufacturer's published structural data including span tables, marked to indicate which sizes and grades are being used; if structural composite lumber is being substituted for dimension lumber or timbers, submit grading agency structural tables marked for comparison.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Storage

1. Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Dimension Lumber

1. Comply with PS 20 and requirements of specified grading agencies.

B. Species

1. Douglas Fir-Larch, unless otherwise indicated.

C. Grading Agency

1. Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Dimension

1. Sizes: Nominal sizes as indicated on drawings, S4S.

B. Description

1. Grading Agency: Western Wood Products Association; WWPA G-5.

2. Moisture Content: S-dry or MC19.

3. Species: Any allowed under referenced grading rules.

C. Grade by Type and Location

1. Stud Framing

a. 2 by 2 through 2 by 6: Grade: No. 2.

b. 2 by 8: Grade: No. 1.

2. Joist, Rafter, and Small Beam Framing
    a. 2 by 6 through 4 by 16: Grade: No. 2 Unless Noted Otherwise.
3. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
    a. Lumber: S4S, No. 2 or Standard Grade.
    b. Boards: Standard or No. 3.

2.3 CONSTRUCTION PANELS

A. Subflooring
1. Dimension
    a. Span Rating: 32/16 inches.
    b. Thickness: See Structural Drawings; 1 1/8”
    c. Panel Size: 48 x 96 inches.
2. Description
    a. APA PRP-108: Rated Sheathing.
    b. Exposure Class: Exposure 1.
    c. Edges: Tongue and Groove.

B. Wall Sheathing: APA PRP-108, Rated Sheathing, Exposure 1, and as follows:
1. Dimension
    a. Span Rating: 32/16.
    b. Thickness: 1/2 inch, nominal.
    c. Panel Size: 48 x 96 inches.
2. Description
    a. Bond Classification: Exposure 1.
    b. Thickness: See Structural Drawings

2.4 ACCESSORIES

A. Fasteners and Anchors:
1. Metal and Finish
    a. Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
2. Machine Bolts, Nuts, Washers, and Screws
    a. Conforming to ASTM A307, galvanized where exposed.
3. Lag Bolts and Wood Screws
    a. ANSI/ASME B18.6.1-1981, zinc plated.
4. Threaded Rods
    a. ASTM A36 or ASTM A307.

5. Anchor Bolts
    a. ASTM A 307, Grade C.
6. Washers
    a. Provide Hot-dip Galvanized Steel Washers under Bolt Heads, Lag Heads, and Nuts adjacent to all wood framing members.
7. Powder Actuated Fasteners:
    a. To Steel: "DS with Washer", by Hilti, or "Power Point with Washer", by Ramset/Redhead.
    b. To Concrete (non-seismic applications only): "DN72 with Washer", by Hilti.
    c. To Concrete Masonry (non-seismic applications only): "DXE72 with Washer", by Hilti.
    d. Substitutions: See Section 01 6000 - Product Requirements.
8. Self-drilling screws of wood-to-wood connections: Simpson SDS series or approved.
9. Self-drilling screws to light-gage framing: “Traxx” by ITW Buildex or approved; with break-off wings, flat or bugle head.

B. Framing Connectors
1. Zinc-coated steel; Simpson, or approved. Connector model numbers shown on Drawings are taken from Simpson Catalog. If specific type is not shown on Drawings, use type recommended by Manufacturer for conditions of installation.
2. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
3. For contact with preservative treated wood in exposed locations, provide minimum G185 galvanizing complying with ASTM A653/A653M.

C. Sill Gasket
1. 1/4 inch thick, plate width, closed cell plastic foam from continuous rolls.
2. Extent: between sill plate and concrete foundation wall

D. Subfloor Adhesives
1. Waterproof, air cure type, cartridge dispensed.

2.5 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

B. Preservative Treatment:
1. Preservative Pressure Treatment of Lumber Above Grade: 1, Use Category UC3B, Commodity Specification A using waterborne preservative to 0.25 lb/cu ft retention.
2. Kiln dry lumber after treatment to maximum moisture content of 19 percent.

3. Treat lumber in contact with roofing, flashing, or waterproofing.
4. Treat lumber in contact with masonry or concrete.
5. Treat lumber in other locations as indicated.

C. Fire Retardant Lumber

1. Lumber rated FS-S demonstrating a flame spread and smoke development rating of 25 or less when tested in accordance with ASTM E84 – Standard Test of Surface Burning Characteristics of Building Materials.

PART 3 EXECUTION

3.1 PREPARATION

A. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

B. Coordinate installation of rough carpentry members specified in other sections.

3.2 INSTALLATION

A. Installation – General

1. Select material sizes to minimize waste.
2. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
3. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

B. Installation – Framing Material

1. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
2. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
3. Install structural members full length without splices unless otherwise specifically detailed.
4. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
5. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.
6. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed. Space to provide clearance for pipes in partitions.

7. Provide bridging at joists in excess of 8 feet span as detailed. Do not anchor until Dead Loads are in place. Space bridging members 1/4 inch apart to avoid members rubbing against each other. Fit solid blocking at ends of members.
8. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.
9. Do not notch, bore, or drill framing members except as noted on Drawings, or as approved by Engineer.
10. Do not install composite lumber in contact with concrete. Provide treated dimension lumber for plates in contact with foundations.
11. Provide preservative-treated wood nailers on roof deck as indicated on Drawings or as required by membrane roofing manufacturer.
    a. Coordinate thickness of nailer with thickness of roof insulation.

C. Installation – Blocking, Nailers, and Supports
1. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
2. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
3. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
4. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
5. Provide the following specific non-structural framing and blocking:
    a. Cabinets and shelf supports.
    b. Wall brackets.
    c. Handrails.
    d. Grab bars.
    e. Towel and bath accessories.
    f. Wall-mounted door stops.
    g. Visual display boards.
    h. Wall paneling and trim.
    i. Joints of rigid wall coverings that occur between studs.

D. Installation – Roof-Related Carpentry
1. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

E. Installation - Installation of Construction Panels

1. Subflooring
    a. Glue and nail to framing; staples are not permitted.
    b. Secure with long dimension perpendicular to floor joists and continuous over 2 or more supports, with ends over firm bearing and staggered. Leave 1/16 inch space between all end joints and 3/32 inch at T & G edges.
    c. Secure with fasteners as shown on Drawings.
2. Wall Sheathing
    a. Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using fasteners as indicated on Drawings.
    b. Wall Sheathing: Secure with ends over firm bearing and staggered, using fasteners as indicated on Drawings.
    c. Block unsupported edges at shearwalls as shown on Drawings.
    d. Drive sheathing fasteners flush with panel face, do not overdrive.
3. Communications and Electrical Room Mounting Boards
    a. Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
    b. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
    c. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
    d. Install adjacent boards without gaps.
    e. Size and Location: As indicated on drawings.
4. Install panels with a minimum 1/16 inch, maximum 1/8 inch gap between adjoining panels.

F. Installation – Accessories and Fastener Installation
1. Provide Framing Connectors where indicated; secure with fasteners recommended by manufacturer to achieve maximum load capacity.
2. Provide Washers under Nuts and Heads when making Bolted or Lag Screwed connections.
3. Drive Nails perpendicular to Grain in lieu of toe-nailing where feasible.
4. Lag Screws
    a. Pre-drill to 70% of the shank diameter in supporting member, 1/32 to 1/16 inch larger than shank diameter in attached members. Use standard cut washer between bolt head and wood. Install Lag Screws by turning, do not drive with hammer.
5. Nails and Screws
    a. Fasten members per Table 2304.10.1 – Fastener Schedule of the OSSC and as shown on the drawings.

b. Predrill holes as required to prevent splitting of members.

6. Bolts

a. Set in holes 1/32 inch to 1/16 inch larger than bolt through wood member. Tighten to snug position. Use cut washer between nut or bolt head and wood.

7. Powder-Driven Connectors

a. Select size and type for full penetration into substrate without splitting connected wood members or fracturing substrate. Use washer under head to prevent over-driving.

G. Installation - Site Applied Wood Treatment

1. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.

2. Allow preservative to dry prior to erecting members.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Framing Members: 1/4 inch from true position, maximum.

2. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

END OF SECTION

SECTION 06 2000

FINISH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior and exterior finish carpentry items, including window sills and wood trim at cased openings.

B. Hardware and attachment accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

E. Section 06 4100 - Architectural Wood Casework: Shop fabricated custom cabinet work.

F. Section 09 9000 – Painting and Coating: Painting and finishing of finish carpentry items.

1.3 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; latest edition.

B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.0; latest edition.

C. National Institute of Standards and Technology (NIST) - Voluntary Product Standard PS 20 - American Softwood Lumber Standard; latest edition.

D. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide instructions for attachment hardware and finish hardware.

C. Shop Drawings

1. Indicate materials, component profiles, fastening methods, jointing details, and accessories.

a. Provide the information required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).

D. Samples

1. Purpose: To review grain, appearance, and finish;

2. Quantity: (2).

3. Size: 8 in x 8 in

1.5 QUALITY ASSURANCE

A. Qualifications

1. Fabricator and Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

B. Mock-ups

1. Purpose: To review completed systems, and to review each major joint type, and fasteners.

a. Provide a mock up section of the wood paneling showing backing, finish panels, fasteners, and joint treatment at corners and butt joints.

2. Size: Sufficient size to demonstrate joint types and fastners.

3. Mock-up, if acceptable to the Architect and Owner may remain in place.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 SEQUENCING

A. Coordinate the work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.

B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Quality Standard

1. Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Surface Burning Characteristics

1. Provide materials having fire and smoke properties as required by applicable code.

2.2 LUMBER MATERIALS

A. Interior Hardwood Trim

1. Material

a. Vertical Grain Fir species; PS 20, AWI Premium Grade; plain sawn, smooth texture; mixed grain; maximum moisture content of 6 percent; suitable for clear finish.

2. Description

a. Ease exposed edges with 1/16 inch radius, unless otherwise shown.

b. Minimum lengths: Opening & Standing Trim: 1 piece, single length. Running Trim: Joints minimum 12 feet apart.

3. Extent

a. Where Hardwood Trim identified on the drawings.

2.3 SHEET MATERIALS

A. Apple-ply Plywood

1. Product and Manufacturers

a. “Apple-ply” by States Industries.

b. “Europly” by Colombia Forest Products.

c. Substitutions: See Section 01 6000 – Product Requirements.

2. Dimensions

a. Thickness: 3/4 inch.

3. Materials

a. Natural Birch species, AWI Premium Grade, PS51.

4. Description

a. Plain sliced, random match, no voids, faced on both sides.

2.4 FASTENERS

A. Of size and type to suit application.

2.5 ACCESSORIES

A. Glass: Type tempered as specified in Section 08 8000.

B. Wood Filler: Solvent base, tinted to match surface finish color.

2.6 FABRICATION

A. Shop assemble work for delivery to site, permitting passage through building openings.

B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

C. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify adequacy of backing and support framing.

2. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.2 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.

B. Set and secure materials and components in place, plumb and level.

C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

D. Miter corners.

E. Use concealed fasteners wherever possible, unless noted otherwise on Drawings.

F. At fasteners installed through the exposed surface(s) of the trim, countersink and/or set fasteners low enough to accommodate wood plugs or wood filler.

G. Ease sharp external corners prior to finishing.

3.3 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners. Apply wood filler in exposed fastener indentations less than 1/4 inch in diameter, and wood plugs in indentations 1/4 inch or greater. Sand work smooth.

3.4 FIELD QUALITY CONTROL

A. Tolerances

1. Maximum Variation from True Position: 1/16 inch.

2. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

3.5 PROTECTION

A. Protect work from damage after installation.

END OF SECTION

SECTION 06 4100

CASEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Specially fabricated cabinet units.

B. Cabinet hardware.

C. Factory finishing.

D. Preparation for installing utilities.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

E. Section 09 0601 – Color Schedule.

F. Section 12 3600 - Countertops.

1.3 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; latest edition.

B. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.0; latest edition.

C. NEMA LD 3 - High-Pressure Decorative Laminates; latest edition.

D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; latest edition.

E. NEMA LD 3 - High-Pressure Decorative Laminates; latest edition.

F. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit hardware manufacturer's product data and installation instructions.

C. Shop Drawings

1. Indicate materials, component profiles and elevations, fastening methods, jointing details, connections to adjacent work, schedule of finishes, and accessories.

D. Samples

1. Cabinet Hardware, each item

a. Quantity: (1)

b. Size: Actual size

2. Plastic laminate color specified, each

a. Quantity: (2)

b. Size: 4 in. x 5 in.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Fabricator Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Do not deliver casework to jobsite until notified by General Contractor that Project is conditioned and prepared to handle and store casework without damage or discoloration.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 PROJECT/SITE CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

1.8 SEQUENCING

A. Coordinate the work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.

B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Quality Standard: Custom grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Plastic Laminate Faced Cabinets: Custom grade.

2.2 WOOD-BASED COMPONENTS

A. Softwood lumber

1. Materials

a. NIST PS 20; graded in accordance with AWI standard indicated, average moisture content 6 percent, Doug Fir or Hemlock species.

2.3 LAMINATE MATERIALS

A. Products and Manufacturers

1. “Formica Laminate” by Formica Corporation
2. “Pionite” by Panolam Industries International, Inc.
3. “High Pressure Laminate” by Wilsonart Engineered Surfaces.
4. Substitutions: See Section 01 6000 – Product Requirements.

B. Description

1. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

C. Characteristics by Application

1. Horizontal Surfaces (HGS)
    a. 0.048 in. nominal thickness.
    b. Colors as scheduled, finish as scheduled.
2. Vertical Surfaces (VGS)
    a. 0.028 in. nominal thickness,.
    b. Colors as scheduled, finish as scheduled.
3. Cabinet Liner (CLS)
    a. 0.020 in. nominal thickness.
    b. Colors as scheduled, finish as scheduled.
4. Laminate Backer (BKL)
    a. 0.020 in. nominal thickness.
    b. Undecorated; for application to concealed backside of panels faced with high pressure decorative laminate.

2.4 HARDWARE AND COMPONENTS

A. Adjustable Shelf Supports

1. Description
    a. Standard side-mounted system using multiple holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.
2. Extent
    a. At adjustable shelves.

B. Drawer and Door Pulls

1. Description
    a. European Bar Pull, 6 inches long, brushed stainless steel look.
2. Product and Manufacturer(s)

a. “101.20.729” by Hafele.

b. Substitutions: See Section 01 6000 – Product Requirements.

3. Extent

a. Cabinet doors and drawers

C. Cabinet Locks

1. Description

a. Keyed cylinder with standard or custom-fabricated strike plate to fit the style of casework detailed.

2. Manufacturer:

a. National Lock

b. Russwin

c. Yale

d. Substitutions: See Section 01 6000 - Product Requirements.

3. Extent

a. (2) keys per lock, each room different and master keyed, steel with satin finish. Locate where shown on Drawings.

D. Drawer Slides:

1. Description

a. Type: Full extension.

b. Static Load Capacity: Heavy Duty grade.

c. Mounting: Side mounted.

d. Stops: Integral Type

2. Manufacturers:

a. Accuride International, Inc.

b. Julius Blum, Inc.

c. Knape & Vogt Manufacturing Company.

d. Substitutions: See Section 01 6000 - Product Requirements.

3. Extent

a. Drawers

E. Hinges

1. Description

a. European style concealed self-closing type, steel with polished finish.

2. Manufacturers

a. Julius Blum, Inc: www.blum.com.

b. Substitutions: See Section 01 6000 - Product Requirements.

3. Extent

a. At cabinet doors.

F. Countertop Supports

1. Description

a. 5mm thick steel construction, epoxy coated.

b. Color: White

c. Size: 550mm (21.7" deep x 14.2" high).

d. Loaded capacity, up to 1,000 pounds per pair.

2. Product and Manufacturer(s)

a. "#208 Ultimate L-Bracket" by Knape & Vogt.

b. Substitutions: See Section 01 6000 – Product Requirements.

3. Extent

a. At 24” depth counters. Locate at cantilevered ends and 32” o.c.

G. Door Silencers

1. Description

a. Felt or rubber with adhered back to prevent noisy door to frame contact.

2. Extent

a. At locations where cabinet doors or pulls hit adjacent walls, window sills, or other building elements.

2.5 ACCESSORIES

A. Adhesive

1. Type recommended by fabricator to suit application.

B. Bolts, Nuts, Washers, Lags, Pins, and Screws

1. Of size and type to suit application; chrome-plated finish in concealed locations and stainless steel finish in exposed locations.

C. Concealed Joint Fasteners

1. Threaded steel.

D. Other Fasteners

1. Size and type to suit application.

2.6 FABRICATION

A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.

2. Cap exposed plastic laminate finish edges with material of same finish and pattern.

E. Matching Wood Grain: Comply with requirements of quality standard for specified Grade and as follows:

F. Provide cutouts for plumbing fixtures, appliances, and other built-in items. Verify locations of cutouts from on-site dimensions. Seal cut edges.

G. All shelves shall be adjustable, unless required to be fixed in place for the stability of the casework, or as otherwise noted on Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify adequacy of backing and support framing.

2. Verify location and sizes of utility rough-in associated with work of this section.

3.2 INSTALLATION

A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

B. Use concealed joint fasteners to align and secure adjoining cabinet units.

C. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

D. Secure cabinets to floor using appropriate angles and anchorages.

E. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.3 FIELD QUALITY CONTROL

A. Adjusting

1. Adjust installed work.

2. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

SECTION 08 8316

FIBERGLASS REINFORCED PANELING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fiberglass reinforced plastic panels.

B. Trims and moldings.

C. Adhesives and joint sealants.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 0601 – Color Schedule: Color.

E. Section 09 02116 – Gypsum Board Assemblies: Substrate for paneling.

1.3 REFERENCE STANDARDS

A. 9 CFR 416.2 - Regulatory Requirements Under the Federal Meat Inspection Act and the Poultry Products Inspection Act, Part 416-Sanitation; current edition.

B. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2010.

C. ASTM D2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of Barcol Impressor; 2013a.

D. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.

E. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2012.

F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

G. FDA Food Code - Chapter 6 - Physical Facilities; current edition with Supplements, if any.

H. FM 4880 - Class 1 Fire Rating of Insulated Wall or Wall and Roof/Ceiling Panels, Interior Finish Materials or Coatings and Exterior Wall Systems; 2010.

I. ISO 846 - Plastics - Evaluation of the Action of Microorganisms; 1997.

J. ISO 2812-1 - Paints and Varnishes - Determination of resistance to liquids - Part 1: Immersion in liquids; 2007.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Samples

1. Purpose: Selection of colors and textures.
2. Quantity: (2)
3. Size: Manufacturer's standard size.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store panels flat, indoors, on a clean, dry surface. Remove packaging and allow panels to acclimate to room temperature for 48 hours prior to installation.

1.6 PROJECT/SITE CONDITIONS

A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer. Do not install products under conditions outside of manufacturer's limits.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Product and Manufacturer – Basis of Design

1. "Standard FRP" by Marlite.
2. Other Acceptable Manufacturers
   a. Panolam.
   b. Substitutions: See Section 01 6000 – Product Requirements.

B. Materials

1. Panels
   a. Fiberglass reinforced plastic (FRP), complying with ASTM D5319.
   b. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
   c. Class 1 fire rated when tested in accordance with FM 4880.
   d. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   e. Scratch Resistance: Barcol hardness score greater than 35, when tested in accordance with ASTM D2583.
   f. Impact Strength: Greater than 6 ft lb force per inch, when tested in accordance with ASTM D256.
   g. Sanitation and Cleanability: Comply with 9 CFR 416.2.

h. Surface Characteristics and Cleanability: Provide products that are smooth, durable, and easily cleanable, in compliance with FDA Food Code, Chapter 6 - Physical Facilities.

i. Chemical Cleanability: Excellent chemical resistance to common cleaners and detergents when tested in accordance with ISO 2812-1.

j. Biological Resistance: Rating of 0, when tested in accordance with ISO 846.

2. Trim

a. Aluminum, anodized.

2.2 PANEL SYSTEM

A. Wall Panels

1. Dimensions

a. Size: 4 ft. x 8 ft.

b. Thickness: 0.10 in.

2. Finish

a. Surface Design: Embossed.

b. Color: See Section 09 0601 – Color Schedule.

3. Attachment

a. Adhesive only with trim and sealant in joint.

4. Extent

a. Provide at Mop Sink as described on the Drawings.

2.3 ACCESSORIES

A. Adhesive

1. Type recommended by panel manufacturer based on application.

B. Sealant

1. Type recommended by panel manufacturer based on application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions and substrate flatness before starting work.

B. Verify that substrate conditions are ready to receive the work of this section.

3.2 INSTALLATION

A. Install panels in accordance with manufacturer's instructions.

B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.

C. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.

D. Remove excess sealant after paneling is installed and prior to curing.

E. Install panels with manufacturer's recommended gap for panel field and corner joints.

F. Avoid contamination of panel faces with adhesives, solvents or cleaners. Clean as necessary and replace if not possible to repair to original condition.

G. Apply panels to wall or with seams plumb and pattern aligned with adjoining panels.

H. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.

3.3 CLEANING

A. Remove excess sealant from panels and moldings. Wipe panel down using a damp cloth and mild soap solution or cleaner.

B. Refer to manufacturer's specific cleaning recommendations Do not use abrasive cleaners.

3.4 PROTECTION

A. Protect installed panels until completion of project.

END OF SECTION

SECTION 07 2100

THERMAL INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Batt insulation and vapor retarder.

B. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof.

C. Perimeter insulation under slabs-on-grade.

D. Glass fiber blanket insulation.

E. Spray foam surface insulation

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 2116 - Gypsum Board Assemblies: Acoustic insulation inside walls and partitions.

1.3 REFERENCE STANDARDS

A. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2014.

C. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2012.

D. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

C. Quality Assurance Submittals

1. Manufacturer’s Instructions

a. Include information on special environmental conditions required for installation and installation techniques.

1.5 QUALITY ASSURANCE

A. Quality Standards

1. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test- response characteristics indicated, as determined by testing identical products

per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

a. Surface-Burning Characteristics: ASTM E 84.

b. Fire-Resistance Ratings: ASTM E 119.

c. Combustion Characteristics: ASTM E 136.

B. Qualifications

1. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum 3 years of experience.

C. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

1.7 PROJECT/SITE CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

1.8 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.1 BATT INSULATION MATERIALS

A. Manufacturers

1. Certainteed Corporation.

2. Johns Manville.

3. Knauf Insulation.

4. Owens Corning Corp.

5. Substitutions: See Section 01 6000 - Product Requirements.

B. Description

1. Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
2. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
3. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
4. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
5. Formaldehyde Content: Zero.
6. Facing: Unfaced.

C. Extent and R-Value

1. Exterior Walls: R-21 at 6" stud walls and R-25 at 8" stud walls.

2.2 GLASS-FIBER BLANKET INSULATION

A. Manufacturers

1. CertainTeed Corporation.
2. Johns Manville.
3. Owens Corning.
4. Substitutions: See Section 01 6000 – Product Requirements.

B. Description

1. Unfaced
    a. Glass-Fiber Blanket Sound Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
2. Faced
    a. Glass-Fiber Blanket Insulation: ASTM C 665, Type III, Class A (membrane-faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier), faced with foil-scrim-kraft, foil-scrim, or foil-scrim-polyethylene vapor-retarder membrane on 1 face.

C. Extent and R-Value

1. Shower Room Ceiling Framing: R-25

2.3 INSULATION VAPOR RETARDERS - CONCEALED

A. Manufacturers

1. “MemBrain” by Certainteed Corporation.
2. Substitutions: See Section 01 6000 – Product Requirements.

B. Description

1. Batt Insulation Vapor Retarder: Polyamide film vapor retarder that changes permeance with change in humidity.
    a. Vapor Retarder Class: Class II.

b. Water Vapor Permeance:

- ASTM E 96, dry cup method: 1.0 perms (57ng/Pa*s*m2) or less.
- ASTM E 96, wet cup method: 10.0 perms (1144ng/Pa*s*m2) or greater.

c. Fire Hazard Classification: ASTM E 84:

- Maximum Flame Spread Index: 20.
- Maximum Smoke Developed Index: 55.

C. Extent

1. Over thermal batt insulation at all walls.

2.4 SPRAY FOAM SURFACE INSULATION

A. Manufacturers

1. “Icynene LD-R-50” by Interteck.
2. “Froth-Pak” by Dow Chemical.
3. “Certa-Spray” by CertainTeed.
4. Substitutions: See Section 01 6000 – Product Requirements.

B. Description

1. Light density spray foam, open celled, flexible, all water blown polyurethane foam insulation meeting the requirements of ASTM C158, E283 and E84 (Flame spread ,<25 and Smoke developed <450).

C. Extent

1. As necessary to seal and fill gaps to building exterior.

2.5 ACCESSORIES

A. Tape: Polyethylene self-adhering type, mesh reinforced, 2 inch wide, compatible with vapor retarder.

B. Insulation Support Fasteners

1. Insulation support system to adequately support glass-fiber blanket insulation from falling or sagging between metal studs and metal stud partitions. Roll type sheet metal in 100 ft. lengths with perforated prongs. Sheet metal strip screwed to studs at 24” oc. vertically with manufacturer approved fasteners. Design simplifies installation, and doubles as reinforcement strapping and meets federal specifications. Insulation is impaled on 2 1/2 in. arrow prongs which are on 8 in. centers.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation .

3.2 PREPARATION

A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION

A. Installation – General

1. Install insulation and vapor retarder in accordance with manufacturer's instructions.
2. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.
3. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
4. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

B. Installation – General Building Insulation

1. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
2. Seal joints between foam-plastic insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.
3. Set vapor-retarder-faced units with vapor retarder to warm side of construction, unless otherwise indicated.
4. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.
5. Stuff glass-fiber loose-fill insulation into miscellaneous voids and cavity spaces where shown. Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft.

C. Installation – Batt Insulation

1. Install in exterior wall spaces without gaps or voids. Do not compress insulation.
2. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
3. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
4. Tape or friction fit insulation batts in place.
5. Install vapor retarder in continuous sheets over the inside face of all exterior wall surfaces and at bottom of batt ceiling insulation. Lap and seal sheet retarder joints over framing member face.

6. Tape seal tears or cuts in vapor retarder.

7. Extend vapor retarder tightly to full perimeter of adjacent window and door frames and other items interrupting the plane of the membrane. Tape seal in place.

D. Installation – Vapor Barriers

1. General: Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage system as indicated. Extend vapor retarder to cover miscellaneous voids in insulated substrates including those filled with loose-fiber insulation.

2. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarder.

3. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder.

3.4 PROTECTION

A. Do not permit installed insulation or vapor barriers to be damaged prior to its concealment.

B. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

SECTION 07 6000

SHEET METAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, counterflashings, and other items described on the Drawings.

B. Sealants for joints within sheet metal fabrications.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 07 9005 - Joint Sealers.

1.3 REFERENCE STANDARDS

A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2013.

B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.

C. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).

D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.

E. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2009.

F. ASTM D4479/D4479M - Standard Specification for Asphalt Roof Coatings - Asbestos-Free; 2007 (Reapproved 2012).

G. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2012).

H. CDA A4050 - Copper in Architecture - Handbook; latest edition.

I. SMACNA (ASMM) - Architectural Sheet Metal Manual; latest edition.

J. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings

1. Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.5 QUALITY ASSURANCE

A. Quality Standards

1. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.

B. Qualifications

1. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing name and identification of supplier.

B. Storage

1. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
2. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.1 SHEET MATERIALS

A. Galvanized Steel

1. ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239 inch) thick base metal.

B. Pre-Finished Galvanized Steel

1. ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
2. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
3. Color: As scheduled.

C. Stainless Steel

1. ASTM A666 Type 304, soft temper, minimum 0.015 inch (26 ga) thick; smooth No. 4 finish. Fully annealed.

2.2 ACCESSORIES

A. Fasteners

1. Stainless steel, with soft neoprene washers.

B. Underlayment

1. Organic roofing felt, Type I ("No. 15").

C. Slip Sheet

1. Rosin sized building paper.

D. Primer

1. Zinc chromate type.

E. Protective Backing Paint

1. Asphaltic mastic, ASTM D4479 Type I.

F. Sealant to be Concealed in Completed Work

1. Non-curing butyl sealant.

G. Sealant to be Exposed in Completed Work

1. Elastomeric sealant, 100 percent silicone with minimum movement capability of plus/minus 25 percent and recommended by manufacturer for substrates to be sealed; clear.

H. Sealant – Other

1. Type as specified in Section 07 9005.

I. Plastic Cement

1. Type I.

J. Solder

1. Sn50 (50/50) type.

K. Flux

1. Rosin, cut Muriatic Acid, or commercial preparation suitable for use.

L. Strainers

1. Same material as gutter. Provide within gutter at each downspout.

2.3 FABRICATION – GENERAL

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Fabricate cleats of same material as sheet, minimum 2 in. wide, interlocking with sheet.

C. Form pieces in longest possible lengths.

D. Hem exposed edges on underside 1/2 in.; miter and seam corners.

E. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

F. Fabricate corners from one piece with minimum 18 in. long legs; seam for rigidity, seal with sealant.

G. Fabricate vertical faces with bottom edge formed outward 1/4 in. and hemmed to form drip.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

2. Verify roofing termination and base flashings are in place, sealed, and secure.

3. Verify that nailers and blocking are properly installed.

3.2 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.

B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

3.3 INSTALLATION – GENERAL

A. Conform to drawing details.

B. Install Work watertight, without waves, warps, buckles, tool marks, fastening stresses, distortion, or defects which impair strength of mar appearance.

C. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.

D. Apply plastic cement compound between metal flashings and felt flashings.

E. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

F. Seal metal joints watertight.

G. Install planes and lines in true alignment. Allow for sheet metal expansion and contraction.

H. Secure elements in place using fasteners.

3.4 SCHEDULES

A. Coping, Cap, Parapet, and Ledge Flashings

1. 24 gage precoated galvanized steel, unless otherwise indicated.

B. Counterflashings at Curb-Mounted Roof Items, including skylights and roof hatches, roofing Penetration Flashings, for Pipes, Structural Steel, and Equipment Supports.

1. 24 gage galvanized steel, unless otherwise indicated.

C. Other flashings.

1. 24 gage precoated galvanized steel, unless otherwise indicated.

END OF SECTION

SECTION 07 9200

JOINT SEALANT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Sealant

B. Joint backing

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 07 6000 – Sheet Metal: Sealants required in conjunction with roof membrane components.

E. Section 08 8000 - Glazing: Glazing sealants and accessories.

F. Section 09 2116 - Gypsum Board Assemblies: Acoustic sealant.

1.3 REFERENCE STANDARDS

A. ASTM C834 - Standard Specification for Latex Sealants; 2010.

B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014.

C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.

D. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

1.5 QUALITY ASSURANCE

A. Quality Standards

1. Types

a. Type S – Single Component.

b. Type M – Multi-Component.

2. Grades

a. Grade P – Pourable (self-leveling).

b. Grade NS – Nosag.

3. Classes

a. Amount listed is percentage relative to original joint width.

4. Uses

    a. Use T – Traffic.

    b. Use NT – Nontraffic.

    c. Use I – Immersible.

    d. Use M – in contact with mortar.

    e. Use G – in contact with glass.

    f. Use A – in contact with aluminum.

    g. Use 0 – in contact with other materials than listed above.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 PROJECT/SITE CONDITIONS

A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. BASF Construction Chemicals-Building Systems.

B. Bostik Inc.

C. Dow Corning Corporation.

D. Momentive Performance Materials, Inc (formerly GE Silicones).

E. Pecora Corporation.

F. Tremco Global Sealants.

G. Substitutions: See Section 01 6000 - Product Requirements. Products listed below are one acceptable product. Other products from the manufacturers listed above meeting the requirements below are acceptable.

2.2 SEALANTS

A. General

1. Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168.

2. Color: To be selected by Architect from manufacturer's standard range.

B. General Purpose Exterior Sealant

1. Description

a. Polyurethane; ASTM C920, Grade NS, Class 25 minimum; Uses M, G, and A; single component.

2. Product

a. “NP2” by Soneborn.

3. Applications: Use for:

a. Control, expansion, and soft joints in masonry.

b. Joints between concrete and other materials.

c. Joints between metal frames and other materials.

d. Other exterior joints for which no other sealant is indicated.

C. General Purpose Interior Sealant

1. Description

a. Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.

2. Product

a. “Sonolac” Sonneborn.

3. Applications: Use for:

a. Interior wall and ceiling control joints.

b. Joints between door and window frames and wall surfaces.

c. Other interior joints for which no other type of sealant is indicated.

D. Plumbing/Tile Sealant

1. Description

a. White silicone; ASTM C920, Uses I, M and A; single component, mildew resistant.

2. Product

a. “Omniplus” by Sonneborn.

3. Applications: Use for:

a. Joints between plumbing fixtures and floor and wall surfaces.

b. Joints between kitchen and bath countertops and wall surfaces.

2.3 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM D 1667, closed cell PVC; oversized 30 to 50 percent larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

E. Masonry Sand: Mason's Sand and Silica Mix for use over still wet sealant at all masonry control or expansion joints. Sand to closely match color and texture of mortar joints.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that substrate surfaces are ready to receive work.

2. Verify that joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean and prime joints in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Protect elements surrounding the work of this section from damage or disfigurement.

3.3 INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tool joints concave. Remove and replace sealant in joints improperly tooled.

H. Spread Mason's Sand and Silica Mix over still wet sealant at all control joints in masonry walls.

3.4 CLEANING

A. Clean adjacent soiled surfaces.

3.5 PROTECTION

A. Protect sealants until cured.

END OF SECTION

SECTION 08 0607

DOOR HARDWARE SCHEDULE

Manufacturer List

Code	Name
AC	Accurate Lock and Hardware
AL	Alarm Lock Systems
HA	HES
JO	L. E. Johnson Products, Inc.
LCN	LCN
MC	McKinney
NO	Norton
PE	Pemko
RO	Rockwood
RX	Rixson
SA	Sargent
SC	Schlage
YA	Yale

Finish List

Code	Description
26D	Satin Chrome
32D	Satin Stainless Steel
626	Satin Chromium Plated
630	Satin Stainless Steel
EN	Sprayed Finish, Aluminum
GRAY	Gray
US28	Aluminum - Clear Anodized
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull

Notes

1. Provide software and cable for Alarm Lock units (ALPC12-U).

Column Headings

Quant.	Component	Product Description	Finish	Mfr
GROUP 1	**Interior - Office**			
3	Hinges	FB179 4 1/2 x 4 1/2 NRP	26D	MC
1	Lockset - Office Func		626	SC
1	Wall Stop	WS406/407CCV	US32D	IV
1	Seals	S88 D 17'		PE
GROUP 2	**Interior – Shower Room**			
3	Hinges	MPB79 4 1/2 x 4 1/2 NRP	26D	MC
1	Privacy w/ Occupancy Indicator	L9056R 06A L283-722 L583-363	626	SC
1	Closer	411x HEDA	AL	LC
1	Auto Door Bottom			
1	Kick Plate	8400 10" x 34"	US32D	IV
1	Wall Stop	WS406/407CCV	US32D	IV
1	Seals	S88 D 17'		PE
GROUP 3	**Interior – Store Room**			
3	Butt Hinge	FB179 4 1/2 x 4 1/2 NRP	26D	ST
1	Lockset – Storeroom Func.	ND80R RHO	626	SC
3	Door Silencer	SR64	GRY	IV

GROUP 4 Interior – Existing Office Area Door

1	Closer	411x HEDA	AL	LC

All other hardware to remain.

GROUP 5 Interior – Stairwell

1 Alarm. Add alarm to door. Alarm to be triggered when exit device on east side is depressed. The alarm to be turned off with prox card.

All other hardware to remain.

END OF SECTION

SECTION 08 1100

METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Steel frames for wood doors.

B. Steel glazing frames.

C. Accessories, including glazing.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 08 1416 - Flush Wood Doors.

E. Section 08 7100 - Door Hardware.

F. Section 08 8000 - Glazing: Glass for doors and borrowed lites.

G. Section 09 9000 – Painting and Coating: Field painting.

1.3 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

B. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2014.

C. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.

D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2013.

E. ASTM C1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus; 2011.

F. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.

G. ASTM E413 - Classification for Rating Sound Insulation; 2010.

H. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames; 2014. (ANSI/BHMA A156.115)

I. ICC A117.1 - Accessible and Usable Buildings and Facilities; International Code Council; 2009 (ANSI).

J. NAAMM HMMA 840 - Guide Specifications for Installation and Storage of Hollow Metal Doors and Frames; The National Association of Architectural Metal Manufacturers; 2007.

K. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. Design Requirements

1. It is the intent of this specification to provide a general guideline for the quality, function, and design of the hollow metal doors, frames, and windows. It is the specific responsibility of the hollow steel supplier to furnish products which are fully functional, in full compliance with state and local building codes, fire codes, and disability and accessibility codes. Any supplier bidding on this section of the work shall notify the Architect prior to bidding, in accordance with Instructions to Bidders, of discrepancies or will be assumed to have included correct material to make this compliance.

B. System Requirements

1. To provide a higher level of coordination the following building materials must be provided by the same sub-contractor.

a. 08 1113 - Metal Doors and Frames

b. 08 1416 - Flush Wood Doors

c. 08 7100 - Door Hardware

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

C. Shop Drawings

1. Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.

D. Manufacturer’s Instructions

1. Manufacturer's published instructions, including any special installation instructions relating to this project.

1.6 QUALITY ASSURANCE

A. Qualifications

1. The steel door and frame supplier shall be a manufacturer or distributor regularly engaged in supplying hollow metal products in this geographic area who has competent field personnel available to consult with the Architect and Contractor regarding applications or field installation problems.

2. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

3. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store in accordance with NAAMM HMMA 840.
2. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Requirements for All Doors and Frames:

1. Accessibility: Comply with ICC A117.1 and ADA Standards.
2. Door Edge Profile: Beveled on both edges.
3. Door Texture: Smooth faces.
4. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings.
5. Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to other requirements specified in door grade standard.
6. Finish: Factory primed, for field finishing.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

C. Manufacturers

1. Assa Abloy Ceco or Curries.
2. Republic Doors: www.
3. Steelcraft, an Allegion brand.
4. Substitutions: See Section 01 6000 - Product Requirements.

2.2 STEEL FRAMES

A. Requirements – General

1. Comply with the requirements of grade specified for corresponding door.
2. Finish: Factory primed, for field finishing.
3. Fully weld unless noted otherwise in Other Requirements.

4. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.
5. Anchor: Provide anchor recommended by the frame manufacturer for the wall construction application that each frame will be located in.

B. Dimensions
1. Exterior Door Locations: 14 ga.
2. Interior Door Locations: 14 ga.
3. Interior Relite and Transom Locations: 16 ga.

C. Other Requirements
1. Frames for Interior Glazing or Borrowed Lights
a. Construction and face dimensions to match door frames, and as indicated on drawings.

2.3 ACCESSORIES

A. Glazing
1. As specified in Section 08 8000 - Glazing.

B. Removable Stops in steel window frames
1. Formed sheet steel, shape as indicated on drawings, mitered or butted corners; prepared for countersink style tamper proof screws.

C. Removeable stops in non-fire rated steel doors
1. Square vision light steel stops. 18 gage cold rolled steel frame with mitered and welded corners, prepared countersunk style tamper proof screws.
2. Products and Manufacturers
a. “Model VLF1G” by Air Louvers, Inc.
b. Substitutions: See Section 01 6000 – Product Requirements.
3. Finish
a. Exterior Doors - Electro-galvanize and prime painted
b. Interior Doors - Powder coated prime paint for field finishing with doors.

D. Thermal Batt Insulation
1. As specified in Section 07 2100.

E. Temporary Frame Spreaders
1. Provide for all factory- or shop-assembled frames.

2.4 FINISHES

A. Primer
1. Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Bituminous Coating

1. Asphalt emulsion or other high-build, water-resistant, resilient coating.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify existing conditions before starting work.
2. Verify that opening sizes and tolerances are acceptable.

3.2 PREPARATION

A. Coat inside of frames with bituminous coating to a thickness of 1/16 inch.

3.3 INSTALLATION

A. Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.

B. Coordinate frame anchor placement with wall construction.

C. Fill frame cavities of exterior and sound rated doors with thermal batt insulation.

D. Coordinate installation of hardware.

E. Coordinate installation of glazing.

F. Coordinate installation of electrical connections to electrical hardware items.

G. Touch up damaged factory finishes.

3.4 FIELD QUALITY CONTROL

A. Tolerances

1. Clearances Between Door and Frame: As indicated in ANSI/SDI A250.8(SDI-100).
2. Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

B. Adjusting

1. Adjust for smooth and balanced door movement.
2. Adjust sound control doors so that seals are fully engaged when door is closed.

END OF SECTION

SECTION 08 1416

FLUSH WOOD DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Flush wood doors; flush configuration; non-rated and acoustical.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 08 1113 - Metal Doors and Frames.

E. Section 08 7100 - Door Hardware.

F. Section 08 8000 - Glazing.

G. Section 09 9000 – Painting and Coating: Field finishing of doors.

1.3 REFERENCE STANDARDS

A. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.

B. ASTM E413 - Classification for Rating Sound Insulation; 2010.

C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.

D. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. System Requirements

1. To provide a higher level of coordination the following building materials must be provided by the same sub-contractor.

a. 08 1113 - Metal Doors and Frames

b. 08 1416 - Flush Wood Doors

c. 08 7100 - Door Hardware

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

2. Indicate door core materials and construction, veneer species, louver, lite kit frame, type and characteristics.

C. Shop Drawings

1. Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

D. Samples

1. Purpose: Factory finishes applied to actual door face materials.
2. Quantity: (2)
3. Size: 6 in. x 6 in.

E. Quality Assurance Submittals

1. Design data/test reports. Show compliance with specified requirements for the following:
    a. Sound-retardant doors and frames; sealed panel tests are not acceptable.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.
2. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.
3. Package, deliver and store doors in accordance with specified quality standard.
4. Accept doors on site in manufacturer's packaging. Inspect for damage.
5. Mark each door on top rail with opening number used on Shop Drawings.

B. Storage

1. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

1.8 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Interior Doors: Provide manufacturer's warranty for the life of the installation.

C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

1. Warping (bow, cup, or twist) more than 1/4 in. in a 42-by-84-in. section.
2. Telegraphing of core construction in face veneers exceeding 0.01 in. in a 3-in. span.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. All Doors

1. Quality Level: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS).
2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
3. See drawings for locations and additional requirements.

B. Interior Doors

1. 1-3/4 inches thick unless otherwise indicated; flush construction.
2. Provide solid core doors at all locations.
3. Sound Retardant Doors: Minimum STC of 41, calculated in accordance with ASTM E413, tested in accordance with ASTM E90.
4. Wood veneer facing for transparent finish.

C. Fire-Rated Wood Doors

1. Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

D. Smoke- and Draft-Control Door Assemblies

1. Listed and labeled for smoke and draft control, based on testing according to UL 1784.

E. Product and Manufacturer

1. Algoma.
2. Eggers Industries.
3. Haley Brothers.
4. Marshfield Door Systems, Inc.
5. Vancouver Architectural Doors.
6. VT Industries.
7. Western Oregon Door.
8. Substitutions: See Section 01 6000 – Product Requirements.

2.2 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors

1. Type particleboard core (PC), plies and faces as indicated.

B. Sound Resistant Doors

1. Equivalent to Type particleboard core (PC) construction with core as required to achieve STC rating of 45; plies and faces as indicated.

2.3 DOOR FACINGS

A. Veneer Facing for Transparent Finish

1. Grade: Premium, with Grade AA faces.
2. Species: White Birch.
3. Cut: Match existing.

B. Facing Adhesive

1. Type I - waterproof.

2.4 ACCESSORIES

A. Glazing Stops

1. Wood, of same species as door facing, mitered corners; prepared for countersink style tamper proof screws.

B. Removable stops in non-fire rated wood doors

1. Square vision light steel stops. 18 gage cold rolled steel frame with mitered and welded corners, prepared countersunk style tamper proof screws.
2. Products and Manufacturers
   a. “Model VLF1G” by Air Louvers, Inc.
   b. Substitutions: See Section 01 6000 – Product Requirements.
3. Finish
   a. Powder coated prime paint for field finishing.

2.5 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:

1. Provide solid blocks at lock edge for hardware reinforcement.
2. Provide solid blocking for other thru-bolted hardware.

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Provide edge clearances in accordance with the quality standard specified.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that opening sizes and tolerances are acceptable.
2. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Use machine tools to cut or drill for hardware.

C. Coordinate installation of doors with installation of frames and hardware.

D. Coordinate installation of glazing.

E. Install door louvers plumb and level.

F. Protect veneer from damage during construction. Do not wedge open doors with any material that might cause the veneer to split or chip.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Conform to specified quality standard for fit and clearance tolerances.

2. Conform to specified quality standard for telegraphing, warp, and squareness.

B. Adjusting

1. Adjust doors for smooth and balanced door movement.

2. Adjust closers for full closure.

END OF SECTION

SECTION 08 3100

ACCESS DOORS AND PANELS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wall access door and frame units.

B. Manifold Wall Cabinets

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 2116 – Gypsum Board Assemblies

1.3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.

C. Manufacturer's Instructions

1. Indicate installation requirements.

1.4 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.6 PROJECT RECORD DOCUMENTS

A. Record actual locations of each access unit.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturer

1. Acudor Products Inc.
2. Babcock-Davis.
3. Cierra Products.
4. Dur-Red Products.
5. Milcor, Inc.
6. Substitutions: See Section 01 6000 – Product Requirements.
7. Products as listed by Acudor Products Inc.

2.2 WALL AND CEILING-MOUNTED UNITS

A. Description

1. Material
    a. Steel.
2. Finish
    a. Stainless Steel
3. Door/Panel
    a. Continuous, concealed hinge, standard duty, with tool-operated spring or cam lock and no handle.
    b. Tool-operated spring or cam lock; no handle.
4. Wall Mounting Criteria
    a. Provide surface-mounted face frame and door surface flush with frame surface.

B. Dimensions

1. 12 in. by 12 in. unless noted otherwise on the Drawings.

C. Product

1. “UF-5000” by Acudor

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that rough openings are correctly sized and located.

3.2 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Install frames plumb and level in openings, and secure units rigidly in place.

C. Position units to provide convenient access to concealed equipment when necessary.

END OF SECTION

Section 08 5659 - Service Windows to be provided in Addenda.

SECTION 08 7100

DOOR HARDWARE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Hardware for wood doors.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 08 0607 - Door Hardware Schedule.

E. Section 08 1113 - Metal Doors And Frames.

F. Section 08 1416 - Flush Wood Doors.

G. Section 08 4313 - Aluminum-Framed Storefronts: Hardware for doors in storefront.

1.3 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

C. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2004.

D. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute; 1993; also in WDHS-1/WDHS-5 Series, 1996.

E. ICC A117.1 - Accessible and Usable Buildings and Facilities; International Code Council; 2009 (ANSI).

F. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2013.

G. NFPA 101 - Life Safety Code; National Fire Protection Association; 2012.

H. OSSC - Oregon Structural Specialty Code, latest edition.

I. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements

1. Provide products that comply with the following:

a. Applicable provisions of federal, state, and local codes.

b. Accessibility: ADA Standards and ICC A117.1.

c. ANSI/ICC A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

d. Applicable provisions of NFPA 101, Life Safety Code.

e. Fire-Rated Doors: NFPA 80.

f. Hardware on Fire-Rated Doors, Except Hinges: Listed and classified by UL as suitable for the purpose specified and indicated.

g. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

B. System Requirements

1. This specification is intended as a guideline for quality and operation and is not to be construed as a complete list. It is the specific responsibility of the hardware supplier to furnish complete hardware for all openings that is functional, meets the described intended use, and in full compliance with all state and local building codes, fire codes, and accessibility codes. Any supplier bidding on this section of the work shall notify the Architect prior to bidding, of discrepancies or will be assumed to have included correct material to make this compliance.

2. To provide a higher level of coordination the following building materials must be provided by the same sub-contractor.

a. 08 1113 - Metal Doors and Frames

b. 08 1416 - Flush Wood Doors

c. 08 7100 - Door Hardware

3. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.

4. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

5. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by all affected installers.

6. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Hardware Schedule

1. Detailed listing of each item of hardware to be installed on each door. Use door numbering scheme as included in the Contract Documents. Identify electrically operated items and include power requirements.

C. Product Data

1. Submit manufacturer's product data and installation instructions.

D. Manufacturer’s Instructions

1. Indicate special procedures, perimeter conditions requiring special attention.

2. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

E. Closeout Submittals

1. Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Installer Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

2. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

3. Hardware Supplier Qualifications: Company specializing in supplying commercial door hardware with 5 years of experience.

4. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.

5. Prior to final project acceptance, supplier's representative shall make one field inspection and certify, in writing to the Architect, that hardware installation complies with the project documents, approved hardware schedule, and Manufacturer's instructions, and that installation is complete and all hardware items have been properly installed and correctly adjusted, or provide a list of items that require correction.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

C. Pre-Installation Meetings

1. Keying Conference:

a. Upon receipt of approved hardware schedule, supplier will, at the earliest convenience, lead a meeting with the Owner at the project site. The purpose of the meeting will be to review keying requirements.

b. Following this meeting, the Supplier will provide Written Schedule showing keying of all new Lock Systems.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.8 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

1.9 PROJECT CLOSEOUT

A. Keys

1. Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

B. Maintenance Materials and Tools

1. Furnish the following for Owner's use in maintenance of project.

C. Owner Training

1. Prior to final project acceptance, supplier's representative shall instruct Owner how to properly adjust and maintain hardware.

1.10 PROJECT RECORD DOCUMENTS

A. Record actual locations of concealed equipment, services, and conduit.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Provide hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.

B. Provide items of a single type of the same model by the same manufacturer.

C. Hardware for Smoke and Draft Control Doors (Indicated as "S" on Drawings): Provide hardware that enables door assembly to comply with air leakage requirements of the applicable code.

D. Product and Manufacturer – Basis of Design

1. See Section 08 0607 – Door Hardware Schedule.

2. Acceptable Products and Manufacturers

a. Allegion Brands, Ives, LCN, Schlage, or Von Duprin.

b. Assa Abloy Brands, Corbin Russwin, McKinney, Norton, Sargent, or Yale.

c. C. Best Access Systems, division of Stanley Security Solutions.

d. D. C. R. Laurence Company, Inc.

e. DORMA USA, Inc.

f. Hager Companies.

g. Trimco Hardware.

h. Substitutions: See Section 01 6000 – Product Requirements.

E. Function

1. Lock and latch function numbers and descriptions of manufactures series as listed in hardware schedule.

F. Electrically Operated and/or Controlled Hardware

1. Provide all power supplies, power transfer hinges, relays, and interfaces required for proper operation; provide wiring between hardware and control components and to building power connection.

G. Finishes

1. Identified in schedule.

2.2 KEYING

A. Provide construction core locks and interchangeable cylinder cores for construction purposes.

B. Owner to provide master key system.

2.3 COMPONENT DESCRIPTIONS

2.4 Locks

A. Provide a lock for every door, unless specifically indicated as not requiring locking.

B. Hardware Sets indicate locking functions required for each door.

C. Lock Cylinders

1. Provide key access on outside of all locks unless specifically stated to have no locking or no outside trim.

D. Electrically Operated Locks

1. Fail secure unless otherwise indicated.

2.5 Lock Cylinders

A. Manufacturer’s standard tumbler type, six-pin standard core.

B. Provide cams and/or tailpieces as required for locking devices required.

2.6 Strikes

A. Extended curved lip where required to protect trim from being marred by extended latch bolt.

2.7 Latches

A. Provide a latch for every door that is not required to lock, unless specifically indicated "push/pull" or "not required to latch".

2.8 Cylindrical Locksets

A. Grade 1 per BHMA A156.

2.9 Mortise Locksets

A. Grade 1 per BHMA A156.

2.10 Hinges

A. Provide hinges on every swinging door unless otherwise indicated.

B. Provide five-knuckle full mortise ball-bearing butt hinges unless otherwise indicated.

C. Provide hinges in the quantities indicated.

D. Provide non-removable pins on all outswinging exterior and interior doors.

E. Where electrified hardware is mounted in door leaf, provide power transfer hinges unless otherwise indicated.

2.11 Push/Pulls

A. Comply with BHMA A156.6.

B. Provide push and pull on doors not specified to have lockset, latchset, exit device, or auxiliary lock.

C. On solid doors, provide matching push plate and pull plate on opposite faces.

2.12 Exit Devices

A. Complying with the appropriate section of BHMA A156.

2.13 Closers

A. Complying with BHMA A156.4.

B. Check degree of opening for all closers. Mount closer away from exterior, corridors and public spaces. Unless specifically specified, do not restrict door swing.

C. Provide surface-mounted, door-mounted closers unless otherwise indicated.

D. Provide a door closer on every exterior door.

E. On pairs of swinging doors, if an overlapping astragal is present, provide coordinator to ensure the leaves close in proper order.

F. At corridors, locate door-mounted closer on room side of door.

G. At out-swinging exterior doors, mount closer in inside of door.

2.14 Stops and Holders

1. Complying with BHMA A156.8; provide a stop for every swinging door, unless otherwise indicated.

2. Provide wall stops, unless otherwise indicated.

3. If wall stops are not practical, due to configuration of room or furnishings, provide overhead stop.

4. Stop is not required if positive stop feature is specified for door closer; positive stop feature of door closer is not an acceptable substitute for a stop unless specifically so stated.

2.15 Gaskets and Thresholds

A. Complying with BHMA A156.21.

B. At each exterior door, provide a threshold unless otherwise indicated.

C. Field cut threshold to frame for tight fit.

D. Fasteners At Exterior Locations: Non-corroding.

2.16 Kick Plates

1. Provide on push side of door where scheduled.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as indicated on shop drawings.

3.2 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Use templates provided by hardware item manufacturer.

C. Install hardware on fire-rated doors and frames in accordance with code and NFPA 80.

D. Mounting heights for hardware from finished floor to center line of hardware item:

1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames."

2. For wood doors: Comply with DHI "Recommended Locations for Architectural Hardware for Wood Flush Doors."

3. At doors with attached pulls separate from the exit devices, and door cylinder locks, verify location of cylinder with Architect to maintain access clearance. Cylinder is not to be located in line with and behind door pulls.

3.3 FIELD QUALITY CONTROL

A. Adjusting

1. Adjust hardware for smooth operation.

2. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3. Test and adjust all Locks and Latches, including Lock Keyways for smooth and easy operation.

B. Site Tests, Inspections

1. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.4 CLEANING

A. Clean adjacent surfaces soiled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjustments has been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.5 PROTECTION

A. Protect finished Work under provisions of Section 01 7000.

B. Do not permit adjacent work to damage hardware or finish.

END OF SECTION

SECTION 08 8000
GLAZING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Glass

B. Spandrel coating

C. Glazing compounds and accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 08 1113 - Metal Doors and Frames: Glazed doors and borrowed lites.

E. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.

1.3 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; U.S. Consumer Products Safety Commission; current edition.

B. ASTM C1036 - Standard Specification for Flat Glass; 2011e1.

C. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2012.

D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2013.

E. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2012a.

F. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.

G. GANA (GM) - GANA Glazing Manual; Glass Association of North America; 2009.

H. GANA (SM) - GANA Sealant Manual; Glass Association of North America; 2008.

I. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements

1. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.

a. Design Pressure: Calculated in accordance with ASCE 7.

b. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.

c. Seismic Loads: Design and size glazing components to withstand seismic loads and sway displacement in accordance with the requirements of ASCE 7.

d. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.

e. Glass thicknesses listed are minimum.

2. Vapor Retarder and Air Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier.

a. In conjunction with vapor retarder and joint sealer materials described in other sections.

b. To utilize the inner pane of multiple pane insulating glass units for the continuity of the vapor retarder and air barrier seal.

c. To maintain a continuous vapor retarder and air barrier throughout the glazed assembly from glass pane to heel bead of glazing sealant.

3. Thermal and Optical Performance: Provide glass products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:

a. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.

b. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.

c. Solar Optical Properties: Comply with NFRC 300 test method.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.

C. Samples

1. Purpose: Appearance of glazing

2. Quantity: (2)

3. Size: 12 in. by 12 in.

1.6 QUALITY ASSURANCE

A. Quality Standards

1. Perform Work in accordance with GANA Glazing Manual and GANA Sealant Manual for glazing installation methods.

2. Safety glazing to comply with OSSC requirements.

B. Qualifications

1. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.

2. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

C. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.8 PROJECT/SITE CONDITIONS

A. Do not install glazing when ambient temperature is less than 50 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.9 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide a ten (10) year warranty to include coverage for seal failure, inter-pane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturers

1. AGC Flat Glass North America, Inc.
2. Cardinal Glass Industries.
3. Guardian Industries Corp.
4. Pilkington North America Inc.
5. Viracon.
6. Vitro Glazings
7. Substitutions: See Section 01 6000 – Product Requirements.

2.2 GLASS COMPONENTS

A. Float Glass

1. Annealed Type

a. ASTM C1036, Type I, transparent flat, Class 1 clear, Quality Q3(glazing select).

2. Heat-Strengthened and Fully Tempered Types

a. ASTM C1048, Kind HS and FT.

b. Safety glazing shall comply with CPSC 16 CFR 1201.

c. Heat strengthen glazing exposed to high temperatures caused by the reflection and/or absorption of solar heat, and/or when recommended by the glazing manufacturer, and/or when required by other items of this specification section.

d. Heat temper glazing when required by other items of this specification section, and/or the drawings, and/or the building code.

e. Heat treating process should minimize Roller Wave Distortion.

f. Orient the glass in the heat treating oven so that the roller waves are parallel to the ground plane of the building.

3. Thicknesses

a. 1/4 in. thick unless noted otherwise.

b. For exterior glazing comply with specified requirements for wind load design regardless of specified thickness.

4. Applications

a. Provide float glass glazing unless otherwise indicated.

5. Applications – Fully Tempered

a. Glazed lites in doors, except fire doors.

b. Glazed sidelights to doors, except in fire-rated walls and partitions.

c. Glazed view windows and panels in partitions enclosing athletic activity rooms, except in fire-rated walls and partitions.

d. Other locations required by applicable federal, state, and local codes and regulations.

e. Other locations indicated on drawings with terms “TEMP”, “TEMPERED” and/or “SAFETY”.

6. Applications – Heat Strengthened

a. Exterior pane of glazed unit with applied coating.

B. Glass Coating

1. Low E coatings

2. Products and Manufacturers

a. “Solarban 70” by Vitro Glazing.

b. Substitutions: See Section 01 6000 – Product Requirements.

3. Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.

C. Sealed Insulation Component

1. Durability

a. Certified by an independent testing agency to comply with ASTM E2190.

2. Edge Spacers

a. Aluminum, bent and soldered corners, 1/2 in.

3. Edge Seal

a. Glass to elastomer with supplementary silicone sealant.

4. Purge interpane space with dry hermetic air.

D. Spandrel Glass Coating

1. Products and Manufacturers

a. “Opaci-Coat-300” by ICD Coatings

b. Substitutions: See Section 01 6000 – Product Requirements.

2. Apply to inner-facing (#4) face of existing window system where noted on the drawings.

3. Color: Harmony Bronze #4-822

2.3 GLAZING COMPOUND

A. As recommended by the glazing manufacturer for particular applications.

2.4 ACCESSORIES

A. As recommended by the glazing manufacturer for particular applications.

B. Setting Blocks

1. Neoprene, 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.

C. Glazing Tape, Back Bedding Mastic Type

1. Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; hardness range of 5 to 30 cured Shore A durometer; coiled on release paper; black color.

D. Glazing Gaskets

1. Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; black color.

2.5 GLAZING UNITS – MONOLITHIC

A. Vision Glass Units

1. Interior relites and doors

2. Tint: clear

2.6 GLAZING UNITS - INSULATED

A. Insulated Glass Units

1. Exterior, vision Glass, double glazed

2. Outboard Lite

a. Tint: Clear.

b. Coating: Apply to #2 surface.

3. Inboard Lite
    a. Tint: Clear.
    b. Coating: None.
4. Total thickness: 1 in.
5. Application
    a. Exterior windows.

B. Spandrel Glass Units
1. Exterior, spandrel glass, double glazed
2. Outboard Lite
    a. Tint: Clear.
    b. Coating: None.
3. Inboard Lite
    a. Tint: Clear.
    b. Coating: Apply spandrel coating to #4 surface.
4. Total thickness: 1 in.
5. Application
    a. At replacement Insulated Glazing Units in new Shower Rooms.

2.7 FABRICATION

A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

B. Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.
1. Temperature Change
    a. 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

C. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.

D. Grind smooth and polish exposed glass edges and corners.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions
1. Verify that openings for glazing are correctly sized and within tolerance.
2. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

D. Install sealants in accordance with ASTM C1193 and GANA Sealant Manual.

E. Install sealants in accordance with manufacturer's instructions.

F. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

G. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

H. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

I. Set glass lites in proper orientation so that coatings face exterior, or interior as indicated.

J. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following: weld splatter, fire-safing, plastering, mortar droppings, etc.

3.3 INSTALLATION – GENERAL

A. Install in strict accordance with manufacturer's instructions and FGMA Glazing Manual.

3.4 INSTALLATION – EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)

A. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

B. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

C. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.5 INSTALLATION – INTERIOR DRY METHOD (TAPE

A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.

B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

C. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.

D. Place glazing tape on free perimeter of glazing in same manner described above.

E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.

F. Knife trim protruding tape.

3.6 CLEANING

A. Remove glazing materials from finish surfaces.

B. Remove labels after Work is complete.

C. Clean glass and adjacent surfaces.

3.7 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

END OF SECTION

SECTION 09 0601

COLOR SCHEDULE

Component	Product	Manufacturer	Color

Note 1. Architect to select from manufacturer's available colors.

Note 2. Architect to select from Volume 1 Neutral Color options.

06 2000 – Finish Carpentry			
Apply Window Sils			Clear
Hardwood Trim			Clear
06 8316 – FRP			
FRP Wall Panels	Standard FRP	Marlite	P110 - White
06 4100 – Casework			
P.Lam 1 – Countertop		Wilsonart	Note 1
P.Lam 2 – Base Cabinets		Wilsonart	Note 1
08 1416 – Flush Wood Doors			
Interior Doors	See Specifications		Match existing
09 3000 - Tiling			
Floor Tile	Volume 1 Conc Look	Daltile	Note 2
Base Tile	Volume 1 Conc Look	Daltile	Note 2
Floor Tile Color A (50% wall area)	Classic Color Wheel	Daltile	Note 1
Floor Tile Color A (50% wall area)	Classic Color Wheel	Daltile	Note 1
09 5100 – Acoustical Ceilings			
Ceiling Tile	See Specifications	Armstrong	White
Suspension System	Prelude 15/16 in.	Armstrong	White
09 6500 – Resilient Flooring			
Rubber Base	See Specifications		Note 1
VCT	See Specifications		Black
09 6813 – Carpet Tile			
CP1 – Carpet Tile	See Specifications		Note 1

Component	Product	Manufacturer	Color
09 9000 – Painting and Coating			
Paint Color 1	Interior Paint	Sherwin Williams	Russian White, Eggshell
Paint Color 2	Interior Paint	Sherwin Williams	Porpoise SW 7047
12 2413 – Roller Window Shade			
Shade Fabric			
Type 1	Ecoveil Screens 1550 Series Mecho		Note 1
12 3600 – Countertops			
See 06 4100 – Casework			

END OF SECTION

SECTION 09 2116

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Gypsum wall and ceiling board

B. Gypsum-based backer board

C. Acoustical insulation

D. Joint treatment and accessories.

E. Acoustical sealant.

F. Textured finish system.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 2216 - Non-Structural Metal Framing.

E. Section 09 9623 - Painting: Primer/sealer on gypsum board.

1.3 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.

B. ASTM C514 - Standard Specification for Nails for the Application of Gypsum Board; 2004 (Reapproved 2014).

C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.

D. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.

E. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.

F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2014.

G. ASTM C1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2014a.

H. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.

I. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.

J. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.

K. ASTM E413 - Classification for Rating Sound Insulation; 2010.

L. GA-216 - Application and Finishing of Gypsum Board; 2013.

M. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

C. Shop Drawings

1. Indicate special details associated with acoustic seals.

D. Samples

1. Purpose: To verify applied texture
2. Quantity: (2)
3. Size: 12 x 12 inches

E. Quality Assurance Submittals

1. Certificates
    a. Demonstrate installer meets or exceeds the standards of this section.

1.5 QUALITY ASSURANCE

A. Quality Standards

1. Gypsum board system standards
    a. Materials: Comply with Gypsum Association GA-201 "Using Gypsum Board for Walls and Ceilings."
    b. Application and finishing: Comply with Gypsum Association GA-216 "Recommended Specifications for Application and Finishing of Gypsum Board" and GA 214 "Levels of Gypsum Board Finish."
2. Acoustic Attenuation
    a. STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

B. Qualifications

1. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum 3 years of experience.

C. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes. Neatly stack gypsum boards flat to prevent sagging.

2. Handle gypsum boards to prevent damage to edges, ends, and surfaces. Do not bend or otherwise damage metal corner beads and trim.

1.7 PROJECT/SITE CONDITIONS

A. Environmental Conditions, General: Establish and maintain environmental conditions for application and finishing gypsum board to comply with ASTM C 840 and with gypsum board manufacturer's recommendations.

B. Minimum Room Temperatures: For non-adhesive attachment of gypsum board to framing, maintain not less than 40 degrees F. For adhesive attachment and finishing of gypsum board maintain not less than 50 degrees F for 48 hours before application and continuously thereafter until drying is complete.

C. Ventilate building spaces to remove water not required for drying joint treatment materials. Avoid drafts during dry, hot weather to prevent materials from drying too rapidly.

D. Provide adequate lighting during installation and joint finishing treatment.

E. Protect adjoining surfaces against damage and soiling.

PART 2 PRODUCTS

2.1 GYPSUM BOARD MATERIAL

A. Manufacturers

1. American Gypsum.
2. Celotex.
3. CertainTeed Corporation.
4. Domtar Gypsum America, Inc.
5. Georgia-Pacific Gypsum.
6. National Gypsum Company.
7. PABCO Gypsum.
8. USG Corporation: www.usg.com.
9. Substitutions: See Section 01 1600 – Product Requirements.

B. General, All Boards

1. This applies to all board types below unless listed otherwise.
2. Dimensions

a. Thickness: 5/8 inch

b. Sheet Size: Sizes to minimize joints in place.

3. Description

a. Edges: Square

b. Type X at all applications.

C. Gypsum Wallboard

1. Application

a. Vertical wall and soffit application where “Gyp Board” identified on Drawings.

2. Description

a. Paper-faced gypsum panels as defined in ASTM C1396/C1396M.

D. Water-Resistant Gypsum Wallboard

1. Application

a. Vertical wall and soffit surfaces on all walls in wet areas such as restrooms, and within 4 feet of plumbing fixtures in all other rooms.

b. Gyp Board ceilings in Restrooms.

2. Description

a. Paper-faced moisture-resistant panels (“Greenboard”) as defined in ASTM C1396/C1396M.

b. Mold Resistance: Score of 10f when tested in accordance with ASTM D3273.

E. Gypsum Ceiling Board

1. Application

2. Dimensions

a. Thickness: 1/2 inch

3. Description

a. Paper-faced gypsum panels as defined in ASTM C1396/C1396M.

F. Water-Resistant Gypsum-based Backer Board – research DensArmor Plus and Hardiebacker

1. Application

2. Product and Manufacturer – Basis of Design

a. “DensArmor Plus” by Georgia Pacific.

b. Substitutions: See Section 01 1600 – Product Requirements

3. Dimensions

a. Thickness: 5/8 inch

b. Sheet Size: Sizes to minimize joints in place.

4. Description

a. Edges: Square

b. Type X at all applications.

5. Extent:

    a. At all wall tile locations within 4 ft of a shower unit.

2.2 ACOUSTICAL COMPONENTS

A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3-1/2 inch.

B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant meeting project's VOC limits; do not use solvent-based non-curing butyl sealant.

C. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board; meeting project's VOC limits.

D. Acoustical Framing Accessories: As specified in Section 09 2216 – Non-Structural Metal Framing.

2.3 ACCESSORIES

A. Finishing Accessories

1. ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.

2. Types: As detailed or required for finished appearance.

3. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.

B. Reveals and Moldings

1. Expansion and Control Joints: Aluminum, similar to Fry Reglet DRM-50-50 2 piece.

C. Joint Materials

1. ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.

2. Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.

3. Water-resistant panels

    a. USG Durabond Setting-Type Joint Compound for treatment of joints, fasteners, and cut edges of water- resistant panels.

D. Trim:

1. Galvanized steel with knurled and perforated flanges.

2. Product

    a. Dur-A-Bead corner bead, No. 200-A, B or C metal trim, No. 093 Control Joint by USG.

    b. Substitutions: See Section 01 1600 – Product Requirements.

3. Ready-mixed vinyl-based joint compound.

E. Textured Finish Materials

    a. Latex-based compound; plain.

F. Fasteners

1. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
2. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion resistant.
3. Nails for Attachment to Wood Members: ASTM C514.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that project conditions are appropriate for work of this section to commence.

3.2 INSTALLATION

A. Board Installation

1. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
2. Single-Layer Non-Rated
    a. Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
3. Exposed Gypsum Board in Interior Wet Areas
    a. Seal joints, cut edges, and holes with water-resistant sealant.
4. Installation on Metal Framing
    a. Use screws for attachment of gypsum board except face layer of non-rated double-layer assemblies, which may be installed by means of adhesive lamination.
5. Installation on Wood Framing
    a. For rated assemblies, comply with requirements of listing authority. For non-rated assemblies, install as follows:
    b. Single-Layer Applications: Screw attachment.

B. Trim and Accessory Installation

1. Control Joints
    a. Place control joints consistent with lines of building spaces and as indicated.
    b. Not more than 30 feet apart on walls and ceilings over 50 feet long.
2. Corner Beads
    a. Install at external corners, using longest practical lengths.
3. Edge Trim
    a. Install at locations where gypsum board abuts dissimilar materials.
4. Reveal Moulding

a. Install in patterns as shown on drawings according to manufacturer's instructions, directly to wall framing, or base layer of wall board in multiple layer applications. Cutting in reveal molding after wall board installation is not acceptable.

5. Wall and Ceiling Mounted Access Hatches

a. Coordinate size, location and number of access hatches shown to be provided in other specification sections or on the drawings. Install these access hatches in gypsum board walls and ceilings in accordance with manufacturer's instructions flat and smooth in wall and ceiling surfaces.

C. Joint Treatment Installation

1. Paper Faced Gypsum Board

a. Use paper joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.

2. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

3. Feather coats of joint compound so that camber is maximum 1/32 inch.

D. Joint Treatment Levels

1. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:

2. Level 4

a. Finish interior gypsum board by applying the following joint compounds in three coats (not including prefill of openings in base), and sand between coats and after last coat:

b. Embedding and First Coat: Ready-mix or job mixed setting type joint or taping compound.

c. Fill (Second) Coat: Ready-mix or job mixed topping compound.

d. Finish (Third) Coat: Ready-mix or job mixed topping compound.

e. Locations: Typical for all walls and ceilings unless otherwise indicated

3. Level 3

a. Finish concealed gypsum board construction that requires finishing to achieve fire-resistance rating, sound rating or to act as air or smoke barrier the same as exposed gypsum board construction, except the third coat and sanding can be omitted.

b. Locations: Walls above acoustical ceiling systems: Tape and fill joints with two coats of joint compound, sanding not required.

4. Level 2

a. Locations: In utility areas, behind cabinetry, and on backing board to receive tile finish.

5. Level 1

a. Locations: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.

E. Texture Finish Installation

1. Coordinate application of paint primer by Section 09 9000 over gypsum board after taping, filling, and sanding, but prior to texture application.

2. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.

3. Texture Required

a. Shower Rooms: None

b. Elsewhere: Match existing adjacent walls. Field verify with Architect.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

3.4 PROTECTION

A. Provide final protection and maintain conditions, in a manner that ensures gypsum board construction will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 09 2216

NON-STRUCTURAL METAL FRAMING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Metal partition and ceiling framing.

B. Framing accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 2116 – Gypsum Board Assemblies.

1.3 REFERENCE STANDARDS

A. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2013.

B. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2011.

C. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2007 (Reapproved 2013).

D. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 2002 (Ed. 2004).

E. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

C. Quality Assurance Submittals

1. Design data/test reports

2. Certificates

a. Demonstrate installer meets or exceeds the standards of this section.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum 3 years of experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

PART 2 PRODUCTS

2.1 FRAMING MATERIAL

A. Product and Manufacturer

1. Contractor's Choice from products that comply with the requirements of this section.

B. Extent

1. Wall framing is detailed as wood framing. Contractor's option to substitute wood framing with metal framing as described below.

C. Dimensions

1. Minimum Metal Thickness (gauge) unless noted otherwise on the drawings:

a. At framing surrounding door and relite openings, unless noted otherwise: 20 ga.

b. At framing surrounding secured and bullet resistant door frames and security windows: 16 ga.

c. At plywood wall coverings, wall panels: 20 ga (33 mil).

d. At backerboard to receive ceramic tile: 20 ga (33 mil).

e. Walls supporting ceiling framing: 18 ga (43 mil) if supporting equipment or access platform, 20 ga (33 mil) elsewhere.

f. At walls taller than 11 ft – 0 in (unsupported height): 20 ga (33 mil).

g. Walls to support casework or plumbing fixtures: 20 ga (33 mil).

h. Walls to support monitors: 20 ga (33 mil).

i. Elsewhere not described above nor on the Drawings: 20 ga (33 mil).

2. Flange Width unless noted otherwise on the drawings:

a. Wall framing to 10 ft -0 in high: 1 3/8 in. (137)

b. Wall framing 10 ft -0 in to 14 ft -0 in: 1 1/2 in. (150)

c. Wall framing 14 ft – 0 in to 20 ft – 0 in: 1 5/8 in. (162)

d. Wall framing over 20 ft – 0 in: See drawings.

D. Description

1. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.

E. Characteristics

1. Studs: C shaped with flat or formed webs with knurled faces.
2. Runners: U shaped, sized to match studs.
3. Ceiling Channels: C shaped.
4. Furring: Hat-shaped sections, minimum depth of 7/8 inch.

2.2 FRAMING ACCESSORIES

A. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.

B. Partition Head to Structure Connections

1. Comply with requirements of ASTM C645.
2. Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings.
3. One Piece Deflection Track: "VST" by Dale Incor, or approved.
    a. Upper track with 3 inch minimum flange, web dimension to slip over normal track allowing 2 1/2 inch deflection of structure.
    b. Slip Connection and Slide Clips: Curtain wall type clip allowing vertical slip connection of studs while providing lateral support.

C. Tracks and Runners

1. Same material and thickness as studs, bent leg retainer notched to receive studs .

D. Furring and Bracing Member

1. Of same material as studs, thickness to suit purpose; complying with applicable requirements of ASTM C754.

E. Sheet Metal Backing

1. 0.036 inch thick, galvanized.

F. Fasteners

1. ASTM C1002 self-piercing tapping screws.
2. Anchorage Devices: Powder actuated.

G. Acoustic Sealant

1. Acrylic emulsion latex or water-based elastomeric sealant meeting project's VOC limits; do not use solvent-based non-curing butyl sealant.

H. Touch-Up Primer for Galvanized Surfaces

1. SSPC-Paint 20, Type I - Inorganic.

I. Foam Gasket:

1. Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
2. Verify that rough-in utilities are in proper location.

3.2 INSTALLATION

A. Installation – General

1. Installation Standard: ASTM C 754.
    a. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
2. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
3. Install bracing at terminations in assemblies.
4. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

B. Installation – Stud Framing

1. Comply with requirements of ASTM C754.
2. Extend partition framing to structure or ceiling as indicated on drawings.
3. Partitions Terminating at Ceiling
    a. Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
4. Partitions Terminating at Structure
    a. Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions.
    b. Verify free movement of top of stud connections.
    c. Do not leave studs unattached to track.
5. Door Openings
    a. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
    b. Install two studs at each jamb unless otherwise indicated.

c. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.

d. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

6. Other Framed Openings

   a. Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

7. Fire-Resistance-Rated Partitions

   a. Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

8. Sound-Rated Partitions

   a. Install framing to comply with sound-rated assembly indicated.

9. Align and secure top and bottom runners at 16 inches on center.

10. At partitions indicated with an acoustic rating or where shown on drawings to receive acoustic insulation:

    a. Place one bead of acoustic sealant between runners and substrate, studs and adjacent construction.

    b. Place two beads of acoustic sealant between studs and adjacent vertical surfaces.

11. Fit runners under and above openings; secure intermediate studs to same spacing as wall studs.

12. Install studs vertically at spacing indicated on drawings. If spacing not listed, comply with the following:

    a. Walls framing to support tile systems: 16” o.c.

    b. Soffits and Ceilings supporting gypsum board: 16” o.c.

    c. Walls and soffits supporting wood blocking or wood sheathing: 16” o.c.

    d. Elsewhere: 24” o.c.

13. Align stud web openings horizontally.

14. Secure studs to tracks using fastener method. Do not weld.

15. Stud splicing is not permissible.

16. Fabricate corners using a minimum of three studs.

17. Double stud at wall openings, door and window jambs, not more than 2 inches from each side of openings.

18. Brace stud framing system rigid.

19. Coordinate erection of studs with requirements of door frames; install supports and attachments.

C. Coordinate installation of bucks, anchors, and blocking with electrical, mechanical, and other work to be placed within or behind stud framing.

D. Blocking

1. Use steel channels secured to studs. Provide blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, hardware, opening frames, and other accessories shown on drawings.

E. Installation – Ceiling and Soffit Framing

1. Make provisions for erection stresses. Provide temporary alignment and bracing.
2. Unless otherwise indicated on drawings, place joists at 12 inches o.c.; not more than 2 inches from abutting walls. Connect joists to supports using fastener method.
3. Set ceiling and soffit joists parallel and level, with lateral bracing and bridging.
4. Locate joist end bearing directly over load bearing studs or provide load distributing member to top of stud track.
5. Coordinate framing with the work and products of other Sections. Provide framing for openings using standard framing techniques unless specifically detailed otherwise.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Maximum Variation from True Position: 1/8 inch in 10 feet.
2. Maximum Variation from Plumb: 1/8 inch in 10 feet.
3. Suspension System

a. Install suspension systems that are level to within 1/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

END OF SECTION

SECTION 09 3000

TILING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Tile for floor and wall applications.

B. Cementitious backer board as tile substrate.

C. Non-ceramic trim.

1.2 RELATED REQUIREMENTS

A. Section 01 6000 – Product Requirements: Substitution request procedures.

B. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

C. Section 07 9200 - Joint Sealants: Sealing joints between tile work and adjacent construction and fixtures.

D. Section 09 0601 - Color Schedule: Colors and sizes.

E. Section 09 2116 – Gypsum Board Assemblies. Wall substrate at wall tile.

1.3 REFERENCE STANDARDS

A. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2014.

B. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).

C. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured

D. Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement; 1999 (Reaffirmed 2010).

E. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2009 (Revised).

F. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).

G. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (Reaffirmed 2010).

H. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2010).

I. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (Reaffirmed 2010).

J. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 1999 (Reaffirmed 2010).

K. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units; 2010 (Revised).

L. ANSI A108.12 - American National Standard for Installation of Ceramic Tile with EGP (Exterior glue plywood) Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).

M. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2010).

N. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar; 2012 (Revised).

O. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2010 (Revised).

P. ANSI A118.12 - American National Standard Specifications for Crack Isolation Membranes for Thin-set Ceramic Tile and Dimension Stone Installation; 2014.

Q. ANSI A118.15 - American National Standard Specifications for Improved Modified Dry-Set Cement Mortar; 2012.

R. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2013.1.

S. ASTM C373 - Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products, Ceramic Tiles, and Glass Tiles; 2014a.

T. ASTM D4068 - Standard Specification for Chlorinated Polyethylene (CPE) Sheeting for Concealed Water-Containment Membrane; 2015.

U. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; current edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Shop Drawings

1. Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

D. Samples

1. Purpose: Verify color, pattern, and texture.

2. Quantity: (2)

3. Size: Actual

E. Manufacturer’s Instructions

1. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.

2. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

B. Pre-Installation Meetings

1. Convene one week week before starting work of this section. Require attendance by all affected installers.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

2. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.7 PROJECT/SITE CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

1.8 EXTRA STOCK

A. Extra Tile: 10 square feet of each size, color, and surface finish combination.

B. Store where directed by Owner.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturers

1. American Olean Corporation.

2. Daltile Corporation.

3. Emser Tile, LLC.

4. Summitville Tiles, Inc.

5. Substitutions: See Section 01 6000 – Product Requirements.

B. General Information

1. Ceramic Mosaic Tile

a. ANSI A137.1, standard grade.

b. Moisture Absorption

c. 0 to 0.5 percent as tested in accordance with ASTM C373.

d. Surface Finish: Matte glazed.

e. Trim Units: Matching bead, cove, and surface bullnose shapes in sizes coordinated with field tile.

2. Porcelain Floor Tile

a. ANSI A137.1, and as follows:

b. Moisture Absorption: 0 to 0.5 percent.

2.2 TILE 1 – FLOOR

A. Product and Manufacturer – Basis of Design

1. “Volume 1 Concrete Look“ by Daltile.

B. Dimensions

1. Sizes: 6 in. by 6 in.

2. Thickness: 5/16 in.

C. Material: Porcelain.

D. Edges: Square.

E. Surface Finish: Glazed.

F. Color(s): See Color Schedule

G. Extent

1. Volume 1 Concrete Look.

2.3 TILE 2 – WALL BASE

A. Product and Manufacturer – Basis of Design

1. “Volume 1 Concrete Look Cove Base“ by Daltile.

B. Dimensions

1. Sizes: 6 in. by 12 in.

C. Material: Porcelain.

D. Edges: Bullnose.

E. Surface Finish: Glazed.

F. Color(s): See Color Schedule

G. Extent

1. Shower Room.

2.4 TILE 3 - WALL

A. Product and Manufacturer – Basis of Design

1. “Classic Color Wheel Collection “ by Daltile.

B. Dimensions

1. Sizes: 4 in. by 4 in.
2. Thickness: 5/16 in.

C. Material: Ceramic.

D. Edges: Square.

E. Surface Finish: Matte and/or Gloss.

F. Color(s): See Color Schedule

G. Extent

1. Shower Room

2.5 TRIM AND ACCESSORIES

A. Non-Ceramic Trim:

1. Manufacturer, Basis of Design:
   a. Schulter Systems.
   b. Substitutions: See Section 01 6000 – Product Requirements.
2. Satin natural anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
3. Applications:
   a. Floor tile, 0pen edges (tile one side), including at door openings, same height: “SCHIENE”.
   b. Floor tile, open edges (tile one side), including at door openings, different height transitions: “RENO-TK”.
   c. Floor tile, expansion and control joints (tile to tile): “DECO”.
   d. Floor to wall tile joints (tile to tile): “DILEX-AHK”.
   e. Wall tile, vertical inside corners (tile to tile): “DILEX-EHK".
   f. Wall tile, vertical outside corners (tile to tile): “ECK-K”
   g. Wall tile, open horizontal edges of wall tile (tile one side): “RONDEC-DB”.
   h. Wall tile, open vertical edges of wall tile (tile one side): “RONDEC-DB”.
   i. Wall tile, expansion and control joints (tile to tile): “DECO”.

2.6 SETTING MATERIALS

A. Latex-Portland Cement Mortar Bond Coat

1. ANSI A118.4, ANSI A118.15.
2. Applications
   a. Use this type of bond coat where indicated and where no other type of bond coat is indicated.

3. Products and Manufacturer:

    a. “Complete Contact-LFT Premium Rapid Setting Large Format Tile Mortar, with Multi-Surface Bonding Primer” by Custom Building Products.

    b. “Merkrete 735 Premium Flex” by Merkrete, by Parex USA.

    c. “Permalastic System “ by ProSpec, an Oldcastle brand.

    d. Substitutions: See Section 01 6000 - Product Requirements.

2.7 GROUTS

A. Polymer Modified Grout

1. ANSI A118.7 polymer modified cement grout.

2. Applications

    a. Use this type of grout where indicated and where no other type of grout is indicated.

3. Type

    a. Use sanded grout for joints 1/8 inch wide and larger; use unsanded grout for joints less than 1/8 inch wide.

4. Color(s)

    a. Architect to select from manufacturer’s available colors.

5. Products and Manufacturer:

    a. “Laticrete Permacolor Grout“ by Latricrete International, Inc.

    b. “Merkrete 735 Premium Flex” by Merkrete, by Parex USA.

    c. “ProColor Sanded Tile Grout“ by ProSpec, an Oldcastle brand.

    d. Substitutions: See Section 01 6000 - Product Requirements.

2.8 MAINTENANCE MATERIALS

A. Tile Sealant – See 07 9200 – Joint Sealant

B. Grout Sealer

1. Liquid-applied, moisture and stain protection for existing or new Portland cement grout.

2. Composition: Water-based colorless silicone.

3. Products and Manufacturer

    a. “Merkrete Grout Sealer “ Merkrete, by Parex USA, Inc.

    b. Substitutions: See Section 01 6000 - Product Requirements.

2.9 ACCESSORY MATERIALS

A. Tile Floor Underlayment and Uncoupling Membrane

1. Description

    a. High-density membrane with raised grid system; comply with ANSI A118.10 for

load bearing, bonded waterproof membranes for thin-set ceramic tile and dimension stone installation.

2. Products and Manufacturer
    a. “DITRA” by Schulter
    b. Substitutions: See Section 01 6000 - Product Requirements.
3. Thickness: 1/8 in.
4. Extent: Apply below floor tile.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.

D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

3.2 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

D. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

3.3 INSTALLATION - GENERAL

A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.13, manufacturer's instructions, and TCNA (HB) recommendations.

B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

E. Form internal angles square and external angles bullnosed.

F. Install non-ceramic trim in accordance with manufacturer's instructions.

G. Sound tile after setting. Replace hollow sounding units.

H. Keep control and expansion joints free of mortar, grout, and adhesive.

I. Keep expansion joints free of adhesive or grout. Apply sealant to joints.

J. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

K. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.

L. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

M. Install grout sealer at grout joints of porcelain tile per tile and grout manufacturer's instructions.

N. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.4 INSTALLATION – FLOORS – THIN-SET METHODS

1. Over interior concrete substrates

a. Install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, with standard grout, unless otherwise indicated. Where waterproofing membrane is indicated, install in accordance with TCNA (HB) Method F122, with latex-Portland cement grout.

3.5 INSTALLATION - WALL TILE

A. Over cementitious backer units install in accordance with TCNA (HB) Method W223, organic adhesive.

B. Over wood studs without backer install in accordance with TCNA (HB) Method W231, mortar bed, with membrane where indicated.

C.

3.6 CLEANING

A. Clean tile and grout surfaces.

3.7 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation, unless otherwise approved by manufacturer. Protect tile during curing process as recommended by manufacturer.

END OF SECTION

SECTION 09 5100

ACOUSTICAL CEILINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units for lay-in application.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 06 6100 – Rough Carpentry: Wall Framing.

E. Section 09 0601 – Color Schedule: Selected colors.

1.3 REFERENCE STANDARDS

A. ASCE 7-05 - Minimum Design Loads for Buildings and Other Structures; American Society of Civil Engineers; current edition.

B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; current edition.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; current edition.

D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; current edition.

E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; current edition.

F. NWCB TB 401 - Suspension Systems for Acoustical Lay-in Ceilings, Field Technical Information; Northwest Wall and Ceiling Bureau; current edition.

G. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Product data: Suspension system components, acoustical units, and seismic restraint components including perimeter clips.

2. Installation instructions: Indicate special procedures, perimeter conditions requiring special attention, and seismic restraint details.

C. Samples

1. Purpose: To verify supplied product matches existing conditions [or design intent].

2. Quantity: Two.

3. Size: 6 in x 6 in.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum 3 years of experience.

2. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

3. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 PROJECT/SITE CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.8 SEQUENCING

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Do not install acoustical units until after interior wet work is dry.

1.9 WARRANTY

A. Provide manufacturer's standard warranty.

B. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

1.10 EXTRA STOCK

A. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

B. Store where directed in un-opened cartons.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. The acoustical ceiling tile units and suspension system to be from the same manufacturer.

B. Manufacturer – Basis of Design

1. Armstrong World Industries.

C. Other Acceptable Products and Manufacturers

1. CertainTeed Corporation.

2. USG.

3. Substitutions: See Section 01 6000 – Product Requirements.

2.2 ACOUSTICAL UNITS

A. Product: ACT 1 - “Fine Fissured –Lay-in – 1729WH” by Armstrong.

1. Dimensions

a. Unit size: 24 in. by 48 in. (1760)

b. Thickness: 5/8 in.

2. Description

a. ASTM E 1264 Type III.

3. Materials

a. Painted mineral fiber.

4. Characteristics

a. Edges: Square.

b. Surface Texture: Fissured

c. Color: White

d. Extent: Where “ACT” or “Acoustical Ceiling Tile” noted on the drawings.

2.3 SUSPENSION SYSTEM

A. Product: “Prelude 15/16 in” by Armstrong.

B. Dimensions

1. Tee: 15/16 in. wide face.

C. Description

1. ASTM C635/C635M

2. Die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

D. Materials

1. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled heavy duty main beams and intermediate duty cross runners.

E. Characteristics

1. Double web construction.

2. Color: White.

F. Accessories

1. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
2. Wire gauge: Minimum 12 gauge.
3. Powder-driven Anchors: When used for seismic restraint purposes, anchors to be ICC-ES approved for seismic applications.
4. Perimeter Moldings: Same material and finish as grid. At exposed grid, provide L-shaped molding for mounting at same elevation as face of grid.
5. Perimeter Clips: Manufacturer's standard; approved for use in lieu of 2 inch wide perimeter molding.
6. Seismic ceiling joint trim or device: Manufacturer's standard providing 3/4 inch movement, matching grid. Example includes Armstrong “Seismic Joint Clip Main Beam”.
   a. Extent: Provide seismic joints at ceilings of a continuous plane at intervals of 2,500 sf max. Identify locations on shop drawings for review by Architect.

G. Extent

1. Support for Acoustical Ceiling Tile system.

2.4 ACCESSORIES

A. Acoustical Sealant For Perimeter Moldings: Non-hardening, non-skinning, for use in conjunction with suspended ceiling system.
B. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.
B. Verify that layout of hangers will not interfere with other work.

3.2 INSTALLATION

A. Installation – Suspension System

1. Install suspension system in accordance with ASCE 7-05, ASTM C 636/C 636M, ASTM E 580/E 580M, and manufacturer's instructions and as supplemented in this section.
2. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
3. Provide seismic bracing as required by OSSC for Occupancy Category II, Seismic Design Category D. NWCB Technical Bulletin 401 may be used as a reference.
   a. Secure grid system to two adjacent walls, provide 3/4 inch movement at opposite walls.
   b. Utilize approved perimeter clips instead of 2 inch wide perimeter moldings.
   c. Install seismic ceiling expansion joints to divide ceiling system areas to less than 2,500 square feet. Review locations with Architect, adjust locations as directed.

d. Install powder-driven anchors for seismic applications in accordance with ICC-ES approval and with special inspection.

4. Locate system on room axis according to reflected plan.
5. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
6. Hang suspension system independent of walls, columns, ducts, pipes and conduit.
7. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
8. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
9. Do not allow hangers or bracing to obstruct parts of mechanical or electrical systems requiring maintenance.
10. Provide framing around any recessed lighting fixtures and other openings.
11. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
12. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
13. Do not eccentrically load system or induce rotation of runners.
14. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
    a. Use longest practical lengths.
    b. Overlap and rivet corners.

B. Installation – Acoustical Units

1. Install acoustical units in accordance with manufacturer's instructions.
2. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
3. Lay directional patterned units with pattern parallel to longest room axis.
4. Fit border trim neatly against abutting surfaces.
5. Install units after above-ceiling work is complete.
6. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
7. Cutting Acoustical Units:
    a. Cut to fit irregular grid and perimeter edge trim.
    b. Make field cut edges of same profile as factory edges.
    c. Double cut and field paint exposed reveal edges.
8. Install hold-down clips on each panel to retain panels tight to grid system; comply with fire rating requirements.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

2. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

B. Site Tests, Inspections

1. An independent testing agency will perform Special Inspection for powder-driven shot-in anchors used as part of the seismic design, as specified in Section 01 1400.

3.4 CLEANING

A. Replace any damaged, chipped, scratched, or broken ceiling tile units identified up to the time of final completion. Use of sealant or putty patch material to conceal damage is not allowed.

END OF SECTION

SECTION 09 6500

RESILIENT FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Resilient Tile Flooring

B. Resilient Base

C. Installation Accessories

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 0601 – Color Schedule. Selected color and finish.

E. Section 09 2100 – Gyp Board Assembly

1.3 REFERENCE STANDARDS

A. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.

B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.

C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

D. ASTM F1066 - Standard Specification for Vinyl Composition Floor Tile.

E. ASTM F1861 - Standard Specification for Resilient Wall Base.

F. ASTM F1913 - Standard Specification for Vinyl Sheet Floor Covering Without Backing.

G. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. Design Requirements

1. General

a. Install flooring according to pattern indicated in the Drawings. If pattern not shown on the Drawings, verify with Architect prior to installation.

b. Where floor finishes are different on opposite sides of door, terminate flooring under centerline of door. Lay flooring continuous through doors and openings where adjacent rooms and areas have same finish and color.

c. Center field or patterns within space or area such that no border unit is less than ½ width of unit.

2. Sheet Flooring Layout:

a. Lay panels crosswise to corridors and rooms.

b. Lay sheets in the same direction.

c. Install with fewest possible seams.

d. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams.

e. Lay out seams to avoid widths less than 1/3 of roll width; match patterns carefully at seams.

f. Filler pieces should be at least 36 inches wide.

g. Where seams occur at right angle corners, cut pieces that butt each other from the same roll.

3. Tile Flooring Layout

a. Layout units with patterns in alternating direction.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

2. Include sizes, patterns, and available colors.

C. Shop Drawings

1. Provide seaming plan.

D. Samples

1. Quantity per type: (2)

2. Tile Flooring: Standard sample box

E. Quality Assurance Submittals

1. Design data/test reports

2. Certificates

a. Demonstrate installer meets or exceeds the standards of this section.

3. Manufacturer’s Instructions

a. Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Installer: Demonstrated experience installing the product for a minimum of 3 years.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver packaged materials to the project site in manufacturer's original, unopened containers with seals unbroken and labels indicating brand names, color, and patterns, and quality designations legible and intact.

2. Do not open containers or remove labels until materials have been inspected and accepted.

B. Storage

1. Store and protect accepted materials in accordance with manufacturer's directions and recommendations.

2. Store resilient materials areas to receive resilient materials for not less than 48 hours prior to installation to achieve temperature stability.

1.8 PROJECT/SITE CONDITIONS

A. Environmental Conditions:

1. Maintain temperature in storage area between 55 and 90 degrees Fahrenheit.

2. Preheat the areas to receive resilient materials to 68 degrees Fahrenheit minimum for at least 72 hours prior to installation.

3. Once that installation has begun, the above criteria are to be observed 24 hours a day seven days a week until completion of the installation, and for a minimum of 72 hours following the installation. Thereafter maintain minimum temperature of 55 degrees Fahrenheit.

B. Close spaces to traffic during installation of products specified in this Section.

C. Provide for continuous ventilation during installation using as close to 100 percent outside air as possible.

1.9 EXTRA STOCK

A. Store where directed by Owner.

B. Flooring Material: 20 square feet of each type and color.

C. Base: 10 linear feet of each type and color.

PART 2 PRODUCTS

2.1 RESILIENT TILE FLOORING

A. Vinyl Composition Tile

1. Product and Manufacturer – Basis of Design

a. "Standard Excelon Imperial Texture" by Armstrong World Industries, Inc

2. Other Acceptable Products and Manufacturers

a. Johnsonite, Inc; a Tarkett Company.

b. Mannington Mills, Inc.

c. Substitutions: See Section 01 6000 – Product Requirements

3. Dimensions
    a. Size: 12 in. by 12 in.
    b. Thickness: 1/8 in.
4. Description
    a. Meet requirements of ASTM F1066 Composition 1, Class 2.
5. Finishes
    a. See Section 09 0601 – Color Schedule.
6. Extent
    a. See Flooring Transition Details for VCT transition strip.

2.2 RESILIENT BASE

A. Rubber Base
1. Product and Manufacturer – Basis of Design
    a. “Traditional Wall Base” by Johnsonite Inc.
2. Other acceptable products and manufacturers
    a. Burke Flooring: www.burkemercer.com.
    b. Roppe Corp: www.roppe.com.
    c. Marley Flexco www.marleyflexco.com.
    d. Substitutions: See Section 01 6000 – Product Requirements
3. Dimensions
    a. Height: Nominal; 4 in.
    b. Thickness: 0.125 inch.
    c. Length: Roll.
4. Description
    a. ASTM F1861, Type TP, Group 1.
    b. Smooth thermoplastic rubber, top set cove type at resilient flooring and straight (toeless) at carpet.
    c. Finish: Satin.
5. Accessories
    a. Preformed end stops.
6. Finishes
    a. See Section 09 0601 – Color Schedule.

2.3 ACCESSORIES

A. Edge (Reducer) Strips
1. Product

a. “Tile Reducer No. 633” by Burke Flooring.

b. “Johnsonite Reducer Strip RRS-XX Series” by Johnsonite Inc.

c. Substitutions: See Section 01 6000 – Product Requirements.

2. Description: Vinyl; color as selected from manufacturer's standard range.

3. Color and Pattern: As indicated on Drawings.

B. Adaptors; Carpet to Resilient

1. Product

a. “Johnsonite Adaptor No. CTA-XX-A Series” by Johnsonite Inc.

b. Substitutions: See Section 01 6000 – Product Requirements.

2. Description: Vinyl adapter for transition between carpet and resilient flooring.

3. Color and Pattern: See Section 09 0601 – Color Schedule.

C. Edge Moldings and Transition Strips

1. Manufacturer

a. Burke Flooring.

b. Johnsonite Inc.

c. Substitutions: See Section 01 6000 – Product Requirements.

2. Description: Vinyl; profiles as indicated on Drawings or as required for adjoining floor surfaces.

3. Color

a. As selected from manufacturer's standard range to match or be compatible with darker flooring color.

4. Extent: Between Resilient Flooring and Other Flooring Materials that are Not Carpet

2.4 RELATED MATERIALS

A. Sealer

1. Type recommended by flooring manufacturer.

B. Leveling and Underlayment Compound:

1. Latex cementitious type as recommended by adhesive manufacturer, having minimum density of 4,000 psi after 28 days.

C. Adhesives: Adhesive must meet the following requirements:

1. Recommended by the flooring manufacturer for application.

2. Meet or exceed the vapor barrier blockage requirement by the applicable flooring manufacturer for installation.

3. Solvent-free, water-resistant, mildew-resistant, non-flammable, low odor adhesive to suit resilient sheet flooring, resilient tie flooring, resilient base][base, resilient stair covering,]and accessories and substrate conditions indicated.

4. Have VOC content of less than 100 g/L.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

2. Verify that required floor-mounted utilities are in correct location.

B. Concrete Floors:

1. Cure concrete surfaces a minimum of 28 days prior to beginning carpet work.
2. Comply with requirements of ASTM F 710 - Practice for Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring.
3. Perform the following tests. If test results exceed carpet [and cushion] manufacturer's limitations, do not commence installation until corrective actions have been completed.
   a. Moisture Testing: Perform calcium chloride tests in accordance with ASTM F 1869.
   b. Perform bond tests in accordance with carpet manufacturer's recommendations.
   c. Perform pH tests in accordance with carpet manufacturer's recommendations.
4. Provide topical vapor barrier that is acceptable to the flooring and adhesive manufacturers if the test results are not within the flooring manufacturer's limits and retest until results are satisfactory.
5. Where concrete floors show varying porosity or are excessively dusty or powdery, treat with sealer applied as per sealant manufacturer's directions.

3.2 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.

C. Prohibit traffic until filler is cured.

D. Application over Existing Floor Material

1. Use a liquid stripper in removing old polish, dirt, dust, oils, grease, and any deleterious materials that will effect proper installation.

2. Repair minor floor irregularities with underlayment material.

3.3 INSTALLATION

A. Installation - General

1. See System Description, Design Requirements above for more.

2. Starting installation constitutes acceptance of sub-floor conditions.

3. Install in accordance with manufacturer's instructions.

4. Spread only enough adhesive to permit installation of materials before initial set.

5. Fit joints tightly.

6. Set flooring in place, press with heavy roller to attain full adhesion.

7. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

8. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

B. Installation - Tile Flooring

1. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

2. Lay flooring with joints and seams parallel to building lines to produce symmetrical tile pattern.

C. Installation - Sheet Flooring

1. Seams are prohibited in custodial closets.

2. Coved Base: Install using coved base filler as backing at floor to wall junction. Extend sheet flooring vertically to height indicated above and cover top edge with metal cap strip.

3. Heat Welded Seams:

a. Use equipment and procedures developed by the flooring manufacturer.

b. General procedures consist of routing out the joint, inserting welding rod of proper size into routed space, and thermally fusing rod and each adjacent flooring material into a homogeneous, seamless floor.

c. Fusion of Material: Fuse welding rod and flooring at least 65 percent through thickness of material.

d. Upon completion of welding, remove excess welding rod material. Finished surface across joint to be flush, free from recessed or raised areas.

e. Correct unwelded joints at no additional expense to the Owner.

f. Seam adhesive welds are not permitted.

4. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated. After installation of flooring, secure metal strips with stainless steel screws. Secure resilient strips by adhesive.

D. Installation - Base

1. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.

2. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use pre-molded units.

3. Install base on solid backing. Bond tightly to wall and floor surfaces.

4. Scribe and fit to door frames and other interruptions.

3.4 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean and seal in accordance with manufacturer's instructions.

3.5 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

B. Protect flooring from damage after installation. Protection system to allow flooring to breath and not trap moisture.

END OF SECTION

SECTION 09 6813

TILE CARPETING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Carpet Tile

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 0601 – Color Schedule: Product, pattern, and finish.

1.3 REFERENCE STANDARDS

A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.

B. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

C. Shop Drawings

1. Indicate layout of joints, direction of carpet pile, and location of edge moldings.

D. Samples

1. Purpose: Selection of color and pattern.

2. Quantity: (2).

3. Size: Full size tiles.

E. Manufacturer’s Instructions

1. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

2. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Installer Qualifications: Company specializing in performing the work of this section with minimum three years of experience.

2. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials in area of installation for minimum period of 24 hours prior to installation.

2. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 EXTRA STOCK

A. Quantity equal to 5 percent of total installed of each color and pattern installed.

B. Store where directed by Owner.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturers

1. Interface, LLC
2. Mannington Commercial
3. Milliken
4. Patcraft; a division of Shaw Industries, Inc.
5. Shaw Contract Group.
6. Substitutions: See Section 01 6000 – Product Requirements.

B. Tile Carpeting

1. Construction: Tufted, manufactured in one color dye lot.
2. Backing: Solid, manufacturer's standard.

2.2 CARPET TILE 1 AND 2

A. Product and Manufacturer – Basis of Design

1. "Disperse Color, Style 5T479" by Milliken

B. Other Acceptable Manufacturers with similar products.

1. See above.

C. Tile Size

1. 24 in. x 24 in.

D. Finishes

1. Color: See Color Schedule.

E. Installation Method

1. Quarter Turn.

F. Extent

1. Where Carpet Tile scheduled.

2.3 ACCESSORIES

A. Edge Strips

1. Embossed aluminum, color as selected by Architect.

2.4 RELATED MATERIALS

A. Sealer

1. Type recommended by flooring manufacturer.

B. Leveling and Underlayment Compound:

1. Latex cementitious type as recommended by adhesive manufacturer, having minimum density of 4,000 psi after 28 days.

C. Adhesives: Adhesive must meet the following requirements:

1. Recommended by the flooring manufacturer for application.

2. Meet or exceed the vapor barrier blockage requirement by the applicable flooring manufacturer for installation.

3. Solvent-free, water-resistant, mildew-resistant, non-flammable, low odor adhesive to suit resilient sheet flooring, resilient tie flooring, resilient base][base, resilient stair covering,]and accessories and substrate conditions indicated.

4. Have VOC content of less than 100 g/L.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.

C. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.

1. Test in accordance with ASTM F710.

2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

3.2 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.

C. Vacuum clean substrate.

D. If required, apply concrete slab moisture barrier in accordance with manufacturer's instructions.

3.3 INSTALLATION

A. Starting installation constitutes acceptance of sub-floor conditions.

B. Install carpet tile in accordance with manufacturer's instructions and CRI (CIS).

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Install per specified installation method following manufacturer’s recommendations. Set parallel to building lines.

F. Locate change of color or pattern between rooms under door centerline.

G. Trim carpet tile neatly at walls and around interruptions.

H. Complete installation of edge strips, concealing exposed edges.

3.4 CLEANING

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

3.5 PROTECTION

A. Protect from damage during the remainder of construction.

END OF SECTION

SECTION 09 9000

PAINTING AND COATING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior painting systems

B. Exterior painting systems

C. Surface prep

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 08 1100 – Metal Doors and Frames: Field painting.

E. Section 09 2116 – Gypsum Board Assemblies: Integration of PVA primer in texturing process.

1.3 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.

C. MPI Architectural Painting Specifications Manual.

D. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements

1. Gloss levels according to ASTM D 523

2. Gloss Level 1

a. Not more than 5 units at 60 degrees and 10 units at 85 degrees.

b. Flat

3. Gloss Level 2

a. Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees.

b. Flat, “Velvet-like”

4. Gloss Level 3

a. 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.

b. Eggshell

5. Gloss Level 4

a. 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees.

b. Satin

6. Gloss Level 5

a. 35 to 70 units at 60 degrees.

b. Semigloss.

7. Gloss Level 6

a. 70 to 85 units at 60 degrees.

b. Gloss

8. Gloss Level 7

a. More than 85 units at 60 degrees.

b. High Gloss

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

2. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

3. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

4. VOC content.

5. Include above information in project closeout Operations and Maintenance manuals.

C. Samples – Paint Drawdown

1. Purpose: For selection of color

2. Quantity: (2) sets; one set for evaluation and section, one set based on final selection.

a. Provide drawdown per color, paint type, and gloss.

3. Size: 6 by 6 inches.

D. Quality Assurance Submittals

1. Certificates

a. Demonstrate installer meets or exceeds the standards of this section.

E. Closeout Submittals

1. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.6 QUALITY ASSURANCE

A. Quality Standards

1. MPI Standards: Comply with requirements in “MPI Architectural Painting Specifications Manual” for products and pain systems indicated.

B. Qualifications

1. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum 3 years of experience.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

2. Maintain containers in clean condition, free of foreign materials and residue.

3. Remove rags and waste from storage areas daily.

1.8 PROJECT/SITE CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1.9 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

1.10 EXTRA STOCK

A. Paint: (1) gallon of each paint type and color.

1. Label each container with color in addition to the manufacturer's label.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Provide all paint and coating products used in any individual system from the same manufacturer, no exceptions.

B. Provide all paint and coating products from the same manufacturer to the greatest extent possible.

1. If a single manufacturer cannot provide all specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.

C. Paints:

1. Basis of Design

a. Sherwin-Williams Company.

2. Other Acceptable Manufacturers

a. Glidden Professional, a product of PPG Architectural Coatings.

b. Benjamin Moore & Co.

c. Parker Paint Mfg Co Inc., a Comex Group company.

d. PPG Architectural Finishes, Inc.

e. Rodda.

f. Tnemec Company Inc.

g. Substitutions: See Section 01 6000 – Product Requirements.

3. Provide the following from the same manufacturer as the topcoat.

a. Primer Sealers.

b. Block Fillers.

2.2 PAINTING AND COATINGS - GENERAL

A. Painting and Coatings

1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.

2. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.

3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.

4. Supply each coating material in quantity required to complete entire project's work from a single production run.

5. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

B. Primers

1. Use the best primer recommended by the topcoat manufacturer.

C. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another, and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

2. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.

3. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

D. Volatile Organic Compound (VOC) Content

1. Products shall comply with the most stringent VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits,

exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2. VOC Limits

a. Flat Paints and Coatings: 50 g/L.

b. Non-flat Paints and Coatings: 150 g/L.

c. Dry-Fog Coatings: 400 g/L.

d. Primers, Sealers, and Under-coatings: 200 g/L.

e. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.

f. Zinc-Rich Industrial Maintenance Primers: 340 g/L.

g. Pretreatment Wash Primers: 420 g/L.

h. Floor Coatings: 100 g/L.

i. Shellacs, Clear: 730 g/L.

j. Shellacs, Pigmented: 550 g/L.

E. Chemical Content

1. The following compounds are prohibited:

a. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).

b. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di

c. (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

2.3 FINISHES

A. Sheen/Gloss Level

1. Provide the sheens specified.

2. Where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

B. Color

1. As indicated in Color Schedule.

2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

3. In utility areas, finish equipment, piping, conduit, and exposed duct work in colors according to the color-coding scheme indicated.

2.4 ACCESSORY MATERIAL

A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

2.5 SCOPE OF WORK

A. Paint/finish the following surfaces

1. Items noted on the Paint Schedule.

2. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.

3. Mechanical and Electrical:

a. In finished areas, paint all insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.

b. In finished areas, paint shop-primed items.

c. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.

B. Do not paint/finish the following surfaces

1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.

2. Items indicated to receive other finishes.

3. Items indicated to remain unfinished.

4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.

5. Non-metallic roofing and flashing.

6. Galvanized stairs, landings, and ramps.

7. Stainless steel, anodized aluminum, bronze, terne, and lead items, unless otherwise indicated.

8. Marble, granite, slate, and other natural stones.

9. Floors, unless specifically so indicated.

10. Ceramic and other tiles.

11. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.

12. Glass.

13. Acoustical materials, unless specifically so indicated.

14. Concealed pipes, ducts, and conduits.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

2. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

3. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

4. Proceed with coating application only after unsatisfactory conditions have been corrected.

a. Application of coating indicates acceptance of surfaces and conditions.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.

2. Masonry (Clay and CMU): 12 percent.

3. Wood: 15 percent.

4. Gypsum Board: 12 percent.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Concrete Substrates

1. Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Masonry Substrates

1. Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceed that permitted in manufacturer's written instructions.

F. Steel Substrates

1. Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer, but not less than the following:
    a. SSPC-SP 2, "Hand Tool Cleaning."
    b. SSPC-SP 3, "Power Tool Cleaning."
    c. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

G. Shop-Primed Steel Substrates
1. Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Galvanized-Metal Substrates
1. Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

I. Wood Substrates
1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

J. Cotton or Canvas Insulation Covering Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

3.3 INSTALLATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

A. Tolerances

1. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

a. Contractor shall touch up and restore painted surfaces damaged by testing.

b. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

3.6 PROTECTION

A. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.7 SCHEDULES

A. Paint Systems - Interior

1. Ferrous Metals, Unprimed, Low-VOC Epoxy:

a. One coat of rust-inhibitive epoxy primer, MPI #301.

b. Semi-gloss: Two coats of latex epoxy enamel, MPI #215.

2. Galvanized Metals, Low-VOC Latex:

a. One coat galvanize primer, MPI 134.

b. Semi-gloss: Two coats of latex enamel, MPI #147.

3. Gypsum Board/Plaster, Wet Areas (restrooms, showers, kitchens, janitor's rooms, and where noted):

a. One coat of PVA epoxy primer sealer, MPI #50.

b. Semi-gloss: Two coats of epoxy enamel, MPI #215.

c. Apply primer prior to wall texture provided by 09 2116.

4. Gypsum Board/Plaster, Wood Panels, all other areas:

a. One coat of PVA primer sealer, MPI #50.

b. Satin: One coat of latex enamel, MPI #146.

c. Apply primer prior to wall texture provided by 09 2116.

B. Paint Systems – Exterior

1. Galvanized Metals, Latex, 3 Coat:

a. One coat epoxy primer MPI #101.

b. Semi-gloss: Two coats of aliphatic urethane MPI #72.

END OF SECTION

SECTION 10 1400

SIGNAGE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Room Signage

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

1.3 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

C. ICC A117.1 - Accessible and Usable Buildings and Facilities; International Code Council; 2009 (ANSI).

D. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.

C. Shop Drawings

1. Provide half-size layout drawing, to scale, indicating spacing between letters and words, space around edges, and relationship to mounting substrate.

2. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.

a. When room numbers to appear on signs differ from those on the drawings, include the drawing room number on schedule.

b. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.

D. Manufacturer's Installation Instructions

1. Include installation templates and attachment devices.

E. Samples

1. Quantity: (2) of each type.

2. Size: Actual size.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.7 PROJECT/SITE CONDITIONS

A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.

B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, including Braille, and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

B. Manufacturers

1. ASI Sign Systems.
2. Architectural Metal Crafters
3. ARK Ramos
4. Best Sign Systems, Inc.
5. Eugene Sign and Awning.
6. Meyer Architectural Signs & Graphics.
7. Mohawk Sign Systems, Inc.
8. OMC Industries
9. Substitutions: See Section 01 6000 - Product Requirements.

2.2 ROOM SIGNS

A. General Requirements

1. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
2. Character Height: 1 inch; Raised
3. Sign Height: 8 inches, unless otherwise indicated.
4. Shower Rooms: Identify with pictograms, the names "SHOWER ROOM".

B. Sign Types

1. Flat Signs: Signage media without frame.
    a. Edges: Square.
    b. Corners: Square.
    c. Wall Mounting of One-Sided Signs: Tape adhesive.
    d. Character Font: Helvetica, Arial, or other sans serif font.
    e. Character Case: Upper case only.
    f. Background Color: Blue.
    g. Character Color: White on blue sign.
    h. Size: 8 in. x 8 in.

C. Concealed Screws

1. Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.

D. Exposed Screws

1. Stainless steel, tamper resistant.

E. Tape Adhesive

1. Double sided tape, permanent adhesive.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify that substrate surfaces are ready to receive work.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install neatly, with horizontal edges level.

C. Protect from damage until Substantial Completion; repair or replace damage items.

END OF SECTION

SECTION 10 2800

TOILET ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Accessories for toilet rooms.

1.2 RELATED REQUIREMENTS

A. Section 01 1000 – Summary: OFOI Items

B. Section 01 3000 – Administrative Requirements: Submittal review procedures.

C. Section 01 6000 – Product Requirements: Substitution request procedures.

D. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

E. Section 10 2113.19 - Plastic Toilet Compartments.

1.3 REFERENCE STANDARDS

A. ANSI/ICC A117.1 Accessible and Usable Buildings and Facilities, 2009.

B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.

C. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2015.

D. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.

E. ASTM C1036 - Standard Specification for Flat Glass; 2011.

F. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2008 (Reapproved 2013).

G. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SYSTEM DESCRIPTION

A. Systems Requirements

1. Furnish inserts and anchoring devices which will be surface mounted or recessed in metal stud wall with ceramic tile for the installation of toilet accessories.

2. Provide products of the same manufacturer for each type of accessory unit and for units exposed in the same areas, whenever possible.

3. Stamped names or labels on exposed faces of units will not be permitted.

4. Provide locks where indicated, with the same keying for each type of accessory units, in the project, wherever possible. Furnish two keys for each lock.

5. Comply with all features of model numbers specified.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit data on accessories describing size, finish, details of function, and attachment methods.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

B. Regulatory Requirements

1. Comply with the applicable requirements of Oregon Structural Specialty Code, latest edition.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.8 SEQUENCING

A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.9 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Product and Manufacturer – Basis of Design

1. Products listed are made by Bobrick, unless noted otherwise.

B. Other Acceptable Products and Manufacturers

1. ASI - American Specialties, Inc.
2. Bradley Corporation.
3. Substitutions: See Section 01 6000 – Product Requirements.

C. Materials

1. Stainless Steel Sheet
    a. ASTM A666, Type 304.
2. Stainless Steel Tubing
    a. ASTM A269/A269M, Type 304 or 316.

3. Sheet SteeL
    a. Cold rolled, commercial quality, ASTM A366.
    b. Surface preparation and metal pre-treatment as required for applied finish.
4. Galvanized Steel Sheet
    a. ASTM A527, G60.
5. Chromium Plating
    a. Nickel and chromium electro-deposited on metal, ASTM B456, Type SC2.
6. Galvanized Steel Mounting Devices
    a. ASTM A386, hot-dip galvanized after fabrication.
7. Mirror Glass
    a. Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

D. Finishes
1. Stainless Steel
    a. No. 4 Brushed finish, unless otherwise noted.
2. Galvanizing for Items Other than Sheet
    a. Comply with ASTM A123/A123M; galvanize ferrous metal and fastening devices.

E. Accessories
1. Accessories – General
2. Keys
    a. Provide two keys for each accessory to Owner; master key lockable accessories.
3. Adhesive: Two component epoxy type, waterproof, compliant with project VOC limitations.
4. Fasteners, Screws, and Bolts: Stainless Steel; tamper-proof; security type.

2.2 FABRICATION

A. Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.

B. Grind welded joints smooth.

C. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.

2.3 OFOI TOILET ACCESSORIES

A. The following units will be provided by the Owner. Contractor to install blocking to accommodate.

B. Paper Towel Dispenser

C. Soap Dispenser.

2.4 TOILET ROOM ACCESSORIES

A. Quantity: All items are (1) per shower room unless noted otherwise.

B. Toilet Paper Dispenser – Surface Mount

1. Double roll, surface mounted bracket type, stainless steel .
2. Attached Shelf
    a. 0.03 inch satin finished stainless steel, with rolled or formed edge at front.
3. Product
    a. “B-2840” by Bobrick.

C. Mirrors

1. Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
2. Frame, where indicated:
    a. 0.05 in. angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; No.4 finish.
3. Backing
    a. Full-mirror sized, minimum 0.03 in. galvanized steel sheet and nonabsorptive filler material.
4. Product
    a. “B-290” by Bobrick.
5. Mirror M-1:
    a. Type: Framed.
    b. Size: 24 in. b 36 in.

D. Seat Cover Dispenser

1. Stainless steel, surface-mounted, reloading by concealed opening at base, tumbler lock.
2. Minimum capacity: 250 seat covers.
3. Product: “B-221” by Bobrick.

E. Grab Bars

1. Stainless steel, nonslip grasping surface finish, Standard Duty Grab Bars.
2. Push/Pull Point Load
    a. 250 pound-force, minimum.
3. Dimensions
    a. 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
4. Length and Configuration
    a. As indicated on drawings.
5. Products:
    a. “5806” by Bobrick.

6. Sizes
    a. GB-1: 36 in.
    b. GB-2: 42 in.
    c. GB-3: 18 in.
7. Extent
    a. (1) of each GB-1, GB-2, and GB-3 per accessible stall per the Drawings.

F. Shelf
1. Surface-mount stainless steel shelf
2. Dimensions
    a. 18 in. by 8 in.
3. Product
    a. “B-298x18” by Bobrick.
4. Quantity: See Drawings.

G. Sanitary Napkin Disposal Unit - Recessed
1. Stainless steel, recessed, all-welded construction, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
2. Product
    a. “B-3513” by Bobrick.

2.5 SHOWER ROOM ACCESSORIES

A. Folding Shower Seat
1. Wall-mounted surface.
2. Welded tubular seat frame, structural support members, hinges and mechanical fasteners of Type 304 stainless steel, L-shaped seat.
3. Seat
    a. Phenolic or polymeric composite one-piece seat or seat slats, of color as selected.
4. Size
    a. ADA Standards compliant.

B. Grab Bars
1. See the Drawings

C. Towel Hook
1. Heavy-duty stainless steel, single-prong, rectangular-shaped bracket and backplate for concealed attachment, satin finish.
2. Product
    a. “B-6827” by Bobrick.
3. Extent

a. (2) per shower unit, and where noted on the Drawings.

b. Verify mounting locations with Architect.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Verify exact location of accessories for installation.

2. Verify installation of blocking, reinforcing plates, and concealed anchors in walls and ceilings.

3.2 PREPARATION

A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

3.3 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on the drawings.

B. Install plumb and level, securely and rigidly anchored to substrate, in locations indicated on drawings.

C. Mounting Heights: As indicated on drawings and required by accessibility regulations, unless otherwise indicated.

3.4 PROTECTION

A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

SECTION 10 4400

FIRE PROTECTION SPECIALITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fire extinguishers

B. Fire extinguisher cabinets.

C. Accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

1.3 REFERENCE STANDARDS

A. NFPA 10 - Standard for Portable Fire Extinguishers; latest edition.

B. OSSC - Oregon Structural Specialty Code, latest edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

1.6 PROJECT/SITE CONDITIONS

A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturers – Basis of Design

1. JL Industries, Inc.

B. Other Acceptable Products and Manufacturers

1. Ansul, a Tyco Business.
2. Larsen's Manufacturing Co.
3. Potter-Roemer.
4. Pyro-Chem, a Tyco Business.
5. Substitutions: See Section 01 6000 – Product Requirements.

2.2 FIRE EXTINGUISHERS

A. Description

1. Multi-Purpose Dry Chemical Type Fire Extinguishers.
2. Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
3. Heavy duty steel tank, with pressure gage.
4. UL Class: A:B:C.
5. 4A-80BC, 10 pound (Similar to JL "Cosmic 10E").
6. Finish: Factory powder-coated; Red.
7. Contents
    a. Fluidized and siliconized mono ammonium phosphate powder; nonconductive and nontoxic

B. Extent

1. Provide extinguisher in each cabinet and elsewhere where shown on Drawings.

2.3 FIRE EXTINGUISHER CABINETS

A. Product and Manufacturer – Basis of Design

1. “Cosmopolitan 1036V10 with View Window” by JL Industries at 2x6 framed wall. Field verify.
2. “Cosmopolitan 1037V10 with View Window” by JL Industries at 2x4 framed wall. Field verify.
3. Substitutions: See Section 01 6000 – Product Requirements.

B. Description

1. Cabinet Configuration: Recessed type.
2. Sized to accommodate extinguisher and accessories.
3. Trim Style
    a. 1 1/2 in. Square at 2x6 wall.
    b. 3 in. Rolled at 2x4 wall.

C. Materials

1. Tub
    a. Primed sheet steel, powder-coated finish.

2. Door
    a. 0.036 inch thick stainless steel reinforced for flatness and rigidity; latch. Hinge doors for 180 degree opening with continuous piano hinge. Provide nylon catch.
3. Door Glazing
    a. Float glass, clear, 1/8 inch thick, and set in resilient channel glazing gasket.
4. Cabinet Mounting Hardware
    a. Appropriate to cabinet, with pre-drilled holes for placement of anchors.
5. Weld, fill, and grind components smooth.

D. Finishes
1. Cabinet Exterior Trim and Door
    a. No. 4 - Brushed stainless steel.
2. Cabinet Interior
    a. White colored enamel.

E. Extent
1. Where “FEC” is noted on the Code Diagram Sheet and/or Floor Plan Drawing, or elsewhere as shown on the Drawings.

2.4 ACCESSORIES

A. Extinguisher Brackets
1. Formed steel, galvanized and enamel finished, red.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions
1. Verify existing conditions before starting work.
2. Verify rough openings for cabinet are correctly sized and located.

3.2 PREPARATION

A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install cabinets plumb and level in wall openings, maximum 54 inches from finished floor to inside top of cabinet.

C. Secure rigidly in place.

D. Place extinguishers in cabinets.

3.4 FIELD QUALITY CONTROL

A. Ensure that each extinguisher is fully charged, and that inspection of each extinguisher has been performed, as evidenced by the National Association of Fire Equipment Distributors certification tag, just prior to turnover.

END OF SECTION

SECTION 12 2400

WINDOW SHADES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Window shades and accessories.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 09 0601 – Color Schedule. Selected Color.

E. Section 09 2116 - Gypsum Board Assemblies: Substrate for window shade systems.

1.3 REFERENCE STANDARDS

A. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015.

B. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2015.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Provide manufacturer's standard catalog pages and data sheets including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.

C. Samples

1. Purpose: Selection of pattern, color, and opacity.
2. Quantity: (2) of each type.
3. Size: 6 in. by 6 in.

D. Manufacturer’s Instructions

1. Operation and Maintenance Data
    a. List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of shop drawings.
2. Warranty
    a. Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

C. Waste Management and Disposal

1.7 SEQUENCING

A. Do not fabricate shades until field dimensions for each opening have been taken.

B. Do not install shades until final surface finishes and painting are complete.

1.8 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide manufacturer's warranty from Date of Substantial Completion, covering the following:

1. Shade Hardware: One year.

2. Fabric: One year.

PART 2 PRODUCTS

2.1 PRODUCT GENERAL REQUIREMENTS

A. Manufacturer – Basis of Design

1. Mecho Shade System, LLC.

2. Other Acceptable Manufacturers with similar products:

a. Hunter Douglas

b. Substitutions: See Section 01 6000 – Product Requirements.

2.2 MANUALLY OPERATED ROLLER SHADE

A. Product– Basis of Design

1. Bracket: “Mecho / 5 Standard” by Mecho.

2. Shade Fabric: “Ecoveil *Sc*reens*:* 1550 Series” by Mecho.

3. Other Acceptable Manufacturers.

a. See above.

B. Dimensions

1. Size: As indicated on the Drawings.

C. Description

1. Roller Shades: Fabric roller shades complete with mounting brackets, roller tubes, hembars, hardware and accessories.
2. Fabric: Non-flammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.
3. Roller Tubes: As required for type of operation.
4. Hembars: Designed for weight requirements and adaptation to uneven surfaces, to maintain bottom of shade straight and flat.
    a. Style: Full wrap fabric covered bottom bar, flat profile with closed ends.
    b. Finish: Painted.
5. Manual Operation for Interior Shades: Clutch operated continuous loop; beaded ball chain.
    a. Bead Chain Material: Stainless steel.
    b. Bead Chain Hold Down: Manufacturer's standard clip.

D. Characteristics

1. Shade Fabric
    a. Openness Factor: 3 percent.
    b. Solar Transmittance (Ts): 0.07.
    c. Visible Light Transmittance (Tv): 0.08.
    d. Solar Absorption (As): 0.39.
    e. Solar Reflectance (Rs): 0.54.

E. Operation

1. Manual.

F. Finishes

1. Color: See Section 09 0601 – Color Schedule.

2.3 ACCESSORIES

A. Fascias

1. Size as required to conceal shade mounting.
2. Style
    a. As selected by Architect from shade manufacturer’s full selection.

B. Brackets and Mounting Hardware

1. As recommended by manufacturer for mounting configuration and span indicated.

C. Fasteners

1. Non-corrosive, and as recommended by shade manufacturer.

2.4 FABRICATION

A. Field measure finished openings prior to ordering or fabrication.

B. Fabricate shades to fit openings within specified tolerances.

1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch space between bottom bar and window stool.

2. Horizontal Dimensions - Inside Mounting: Provide symmetrical light gaps on both sides of shade not to exceed 0.50 inches total.

C. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

3.1 PREPARATION

A. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.

3.3 FIELD QUALITY CONTROL

A. Tolerances

1. Inside Mounting: Maximum space between shade and jamb when closed of 1/16 inch.

2. Maximum Offset From Level: 1/16 inch.

3.4 CLEANING

A. Clean soiled shades and exposed components as recommended by manufacturer.

B. Replace shades that cannot be cleaned to "like new" condition.

3.5 PROTECTION

A. Protect installed products from subsequent construction operations.

B. Touch-up, repair or replace damaged products before Substantial Completion.

3.6 SCHEDULES

A. Provide at all exterior window locations in the office improvement area.

END OF SECTION

SECTION 12 3600

COUNTERTOP

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Countertop for architectural cabinet work.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 – Administrative Requirements: Submittal review procedures.

B. Section 01 6000 – Product Requirements: Substitution request procedures.

C. Section 01 7000 – Execution and Closeout Requirements: Closeout procedures.

D. Section 06 4100 – Casework.

E. Section 09 0601 – Color Schedule.

1.3 REFERENCE STANDARDS

A. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2014.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

C. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data

1. Submit manufacturer's product data and installation instructions.

C. Shop Drawings

1. Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.

D. Samples

1. Purpose: Select color(s) and patterns, and to verify finishes
2. Quantity: (2)
3. Size: 6 in. x 6 in.

E. Manufacturer’s Instructions

1. Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.5 QUALITY ASSURANCE

A. Quality Standards

1. See Section 06 4100 – Casework.

B. Qualifications

1. Fabricator Qualifications: Same fabricator as for cabinets on which tops are to be installed.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Acceptance at Site

1. Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier.

B. Storage

1. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic and other causes.

PART 2 PRODUCTS

2.1 PLASTIC LAMINATE COUNTERTOPS

A. Product and Manufacturer – Basis of Design

1. "High Pressure Laminates" by Wilsonart.

B. Other Acceptable Manufacturers with similar products.

1. Formica Corporation.
2. Lamin-Art, Inc.
3. Nevamar/Panolam Surface Systems.
4. Pionite/Panolam Surface Systems.
5. Substitutions: See Section 01 6000 – Product Requirements.

C. Dimensions

1. Nominal thickness: 0.048 in.

D. Description

1. High-pressure decorative laminate (HPDL) sheet bonded to substrate.

E. Materials

1. Laminate Sheet: NEMA LD 3, Grade HGS.

F. Characteristics

1. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.

G. Components

1. Exposed Edge Treatment: Square, substrate built up to minimum 1 1/4 in. thick; covered with matching laminate.
2. Back and End Splashes: Same material, same construction, min 4 in. high unless noted otherwise.

H. Finishes

1. Finish: Matte or suede, gloss rating of 5 to 20.

2. Surface Color and Pattern: See Section 09 0601- Color Schedule.

2.2 ACCESSORIES

A. Wood-Based Components

1. As specified in Section 06 4100 - Casework.

B. Adhesives

1. Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

2.3 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.

1. Join lengths of tops using best method recommended by manufacturer.

2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.

3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.

1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.

2. Height: 4 in., unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions

1. Do not begin installation until substrates have been properly prepared.

2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 in.

C. Attach epoxy resin countertops using compatible adhesive.

D. Attach HDPE countertops using compatible adhesive.

E. Seal joint between back/end splashes and vertical surfaces.

3.4 FIELD QUALITY CONTROL

A. Tolerances

1. Variation From Horizontal: 1/8 in. in 10 ft., maximum.

2. Offset From Wall, Countertops: 1/8 in. maximum; 1/16 in. minimum.

3. Field Joints: 1/8 in. wide, maximum.

3.5 CLEANING

A. Clean countertops surfaces thoroughly.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 26 0000

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Electrical materials and installation instruction common to most electrical systems and components including but not limited to: equipment, raceways, fittings, sleeve/seals, sleeves, wires & connectors, conductors, demolition, equipment installation requirements common to equipment sections, painting and finishing, supports and anchorages, general coordination, electrical wiring and device coordination.

1.2 DEFINITIONS

A. Following is a list of abbreviations generally used in Division 26.

1. AHJ – Authority Having Jurisdiction.
2. ETL – Electric Testing Laboratories.
3. NEC – National Electric Code.
4. NEMA – National Electrical Manufacturers Association.
5. NFPA – National Fire Protection Association.
6. OSHA – Occupational Safety and Health Administration.
7. UL – Underwriters Laboratories Inc.

B. Terms used on the drawings or in the specifications shall have the following meanings:

1. Approved Equal: An Item suggested by the Contractor that is allowed by the Engineer to replace an item listed in the Specifications or Drawings. The burden of proof of equality is the responsibility of the Contractor.
2. Furnish: Supply and deliver, ready for installation, assembly or intended use, all materials, labor, equipment, testing apparatus, controls, tests, accessories, and all other items customarily required for the proper and complete application for the particular work referred to.
3. Install: Includes unloading, unpacking, assembling, erecting, installation, applying, finishing, protecting, cleaning and similar operations at the project site as required to complete all items of work as required for the intended use/operation including all testing, certification, commissioning, and other requirements for final turnover to the Owner.
4. Provide: “Furnish” and “Install”.
5. Owner Furnished, Contractor Installed: The Owner will furnish at his cost and the Contractor shall receive, protect, store and install in the performance of the Work.
6. Finished Spaces: Spaces other than electrical equipment rooms, furred spaces, pipe and duct shafts, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
7. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
8. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include installations above ceilings, in shafts, trenches, partitions, or other enclosures.

9. Wiring: All wires, raceways, fittings, conductors, connectors, tape, junction and outlet boxes, connectors, splices, and all other items necessary and/or required in connection with such work.

10. Raceway: All raceways, conduit, fittings, hangers, supports, sleeves, etc.

1.3 GENERAL REQUIREMENTS

A. Examine the Drawings, specifications and other Contract Documents relating to the Work and the work of all trades and become fully informed as to the extent and character of work required. Coordinate all work with that of others to ensure proper and complete installation of all materials, equipment and supports. It is the intent of the drawings, specifications and related contract Documents to provide a complete working installation of all systems and equipment called for, in proper operating condition, finished, tested and ready for its intended use (hereinafter "Design Intent"). Provide all items not specifically shown on the drawings, called for in the specifications or related Contract Documents, but required to conform to the labor, material and equipment to achieve the Design Intent all and scaffolding, access provisions, tools, appliances, consumables, fees, permits and licenses, debris removal/disposal, supervision and labor, including required start-up, check-out and training to provide complete and fully operable systems in full compliance with the Contract Documents.

B. Before submitting a bid and prior to the start of work, Contractor shall examine all conditions relating to the Work, including that associated with the work of other trades upon which Contractor's work may rely or otherwise depend, to achieve the Design Intent, in accordance with the best trade practices, workmanship and highest quality product installation, taking into account the sequence of the work, delivery, storage and hoisting requirements, requirements for access, testing and temporary services and all other site limitations and project complexities. Report to the Architect/Engineer any conditions which might prevent installation of materials and/or equipment in the manner intended by the Contract Documents or contrary to applicable codes, standards or regulations.

C. Site Visit – Visit the site and verify the exact conditions relating to the work and obtain such information as may be necessary to present a complete and comprehensive bid. No allowance will be made for any extra expense due to Contractor's failure to make such a visit and reasonably verify all actual/existing conditions. In the event of a conflict between existing conditions and the requirements of the Contract Documents, perform the necessary work to conform to Design Intent. The Owner or his representative will be the sole individual to interpret the intent of the Drawings in the event of a conflict between (1) existing conditions and those shown on the drawings, or (2) quality of existing material and quality of material indicated on the drawings or in the specifications. Wherever a conflict such as this occurs, the higher standard shall prevail.

1.4 SUBMITTALS

A. Reference Division 1 for submittal requirements.

B. Catalog Cuts & Submittal Literature

Catalog cuts, submittal literature and published material may be included to supplement scale drawings.

1. Prepare submittals electronically in accordance with the following and Division 1

2. Submittal literature, drawings and diagrams shall be specifically applicable to this project and shall not contain extraneous material or optional choices. Clearly mark literature to indicate the proposed item. Substitutions: Comply with Division 1 Product Substitution Procedures.

C. Shop Drawings:

1. Shop drawings shall include all significant Division systems, equipment and components, including but not limited to all terminal devices, connections and elevations. Include all related specialty rooms (i.e. electrical, data/technology). Drawings shall be at a minimum

scale of ¼" per 1'-0" and shall be fully coordinated with the work of other trades and/or Sections.

2. Identify congested areas and clearly indicate solutions to space problems, developed in conjunction with the work of other trades and/or Sections. Identification of space problems without proposed solutions is not acceptable and is grounds for rejection. For such areas indicate, superimposed, the work of all trades and/or Sections involved and:

   a. Clearly identify each area of congestion and deviations from the Contract Documents, and:

   b. Proposed solution(s), clearly documented and signed-off by all other trades and/or Sections involved.

D. Certificates: Submit final inspection certificates signed by governing authorities.

E. Operating and Maintenance Instructions and Manuals.

1. Submit as identified below and as directed in Division 1.

   a. Names, addresses and phone numbers of contractors and subcontractors. Alphabetical list of all system components, with the name, address, and 24-hour phone number of the company responsible for servicing each item during the first year of operation.

   b. Complete operating and maintenance instructions and parts lists of all equipment and component parts. Data sheets to show complete internal wiring, and electrical ratings and characteristics, catalog data on component parts whether furnished by equipment manufacturer or others, names, addresses and telephone numbers of source of supply for parts subject to wear or failure, and description of operating, test, adjustment, and maintenance procedures.

   c. Operating Instructions should include, but not be limited to:

      1) Normal starting, operational and shutdown procedures, including emergency procedures for each type of equipment/system.

      2) Equipment wiring diagrams.

      3) All other items as may be specified/required by this Section and the Contract Documents.

   d. Maintenance Instructions

      1) All items as may be specified/required by this Section and the Contract Documents.

   e. Manufacturers Data (each piece of equipment)

      1) Installation instructions

      2) Drawings & specifications

      3) Parts List, including recommended stock and long lead parts/components.

      4) Wiring and riser diagrams.

      5) Warranties and guarantees for all equipment, materials and components, including repair, replacement and labor from both Contractor and manufacturer as required by the Contract Documents.

      6) Certificates of Installation – manufacturer's certification of supervision during equipment installation and start-up procedures.

      7) Instruction certificates – certificates of compliance with Sections specific training and instruction programs.

8) All other items as may be specified/required by this Section and the Contract Documents.

F. Record Documents.

1. Maintain one (1) complete set of blueline prints and specifications at the job site exclusively for recording deviations from the drawings which are necessary because of job conditions, request for information and/or approved change orders. Record locations and depths of buried and concealed conduits or other systems components from fixed, easily identifiable objects, such as building walls or other fixed physical objects. Where conduits are concealed in walls or other fixed physical objects, indicate distances from building corners or other building features not likely to be disturbed by fixture alterations. Drawings, specifications (as-builts) and approved submittals.

2. Prior to Substantial Completion, obtain from the Architect a complete set of electronic CADD drawings. Record all revisions to these drawings to indicate as-built conditions. Indicate all changes, including RFI's, on this set of documents. Submit one set of blueprints of these revised drawings for review. Make necessary changes and deliver to Architect one set of reproducibles and one electronic copy, including and BIM model, upon Final Completion and Acceptance. Refer to Division 1 for additional requirements.

3. Provide full size copies of record one-line diagrams, in metal frames with glass front. Obtain Record prints from Owner's Representative at Contractor's cost and have prints framed by a firm normally engaged in this work. Locate diagrams as directed.

4. All test reports, certifications, and inspection reports.

5. AHJ/Specialty AHJ Approvals (i.e. Fire Marshal and/or Fire Department system approvals).

6. Substantial and Final inspection certificate signed by governing authorities.

7. All other items as may be specified/required by this Section and/or other provisions of the Contract Documents.

1.5 EQUIPMENT DEVIATIONS & SUBSTITUTIONS

A. See Division 1 for requirements and procedures related to Deviations and Substitutions. Unless specified elsewhere in the Contract Documents, a minimum of two (2) weeks shall be allowed for evaluation. The burden of all systems re-engineering/design, testing, suitability and constructability is solely placed upon the Contractor for all deviations from the basis of design as reflected in the Contract Documents.

B. Where the contractor proposes to use and item of equipment other than that specified or detailed on the drawings which requires any redesign of any portion of the project, including but not limited to the mechanical, electrical, plumbing, structure, or architectural design or any of their respective subcomponents. Contractor shall be responsible to the Architect/Engineer and/or Owner for all costs, expenses and impact to the project budget and/or schedule resulting from any required investigation, analysis or redesign, including but not limited to; payment for required overtime, out-of-house resources/consultants or other higher cost resources of the Architect/Engineer, Owner or AHJ as may be required to perform the investigation, analysis or redesign (cumulatively and hereinafter, "Deviation Review Costs"0

1.6 COORDINATION

A. Drawings and corresponding electronic media are diagrammatic and indicate the general arrangement of systems and work included in the Work. Consult the drawings, details and other electronic media for locations of fixtures and equipment; where same are not definitely located, obtain this information from the Architect/Engineer.

B. The drawings and related electronic media have been made to scale with the best knowledge of conditions, dimensions and space requirements available at the time of design and shall be followed as closely as possible during performance of the Work and coordination with the work of others. The forgoing however shall not relieve Contractor from its responsibility to verify all conditions. Dimensions and space requirements prior to commencement of the Work and to immediately report any errors or discrepancies to the Architect/Engineer..

C. Prior to construction, coordinate the Work with that of other trades and building components.

D. Before starting work, carefully examine the site and all Contract Documents. Become thoroughly familiar with new and existing conditions governing work on this project. Verify indicated elevations, building measurements, rough-in dimensions and equipment locations before proceeding with any of the work.

E. Sequence, coordinate, and integrate installations of systems materials and equipment for efficient flow of the Work. Coordinate installation of large equipment requiring positioning prior to building enclosure.

1.7 ACCESSIBILITY

A. Contractor is responsible for verifying that equipment and devices will fit within the space shown on the drawings. Contractor shall locate all equipment which must be serviced, operated or maintained, if fully accessible positions.

B. Minor deviations from the drawings may be made to allow for better accessibility, but changes of magnitude or which involve extra cost shall not be made without approval from the Architect/Engineer.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 5 years documented experience.

B. Installer Qualifications: Company specializing in performing the work of this section with a minimum of 5 years documented experience. Company personnel shall be approved by manufacturer for all product installations and required training.

C. Conform to all applicable standards, codes and regulation and industry best practice requirements.

D. All materials and equipment shall be new, shall bear manufacturer's name, and shall conform to the grade, quality and standards specified herein. Type, capacity and application shall be suitable and capable of satisfactory operation for the purpose intended. All equipment and components shall include UL label and/or marking on equipment body/device including manufacturer's name, pressure rating(s), electrical classification(s), limits and ratings as applicable to individual components for the purpose specified and intended.

E. Cutting & Patching: Unless otherwise required by the Contract Documents, Contractor shall be responsible for all cutting, fitting and patching required to complete the Work, or to make portions of the Work and existing conditions fit together properly, and all such areas shall be restored to the conditions existing prior to the cutting, fitting and patching unless otherwise provided in the Contract Documents.

F. Contractor shall promptly correct any portion of the Work that is defective or not in accordance with the Contract Documents or rejected ty the Architect/Engineer or Owner. Contractor shall be responsible for, and pay for all costs arising out of, any additional testing and inspections, demolition, uncovering and replacement and additional design and consulting services required to properly correct any portion of the Work.

1.9 DELIVERY, STORAGE, AND HANDLING

A. All materials and equipment shall be adequately covered and protected against dirt, water, chemical or mechanical damage, and theft. At completion, all work, equipment and materials

shall be cleaned, and damage repaired by Contractor. Damaged equipment will be replaced by the contractor if Owner does not accept repairs done to the equipment. Such replacement shall be scheduled to minimize building system interruption of occupied or scheduled for occupancy.

B. Material delivered at the site shall not be left exposed to the weather or left unattended. Deliver pipes, tubes and conduit with factory-applied end-caps. Contractor shall be responsible to maintain end-caps or provide temporary end caps on all open-ended piping, tubes and conduit through shipping, storage, and handling to prevent pipe-end damage and prevent entrance of dirt, debris, and moisture.

C. Protect stored material from moisture and dirt. Protect plastic pipes and materials from sunlight and support to prevent sagging and bending.

D. Contractor shall check the openings in the building and the size of the doors, passages, and openings through which equipment is to be admitted. Wherever necessary, he shall provide the equipment in sections or knocked down in order to admit the equipment through these openings.

1.10 PERMITS, FEES & UTILITIES

A. Obtain and pay for all necessary permits, fees and utilities and inspections required to perform the Work.

B. Coordinate work with local regulatory entities, utility companies and others as required to fully comply with the requirements of this section and the Contract Documents, including those for both temporary and permanent services.

C. Permits, fees and utility expenses to be paid by Owner, if any, shall only where specifically required by the Contract Documents, and then only to the extent so specified.

1.11 DOCUMENT OWNERSHIP

A. The Drawings and Specifications, combined with the calculations, field data, notes, and reports, are the intellectual and real property of the Architect and/or Engineer. This covers all forms of written and recorded or electronic media. The reuse of these documents without specific permission of the Engineer is prohibited. The Drawings may be employed by the Owner and Contractor for the express use of constructing, commissioning and operating the facility only upon proper execution of the Agreement for Use of Electronic Files & Data.

1.12 GUARANTEE AND WARRANTY

A. Contractor shall warrant and guarantee all work against faulty material or workmanship for a period of one (1) year from the date of final completion and written acceptance by the Owner, unless specified more stringently elsewhere in the Contract Documents.

B. If a defect or deficiency in the Work is discovered within the one (1) year Warranty & Guarantee period or within such longer period as may be prescribed by the Laws or by any specific guarantee, and Owner elects to have Contractor correct such defect or deficiency, Owner shall notify Contractor of such defect or deficiency in writing. This period of correction relates only to the specific obligation to correct defects and deficiencies and in no way otherwise limits the Contractor's responsibility for Work that is not in accordance with the Contract Documents, If Contractor fails to timely correct defects or deficiencies in the Work, Owner may, at its sole option, correct them and charge contractor for all cost therefore.

C. See Division 1 – Closeout Submittals for additional warranty requirements.

D. Specific exclusions, if any, from this one (1) year warrantee and guarantee period are listed in the individual specification sections.

1.13 LIMITATIONS OF LIABILITY

A. Architect/Engineer is not responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and is not responsible for Contractor's failure to perform or furnish the work in accordance with the Contract Documents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2. Manufacturer: Unless otherwise specified, company specializing in manufacturing specified products for at least 3 years.

2.2 MATERIALS AND EQUIPMENT

A. Materials and equipment used in carrying out these specifications shall be new and have UL listing, or listing by other recognized testing laboratory when such listings are available.

B. All material shall bear manufacturer's name, model number, electrical characteristics and other identification and shall be the standard product of manufacturer regularly engaged in production of similar material.

PART 3 EXECUTION

3.1 ELECTRICAL SYSTEMS

A. Visit site and observe conditions under which work must be performed.

B. The Drawings are diagrammatic. They do not show every offset, bend, conduit body, elbow or junction box that may be required to install work in the space provided and avoid conflicts. Follow the Drawings as closely as is practical and install additional bends, offsets and elbows where needed by local job site conditions. Provide necessary junction boxes to meet code regulations for the allowed number of conduit bends.

C. Provide supports, blocking, hangers, and auxiliary structural members required for support of work.

D. Furnish and set all sleeves for passage of raceways through structural, masonry, and concrete walls, floors, and elsewhere for proper protection of the raceways.

E. The architectural drawings govern the locations and elevations of all electrical equipment, devices and fixtures. Resolve conflicts with the Architect prior to rough-in.

F. Verify that the physical dimension of each item of electrical equipment will fit the available space. Coordinate electrical equipment space requirements with the allotted space provisions, and access routes through the construction area.

G. Coordinate all aspects of the electrical, telephone and other utility services with the appropriate serving utility company.

H. Call to the attention of the Architect any error, conflict or discrepancy in Plans and/or Specifications. Do not proceed with any questionable items of work until clarification of same has been made. Supplementary Details and Plans may be supplied as required and they will become a part of the Contract Documents.

3.2 EQUIPMENT INSTALLATION

A. Follow manufacturer's instructions.

B. Where the product has no manufacturer's instructions, follow these specifications. Where neither the manufacturer nor these specifications contain such instructions, install in accordance with the standards listed above. No allowance of any kind will be made for negligence on part of Contractor to foresee means of bringing in or installing equipment into position.

1. Verify all dimensions by field measurements.
2. Install systems, materials, and equipment to provide the maximum headroom possible.
3. Install systems, materials, and equipment to comply with approved submittal data, including coordination drawings
4. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
5. Fit surface panels, devices and outlets with neat, appropriate trims, plates or covers, without over-hanging edges, protruding corners or raw edges, to leave a finished appearance.
6. Extend maintenance and access components (i.e., grease fittings, service panels, and similar items) to accessible locations

C. Locations:

1. Verify all locations with actual field conditions, architectural, structural, electrical, plumbing, heating and ventilating plans to avert possible installation conflicts.
2. Architect reserves the right to make minor changes prior to installation without cost to Owner.
3. Coordinate work with that of other trades to assure symmetrical placing of fixtures, sprinkler heads and other exposed components with respect to ceiling tile, grilles, etc. See Architectural reflected ceiling plan for exact location of light fixtures and other equipment.
4. In general, locate all finished devices or other exposed finished devices as indicated on or by symbols on drawings. Where devices or other exposed finished components occur in face, decks or base millwork, walls, ceilings or other finished surfaces carefully coordinate with details and arrangements of same.
5. All mounting heights shown on drawings are from finish floor to centerline unless otherwise indicated or required by code. Mounting heights at non-typical locations shown with (+) sign and height required noted adjacent to such device. Devices located in concrete block, brick or tile walls are to be adjusted in height to coordinate with modular joints of the materials. Verify requirements with Architect prior to installation.
6. Wiring Requirements: Install wiring complete to every outlet with all devices shown and/or required. All wiring to be in raceways and concealed throughout finished areas unless specifically noted otherwise.

3.4 NOISE CONTROL

A. Back to back or straight through boxes are not permitted unless specifically noted on the drawings.

B. Route raceways along corridors or other noncritical noise space to minimize penetrations through sound rated walls. Seal raceway penetrations through sound rated walls.

3.5 FIRE WALL PENETRATIONS

A. Perform necessary fire rated wall sealing for the work in accordance with Division 7 - Fire and Smoke Protection.

B. Provide necessary wall material to maintain fire wall rating where flush mounted equipment or components installed.

3.6 EQUIPMENT SUPPORT

A. General

1. Provide a system of supporting devices and hangers for support and bracing of piping, conduit and equipment as required by code or as provided under this Division as indicated on plans and as described herein.
2. Do not install supporting devices so as to obstruct access to equipment.
3. Floor-mounted equipment shall not be held in place solely by its own dead weight. Include floor anchor fastening in all cases.
4. Do not support ductwork, piping, conduits, conductors, or equipment from other piping, conduits, ceiling grids, equipment, ductwork, or ceiling supports. In all cases, provide independent supports for such components and equipment.

3.7 PAINTING

A. Painting of systems, equipment, and components is specified in Division 9. Unless and to the extent that painting is not specified elsewhere in the Contract Documents, all exposed materials in finished areas and on exterior walls shall be painted to match surrounding surfaces.

B. Contractor shall be responsible for and shall coordinate the timing of painting with the work of other trades and to minimize the requirements for damage and touchup to the work.

C. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.8 CLEANING

A. General

1. At all times keep the premises free from accumulation of waste materials or rubbish caused by the employees or the work. At the completion of the work, remove all superfluous materials, equipment and debris related to or resulting from the work.

2. All systems, equipment and component including but not limited to all panels, compartments, points of access, surface areas, panels, whether concealed or not shall be free from debris, filings, clippings, dirt, dust and debris and in a new condition. Touch up paint where necessary.

3. Where existing systems are expanded and/or remodeled, clean the new installation prior to making final connection to the existing systems.

3.9 COOPERATION WITH OTHER TRADES

A. Contractor shall cooperate with and coordinate the work with that of all other trades in the performance of the work, including but not limited to; delivery of equipment and materials, furnishing material and location requirements of sleeves, bucks, chases, supports, mountings, backings, inserts, anchor bolts, cast-in-place box-out or steel embeds, routings, sequencing, locations, finished devices, etc., for proper installation of its work. Contractor shall be responsible for any and all removal, replacement or repairs to its work or the work of others for its failure to fully comply with this provision.

3.10 OPERATION AND INSTRUCTION

A. Upon completion of the work and prior to final acceptance, Contractor shall operate the equipment for a period as required to fully instruct the Owner and its authorized representatives in all details of operation, adjustment and maintenance.

END OF SECTION

SECTION 26 0519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Copper building wire rated 600 V or less.
2. Mineral-insulated cable, Type MI, rated 600 V or less.
3. Connectors, splices, and terminations rated 600 V and less.

B. Related Requirements:

1. Section 27 1000 "Structured Cabling System" for twisted pair cabling used for data circuits.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: Indicate type, use, location, and termination locations.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Member company of NETA.

1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

PART 2 - PRODUCTS

2.1 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. Manufacturers:

1. Belden Inc
2. General Cable Tech
3. Southwire Company
4. Or approved equal

C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

2. RoHS compliant.

3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors: Copper, complying with ASTM B 3 for bare annealed copper and with ASTM B 8 for stranded conductors, minimum 98% Conductivity.

E. Conductor Insulation:

1. Type THHN/THWN-2: Comply with UL 83.

2. Type XHHW-2: Comply with UL 44.

F. Shield:

1. Type TC-ER: Cable designed for use with VFCs, with oversized crosslinked polyethylene insulation, spiral-wrapped foil plus 85 percent coverage braided shields and insulated full-size ground wire, and sunlight- and oil-resistant outer PVC jacket.

2.2 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Manufacturers:

1. AFC Cable

2. Hubbell Power Systems

3. O-Z/Gedney

4. Thomas & Betts Corp

5. Or approved equal.

C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.

D. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.

1. Material: Copper.

2. Type: One hole with standard barrels.

3. Termination: Compression.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Feeders: Copper for feeders smaller than No. 4 AWG; copper or aluminum for feeders No. 4 AWG and larger. Conductors shall be solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

C. Branch Circuits: Copper. Stranded for No. 12 AWG and larger

D. Branch Circuits: Copper. Solid or stranded for No. 14 AWG and smaller

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Exposed Feeders: Not allowed.

B. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN/THWN-2, single conductors in raceway.

C. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

3.4 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material.

1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack.

3.5 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIRESTOPPING

A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 078413 "Penetration Firestopping."

3.8 FIELD QUALITY CONTROL

A. Perform tests and inspections.

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors.

2. Perform each of the following visual and electrical tests:

a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.

b. Test bolted connections for high resistance using one of the following:

1) A low-resistance ohmmeter.

2) Calibrated torque wrench.

3) Thermographic survey.

c. Inspect compression-applied connectors for correct cable match and indentation.

d. Inspect for correct identification.

e. Inspect cable jacket and condition.

f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500-V dc for 300-V rated cable and 1000-V dc for 600-V rated cable for a one-minute duration.

g. Continuity test on each conductor and cable.

h. Uniform resistance of parallel conductors.

B. Cables will be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports to record the following:

1. Procedures used.

2. Results that comply with requirements.

3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes grounding and bonding systems and equipment.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.2 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

B. Bare Copper Conductors:

1. Solid Conductors: ASTM B 3.
2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch (6 mm) in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches (41 mm) wide and 1/16 inch (1.6 mm) thick.

PART 3 - EXECUTION

3.1 APPLICATIONS

A. Conductors: Install solid conductor for No. 8AWG and smaller, and stranded conductors for No. 6AWG and larger unless otherwise indicated..

B. Grounding Bus: Install in network equipment room.

1. Install bus horizontally, on insulated spacers 2 inches from wall, 6 inches above floor.

3.2 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Lighting circuits.

2. Receptacle circuits.

3. Single-phase motor and appliance branch circuits.

4. Flexible raceway runs.

5. Armored and metal-clad cable runs.

3.3 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

END OF SECTION

SECTION 26 0529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Steel slotted support systems.
2. Aluminum slotted support systems.
3. Conduit and cable support devices.
4. Support for conductors in vertical conduit.
5. Structural steel for fabricated supports and restraints.
6. Mounting, anchoring, and attachment components, including powder-actuated fasteners, mechanical expansion anchors, concrete inserts, clamps, through bolts, toggle bolts, and hanger rods.
7. Fabricated metal equipment support assemblies.

PART 2 - PRODUCT

2.1 CHANNEL

A Aluminum Slotted Support Systems: Extruded-aluminum channels and angles with minimum 13/32-inch- (10-mm-) diameter holes at a maximum of 8 inches (200 mm) o.c. in at least one surface.

1. Manufacturers:
   a. Cooper Industries
   b. Haydon Corp.
   c. Thomas & Betts
   d. Or approved equal
2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
3. Channel Material: 6063-T5 aluminum alloy.
4. Fittings and Accessories Material: 5052-H32 aluminum alloy.
5. Channel Width: Selected for applicable load criteria.

B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with requirements in Section 078413 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.

B. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings that are less than those stated in NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter.

D. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits. Secure raceways and cables to these supports with two-bolt conduit clamps.

E. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch (38-mm) and smaller raceways serving branch circuits and communication systems above suspended ceilings, and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT may be supported by openings through structure members, according to NFPA 70.

C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb (90 kg).

3.3 PAINTING

A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.

B. Touchup: Comply with requirements in Section 099123 "Interior Painting" for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.

C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

END OF SECTION 26 0529

SECTION 26 0533

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Metal conduits and fittings.
2. Metal wireways and auxiliary gutters.
3. Surface raceways.
4. Boxes, enclosures, and cabinets.

B. Related Requirements:

1. Section 270528 "Pathways for Communications Systems" for conduits, wireways, surface pathways, innerduct, boxes, faceplate adapters, enclosures, cabinets, and handholes serving communications systems.

1.3 DEFINITIONS

A. GRC: Galvanized rigid steel conduit.

B. IMC: Intermediate metal conduit.

C. EMT: Electric metallic Tubing

D. FMC: Flexible Metal Conduit

E. LFMC: Liquidtight flexible metal conduit.

F. MC: Metal Clad Cable

1.4 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

B. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS

A. Metal Conduit:

1. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. GRC: Comply with ANSI C80.1 and UL 6.
3. ARC: Comply with ANSI C80.5 and UL 6A.
4. IMC: Comply with ANSI C80.6 and UL 1242.
5. EMT: Comply with ANSI C80.3 and UL 797.
6. FMC: Comply with UL 1; zinc-coated steel.
7. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.

B. Metal Fittings:

1. Comply with NEMA FB 1 and UL 514B.
2. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
3. Fittings, General: Listed and labeled for type of conduit, location, and use.
4. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 1203 and NFPA 70.
5. Fittings for EMT:
    a. Material: Steel.
    b. Type: compression.

2.2 METAL WIREWAYS AND AUXILIARY GUTTERS

A. Description: Sheet metal, complying with UL 870 and NEMA 250, Type 1 unless otherwise indicated, and sized according to NFPA 70.

B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

C. Wireway Covers: Screw-cover type unless otherwise indicated.

D. Finish: Manufacturer's standard enamel finish.

2.3 BOXES, ENCLOSURES, AND CABINETS

A. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

B. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

C. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, [**ferrous alloy**] [**aluminum**], Type FD, with gasketed cover.

D. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb

E. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

F. Gangable boxes are allowed.

G. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1 with continuous-hinge cover with flush latch unless otherwise indicated.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.

2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Indoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed, Not Subject to Physical Damage: EMT.

2. Concealed in Ceilings and Interior Walls and Partitions: EMT.

3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.

4. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250.

B. Minimum Raceway Size: ½ -inch trade size.

C. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.

2. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10.

3. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

3.2 INSTALLATION

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

B. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits.

Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

C. Do not fasten conduits onto the bottom side of a metal deck roof.

D. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

E. Complete raceway installation before starting conductor installation.

F. Arrange stub-ups so curved portions of bends are not visible above finished slab.

G. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

H. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.

I. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

J. Support conduit within 12 inches of enclosures to which attached.

K. Stub-Ups to Above Recessed Ceilings:

1. Use EMT, IMC, or RMC for raceways.

2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

L. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

M. Coat field-cut threads on PVC-coated raceway with a corrosion-preventing conductive compound prior to assembly.

N. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors including conductors smaller than No. 4 AWG.

O. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch trade size and insulated throat metal bushings on 1-1/2-inch trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

P. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

Q. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

R. Cut conduit perpendicular to the length. For conduits 2-inch trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

S. Install raceway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings according to NFPA 70.

T. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all raceways at the following points:

1. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
2. Conduit extending from interior to exterior of building.
3. Where otherwise required by NFPA 70.

U. Flexible Conduit Connections: Comply with NEMA RV 3. Use a maximum of 36 inches of flexible conduit for recessed and semirecessed luminaires**,** equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

1. Use LFMC in damp or wet locations subject to physical damage.
2. Use LFMC or LFNC in damp or wet locations not subject to physical damage.

V. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

W. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel..

X. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.4 FIRESTOPPING

A. Install firestopping at penetrations of fire-rated floor and wall assemblies. Comply with requirements in Section 078413 "Penetration Firestopping."

3.5 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION 260533

SECTION 26 0544

SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Sleeves for raceway and cable penetration of non-fire-rated construction walls and floors.
2. Sleeve-seal systems.
3. Sleeve-seal fittings.
4. Silicone sealants.

B. Related Requirements:

1. Section 07 8413 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Wall Sleeves:

1. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, plain ends.

B. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies: Galvanized-steel sheet; 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.

C. Sleeves for Rectangular Openings:

1. Material: Galvanized sheet steel.
2. Minimum Metal Thickness:
   a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and with no side larger than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
   b. For sleeve cross-section rectangle perimeter 50 inches (1270 mm) or more and one or more sides larger than 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

2.2 SLEEVE-SEAL SYSTEMS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.

1. Manufacturers:

a. CALPICO, Inc

b. Metraflex Co.

c. Proco Products

d. Or approved equal

2. Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.

3. Pressure Plates: Carbon steel.

4. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length required to secure pressure plates to sealing elements.

2.3 SLEEVE-SEAL FITTINGS

A. Description: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit shall have plastic or rubber waterstop collar with center opening to match piping OD.

1. Manufacturers:

a. HOLDRITE

b. Or approved equal

2.4 SILICONE SEALANTS

A. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below.

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

B. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

A. Comply with NECA 1.

B. Comply with NEMA VE 2 for cable tray and cable penetrations.

C. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:

1. Interior Penetrations of Non-Fire-Rated Walls and Floors:

a. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."

b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect material while curing.

2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

3. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable unless sleeve seal is to be installed.

4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.

D. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:

1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.

2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

3.2 SLEEVE-SEAL-SYSTEM INSTALLATION

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.

B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

END OF SECTION 26 0544

SECTION 26 0553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Color and legend requirements for raceways, conductors, and warning labels and signs.
2. Labels.
3. Bands and tubes.
4. Tapes and stencils.
5. Tags.
6. Signs.
7. Cable ties.
8. Paint for identification.
9. Fasteners for labels and signs.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

B. Samples: For each type of label and sign to illustrate composition, size, colors, lettering style, mounting provisions, and graphic features of identification products.

C. Identification Schedule: For each piece of electrical equipment and electrical system components to be an index of nomenclature for electrical equipment and system components used in identification signs and labels. Use same designations indicated on Drawings.

D. Delegated-Design Submittal: For arc-flash hazard study.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with NFPA 70.

B. Comply with NFPA 70E requirements for arc-flash warning labels.

C. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

2.2 COLOR AND LEGEND REQUIREMENTS

A. Color-Coding for Phase- and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded service feeder conductors.

1. Color shall be factory applied or field applied for sizes larger than No. 8 AWG if authorities having jurisdiction permit.

2. Colors for 240/120-V Circuits:

a. Phase A: Black.

b. Phase B: Red.

3. Color for Neutral: White

4. Color for Equipment Grounds: Green

5. Colors for Isolated Grounds: Green with white stripe.

B. Raceways and Cables Carrying Circuits at More Than 600 V:

1. Black letters on an orange field.

2. Legend: "DANGER - CONCEALED HIGH VOLTAGE WIRING."

C. Warning Label Colors:

1. Identify system voltage with black letters on an orange background.

D. Warning labels and signs shall include, but are not limited to, the following legends:

1. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES (915 MM)."

E. Equipment Identification Labels:

1. Black letters on a white field.

2.3 LABELS

A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

1. Manufacturers:

a. Brady Corp.

b. Emedco

c. Panduit Corp.

2.4 CABLE TIES

A. Manufacturers:

1. HellermannTyton

2. Ideal Industries

3. Panduit Corp

4. Or approved Equal

5. Color: Black.

2.5 MISCELLANEOUS IDENTIFICATION PRODUCTS

A. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.

B. Install identifying devices before installing acoustical ceilings and similar concealment.

C. Verify identity of each item before installing identification products.

D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.

E. Apply identification devices to surfaces that require finish after completing finish work.

F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.

G. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.

1. Secure tight to surface of conductor, cable, or raceway.

H. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.

I. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.

J. Accessible Fittings for Raceways: Identify the covers of each junction and pull box of the following systems with the wiring system legend and system voltage.

K. Vinyl Wraparound Labels:

1. Secure tight to surface of raceway or cable at a location with high visibility and accessibility.

2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.

3.3 IDENTIFICATION SCHEDULE

A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.

B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.

C. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits, More Than 30A and 120V to Ground: Identify with self-adhesive raceway labels.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

D. Accessible Fittings for Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive labels containing the wiring system legend and system voltage.

E. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use vinyl wraparound labels to identify the phase.

1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot (15-m) maximum intervals in straight runs, and at 25-foot (7.6-m) maximum intervals in congested areas.

F. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive labels with the conductor or cable designation, origin, and destination.

G. Control-Circuit Conductor Termination Identification: For identification at terminations, provide self-adhesive labels with the conductor designation.

H. Equipment Identification Labels:

1. Indoor Equipment: Laminated acrylic or melamine plastic sign.

2. Equipment to Be Labeled:

a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of a self-adhesive, engraved, laminated acrylic or melamine label.

b. Enclosures and electrical cabinets.

c. Enclosed switches.

d. Enclosed circuit breakers.

e. Remote-controlled switches, dimmer modules, and control devices.

END OF SECTION

SECTION 26 0923

LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Indoor occupancy and vacancy sensors.
2. Switchbox-mounted occupancy sensors.

B. Related Requirements:

1. Section 262726 "Wiring Devices" for wall-box dimmers, non-networkable wall-switch occupancy sensors, and manual light switches.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings:

1. Show installation details for the following:
    a. Occupancy sensors.
    b. Vacancy sensors.
2. Interconnection diagrams showing field-installed wiring.
3. Include diagrams for power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and elevations, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Suspended ceiling components.
2. Structural members to which equipment will be attached.
3. Items penetrating finished ceiling, including the following:
    a. Luminaires.
    b. Control modules.

B. Field quality-control reports.

C. Sample Warranty: For manufacturer's warranties.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each type of lighting control device to include in operation and maintenance manuals.

1.6 WARRANTY

A. Manufacturer's Warranty: Manufacturer and Installer agree to repair or replace lighting control devices that fail(s) in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to faulty operation of lighting control devices.

2. Warranty Period: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 INDOOR OCCUPANCY AND VACANCY SENSORS

A. Manufacturers:

1. Wattstopper

2. Leviton

3. Cooper

4. Or approved equal

B. General Requirements for Sensors:

1. Ceiling-mounted, solid-state indoor occupancy and vacancy sensors.

2. Dual technology.

3. Integrated or Separate power pack.

4. Hardwired connection to switch.

5. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

6. Operation:

a. Combination Sensor: Unless otherwise indicated, sensor shall be programmed to turn lights on when coverage area is occupied and turn them off when unoccupied, or to turn off lights that have been manually turned on; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

7. Sensor Output: Sensor is powered from the power pack.

8. Power: Line voltage.

9. Power Pack: Dry contacts rated for 20-A LED load at 120- and 277-V ac, for 13-A tungsten at 120-V ac, and for 1 hp at 120-V ac. Sensor has 24-V dc, 150-mA, Class 2 power source, as defined by NFPA 70.

10. Mounting:

a. Sensor: Suitable for mounting in any position on a standard outlet box.

b. Relay: Externally mounted through a 1/2-inch (13-mm) knockout in a standard electrical enclosure.

c. Time-Delay and Sensitivity Adjustments: Recessed and concealed behind hinged door.

11. Indicator: Digital display, to show when motion is detected during testing and normal operation of sensor.

2.2 SWITCHBOX-MOUNTED OCCUPANCY SENSORS

A. Manufacturers:

1. Wattstopper
2. Leviton
3. Cooper
4. Or approved equal

B. General Requirements for Sensors: Automatic-wall-switch occupancy sensor with manual on-off switch, suitable for mounting in a single gang switchbox, using hardwired connection.

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Occupancy Sensor Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn lights off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
3. Operating Ambient Conditions: Dry interior conditions, 32 to 120 deg F (0 to 49 deg C).
4. Switch Rating: Not less than 800-VA LED load at 120 V, 1200-VA LED load at 277 V, and 800-W incandescent.

C. Wall-Switch Sensor:

1. Standard Range: 180-degree field of view, field adjustable from 180 to 40 degrees; with a minimum coverage area of 900 sq. ft. (84 sq. m).
2. Sensing Technology: PIR.
3. Switch Type: SP, field-selectable automatic "on," or manual "on," automatic "off."
4. Capable of controlling load in three-way application.
5. Voltage: Match the circuit voltage
6. Concealed, field-adjustable, "off" time-delay selector at up to 30 minutes.
7. Adaptive Technology: Self-adjusting circuitry detects and memorizes usage patterns of the space and helps eliminate false "off" switching.
8. Color: White.
9. Faceplate: Color matched to switch.

2.3 CONDUCTORS AND CABLES

A. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

B. Classes 2 and 3 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

C. Class 1 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine lighting control devices before installation. Reject lighting control devices that are wet, moisture damaged, or mold damaged.

B. Examine walls and ceilings for suitable conditions where lighting control devices will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SENSOR INSTALLATION

A. Comply with NECA 1.

B. Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression systems, and partition assemblies.

C. Install and aim sensors in locations to achieve not less than 90-percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.

3.3 WIRING INSTALLATION

A. Comply with NECA 1.

B. Wiring Method: Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables." Minimum conduit size is 1/2 inch (13 mm).

C. Size conductors according to lighting control device manufacturer's written instructions unless otherwise indicated.

D. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures.

3.4 IDENTIFICATION

A. Identify components and power and control wiring according to Section 260553 "Identification for Electrical Systems."

1. Identify controlled circuits in lighting contactors.

2. Identify circuits or luminaires controlled by photoelectric and occupancy sensors at each sensor.

3.5 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting lighting control devices to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

1. For occupancy and motion sensors, verify operation at outer limits of detector range. Set time delay to suit Owner's operations.

2. Align high-bay occupancy sensors using manufacturer's laser aiming tool.

3.6 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain lighting control devices.

END OF SECTION

SECTION 26 2416

PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Circuit breakers for Lighting and appliance branch-circuit panelboards.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of panelboard.

1. Include materials, switching and overcurrent protective devices, SPDs, accessories, and components indicated.

2. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

1.4 FIELD CONDITIONS

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Architect no fewer than five days in advance of proposed interruption of electric service.

2. Do not proceed with interruption of electric service without Architect's written permission.

3. Comply with NFPA 70E.

1.5 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace panelboard circuit breakers that fail in materials or workmanship within specified warranty period.

1. Panelboard Warranty Period: 18 months from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANELBOARD REQUIREMENTS

A. Provide new circuit breakers in existing panels in accordance with panel schedules

B. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Hard-drawn copper, 98 percent conductivity.

2. Terminations shall allow use of 75 deg C rated conductors without derating.

3. Size: Lugs suitable for indicated conductor sizes, with additional gutter space, if required, for larger conductors.

4. Main and Neutral Lugs: Compression type, with a lug on the neutral bar for each pole in the panelboard.

5. Ground Lugs and Bus-Configured Terminators: Compression type, with a lug on the bar for each pole in the panelboard.

C. Circuit breaker Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. Assembly listed by an NRTL for 100 percent interrupting capacity.

1. Panelboard overcurrent protective devices rated 240 V or less shall have short-circuit rating not less than 10,000 A rms symmetrical.

2.2 POWER PANELBOARDS

A. Manufacturers:

1. Eaton Pow R Line to match existing.

2.3 IDENTIFICATION

A. Breaker Labels: Faceplate shall list current rating, UL and IEC certification standards, and AIC rating.

B. Circuit Directory: Directory card inside panelboard door, mounted in transparent card holder.

1. Update circuit directory with detail sufficient to distinguish it from all other circuits.

C. Circuit Directory: Computer-generated circuit directory mounted inside panelboard door with transparent plastic protective cover.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receive, inspect, handle, and store panelboards according to NECA 407.

B. Examine panelboards before installation. Reject panelboards that are damaged, rusted, or have been subjected to water saturation.

C. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

3.2 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads; incorporate Owner's final room designations. Obtain approval before installing. Handwritten directories are not acceptable. Install directory inside panelboard door.

3.3 ADJUSTING

A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

END OF SECTION

SECTION 26 2726

WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Standard-grade receptacles, 125 V, 20 A.
2. GFCI receptacles, 125 V, 20 A.
3. Toggle switches, 120/277 V, 20 A.
4. Wall plates.

1.3 DEFINITIONS

A. EMI: Electromagnetic interference.

B. GFCI: Ground-fault circuit interrupter.

C. Pigtail: Short lead used to connect a device to a branch-circuit conductor.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: List of legends and description of materials and process used for premarking wall plates.

C. Samples: One for each type of device and wall plate specified, in each color specified.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing-label warnings and instruction manuals that include labeling conditions.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 - PRODUCTS

2.1 GENERAL WIRING-DEVICE REQUIREMENTS

A. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Comply with NFPA 70.

C. RoHS compliant.

D. Comply with NEMA WD 1.

E. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:

1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.

2. Devices shall comply with requirements in this Section.

F. Device Color:

1. Wiring Devices Connected to Normal Power System: White unless otherwise indicated or required by NFPA 70 or device listing.

G. Wall Plate Color: White.

2.2 STANDARD-GRADE RECEPTACLES, 125 V, 20 A

A. Duplex Receptacles, 125 V, 20 A:

1. Manufacturers:

a. Eaton

b. Leviton

c. Hubbell

d. Or approved equal.

2. Description: Two pole, three wire, and self-grounding.

3. Configuration: NEMA WD 6, Configuration 5-20R.

2.3 GFCI RECEPTACLES, 125 V, 20 A

1. Manufacturers:

a. Eaton

b. Leviton

c. Hubbell

d. Or approved equal.

2. Description: Integral GFCI with "Test" and "Reset" buttons and LED indicator light. Two pole, three wire, and self-grounding.

3. Configuration: NEMA WD 6, Configuration 5-20R.

4. Type: Non-feed through.

5. Standards: Comply with UL 498, UL 943 Class A, and FS W-C-596.

2.4 TOGGLE SWITCHES, 120 V, 20 A

A. Single-Pole Switches, 120 V, 20 A:

1. Manufacturers:

a. Eaton

b. Leviton

c. Hubbell

d. Or approved equal.

2. Standards: Comply with UL 20 and FS W-S-896.

B. Lighted Single-Pole Switches, 120 V, 20 A:

1. Manufacturers:

a. Eaton

b. Leviton

c. Hubbell

d. Or approved equal.

2. Description: Handle illuminated when switch is on.

2.5 WALL PLATES

A. Single Source: Obtain wall plates from same manufacturer of wiring devices.

B. Single and combination types shall match corresponding wiring devices.

1. Plate-Securing Screws: Metal with head color to match plate finish.

2. Material for Finished Spaces: White Thermoplastic

3. Material for Unfinished Spaces: Galvanized steel.

C. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with Type 3R, weather-resistant, die-cast aluminum with lockable cover.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including mounting heights listed in that standard, unless otherwise indicated.

B. Coordination with Other Trades:

1. Protect installed devices and their boxes. Do not place wall finish materials over device boxes, and do not cut holes for boxes with routers that are guided by riding against outside of boxes.

2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.

3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.

4. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors:

1. Do not strip insulation from conductors until right before they are spliced or terminated on devices.

2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.

3. The length of free conductors at outlets for devices shall comply with NFPA 70, Article 300, without pigtails.

4. Existing Conductors:

   a. Cut back and pigtail, or replace all damaged conductors.

   b. Straighten conductors that remain and remove corrosion and foreign matter.

   c. Pigtailing existing conductors is permitted, provided the outlet box is large enough.

D. Device Installation:

1. Replace devices that have been in temporary use during construction and that were installed before building finishing operations were complete.

2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.

3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.

4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.

5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, two-thirds to three-fourths of the way around terminal screw.

6. Use a torque screwdriver when a torque is recommended or required by manufacturer.

7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.

8. Tighten unused terminal screws on the device.

9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device-mounting screws in yokes, allowing metal-to-metal contact.

E. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.

F. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

G. Dimmers:

1. Install dimmers within terms of their listing.

2. Verify that dimmers used for fan-speed control are listed for that application.

3. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' device, listing conditions in the written instructions.

H. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

3.2 GFCI RECEPTACLES

A. Install non-feed-through GFCI receptacles where protection of downstream receptacles is not required.

3.3 IDENTIFICATION

A. Comply with Section 26 0553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

A. Test Instruments: Use instruments that comply with UL 1436.

B. Test Instrument for Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

C. Perform the following tests and inspections:

1. Test Instruments: Use instruments that comply with UL 1436.

2. Test Instrument for Receptacles: Digital wiring analyzer with digital readout or illuminated digital-display indicators of measurement.

D. Tests for Receptacles:

1. Line Voltage: Acceptable range is 105 to 132 V.

2. Percent Voltage Drop under 15-A Load: A value of 6 percent or higher is unacceptable.

3. Ground Impedance: Values of up to 2 ohms are acceptable.

4. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943.

5. Using the test plug, verify that the device and its outlet box are securely mounted.

6. Tests shall be diagnostic, indicating damaged conductors, high resistance at the circuit breaker, poor connections, inadequate fault-current path, defective devices, or similar problems. Correct circuit conditions, remove malfunctioning units and replace with new ones, and retest as specified above.

E. Wiring device will be considered defective if it does not pass tests and inspections.

F. Prepare test and inspection reports.

END OF SECTION

SECTION 26 5000

GENERAL LIGHTING PROVISIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes general information related to providing and installing all interior and exterior lighting systems throughout the project.

B. RELATED REQUIREMENTS

1. Section 26 09 23 “Interior Lighting Controls”

1.3 DEFINITIONS

A. Fixture: See "Luminaire."

B. IP: International Protection or Ingress Protection Rating.

C. LED: Light-emitting diode.

D. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 WARRANTIES

A. Submit a copy of manufacturers’ written guarantees for each manufacturer for transmittal to the Owner, agreeing to repair or replace any and all defects in workmanship and/or materials for a period of two (2) years, or as otherwise specified, from the date of final acceptance of the installation, without cost to the Owner.

B. Submit the Contractor's written guarantee for a period of one (1) year after the date of final acceptance, all apparatus installed by the Contractor to be free of mechanical and electrical defects in workmanship, and to replace the same if, in the opinion of the Architect, the responsibility lies with the Contractor.

C. LED luminaires shall have a ten (10) year warranty on driver and light modules.

1.5 REQUIREMENTS OF REGULATORY AGENCIES

A. All equipment covered in this section shall comply with all applicable standards of IESNA, National Electrical Code and all laws, codes and regulations of Federal, State, County and City authorities having jurisdiction over this work.

B. All equipment shall be U.L. Listed. Equipment shall be listed for Wet or Damp locations, as stated in the luminaire schedule, or as specified by the luminaire catalog number.

C. Luminaires shall be located so as not to provide any conflicts with barrier free spaces: Public Law 90-480 and American National Standards Institute A1117.1-1961

1.6 MATERIALS AND WORKMANSHIP

A. All materials and apparatus required for the work, except as specified otherwise, shall be new, of first class quality, and shall be furnished, delivered, erected, connected and finished in every detail, and shall be so selected and arranged as to fit properly into the spaces. Where no specific kind or quality of material is given, an article acceptable to the Architect shall be furnished.

B. All component parts of each item of equipment or device shall bear the Manufacturer's Nameplate, giving at least the name of the manufacturer, description, size, type, serial number, and electrical characteristics in order to facilitate maintenance or replacement. This nameplate shall not be visible during normal operation of the equipment.

C. New luminaires that are Blemished, damaged, or unsatisfactory shall be replaced at the direction of the Architect in a satisfactory manner at no cost to the Owner. This includes manufacturer defects as well as damage or blemishes to luminaires during handling and installation. Special attention should be paid to the blades and baffles of luminaires.

D. Relocate and relamp existing light fixtures as indicated on drawings. Where TLED lamps replace existing T8 lamps replace ballast with Type C 0-10VDC dimming driver

PART 2 PRODUCTS

2.1 GENERAL MATERIALS REQUIREMENTS

A. Provide accessories as required for compatibility with installation requirements. Luminaire catalog numbers do not necessarily denote specific mounting accessories for where/how luminaire is to be installed.

B. All materials used in fabrication and mounting luminaires shall be of a non-corrosive nature.

C. Luminaires shall be free of light leaks. Luminaires shall be designed to provide adequate ventilation for both light sources and drivers or transformers.

D. Luminaires shall be designed to hide mounting hardware from view when luminaire is completely installed. Exposed fasteners shall not be acceptable, except as noted on details.

E. Wiring channels and lamp holder mountings shall be rigid and accurately manufactured.

F. All luminaires when installed shall be set true and free of warps, dents, or other irregularities. The finish of exposed parts or trims shall be as specified or as directed by the Architect/Engineer.

G. TLED system shall be style C with fixture mounted driver that will accommodate 0-10 Volt DC dimming through daylight sensing system and / or wall mounted dimming switches. TLED lamp systems shall be dimmable to 10% light level without flicker.

2.2 PRODUCT DELIVERY AND STORAGE

A. Store all luminaires, light sources, drivers and hardware flat, in a clean, dry area off the ground under watertight cover.

PART 3 EXECUTION

3.1 PREPARATION

A. Report all defects. Contractor shall be held responsible for any existing defects that adversely affect the luminaire or its performance.

B. Upon Architect's request, Contractor shall provide one sample of selected luminaires.

3.2 INSTALLATION

A. The installation shall be in accordance with all governing local ordinances and regulations, the Drawings, these special provisions and those sections of the Standard Specifications which apply. All workmanship shall be first class and finished work shall present a neat, uncluttered appearance. The Contractor shall coordinate his work with other construction phases so as to provide a minimum of interference to the combined operations. Contractor shall also coordinate their work with the work on adjacent projects where required.

B. Clean the housing, trim, reflector surfaces, lens of all luminaires after construction is complete, so as to render them free of any material.

C. Any luminaire or lamp or lighting device damaged during construction shall be replaced without cost to the Owner.

D. Replace all inoperative light sources, ballasts, drivers and transformers just prior to acceptance of Project by Owner. Verify that all light sources are installed are exactly as specified for each luminaire type.

E. Notify Owner and/or Architect about field conditions at variance with contract documents before commencing installation.

F. It is the contractor's responsibility to review and coordinate with the Architectural drawings for placement of luminaires and lighting control devices.

3.4 TESTS

A. Prior to final acceptance, the Contractor shall demonstrate by test to the Architect's and/or Lighting Consultant 's satisfaction that all the electrical and lighting equipment installations are in proper condition per drawings and specifications. The Contractor shall furnish all equipment and appliances to make the test.

B. The Contractor shall be fully responsible for the system during this period of operation and he shall make any adjustment or repairs which may be required, and remedy any defects or damages which may occur, at Contractor's expense.

END OF SECTION

SECTION 27 0528

COMMUNICATION CONDUIT SYSTEM--

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Furnish and install conduits, outlets and other items necessary for a telephone and data systems as specified and shown.

B. All system wire, cables, terminals and instruments furnished and installed by Contractor.

1.2 SUBMITTALS

A. Provide submittals for products listed in the Product Table below in accordance with Section 26 0500 – General Electrical Provisions. Submittal requirements indicated by column number designation as follows:

1. Materials List
2. Catalog Data
3. Product Data
4. Performance Data
5. Wiring Diagrams
6. Shop Drawings
7. Installation Instructions
8. Special Requirement listed herein.

PRODUCT TABLE	1	2	3	4	5	6	7	8
Wall outlets		X	X					

PART 2 - PRODUCTS

2.1 WALL OUTLETS

A. Box: 4-inch square by 1-1/2-inch with single-gang plaster ring

B. Cut-ins: Caddy MPLS low voltage cut-in rings.

C. Provide #10 THWN copper grounding conductor from the data outlet box to the closest equipment grounding conductor, usually in the adjacent duplex receptacle outlet box.

2.2 HOME RUNS

A. 1-inch conduit from each outlet to accessible ceiling space.

B. 1-inch conduit through any inaccessible areas between outlet and trunk conduit, cable tray or terminal board.

C. 1-inch conduit sleeves, or equivalent blockout through floors, walls and structure between outlet cable tray and trunk conduit or terminal board.

D. Provide pull strings in conduits.

PART 3 - EXECUTION

NOT USED

END OF SECTION

STANDARD DRAWINGS