



June 1, 2023

KIRKLAND HEIGHTS REDEVELOPMENT
Owner: New Kirkland Heights LLLP

Addendum No. 3

ARCHITECT: SMR Architects

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the Bid Documents dated April 21, 2023 with amendments and additions noted below.

Addendum items are included in the Conformance Set drawings and are clouded and marked with an A2 delta.

Note:

- 1) As of the issuance of Addenda 1, no permits for construction have been issued by the City of Kirkland.
- 2) PSE has not issued their final construction drawings for the utility undergrounding.

Documents included in this Addenda:

- Revisions to the Kirkland Heights Redevelopment Bid Set Project Manual
- Revisions to the Kirkland Heights Redevelopment Bid Set Drawings

CHANGES TO THE PROJECT MANUAL

Revised Sections have been noted. Text changes with replaced or revised Sections are noted: Additions are underlined. Deletions are ~~lined through~~.

ADDED: Added the following Sections in their entirety:

- **00 00 00 Cover Volume 6**

REVISE: Revise the following Specifications:

- **02-Invitation to Bid_\$250+ - Scope of Work**
- **06-General Conditions Rev 08Jan20 - \$250k+ - 5.2.D**
- **01 10 00 Summary - 1.5.C**
- **01 50 00 Temp Facilities and Controls - 1.24**
- **08 71 00 Door Hardware - 2.1.b**
- **08 71 00.02 Door Hardware Index**
- **27 00 00 Low Voltage Systems General Conditions - 1.4D.7 Dwelling Units a.1**

CHANGES TO THE DRAWINGS

Revised Drawings have been noted. Drawing changes have been clouded and annotated with a Delta 2.

REPLACE: Replace the following sheets in their entirety:

New Construction Buildings:

- **A001 – SITE PLAN**

Please note, wheel stops have been added to the head end of the balance of parallel parking stalls.

***** End of Addendum *****

Kirkland Heights Redevelopment

13310 NE 133rd Street
Kirkland, WA 98034

Contract No. TC2200131

Bid Set Documents Project Manual Volume 6: Appendix C

May 19, 2023



OWNER:

NEW KIRKLAND HEIGHTS LLLP
c/o: King County Housing Authority, General Partner
600 Andover Park West
Tukwila, WA 98188

ARCHITECT:

SMR Architects PLLC
117 S. Main Street, Suite 400
Seattle, WA 98104

INVITATION TO BID

New Kirkland Heights LLLP will accept bids from qualified general contractors to furnish labor, materials and necessary equipment to perform the following:

SCOPE OF WORK: Work includes, but is not limited to, the Project site is a single, developed lot in Kirkland, Washington with twenty-five existing wood-framed apartment buildings with 179 residential units, demolition of one existing community/office building, and two existing utility buildings as illustrated on the drawings identified as bidding and/or construction drawings. The existing wood frame structures will be renovated per the drawings identified as bidding and/or construction drawings, three new buildings will be constructed as part of the scope of work including two 24 unit apartment buildings, Buildings 26 and 27, and a new Community Building, Building 28, to be constructed on the site of the current Community and Laundry Buildings as illustrated on the drawings identified as bidding and/or construction drawings. Additional work includes sitework and utility work; site specialties and landscaping work; concrete footings, slabs-on-grade, and cast in place concrete; Type 5-A construction; the balance of building construction including MEP, and fire sprinkler work shown on the drawings and specified herein, and other tasks as described in the bid documents. PV infrastructure and coordination are included in the GC scope of work. PV Systems will be installed under a separate contract.

PROJECT MANUAL DISTRIBUTION:

Address: New Kirkland Heights LLLP, 600 Andover Park West, Tukwila, WA 98188
Distribution: * **Documents are available for download on KCHA's website at <http://www.kcha.org/business/construction/open/>**

PRE-BID CONFERENCE:

Date and Time: Meeting 1: April 25, 2023 at 2:00 P.M.
Meeting 2: April 26, 2023 at 2:00 P.M.
Jobsite Address: Kirkland Heights Apartments, 13310 NE 133rd St, Kirkland, WA 98034
In Addition: Contractors are strongly encouraged to attend the Pre-Bid Conference. Failure to attend the Conference will not relieve the Contractor of any responsibility for information provided at that time.
For Questions: Questions pertaining to the bid are to be sent via email to nathank@kcha.org no later than seven (7) calendar days prior to bid due date. All responses shall be in the form of Addenda.
Posting: Addenda will be posted on KCHA's website.

BIDS ARE DUE:

Time: **11:00 A.M.**
Date: **June 5, 2023**
Address: New Kirkland Heights LLLP
600 Andover Park West, Tukwila, WA 98188
Submittal Process: * Bids may be sent to Nate Kraus via mail, hand delivery, or by email to nathank@kcha.org. If dropping off a hard copy bid to the KCHA office, please call Nate Kraus at (206) 693-6452. Prospective bidders can either call and make an appointment or call upon arrival.
Process: All Bids must be received by New Kirkland Heights LLLP no later than the above due date and time. No Bids will be accepted after that date and time.

BID GUARANTEE:

Amount: Five (5%) Percent of the Total Bid must accompany Each Bid
Payable to: New Kirkland Heights LLLP

PERFORMANCE AND PAYMENT BONDS: As a condition of award Performance and Payment bonds for 100% of the Contract Award Amount shall be furnished for the Work.

New Kirkland Heights LLLP's Kirkland Heights Redevelopment project does not have a project-specific DBE goal. However, New Kirkland Heights LLLP is an Equal Employment Opportunity Employer and strongly encourages minority-owned and women-owned businesses, socially and economically disadvantaged businesses, and small businesses to submit bids or to participate as subcontractors and suppliers.

New Kirkland Heights LLLP reserves the right to reject any or all bids or to waive any informality in the bidding. No bid shall be withdrawn for a period of 60 calendar days subsequent to the opening of the bids without the written consent of New Kirkland Heights LLLP.

CONTACT PERSON: Nate Kraus at nathank@kcha.org

GENERAL CONDITIONS

PART 1 - GENERAL PROVISIONS

1.1 DEFINITIONS

- A. "Application for Payment" means a written request submitted by Contractor to Owner for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner or A/E may require.
- B. "Architect," "Engineer," or "A/E" means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority.
- C. "Authority Having Jurisdiction" or "AHJ" means a federal, state, local, or other regional department, or an individual such as a fire official, labor department, health department, building official, or other individual having statutory authority.
- D. "Change Order" means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.
- E. "Claim" means Contractor's exclusive remedy for resolving disputes with Owner arising from the Contract Documents (including disputes regarding the terms of a Change Order or a request for equitable adjustment), as more fully set forth in Part 8.
- F. "Construction Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Part 3.2.
- G. "Contract Award Amount" is the sum of the Base Bid, any accepted Alternates, and Washington State Retail Sales Tax.
- H. "Contract Documents" means the Contract Form, Addenda, Instructions to Bidders, General Conditions, Bid Form and Bidder Information, applicable wage rates, drawings and specifications, hazardous material reports, performance and payment bonds, and all other parts of the bid solicitation.
- I. "Contract Sum" is the total amount payable by Owner to Contractor for performance of the Work in accordance with the Contract Documents, including Washington State sales tax and all other taxes imposed by law and properly chargeable to the Work.
- J. "Contract Time" is the number of consecutive Days allotted in the Contract Documents for achieving Substantial Completion of the Work.
- K. "Contracting Officer" means the person delegated the authority by Owner to enter into, and/or terminate this Contract. The term includes any successor Contracting Officer and any duly authorized representative of the Contracting Officer.
- L. "Contractor" means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.
- M. "Day" means calendar day, unless otherwise specified.
- N. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.
- O. "Final Acceptance" means the written acceptance issued to Contractor by Owner after Contractor has completed the requirements of the Contract Documents.
- P. "Final Completion" means that the Work is fully and finally complete in accordance with the Contract Documents.
- Q. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in Part 3.5A.

GENERAL CONDITIONS

- R. "Furnish" means supply and deliver to Project site, ready for unpacking, assembly, installation, and similar operations.
- S. "Install" means operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- T. "Manager" means the person who is an authorized agent of the Owner to administer the Contract.
- U. "Notice" means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.
- V. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.
- W. "Owner" means New Kirkland Heights LLLP or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.
- X. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.
- Y. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Part 6.7A.
- Z. "Provide" means furnish and install, complete and ready for the intended use.
- AA. "Project" means the total construction of which the Work performed in accordance with the Contract Documents may be the whole or a part and which may include construction by Owner or by separate contractors.
- BB. "Project Record" means the separate set of Drawings and Specifications as further set forth in Part 4.2A.
- CC. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail as requested by Owner.
- DD. "Specifications" are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- EE. "Subcontract" means a contract entered into by Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind for or in connection with the Work.
- FF. "Subcontractor" means any person, other than Contractor, who agrees to furnish or furnishes any supplies, materials, equipment, or services of any kind in connection with the Work.
- GG. "Substantial Completion" means that stage in the progress of the Work where the Owner has full and unrestricted use and benefit of the facilities for the purposes intended [when the construction is sufficiently complete], as more fully set forth in Part 6.6.
- HH. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

1.2 EXECUTION AND INTENT

Contractor makes the following representations to Owner:

- A. The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;

GENERAL CONDITIONS

- B. Contractor has carefully reviewed the Contract Documents, had an opportunity to visit and examine the Project site, has become familiar with the local conditions in which the Work is to be performed, and has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.
- C. Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and
- D. Contractor is able to furnish the plant, tools, materials, supplies, equipment and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.
- E. All work is to be executed in accordance with the Building Codes, as adopted by the Authority Having Jurisdiction, and other applicable codes and generally accepted industry standards.
- F. The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

PART 2 - INSURANCE AND BONDS

2.1 INSURANCE REQUIREMENTS FOR BUILDING TRADES CONTRACTORS

- A. Within 7 days from the date of the Notice of Award and prior to commencing Work, Contractor shall obtain, and maintain, for the duration of the Contract and for one year after Final Acceptance, insurance against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or Subcontractors. Contractor shall also maintain such insurance coverage during the performance of any corrective Work required by Part 5.15. Review of the Contractor's insurance by Owner shall not relieve or decrease the liability of Contractor.

2.2 MINIMUM SCOPE OF INSURANCE

- A. Contractors shall maintain coverages no less than:
 1. Insurance Services Office Commercial General Liability coverage.
 2. Insurance Services Office covering Automobile Liability, code 1 (any auto).
 3. Workers' Compensation insurance as required by State law and Employer's Liability Insurance.
 4. Builders Risk (Property / Course of Construction) insurance covering for all risks of loss.

2.3 MINIMUM LIMITS OF INSURANCE

- A. Contractor shall maintain limits no less than:
 1. General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit of \$2,000,000.
 2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
 3. Employer's Liability: \$1,000,000 per accident for bodily injury/sickness or disease.

2.4 DEDUCTIBLES AND SELF INSURED RETENTION

- A. Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the Owner guaranteeing payment of losses and related investigations, claim administration and defense expenses. **NOTE: If this contract deals with hazardous materials or activities (i.e. lead based paint,**

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asbestos, armed security guards), additional provisions covering those exposures must be included in order to protect the Owner's interests.

2.5 OTHER INSURANCE PROVISIONS

- A. The policies are to contain, or be endorsed to contain, the following provisions:
1. The Owner, the Property Manager, its officers, officials, employees, partners, agents and volunteers are to be covered as additional insureds under a "completed operations" type of additional insured endorsement with respect to general liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts or equipment furnished in connection with such work or operations. The endorsement(s) effectuating the foregoing additional insured coverage shall be ISO form CG 20 10 11 85, or CG 20 10 10 01 issued concurrently with CG 20 37 10 01, or their equivalent as long as it provides additional insured coverage, without limitation, for (1) completed operations; (2) automobile liability arising out of vehicles owned, leased, hired, or borrowed by or on behalf of the Contractor; (3) any insurance written on a claims made basis, shall have a retroactive date that coincides with, or precedes, the commencement of any work under this contract. Evidence of such coverage shall be maintained for a minimum of six (6) years beyond the expiration of the project.
 2. The Owner will not accept Certificates of Insurance alone. Improperly completed endorsements will be returned to your insured for correction by an authorized representative of the insurance company.
 3. For any claims related to this project, the Contractor's insurance coverage shall be primary insurance as respects the Owner, its officers, officials, agents, partners, employees, and volunteers. Any insurance or self-insurance maintained or expired by the Owner, its officers, officials, agents, partners, employees, volunteers shall be excess of the Contractor's insurance and shall not contribute with it. Owner's Insurance is Non-Contributory in claims settlement funding.
 4. The "General description of agreement(s) and/or activity(s) insured" shall include reference to the activity and/or to Owner's specific project or site name, contract number, lease number, permit number or construction approval number.
 5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled or materially changed, except after thirty (30) days' [ten (10) days for non-payment of premium] prior written notice, by certified mail, return receipt requested, has been given to the Owner.
 6. Maintenance of the proper insurance for the duration of the contract is a material element of the contract. Material changes in the required coverage or cancellation of the coverage shall constitute a material breach of the contract.

2.6 ACCEPTABILITY OF INSURERS

- A. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:-VII. The name of the Insurance Company underwriting the coverage and its address shall be noted on the endorsement form. Contractors must provide written verification of their insurer's rating.

2.7 VERIFICATION OF COVERAGE

- A. Contractor shall furnish the Owner with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Owner before work commences in sufficient time to permit contractor to remedy any deficiencies. The Owner reserves the right to require complete, certified copies of all required insurance policies or pertinent parts thereof, including endorsements affecting the coverage, required by these specifications at any time. Contractor shall include in its bid the cost of all insurance and bonds required to complete the base bid work and accepted alternates.

2.8 SUBCONTRACTORS

- A. Subcontractors shall include the Contractor as additional insured under their policies. All coverage for subcontractors shall be subject to all of the requirements stated herein. Contractor shall be responsible for the adequacy of required coverages for subcontractors, and compile related certificates of insurance and endorsements evidencing subcontractors' compliance.

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2.9 PAYMENT AND PERFORMANCE BONDS

- A. Payment and performance bonds for 100% of the Contract Award Amount shall be furnished for the Work, using the Payment Bond and Performance Bond form AIA – form A312. Change order increases of cumulative 15% increments require revisions to the bond to match the new Contract Sum.

PART 3 - TIME AND SCHEDULE

3.1 PROGRESS AND COMPLETION

- A. Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within a reasonable period thereafter.

3.2 CONSTRUCTION SCHEDULE

- A. Preliminary Progress Schedule: Unless otherwise provided in Division 1, Contractor shall, within seven Days after issuance of the Notice to Proceed, submit a preliminary Construction Schedule. The Construction Schedule shall show the sequence in which Contractor proposes to perform the Work and the dates on which Contractor plans to start and finish major portions of the Work, including dates for shop drawings and other submittals, and for acquiring materials and equipment.
- B. Form of Construction Schedule: Unless otherwise provided in Division 1, the Construction Schedule shall be in the form of a bar chart or critical path method analysis, as specified by Owner. The preliminary Construction Schedule may be general, showing the major portions of the Work, with a more detailed Construction Schedule submitted as directed by Owner.
- C. Owner comments on Construction Schedule: Owner shall return comments on the preliminary Construction Schedule to Contractor within 7 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of the progress payments until a Construction Schedule has been submitted which meets the requirements of this section.
- D. Monthly updates and compliance with Construction Schedule: Contractor shall utilize and comply with the Construction Schedule. On a monthly basis, or as otherwise directed by Owner, Contractor shall submit an updated Construction Schedule at its own expense to Owner indicating actual progress, accompanying each Application for Payment. If, in the opinion of Owner, Contractor is not in conformance with the Construction Schedule for reasons other than acts of Force Majeure as identified in Part 3.5, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Construction Schedule, or revise the Construction Schedule to reconcile with the actual progress of the Work.
- E. Contractor to notify Owner of delays: Contractor shall promptly notify Owner in writing of any actual or anticipated event which is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Construction Schedule, and the action being or to be taken to correct the problem. Provision of such notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

3.3 OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE

- A. Owner may suspend Work: Owner may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 Days, or for such longer period as mutually agreed.
- B. Compliance with suspension; Owner's options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 Days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Owner shall either:
 - 1. Cancel the written notice suspending the Work; or

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2. Terminate the Work covered by the notice as provided in the termination provisions of Part 9.

- C. Resumption of Work: If a written notice suspending the Work is cancelled or the period of the notice or any extension thereof expires, Contractor shall resume Work.
- D. Equitable Adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance directly attributable to such suspension, provided Contractor complies with all requirements set forth in Section 7.

3.4 OWNER'S RIGHT TO STOP THE WORK FOR CAUSE

- A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until satisfactory corrective action has been taken.
- B. No Equitable Adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

3.5 DELAY

- A. Force Majeure actions not a default; Force Majeure defined: Any delay in or failure of performance by Owner or Contractor, other than the payment of money, shall not constitute a default hereunder if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party ("Force Majeure"). Acts of Force Majeure include, but are not limited to:
 - 1. Acts of God or the public enemy;
 - 2. Acts or omissions of any government entity;
 - 3. Fire or other casualty for which Contractor is not responsible;
 - 4. Quarantine or epidemic;
 - 5. Strike or defensive lockout;
 - 6. Unusually severe weather conditions which could not have been reasonably anticipated; and
 - 7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available.
- B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment according to Part 7.2A. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.
- C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor makes a request according to Parts 7.2 and 7.2A.
- D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.
- E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment according to Section 7.2A, but shall not be entitled to an adjustment in Contract Sum.
- F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise.

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3.6 NOTICE TO OWNER OF LABOR DISPUTES

- A. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with the Contract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.
- B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tier Subcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

3.7 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

A. Liquidated Damages

- 1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, liquidated damages of \$ [\$2000.00 per Day unless other amount indicated here or in Division 1] will be assessed.
- 2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth above will be assessed not as a penalty, but as liquidated damages for breach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and deducted from any payments to the Contractor.
- 3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any further obligations or liabilities pursuant to the Contract Documents.
- 4. If different completion dates are specified in the contract for separate parts or stages of the Work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed.

B. Actual Damages

- 1. Calculation of Actual Damages: Actual damages will be assessed for failure to achieve Final Completion within the time provided. Actual damages will be calculated on the basis of direct administrative, financial, and other related costs attributable to the Project from the date when Substantial Completion should have been achieved to the date Final Completion is actually achieved. The amount of these costs may be retained by Owner and deducted from any payment due Contractor.

PART 4 - SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

4.1 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

- A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.
- B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.
- C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to Owner in writing.

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- D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, or written modifications, or Shop Drawings where required, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for the performance and shall bear the cost for its correction.
- E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work or materials the provision of which is clearly implied and is within the scope of the Contract Documents even if the Contract Documents do not mention them specifically.
- F. Interpretation questions referred to Owner: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the Owner.

4.2 PROJECT RECORD

- A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction, including depths of foundations, horizontal and vertical locations of internal and underground utilities and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, and Change Order Proposals (COP). This separate set of Drawings and Specifications shall be the “Project Record.”
- B. Update Project Record weekly and keep on site: The Project Record shall be maintained on the project site throughout the construction and shall be clearly labeled “PROJECT RECORD” The Project Record shall be updated at least weekly noting all changes and shall be available to Owner at all times.
- C. Final Project Record to A/E before Final Acceptance: Contractor shall submit the completed and finalized Project Record to Owner prior to Final Acceptance.

4.3 SHOP DRAWINGS

- A. Definition of Shop Drawings: “Shop Drawings” means documents and other information required to be submitted to Owner by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e. form, fit, and attachment details) of materials and equipment. Shop Drawings include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Shop Drawings provided in accordance with the Contract Documents.
- B. Approval of Shop Drawings by Contractor and A/E: Contractor shall coordinate all Shop Drawings, and review them for accuracy, completeness, and compliance with the Contract Documents and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Shop Drawings shall be stamped by an appropriate professional licensed by the state of Washington. Shop Drawings submitted to Owner without evidence of Contractor’s approval shall be returned for resubmission. Contractor shall review, approve, and submit Shop Drawings with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor’s submittal schedule shall allow a reasonable time for A/E review. Owner will review, approve, or take other appropriate action on the Shop Drawings. Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings until the respective submittal has been reviewed and the Owner has approved or taken other appropriate action. Owner shall respond to Shop Drawing submittals with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Shop Drawings. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.
- C. Contractor not relieved of responsibility when Shop Drawings approved: Approval, or other appropriate action with regard to Shop Drawings, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Shop Drawings, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of

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Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.

- D. Variations between Shop Drawings and Contract Documents: If Shop Drawings show variations from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the Shop Drawings, at the time it submits the Shop Drawings containing such variations. If Owner approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time, a Change Order need not be issued; however, the modification shall be recorded upon the Project Record.
- E. Contractor to submit 4 copies of Shop Drawings: Unless otherwise provided in Division 1, Contractor shall submit to Owner for approval 4 copies of all Shop Drawings. Unless otherwise indicated, 3 sets of all Shop Drawings shall be retained by Owner and 1 set shall be returned to Contractor.

4.4 ORGANIZATION OF SPECIFICATIONS

- A. Specification organization by trade: Specifications are prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

PART 5 - PERFORMANCE

5.1 CONTRACTOR CONTROL AND SUPERVISION

- A. Contractor responsible for Means and Methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.
- B. Competent Superintendent required: Performance of the Work shall be directly supervised by a competent superintendent who has authority to act for Contractor. The superintendent must be satisfactory to the Owner and shall not be changed without the prior written consent of Owner. Owner may require Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.
- C. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.
- D. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among all of the Contractor's employees and other persons performing the Work. Contractor shall not permit employment of persons not skilled in tasks assigned to them. Contractor's employees shall at all times conduct business in a manner which assures fair, equal, and nondiscriminatory treatment of all persons. Owner may, by written notice, request Contractor to remove from the Work or Project site any employee Owner reasonably deems incompetent, careless, or otherwise objectionable.
- E. Contractor to keep project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Shop Drawings, and permits and permit drawings.

5.2 PERMITS, FEES, AND NOTICES

- A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits shall be delivered to Owner.

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- B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference shall be adjusted by Change Order.
- C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.
- D. KCHA has applied for and paid for the building permits, land use permits, mechanical permits, and plumbing permits. All other permit requirements remain in place.

5.3 PREVAILING WAGES

- A. Contractor to pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with the requirements of the Owner.
- B. Agreement to Pay Prevailing Wages: Before commencing the Work Contractor shall submit to the Owner an Agreement to Pay Prevailing Wages.
- C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, for the Contractor and every subcontractor, of any tier, that performed work on the Project.
- D. Disputes: Disputes regarding prevailing wage rates shall be referred to the Owner.
- E. Certified Payrolls: Contractor and any subcontractor shall submit a certified copy of payroll records if requested.

5.4 HOURS OF LABOR

- A. Overtime: Contractor shall comply with all applicable provisions of RCW 49.28 and they are incorporated herein by reference. Pursuant to that statute, no laborer, worker, or mechanic employed by Contractor, any Subcontractor, or any other person performing or contracting to do the whole or any part of the Work, shall be permitted or required to work more than eight hours in any one calendar day, provided, that in cases of extraordinary emergency, such as danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight hours of each calendar day shall be not less than one and one-half times the rate allowed for this same amount of time during eight hours of service.

5.5 NONDISCRIMINATION

- A. During performance of the Work:
 - 1. Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, the presence of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status or political affiliation, nor commit any unfair practices as defined in RCW 49.60.
 - 2. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, of any physical, sensory, or mental disability, sexual orientation, Vietnam-era veteran status, disabled veteran status, or political affiliation.
 - 3. The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and orders in regard to Equal Employment Opportunity including but not limited to Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973, as amended, and the rules, regulations, and orders of the Secretary of Labor. The Contractor shall include the terms of this Clause in every subcontract so that such term shall be binding on each Subcontractor.
 - 4. Non-Discrimination R.C.W. 49.60: These special requirements establish minimum requirements for affirmative action and are intended to define and implement the basic discrimination provisions of these specifications. Failure to comply with these requirements may constitute grounds for application of contract default.

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5.6 SAFETY PRECAUTIONS

- A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work.
- B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. For these purposes, the Contractor shall:
 - 1. Follow Washington Industrial Safety and Health Act (WISHA) regional directives and provide a site-specific safety program that will require an accident prevention and hazard analysis plan for the contractor and each subcontractor on the work site. The Contractor shall submit a site-specific safety plan to the Owner's representative prior to the initial scheduled construction meeting.
 - 2. Provide adequate safety devices and measures including, but not limited to, the appropriate safety literature, notice, training, permits, placement and use of barricades, signs, signal lights, ladders, scaffolding, staging, runways, hoist, construction elevators, shoring, temporary lighting, grounded outlets, wiring, hazardous materials, vehicles, construction processes, and equipment required by Chapter 19.27 RCW, State Building Code (Uniform Building, Electrical, Mechanical, Fire, and Plumbing Codes); Chapter 212-12 WAC, Fire Marshal Standards, Chapter 49.17 RCW, WISHA; Chapter 296-155 WAC, Safety Standards for Construction Work; Chapter 296-65 WAC; WISHA Asbestos Standard; WAC 296-62-071, Respirator Standard; WAC 296-62, General Occupation Health Standards, WAC 296-24, General Safety and Health Standards, WAC 296-24, General Safety and Health Standards, Chapter 49.70 RCW, and Right to Know Act.
 - 3. Comply with the State Environmental Policy Act (SEPA), Clean Air Act, Shoreline Management Act, and other applicable federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources.
 - 4. Post all permits, notices, and/or approvals in a conspicuous location at the construction site.
 - 5. Provide any additional measures that the Owner determines to be reasonable and necessary for ensuring a safe environment in areas open to the public. Nothing in this part shall be construed as imposing a duty upon the Owner to prescribe safety conditions relating to employees, public, or agents of the Contractors.
- C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right of access to all records of exposure.
- D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.
 - 1. Information. At a minimum, Contractor shall inform persons working on the Project site of:
 - a. WAC: The requirements of chapter 296-62 WAC, General Occupational Health Standards;
 - b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and
 - c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by chapter 296-62 WAC.
 - 2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:
 - a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the

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- employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;
 - c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
 - d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.
 - E. Hazardous, toxic or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:
 - 1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored on the Project site.
 - 2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.
 - F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
 - G. Contractor to act in an emergency: In an emergency affecting the safety of life or the Work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if so authorized or instructed.
 - H. No duty of safety by Owner or A/E: Nothing provided in this section shall be construed as imposing any duty upon Owner or A/E with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.
- 5.7 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS
- A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.
 - B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.
 - C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadways authorized by Owner. When materials are transported in prosecuting the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.
 - D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility or severance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal.

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Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.

- E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.
- F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Final Acceptance, and shall repair or replace without cost to Owner any damage or loss that may occur.

5.8 PRIOR NOTICE OF EXCAVATION

- A. Excavation defined; Use of locator services: "Excavation" means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12-inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall engage a locate service for all underground facilities or utilities and provide notice of the scheduled commencement of excavation to all owners of underground facilities or utilities. Contractor shall pay all fees for locator services and pay for all damages caused by excavation.

5.9 UNFORESEEN PHYSICAL CONDITIONS

- A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than 7 Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.
- B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 7.

5.10 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS

- A. Contractor to protect and repair property: Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.
- B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and shall protect vegetation that will remain in place.

5.11 LAYOUT OF WORK

- A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance of operations so as to coordinate all work without delay or revision.
- B. Layout responsibilities: Contractor shall lay out the Work from Owner-established baselines and bench marks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

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5.12 MATERIAL AND EQUIPMENT

- A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of Owner, is equal to that named in the Specifications, unless otherwise specifically provided in the Contract Documents.
- B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably implied by, the Contract Documents. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner.
- C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this work, in whatever stage of completion, may be rejected by Owner.

5.13 AVAILABILITY AND USE OF UTILITY SERVICES

- A. Owner to provide and charge for utilities: Owner shall make all reasonable utilities available to Contractor from existing outlets and supplies, as specified in the Contract Documents. Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner or, where the utility is produced by Owner, at reasonable rates determined by Owner. Contractor will carefully conserve any utilities furnished.
- B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Owner, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices, and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

5.14 TESTS AND INSPECTION

- A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.
- B. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole benefit of Owner and do not:
 - 1. Constitute or imply acceptance;
 - 2. Relieve Contractor of responsibility for providing adequate quality control measures;
 - 3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;
 - 4. Relieve Contractor of its responsibility to comply with the requirements of the Contract Documents; or
 - 5. Impair Owner's right to reject defective or nonconforming items, or to avail itself of any other remedy to which it may be entitled.
- C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall

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relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.

- D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may charge Contractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

5.15 CORRECTION OF NONCONFORMING WORK

- A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the requirements in the Contract Documents, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at the Contractor's expense and without change in the Contract Time.
- B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Part 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.
- C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear all costs of correcting such nonconforming Work, including additional testing and inspections.
- D. Contractor's compliance with warranty provisions: If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established under Part 6.7, or within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Owner to do so. Owner shall give such notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct with respect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this paragraph shall survive Final Acceptance.
- E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.
- F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.
- G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Period of limitation on other requirements: Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in Section 5.16D relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.
- I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

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5.16 CLEAN UP

- A. Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

5.17 ACCESS TO WORK

- A. Owner and A/E access to Work site: Contractor shall provide Owner and A/E access to the Work in progress wherever located.

5.18 OTHER CONTRACTS

- A. Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Contractor shall reasonably cooperate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.
- B. PV infrastructure and coordination are included in the GC scope of work. PV Systems will be installed under a separate contract.

5.19 SUBCONTRACTORS AND SUPPLIERS

- A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
 - 1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 - 2. Have a current Washington Unified Business Identifier (UBI) number;
 - 3. If applicable, have:
 - a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;
 - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - d. An electrical contractor license, if required by Chapter 19.28 RCW;
 - e. An elevator contractor license, if required by Chapter 70.87 RCW.
- B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified, and meet the requirements of the Contract Documents, if any. Contractor shall not utilize any Subcontractor or supplier to whom the Owner has a reasonable objection, and shall obtain Owner's written consent before making any substitutions or additions.
- C. Subcontracts in writing and pass through provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Contractor shall require each Subcontractor to enter into similar agreements with Sub-

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subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.

- D. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.
- E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that:
 - 1. Effective only after termination and Owner approval: The assignment is effective only after termination by Owner for cause pursuant to Part 9.1 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; and
 - 2. Owner assumes Contractor's responsibilities: After the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.
 - 3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

5.20 WARRANTY OF CONSTRUCTION

- A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.
- B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performed or materials furnished according to the Contract Documents, Contractor shall:
 - 1. Obtain warranties: Obtain all warranties that would be given in normal commercial practice;
 - 2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;
 - 3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and
 - 4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.
- C. Warranties beyond Final Acceptance: The obligations under this section shall survive Final Acceptance.

5.21 INDEMNIFICATION

- A. The Contractor hereby agrees to indemnify, defend, and hold harmless the Owner, its successors and assigns, directors, officers, officials, employees, agents, partners and volunteers (all foregoing singly and collectively "Indemnitees") from and against any and all claims, losses, harm, costs, liabilities, damages and expenses, including, but not limited to, reasonable attorney's fees, arising or resulting from the performance of the services, or the acts or omissions of the Contractor its successors, and assigns, employees, subcontractors or anyone acting on the contractor's behalf in connection with the Contract Documents or its performance thereof.
- B. Provided, however, that the Contractor will not be required to indemnify, defend, or save harmless the indemnitee as provided in the preceding paragraphs of this section if the claim, suit, or action for injuries, death, or damages is caused by the sole negligence of the indemnitee. Where such claims, suites, or actions result from the concurrent negligence of (a) the Indemnitee or the Indemnitee's agents or employees and (b) the Contractor or the Contractor's agents or employees, the indemnity provisions provided in the preceding paragraphs of this section shall be valid and enforceable only to the extent of the Contractor's negligence or the negligence of its agents and employees..
- C. The foregoing indemnity is specifically and expressly intended to constitute a waiver of the Contractor's immunity under Washington's Industrial Insurance act, RCW Title 51. The parties acknowledge that these provisions were specifically negotiated and agreed upon by them. If any portion of this indemnity clause is invalid or unenforceable, it shall be deemed excised and the remaining portions of the clause shall be given full force and effect.

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- D. The Contractor hereby agrees to require all its Subcontractors or anyone acting under its direction or control or on its behalf in connection with or incidental to the performance of the Contract Documents to execute an indemnity clause identical to the preceding clauses, specifically naming the Indemnitees as indemnitee, and failure to do so shall constitute a material breach of the Contract Documents by the Contractor.

PART 6 - PAYMENTS AND COMPLETION

6.1 CONTRACT SUM

- A. Taxes: The Contract Sum shall include all taxes imposed by law and properly chargeable to the Project, including retail sales tax. The contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested.

6.2 SCHEDULE OF VALUES

- A. Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner ("Schedule of Values"). The approved Schedule of Values shall include appropriate amounts for demobilization, record drawings, O&M manuals, and any other requirements for Project closeout, and shall be used by Owner as the basis for progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

6.3 APPLICATION FOR PAYMENT

- A. Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.
- B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Part 1.2, are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment.
- C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule. Each Application for Payment shall be consistent with previous applications and payments. Each Application for Payment needs to be accompanied by updated Construction Schedule.
- D. Payment for material delivered to site or stored off-site: If authorized by Owner, the Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:
 1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored;
 2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;
 3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set aside for the Project);
 4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;
 5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;
 6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;

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7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and
8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

6.4 PROGRESS PAYMENTS

- A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor if the Application for Payment does not comply with the requirements of the Contract Documents.
- B. Withholding retainage; Options for retainage: Owner shall retain 5% of the amount of each progress payment until 45 Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including consent of surety to release of the retainage. The Owner will not pay interest to the Contractor for accounts where retainage funds are maintained by the Owner. The Contractor agrees to waive any other options and has made allowances for this waiver. Owner may permit Contractor to provide an appropriate bond in lieu of the retained funds.
- C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents.
- D. Waivers of Lien: With each Application for Payment, submit conditional waivers lien from every entity who is lawfully entitled to file a lien arising out of the Work covered by the payment.
 1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - a. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
- E. Final Payment Application: Submit final Application for Payment with releases and close out supporting documentation.
- F. Approved payments shall be mailed to the Contractor within 30 days.

6.5 PAYMENTS WITHHELD

- A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to:
 1. Non-compliant Work: Work not in accordance with the Contract Documents;
 2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;
 3. Owner correction or completion Work: Work by Owner to correct defective Work or complete the Work in accordance with Section 5.15;
 4. Contractor's failure to perform: Contractor's failure to perform in accordance with the Contract Documents; or
 5. Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.
- B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor.

6.6 SUBSTANTIAL COMPLETION

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- A. Substantial Completion defined: Substantial Completion is the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities for the use for which it is intended. All Work other than incidental corrective or punch list work shall be completed. Substantial Completion shall not have been achieved if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

6.7 PRIOR OCCUPANCY

- A. Prior Occupancy defined; Restrictions: Owner may, upon written notice thereof to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.
- B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

6.8 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

- A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by a final inspection of the Work by Owner following receipt of (1) written notice from the Contractor that the Work is ready for final inspection and (2) a final Application for Payment. When the Owner finds the Work acceptable and fully performed under the Contract Documents and the Contractor has delivered to the Owner all warranties, permits, and operations manuals, the Owner will issue a Notice of Final Completion. In no case shall Final Completion constitute Final Acceptance which is a subsequent, separate, and distinct action.
- B. Final Acceptance defined: Final Acceptance shall be achieved when the Contractor has completed the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Prior to Final Acceptance, Contractor shall, in addition to all other requirements in the Contract Documents, submit to Owner a written notice of any outstanding disputes or claims between Contractor and any of its Subcontractors, including the amounts and other details thereof. Neither Final Acceptance, nor final payment, shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Final payment waives Claim rights: Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every act or omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

PART 7 - CHANGES

7.1 CHANGE IN THE WORK

- A. Changes in Work, Contract Sum, and Contract Time by Change Order: Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes in the Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time,

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an equitable adjustment shall be made as provided in Section 7.2 or 7.2A, respectively, and such adjustment(s) shall be incorporated into a Change Order.

- B. Owner may request COP from Contractor: If Owner desires to order a change in the Work, it may request a written Change Order Proposal (COP) from Contractor. Contractor shall submit a Change Order Proposal within 7 Days of the request from Owner, or within such other period as mutually agreed. Contractor's Change Order Proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.
- C. COP negotiations: Upon receipt of the Change Order Proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, or both, as provided in Sections 7.2 and 7.3, Owner may accept or reject the proposal, request further documentation, or negotiate acceptable terms with Contractor. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's approval. All Work done pursuant to any Owner-directed change in the Work shall be executed in accordance with the Contract Documents.
- D. Change Order as full payment and final settlement: If Owner and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.
- E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within 30 Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.
- F. Field Authorizations: The Owner may direct the Contractor to proceed with a change in the work through a written Field Authorization when the time required to price and execute a Change Order would impact the Project.

The Field Authorization shall describe and include the following:

1. The scope of work
2. An agreed upon maximum not-to-exceed amount
3. Any estimated change to the Contract Time
4. The method of final cost determination in accordance with the requirements of Part 7 of the General Conditions
5. The supporting cost data to be submitted in accordance with the requirements of Part 7 of the General Conditions

Upon satisfactory submittal by the Contractor and approval by the Owner of supporting cost data, a Change Order will be executed. The Owner will not make payment to the Contractor for Field Authorization work until that work has been incorporated into an executed Change Order.

7.2 CHANGE IN THE CONTRACT SUM

- A. Change Order Pricing - Fixed Price: When the fixed price or time and materials method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:
 1. Contractor's Change Order proposal, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets with documentation in a form approved by Owner.
 2. Any request for adjustment of Contract Sum shall include only the following items:

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- a. Craft labor costs for Contractors and Subcontractors.
 - 1) Basic wages and benefits: Hourly rates and benefits according to applicable prevailing wages.
 - 2) Direct supervision shall not to exceed 15% of the cost of direct labor. No supervision markup shall be allowed for a working supervisor's hours.
 - 3) Worker's Insurance. Direct contributions to the State for industrial insurance, medical aid, and supplemental pension by the class and rates established by L&I.
 - 4) Federal Insurance. Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.
 - 5) Safety and small tools: 4% of the sum of the amounts calculated in (1), (2), and (3) above.
- b. Material Costs: Material costs shall be developed from actual known costs, supplier quotations or standard industry pricing guides and shall consider all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.
- c. Equipment Costs: Itemization of the type of equipment and the estimated or actual length of time the equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for equipment only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. The Date Quest Rental Rate (Blue Book) shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed 50% of the applicable rate.
- d. Allowance for Overhead: This allowance shall compensate Contractor for all noncraft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time and any other cost incidental to the change in the Work. This allowance shall be strictly limited in all cases an amount not to exceed the following:
 - 1) For Contractor, for any Work actually performed by Contractor's own forces, 16% of the cost.
 - 2) For each Subcontractor (including lower tier subcontractors), for any Work actually performed by its own forces, 16% of the cost.
 - 3) For Contractor, for any Work performed by its Subcontractor(s), 6% of the amount due each Subcontractor.
 - 4) For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, 5% of the amount due the sub-Subcontractor.
- e. Allowance for Profit:
 - 1) For Contractor or Subcontractor of any tier for work performed by their forces, 5% of the cost developed in accordance with subsections a, b & c above.
 - 2) For Contractor or Subcontractor of any tier for work performed by a subcontractor of a lower tier, 5% of the Subcontractor cost.
- f. Insurance or Bond Premium: The costs of any change or additional premium of Contractor's liability insurance and public works bond arising directly from the changed Work. The costs of any change in insurance or bond premium shall be added after overhead and profit are calculated.
- g. Washington State sales tax as applicable.

B. Change Order Pricing - Unit Prices

1. Work on a unit-price basis as stated in the Specifications and at the price submitted in the Bid Form or as subsequently modified.
 - a. Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead and profit, and bond, insurance costs and retail sales tax; and
 - b. Quantities must be supported by field measurement verified by Owner.

7.3 CHANGE IN THE CONTRACT TIME

- A. The Contract Time shall only be changed by a Change Order. Contractor shall immediately notify Owner, and shall include any request for a change in the Contract Time in its Change Order proposal.

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- B. If the time of Contractor's performance is changed due to an act of Force Majeure, Contractor shall request for an equitable adjustment in the Contract Time in writing within 24-hours of the occurrence.

PART 8 - CLAIMS AND DISPUTE RESOLUTION

8.1 CLAIMS PROCEDURE

- A. Claim is Contractor's remedy: If the parties fail to reach agreement on the terms of any Change Order for Owner-directed Work as provided in Part 7.1, or on the resolution of any request for an equitable adjustment in the Contract Sum as provided in Part 7.2 or the Contract Time as provided in Part 7.3, Contractor's only remedy shall be to file a Claim with Owner as provided in this section.
- B. Claim filing deadline for Contractor: Contractor shall file its Claim within 30 Days from Owner's final offer made in accordance with Part 7.1E, or by the date of Final Acceptance, whichever occurs first.
- C. Claim must cover all costs and be documented: The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may be entitled. It shall be fully substantiated and documented. At a minimum, the Claim shall contain the following information:
 - 1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and time, if any, providing all necessary dates, locations, and items of Work affected by the Claim;
 - 2. Dates: The date on which facts arose which gave rise to the Claim;
 - 3. Owner and A/E employees knowledgeable about Claim: The name of each employee of Owner or A/E knowledgeable about the Claim;
 - 4. Support from Contract Documents: The specific provisions of the Contract Documents which support the Claim;
 - 5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;
 - 6. Copies of supporting documentation: Copies of any identified documents, other than the Contract Documents, that support the Claim;
 - 7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought: the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted; and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time;
 - 8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories set forth in, and in the detail as required by Part 7.2; and
 - 9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is liable.
- D. Owner's response to Claim filed: After Contractor has submitted a fully documented Claim that complies with all applicable provisions of Parts 7 and 8, Owner shall respond, in writing, to Contractor with a decision within 30 Days from the date the Claim is received.
- E. Owner's review of Claim and finality of decision: To assist in the review of Contractor's Claim, Owner may visit the Project site, or request additional information, in order to fully evaluate the issues raised by the Claim. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim, unless Contractor follows the procedure set forth in Part 8.2.
- F. Waiver of Contractor rights for failure to comply with this Section: Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless timely made in accordance with the requirements of this Section.

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8.2 ARBITRATION

- A. Timing of Contractor's demand for arbitration: If Contractor disagrees with Owner's decision rendered in accordance with Part 8.1D, Contractor shall provide Owner with a written demand for arbitration. No demand for arbitration of any such Claim shall be made later than 30 Days after the date of Owner's decision on such Claim; failure to demand arbitration within said 30 Day period shall result in Owner's decision being final and binding upon Contractor and its Subcontractors.
- B. Filing of Notice for arbitration: Notice of the demand for arbitration shall be filed with the American Arbitration Association (AAA), with a copy provided to Owner. The parties shall negotiate or mediate under the Voluntary Construction Mediation Rules of the AAA, or mutually acceptable service, before seeking arbitration in accordance with the Construction Industry Arbitration Rules of AAA as follows:
 - 1. Claims less than \$30,000: Disputes involving \$30,000 or less shall be conducted in accordance with the Northwest Region Expedited Commercial Arbitration Rules; or
 - 2. Claims greater than \$30,000: Disputes over \$30,000 shall be conducted in accordance with the Construction Industry Arbitration Rules of the AAA, unless the parties agree to use the expedited rules.
- C. Arbitration is forum for resolving Claims: All Claims arising out of the Work shall be resolved by arbitration. The judgment upon the arbitration award may be entered, or review of the award may occur, in the superior court having jurisdiction thereof. No independent legal action relating to or arising from the Work shall be maintained.
- D. Owner may combine Claims into same arbitration: Claims between Owner and Contractor, Contractor and its Subcontractors, Contractor and A/E, and Owner and A/E shall, upon demand by Owner, be submitted in the same arbitration or mediation.
- E. Settlement outside of arbitration to be documented in Change Order: If the parties resolve the Claim prior to arbitration judgment, the terms of the resolution shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of the Claim, including all claims for time and for direct, indirect, or consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity.

8.3 CLAIMS AUDITS

- A. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.
- B. Contractor to make documents available: In support of Owner audit of any Claim, Contractor shall, upon request, promptly make available to Owner the following documents:
 - 1. Daily time sheets and supervisor's daily reports;
 - 2. Collective bargaining agreements;
 - 3. Insurance, welfare, and benefits records;
 - 4. Payroll registers;
 - 5. Earnings records;
 - 6. Payroll tax forms;
 - 7. Material invoices, requisitions, and delivery confirmations;
 - 8. Material cost distribution worksheet;
 - 9. Equipment records (list of company equipment, rates, etc.);
 - 10. Vendors', rental agencies', Subcontractors', and agents' invoices;
 - 11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;
 - 12. Subcontractors' and agents' payment certificates;
 - 13. Cancelled checks (payroll and vendors);
 - 14. Job cost report, including monthly totals;
 - 15. Job payroll ledger;
 - 16. Planned resource loading schedules and summaries;
 - 17. General ledger;
 - 18. Cash disbursements journal;

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19. Financial statements for all years reflecting the operations on the Work. In addition, the Owner may require, if it deems it appropriate, additional financial statements for 3 years preceding execution of the Work;
 20. Depreciation records on all company equipment whether these records are maintained by the company involved, its accountant, or others;
 21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;
 22. All nonprivileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in Contract Sum or Contract Time sought by each Claim;
 23. Work sheets or software used to prepare the Claim establishing the cost components for items of the Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents which establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals; and
 24. Work sheets, software, and all other documents used by Contractor to prepare its bid.
- C. Contractor to provide facilities for audit and shall cooperate: The audit may be performed by employees of Owner or a representative of Owner. Contractor, and its Subcontractors, shall provide adequate facilities acceptable to Owner, for the audit during normal business hours. Contractor, and all Subcontractors, shall make a good faith effort to cooperate with Owner's auditors.

PART 9 - TERMINATION OF THE WORK

9.1 TERMINATION BY OWNER FOR CAUSE

- A. 7 Day Notice to Terminate for Cause: Owner may, upon Notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:
1. Contractor fails to prosecute Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;
 2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
 3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;
 4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;
 5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;
 6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or
 7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.
- B. Owner's actions upon termination: Upon termination, Owner may at its option:
1. Take possession of Project site: Take possession of the Project site and take possession of or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;
 2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Part 5.20; and
 3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.
- C. Surety's role: Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.
- D. Contractor's required actions: When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in Part 9.2B, and shall not be entitled to receive further payment until the Work is accepted.
- E. Contractor to pay for unfinished Work: If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for A/E's services and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess

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shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. These obligations for payment shall survive termination.

- F. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.
- G. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances set forth in Part 9.1A exist, then such termination shall be deemed a termination for convenience pursuant to Part 9.2.

9.2 TERMINATION BY OWNER FOR CONVENIENCE

- A. Owner Notice of Termination for Convenience: Owner may, upon Notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.
- B. Contractor response to termination Notice: Unless Owner directs otherwise, after receipt of a Notice of termination for either cause or convenience, Contractor shall promptly:
 - 1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;
 - 2. No further orders or Subcontracts: Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;
 - 3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;
 - 4. Assign orders and Subcontracts to Owner: Assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts;
 - 5. Take action to protect the Work: Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property related to this Project in the possession of Contractor in which Owner has an interest; and
 - 6. Continue performance not terminated: Continue performance only to the extent not terminated
- C. Terms of adjustment in Contract Sum if Contract terminated: If Owner terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.
- D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

PART 10 - MISCELLANEOUS PROVISIONS

10.1 GOVERNING LAW

- A. Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the laws of the state of Washington. Venue shall be in the county in which Owner's principal place of business is located, unless otherwise specified.

10.2 SUCCESSORS AND ASSIGNS

- A. Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Work without written consent of the other, except that Contractor may assign the Work for security purposes, to a bank or lending institution authorized to do business in the state of Washington. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

GENERAL CONDITIONS

10.3 MEANING OF WORDS

- A. Meaning of words used in Specifications: Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in these Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such articles as are shown on the drawings, or required to complete the installation.

10.4 RIGHTS AND REMEDIES

- A. No waiver of rights: No action or failure to act by Owner or A/E shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall action or failure to act constitute approval or an acquiescence in a breach therein, except as may be specifically agreed in writing. Waiver of any provision of the Contract Documents shall not be construed to be a modification of the such provisions, unless the Contract Documents are modified pursuant to the Clause entitled "Contract Modifications" herein.
- B. If any provision of the Contract Documents is or becomes void or unenforceable by operation of law, the remaining provisions shall be valid and enforceable.

10.5 TIME COMPUTATIONS

- A. Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

10.6 RECORDS RETENTION AND REPORTING

- A. Record keeping: The Contractor and all Subcontractors shall maintain accounts and records in accordance with State Auditor's procedures, including personnel, property, financial and programmatic records which sufficiently and properly reflect all direct and indirect costs of any nature expended and services performed in the performance of the Contract Documents and other such records as may be deemed necessary by the Owner to ensure proper accounting for all funds contributed by the Owner to the performance of the Contract Documents and compliance with this Contract.
- B. Six year records retention period: Contractor and its Subcontractors shall maintain these records for a period of not less than 6 years after the date of Final Acceptance.

10.7 THIRD-PARTY AGREEMENTS

- A. No third party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between: A/E and Contractor; Owner and any Subcontractor; or any persons other than Owner and Contractor. Contractor is an independent contractor with respect to the Work. Nothing in the Contract Documents shall be considered to create a relationship of employer and employee between the parties hereto. Neither the Contractor nor any employee of the Contractor shall be entitled to any benefits accorded Owner employees by virtue of the services provided. The Owner shall not be responsible for withholding or otherwise deducting federal income tax or social security or contributing to the State Industrial Insurance Program, or otherwise assuming the duties of an employer with respect to the Contractor, or any employees of the Contractor.

10.8 ANTITRUST ASSIGNMENT

- A. Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance with the Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and

GENERAL CONDITIONS

which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its sub- Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

10.9 AUDITS AND INSPECTIONS

- A. The records and documents with respect to all matters covered by the Contract Documents shall be subject at all times to inspection, review or audit by the Owner or any other government agency so authorized by law during the performance of the Work. The Owner shall have the right to an annual audit of the Contractor's financial statement and condition.

10.10 ORGANIZATION CONFLICTS OF INTEREST

- A. The Contractor warrants that, to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under the Contract Documents and the Contractor's organizational, financial, contractual or other interests are such that:
 - 1. Award of the Work may result in an unfair competitive advantage; or
 - 2. The Contractor's objectivity in performing the Work may be impaired.
- B. The Contractor agrees that if after award it discovers an organizational conflict of interest with respect to performance of the Work, it shall make an immediate and full disclosure in writing to the Contracting Officer, which shall include a description of the action the Contractor has taken or intends to take to eliminate or neutralize the conflict. The Owner may, however, terminate the Work if it deems the action to be in the best interest of the Owner.
- C. In the event the Contractor was aware of an organizational conflict of interest before the award of this Contract and intentionally did not disclose the conflict to the Contracting Officer, the Owner may terminate the Work for cause.
- D. The provisions of this Section 10.11 shall be included in all subcontracts and consulting agreements wherein the work to be performed is similar to the services provided by the Contractor. The Contractor shall include in such subcontracts and consulting agreements any necessary provisions to eliminate or neutralize conflicts of interest.

10.11 INTERESTS OF MEMBERS OF CONGRESS

- A. No member of or delegate to the Congress of the United States of America shall be admitted to any share or part of the Contract Documents or to any benefit to arise therefrom, but this provision shall not be construed to extend to the Contract Documents if made with a corporation for its general benefit.

10.12 HEADINGS AND CAPTIONS

- A. Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

SECTION 01 10 00
SUMMARY

PART 1 GENERAL

- 1.1 Conform to the requirements of Division 00 and Division 01, including the General Conditions, Special Conditions, and Supplementary Conditions of the Contract.
- 1.2 CONTRACT DESCRIPTION: EARTHWORK AND UTILITY WORK
- A. The Project site is a single, developed lot in Kirkland, Washington with twenty-five existing wood-framed apartment buildings with 179 residential units, demolition of one existing community/office building, and two existing utility buildings as illustrated on the drawings identified as bidding and/or construction drawings. The existing wood frame structures will be renovated per the drawings identified as bidding and/or construction drawings, three new buildings will be constructed as part of the scope of work including two 24 unit apartment buildings, Buildings 26 and 27, and a new Community Building, Building 28, to be constructed on the site of the current Community and Laundry Buildings as illustrated on the drawings identified as bidding and/or construction drawings.
1. sitework and utility work;
 2. site specialties and landscaping work;
 3. concrete footings, slabs-on-grade, and cast in place concrete;
 4. Type 5-A construction.
 5. the balance of building construction including MEP, and fire sprinkler work shown on the drawings and specified herein.
- B. Perform Work of Contract under a stipulated sum amount contract with Owner in accordance with Conditions of Contract.
- C. First-class workmanship is expected; that is not intended to demand "deluxe" work, but only to guard against and prevent poor workmanship.
1. Before installing any item or material, verify that receiving surfaces are plumb, level, true to line, and straight to the degree necessary to achieve tolerances specified or required. Perform without extra cost all shimming, blocking, grinding, or patching required to make such surfaces plumb, level, true to line, and straight.
 2. Take care in attention to details and fitting at intersections and junctures of materials. All joints are to be tight, straight, even, and smooth.
- D. Work of each separate Contract, if any, is identified on Drawings.

1.3 WORK SEQUENCE

- A. The Work shall be completed in 1,000 calendar days commencing on July 5, 2023.
- B. The Work shall meet below sequencing requirement.
1. New Construction
 - a. Begin two new residential buildings on 7/5/2023
 - b. Complete two new residential buildings no later than 11/30/2024
 - c. Complete community building no later than 12/31/24
 2. Rehab
 - a. Begin with Buildings 10 and 11 as soon as you can.
 - b. Only one Townhome 4-plex can be empty for rehab at a time (Buildings 9, 15, 17, 19, 23).
 - c. Additional buildings will be made available for rehab as new units are placed in service post rehab and post new construction. To the extent that additional vacancies allow us to empty more buildings, we will make those buildings available for rehab.
 - d. Complete at least 54 units of rehab (including additional 3rd floor units) by 11/30/24
 - e. Complete at least 206 units of rehab (including all additional 3rd floor units) by 12/31/25
 - f. Complete all work by 3/31/26
 - g. The following buildings on each line are paired for purposes of new electrical transformers, so they should be rehabbed at the same time.
 - Building 2 Building 3
 - Building 4 Building 5
 - Building 6 Building 7
 - Building 10 Building 11
 - Building 13 Building 17
 - Building 15 Building 16
 - Building 18 Building 19
 - Building 20 Building 21
 - Building 22 Building 24
 - Building 23 Building 25
 - Building 26 Building 27
 - h. The order of buildings to be rehabbed after the first two is up to the contractor, although we need to be given at least 130 days' notice prior to the contractor needing the building so that we can give tenants adequate notice.

PART 2 WORK BY OWNER

- A. Items noted NIC (Not in Contract) on the drawings.
- B. Items noted "By Owner" on the drawings.
- C. Fixtures, furniture, and equipment (FFE) unless identified on the drawings.

2.2 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: Owner may award a separate contract for performance of certain construction operations at Project site. Those operations may be conducted simultaneously with work under this Contract.
- B. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract
- C. PV infrastructure and coordination are included in the GC scope of work. PV Systems will be installed under a separate contract.

2.3 OWNER SUPPLIED PRODUCTS

- A. Products furnished to site and installed “by Owner”, and items furnished by Owner for installation by Contractor (FOIC) will be identified within these Contract Documents, or by addendum during the bid period, or by change proposal and change order after the signing of the Contract for Construction.
- B. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
 - 2. Arrange and pay for 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.

2.4 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Construction Operations: Public rights-of-way beyond the property boundaries are not controlled by the Owner and, with the exception of specific work outside the property boundaries indicated on the drawings, may be used for construction purposes only if arranged by the Contractor.
- B. Use of Existing Building: Repair damage caused by construction operations. Protect property, the buildings, and occupants during construction period.
- C. Parking Policy: Contractor shall request construction related parking and Owner will review and monitor onsite parking to minimize impact to remaining residents. As work requirements change the parking and lay down areas will be reevaluated and adjusted as needed.
- D. Access Routes and Laydown/Staging Areas: Contractor shall coordinate location of all access routes and laydown/staging areas with Owner. Keep driveways and entrances serving premises clear and available to residents and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
- E. Utility Outages and Shutdown: To the extent that privately-owned adjacent properties are served by public utility companies, coordinate planned outages with those utility companies.

- F. Cleanup: Construction materials and areas shall be fenced off and secured at the end of each day. Debris shall be removed daily.

2.5 LIQUIDATED DAMAGES

- A. Liquidated damages will be assessed for each calendar day that the Contractor exceeds the time for substantial completion in the amount of \$2,000.

PART 3 PRODUCTS (not applicable)

PART 4 EXECUTION (not applicable)

END OF SECTION

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 Conform to the requirements of Division 00 and Division 01, including the General Conditions, Special Conditions, and Supplementary Conditions of the Contract.

1.2 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary lighting for construction purposes.
 - 3. Temporary heating.
 - 4. Temporary ventilation.
 - 5. Telephone service.
 - 6. Facsimile service.
 - 7. Temporary water service.
 - 8. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Construction aids.
 - 2. Field offices and sheds.
 - 3. Vehicular access.
 - 4. Progress cleaning and waste removal.
 - 5. Project identification.
 - 6. Traffic regulation.
 - 7. Fire prevention facilities.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Security.
 - 3. Water control.
 - 4. Dust control.
 - 5. Erosion and sediment control: refer to Section 01 57 13.
 - 6. Noise control.
 - 7. Pollution control.
 - 8. Rodent control.
- D. Protection of property.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

Comply with federal, state, city, and all local codes and regulations.

1.4 TEMPORARY ELECTRICITY:

- A. The Owner will allow the Contractor to use current electrical service to the site for construction operations.
- B. Complement existing power service capacity, if any, and characteristics as required for construction operations.
- C. Provide distribution equipment, wiring, outlets, and branch circuits for power and lighting—as required by governing codes and as required for construction operations.

1.5 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain lighting for construction operations.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide and maintain lighting to interior work areas after dark for security purposes.

1.6 TEMPORARY HEATING

- A. Provide and pay for heating devices and heat as needed to maintain specified conditions for construction operations. Permanent heating system may not be used for construction purposes.
- B. Prior to operation of ~~permanent~~ equipment for temporary heating purposes, verify installation is approved for operation, equipment is lubricated and filters are in place. Upon installation, seal all permanent ducts and vents to minimize contamination during construction. Take precautions to prevent construction dust from entering permanent ductwork and equipment. Remove any seals after construction is completed.

1.7 TEMPORARY VENTILATION

Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases. Permanent heating system may not be used for construction purposes. Upon installation, seal all permanent ducts and vents to minimize contamination during construction. Take precautions to prevent construction dust from entering permanent ductwork and equipment. Remove any seals after construction is completed.

1.8 TELEPHONE SERVICE

Provide, maintain, and pay for telephone service to field office at time of project mobilization.

1.9 TEMPORARY WATER SERVICE

The Owner will allow the Contractor to use current water service to the site for construction operations.

1.10 TEMPORARY SANITARY FACILITIES

Provide and maintain required facilities and enclosures. Provide facilities at time of project mobilization.

1.11 CONSTRUCTION AIDS

- A. Provide construction aids and equipment required by personnel to facilitate execution of work. Include scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, protective enclosures, and other such facilities and equipment. Refer to respective sections for particular requirements for each trade.
- B. As applicable, when permanent stair framing is in place, provide temporary treads, platforms and railings, for use by construction personnel.
- C. Maintain all facilities and equipment in a first class condition.

1.12 FIELD OFFICES AND SHEDS

- A. Provide Field Office: Weather tight, with lighting, electrical outlets, and heating equipment. Provide facilities at time of project mobilization.
- B. Field Office limited to 20'x8' trailer.
- C. Owner will provide space for Project meetings.
- D. Removal: At completion of Work remove temporary buildings, foundations, utility services, and debris from the construction site and the adjacent paved parking lots.

1.13 VEHICULAR ACCESS

- A. Construct temporary all-weather access from public thoroughfares or the onsite parking areas to serve construction area, of width and load bearing capacity to accommodate unimpeded traffic for construction purposes. Refer to TESC Plan in the drawings.
- B. Construct tire-wash area to remove mud from vehicle wheels before entering streets. Take precautions to prevent silty water from entering existing catch basins in the parking lot.
- C. Provide unimpeded access for emergency vehicles.
- D. Provide and maintain access to fire hydrants and control valves free of obstructions.

1.14 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in 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 spaces.

1.15 TRAFFIC REGULATION

- A. Signs, Signals, And Devices:
 - 1. Post Mounted and Wall Mounted Traffic Control and Informational Signs: As required and approved by authority having jurisdiction.
 - 2. Traffic Cones and Drums, Flares and Lights: As approved by authority having jurisdiction.
 - 3. Flag person Equipment: As required by authority having jurisdiction.
- B. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
- C. Haul Routes: If required by permit conditions, develop plan and obtain approval from authority having jurisdiction identifying public thoroughfares to be used for haul routes and site access.
- D. Removal: Remove equipment and devices when no longer required. Repair damage caused by installation.

1.16 FIRE PREVENTION FACILITIES

- A. Kirkland Heights Apartments is a No Smoking property. Refer to on-site property management for No Smoking Policy for details.

- B. Establish fire watch for cutting and welding and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- C. Develop and supervise a comprehensive fire prevention and fire protection program. Instruct personnel in the methods and procedures of the program. Post warnings and information and enforce strict discipline. Review needs with local fire department and establish procedures to be followed. Maintain unobstructed access to extinguishers, hydrants, stairways, and other escape routes and access routes for firefighting.
- D. Provide one fire extinguisher at each stair on each floor of buildings under construction and/or demolition.
- E. Provide minimum one fire extinguisher in every construction trailer and storage shed.

1.17 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.18 SECURITY

- A. Security Program:
 - 1. Protect Work, and existing premises from theft, vandalism, and unauthorized entry.
 - 2. Initiate program at project mobilization.
 - 3. Maintain program throughout construction period until Owner occupancy.
- B. Entry Control:
 - 1. Restrict entrance of unauthorized persons and vehicles into Project site and existing facilities. Allow entrance only to authorized persons with proper identification.
 - 2. Maintain log of workers and visitors, make available to Owner on request.

1.19 WATER CONTROL

- 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.

1.20 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.21 EROSION AND SEDIMENT CONTROL

Refer to the permitted drawings and specifications.

1.22 NOISE CONTROL

Provide methods, means, and facilities to minimize noise from, and noise produced by, construction operations.

1.23 POLLUTION CONTROL

A. 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.

B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.24 Rodent Control: Provide methods, means & facilities to prevent rodents from accessing or invading the areas under the control of the Contractor.

1.25 PROTECTION OF PROPERTY

A. Protection of work and existing property:

1. Protect existing structures, property, landscaping and other surface improvements from damage, including but not limited to sidewalks, driveways, curbs, pavements, utilities, adjoining property and structures. Provide bracing, shoring, or other means necessary for such protection.
2. Prevent dust or debris from entering into adjacent areas. Take measures necessary to avoid tracking dust and mud onto adjacent streets and site finishes.
3. All damage resulting from the Work of this Contract, whether inside or outside the Limits of Work, and whether private, public, or franchise utility property, shall be repaired/replaced by this Contractor to a condition equal to or better than that existing prior to the damage with no increase to the Contract Amount.
4. The location of fences, trees and other landscaping, and other objects shown on the survey or the drawings is provided solely to provide the probable location of such object(s), and may not be precise or complete. Contractor shall confirm exact locations before beginning the Work.

B. Minimize disruption to adjacent property owners. Repair impacted property and/or facilities when damage is done.

- C. Maintain existing utility services to adjacent buildings. Schedule and conduct the Work to avoid shutdowns and interferences of services to adjacent property owners.
- D. Protection of roadways and sidewalks:
 - 1. Protect from damage existing sidewalks, curbs, gutters, aprons, driveways and other pavements. Install cribbing, wood or metal sheeting, or other such measures to minimize damage.
 - 2. Maintain existing illumination patterns for signs and roads at all times.
 - 3. Maintain existing signage at all times.
- E. Protection of existing utilities:
 - 1. Protect all existing utilities, both above and below ground, whether identified or unknown, from damage. Notify Owner and immediately of utilities encountered that were not identified on the drawings.
 - 2. Above and below ground utilities not identified on the drawings may be encountered during the course of the Work. The Contractor shall coordinate with, and pay the costs associated with, a utility locating service (see below). Existing utilities shown on the drawings represent the best information available and are based upon recorded information available to the property surveyor, or from information provided by the owners of underground facilities. Also, other work in the area may have recently installed utilities that are not shown on the Contract Documents.
 - 3. Contractor shall contact utility companies in the vicinity of this Work. No construction shall begin until utilities within and adjacent to these Limits of Work have been located and marked.
 - 4. At least two days, and not longer than ten business days prior to commencing excavation work on this site, the Contractor shall notify the Underground Utilities Location Center of the planned excavation and its schedule. The Contractor shall also notify utility providers directly who are not part of the One-Call system for locations of their facilities and/or equipment.
 - 5. All utility components that are buried (valves, manholes, vaults, or pull boxes) shall be conspicuously marked by the Contractor to allow their location to be determined by other utility personnel under adverse conditions (inclement weather or darkness). Stake end points of underground components. Color code and mark stakes to clearly identify utility types.
 - 6. If utility conflicts occur, the Contractor shall proceed with construction in other areas of the Work. In the event utilities are damaged during construction, temporary repairs must be made immediately to maintain continuity of services. Under no circumstances shall damaged utility service be left unrepaired overnight.
 - 7. In addition to marking utilities at the beginning of the Work, the Contractor shall record underground utilities on the work site after the completion of the Work.
- F. Power, Telephone and CATV lines:
 - 1. If relocation of power lines becomes necessary, Contractor shall coordinate and pay all costs of such relocation. Contractor(s) to maintain

as a minimum all Washington State Labor and Industry safety clearances.

2. Contractor shall notify the appropriate communications company one week prior to work in the vicinity of overhead lines.

H. Archaeological and historic objects:

1. All cultural resources, including isolated artifacts as well as significant historic property, shall be avoided and, if discovered, shall be actively protected to the greatest extent possible. Such resources include archaeological or historic objects such as ruins, sites, buildings, artifacts, fossils, human remains of any age, or other such objects of antiquity that may have significance from a historic or scientific standpoint.
2. At the Contractor's option, a training session can be arranged at the beginning of Work on site to brief construction personnel on cultural resource issues. The training will be led by a qualified professional archaeologist and will include information on the legal context of cultural resources protection, and on the prehistoric, ethnographic, and historic cultural resources likely to be present. The primary goal of the training will be to familiarize personnel with the procedures to be followed in the event of discovery of cultural material, and to provide contact protocols. The training will include examples and explanations of how to recognize archaeological materials.
3. If any evidence is found or unearthed that matches the criteria, immediately do the following:
 - a. Stop work in the vicinity of the discovery.
 - b. Contact the Owner, who will in turn contact a qualified Archaeological Consultant for a site assessment.
 - c. Protect the discovery from additional disturbance, and secure the discovery area (cover with a tarp to protect from weather, flag with caution tape to keep unauthorized persons from the discovery, etc.).
 - d. Expand or shrink the boundaries of the discovery area depending upon the assessment by the Consultant.
 - e. Do not resume work within the boundary until notified by the Owner and Consultant in writing that it is proper to do so.
4. Do not pick up, excavate, or otherwise disturb cultural objects or deposits. Collection of artifacts by the Contractor's personnel or any others with access to the worksite will not be tolerated.
5. If the discovery includes human remains, whether burials or isolated teeth or bones, or if other mortuary items are discovered, proceed as follows in addition to the above:
 - a. Do not photograph remains or artifacts.
 - b. Secure and protect the site as described in 3.c above and report the presence and location of these remains to the project Superintendent. The Superintendent will report the presence and location of these remains to the Owner and King County Sheriff, who will contact the Medical Examiner (ME). The ME will assume

jurisdiction over the skeletal remains and make a determination of whether those remains are forensic or non-forensic.

6. Claims for an increase in the Contract Sum and/or the Contract Time related to the discovery of archaeological or historic objects may be brought by the Contractor in accordance with Section 01 26 00 - Contract Modification Procedures.

1.26 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials, prior to Substantial Completion inspection.
- B. Remove abandoned underground installations to minimum depth of 2 feet. Grade site as indicated on Drawings.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

GENERAL

1.1 SUMMARY

- A. Work under this section includes the complete finish hardware requirements for the project. Quantities listed are for the contractor's convenience only and are not guaranteed. Items not specifically mentioned, but necessary to complete the work shall be furnished, matching the items specified in quality and finish.
- B. Related Sections:
 - 1. Section 08 16 00 Molded Composite Doors
 - 2. Section 08 16 13 Fiberglass Doors

1.2 QUALITY ASSURANCE

- A. Product Qualification:
 - 1. To assure a uniform high quality of materials for the project, it is intended that only specified items be furnished. Comparable products may be accepted upon prior approval of architect.
 - 2. Hardware to be new, free of defects, blemishes and excessive play. Obtain each kind of hardware (Mechanical latch and locksets, exit devices, hinges and closers) from one manufacturer except where specified.
 - 3. Fire-Rated opening in compliance with NFPA80. Hardware UL10C/UBC-7-2 (positive pressure) compliant for given type/size opening and degree of label. Provide proper latching hardware, non-flaming door closers, approved bearing hinges and smoke seal. Furnish openings complete.
- B. Supplier Qualifications:
 - 1. Hardware supplier will be a direct factory contract supplier who employs a certified Architectural Hardware Consultant (AHC) available at all reasonable times during the course of the work for project hardware consultation to owner, architect and contractor.
 - 2. Supplier will be responsible for detailing, scheduling and ordering of finish hardware.
 - 3. Conduct pre-installation conference at jobsite. Initiate and conduct with supplier, installer and related trades. Coordinate materials and techniques and sequence complex hardware items and systems installation.
 - 4. Key Conference shall be initiated and conducted with owner to determine system, keyway(s) and structure.

C. Installer Qualifications:

1. Installer to have not less than 3 years' experience specializing in installation of work in this section. Company must maintain qualified personnel trained and experienced in installing hardware.

1.3 REFERENCES

- A. NFPA80 – Fire Doors and Windows
- B. NFPA101 – Life Safety Code
- C. NFPA105 – Smoke and Draft Control Door Assemblies
- D. ANSI A117.1 Accessible and Usable Buildings and Facilities

1.4 SUBMITTALS

- A. Hardware schedule: Submit digital copies of schedule. Organize vertically formatted schedule into Hardware Sets with index of doors and headings, indication complete designations of every item required for each door or opening. Include the following:
 1. Type, style, function, size, quantity and finish of hardware items.
 2. Name, part number and manufacture of each item.
 3. Fastenings and other pertinent information.
 4. Explanation of abbreviations, symbols and codes contained in schedule.
 5. Door and frame sizes, materials and degrees of swing.
- B. Product Data: Submit digital copies for each product indicated.
- C. Templates: Obtain and distribute templates for doors, frames, and other works specified to be prepared for installing door hardware.
- D. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.
- E. Keying Schedule: Prepared by or under the supervision of supplier, after receipt of the approved finish hardware schedule, detailing Owner's final keying instructions for locks.
- F. Samples: Upon request submit material samples.
- G. THE SPECIFICATION WRITER MUST APPROVE ALL SUBMITTALS BEFORE ORDERS CAN BE PLACED.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle and protect products to project site under provisions of Division 1 and as specified herein.

- B. Tag each item or package separately, with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver keys to Owner by registered mail.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Years from date of Substantial Completion, for durations indicated.
 - a. Closers: Thirty years mechanical, two years electrical
 - b. Exit Devices: Three years mechanical, one year electrical
 - c. Locksets: Ten years(ND), three years (everything else), one year electrical

PRODUCTS

2.1 MATERIAL AND FABRICATION

- A. Provide all door hardware for complete work, in accordance with the drawings and as specified herein.
- B. Provide items and quantities not specifically mentioned to ensure a proper and complete operational installation. Include 1,000 key fobs for owner customization.

2.2 MANUFACTURERS

- A. Approval of products from manufacturers indicated as "Acceptable Manufacturer" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

| ITEM | SCHEDULED MANUFACTURER | ACCEPTABLE MANUFACTURER |
|------------------------------------|------------------------|-------------------------|
| Hinges | Ives (IVE) | Hager, Bommer |
| Flush Bolts & Coordinators | Ives (IVE) | Burns, Rockwood |
| Locksets & Deadlocks | Schlage (SCH) | No sub. |
| Aluminum Door Locks - Narrow Style | Adams Rite (ADA) | None |
| Exit Devices & Mullions | Von Duprin (VON) | No Sub. |
| Electric Strikes | Von Duprin (VON) | Trine, SDC |

| | | |
|---------------------------|---------------------|---------------------|
| Power Supplies | Von Duprin (VON) | No Sub. |
| Cylinders & Keying | Schlage (SCH) | Everest 29 S keyway |
| Door Closers | LCN (LCN) | No sub |
| Automatic Operators | LCN (LCN) | Norton, Besam |
| Door Trim | Ives (IVE) | Trimco, Burns |
| Protection Plates | Ives (IVE) | Trimco, Burns |
| Overhead Stops | Glynn-Johnson (GLY) | Rixson, Sargent |
| Thresholds & Weatherstrip | Zero (ZER) | NGP, Reese, Pemko |

2.3 HANGING

- A. Conventional Hinges: Hinge open width minimum, but of sufficient throw to permit maximum door swing. Steel or stainless steel pins:
1. Three hinges per leaf to 7 feet, 6-inch height. Add one for each additional 30 inches in height or any fraction thereof.
 1. Provide 4 ½ x 4 ½ for 1 ¾" thick doors up to 3'5". Provide 5 x 4 ½ on doors 36" and over.
 2. Exterior outswing doors to have non removable (NRP) pins.
 3. Pin tips, flat button, finish to match leaves
 4. Interior doors over 36" – Heavy weight
 5. Interior doors up to 36" – Standard weight

2.4 LOCKSETS, LATCHSETS, DEADBOLTS

- A. Heavy Duty Mortise Locks and Latches: Schlage L9000 Series
1. Provide mortise locks certified as ANSI A156.13, Grade 1 Operational, Grade 1 Security.
 2. Provide lock case that is multi-function and field reversible for handing without opening case, and manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
 3. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
 4. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
 5. Provide electrified options as scheduled in the hardware sets.
 6. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
 - a. Lever Design: Schlage 06A
- B. Extra Heavy Duty Cylindrical Locks and Latches: Schlage ND Series

1. Provide cylindrical locks conforming to ANSI A156.2 Series 4000, Grade 1.
2. UL listed for A label and lesser class single doors up to 4ft x 8ft.
3. Meets A117.1 Accessibility Codes.
4. Provide solid steel rotational stops to control excessive rotation of lever.
5. Provide completely refunctionable lockset that allows lock function to be changed to over twenty other common functions by swapping easily accessible parts.
6. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
7. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
8. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
9. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
10. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.

a. Lever Design: Schlage Sparta

C. Standalone Electronic Locksets: Schlage Electronics NDE series

D. Electronic Deadbolt Schlage FE410 series

1. Provide interconnected locksets with electronic deadbolt conforming to ANSI/BHMA A156.12, Grade 2 requirements, with simultaneous retraction of deadbolt and latch for single-operation egress, and certified by UL for 3-hour fire resistance rating.
 2. Provide locks adjustable for 2-3/8 inches (60 mm) or 2-3/4 inches (70 mm) backset with 1/2 inch (13 mm) throw latchbolt and 1-inch throw deadbolt.
 3. Door Thickness: Locksets adjustable to fit in 1-3/8 inches (35 mm) or 1-3/4 inches (44 mm) door thickness.
 4. Strikes shall be standard 1-1/8-inches x 2-3/4-inches square corner strikes, unless extended-lip strikes are required for protection of trim.
 5. Provide AA battery operated interconnected lockset, supporting smart credential technology.
 6. Programming via mobile application through Bluetooth® connection.
 7. Coordinate with door supplier for proper preparation of the unit door. 5 1/2" or 4" center-to-center (CTC) spacing between deadbolt and passage level. Order product accordingly as product is not field reversible.
1. **NOTE:** Hardware supplier is asked to contact Michael Conn, Schlage Multi-Family Consultant, as to coordinate with the general contractor and access control provider to insure a non-proprietary card reader is used. This will ensure the use of the Schlage 9651T MIFARE Smart fob, used on the unit entry locks, can work in both operating systems. If done so, the resident is not required to carry two fobs/credentials in accessing the building and resident unit entry. Coordination with access control provider required to insure compatibility. Recommend the use of Schlage Multi-Technology card readers on common area access control system.

E. ADD FOR TRAINING- 2-hour minimum site training. Coordinate site training with Michael Conn, Schlage Lock.

F. USE ENGAGE SOFTWARE

G. Tubular Locksets: Schlage F Series

1. Provide tubular locks conforming to ANSI A156.2 Series 4000, Grade 2.
2. Provide locks with standard 2-3/8 inches (60 mm) adjustable to 2-3/4 inches (70 mm) backset with 1/2 inch (13 mm) latch throw. Provide 2 3/4 inches (70 mm) backset, unless 2-3/8 inches (60 mm) is required by door or frame detail, or noted otherwise.
3. Provide locksets that fit standard 2-1/8 inches (54 mm) diameter bore without use of thru-bolts.
4. Standard Rose Size: 2-1/2 inches (64 mm) in diameter.
5. Door Thickness: Locksets adjustable to fit in 1-3/8 inches (35 mm) or 1-3/4 inches (44 mm) door thickness.
6. Provide standard T-strikes unless extended lip strikes are necessary to protect trim.
7. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.
 - a. Lever Design: Schlage ELA

2.5 EXIT DEVICES

A. Panic and Fire Rated Exit Devices: Von Duprin 98/99 Series

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1, AND UL listed for Panic Exit or Fire Exit Hardware.
2. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
3. Quiet Operation: Incorporate fluid damper or other device that eliminates noise of exit device operation.
4. Touchpad: Extend minimum of one half of door width, but not the full length of exit device rail. Provide end-cap with two-point attachment to door. Provide compression springs in devices, latches, and outside trims or controls; tension springs prohibited.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrical requirements.
 - a. Cable: Stainless steel core wire in stainless steel with polytetrafluoroethylene (Teflon®) liner color-coded to latches and center slides. Conduit and core wire ends snap into latch and center slides without use of tools.
 - b. Latchbolts and Blocking Cams: Manufactured from sintered metal low carbon copper- infiltrated steel, with molybdenum disulfide low friction coating.
 - c. Top Latchbolt: Minimum 0.382 inch (10 mm) and greater than 90 degree engagement with strike to prevent door and frame separation under high static load.
 - d. Bottom Latchbolt: Minimum of 0.44 inch (11 mm) engagement with strike.
 - e. Product Cycle Life: 1,000,000 cycles.

- f. Latch Operation: Top and bottom latch operate independently of each other. Top latch fully engages top strike even when bottom latch is compromised. Separate trigger mechanisms not permitted.
 - g. Latch release does not require separate trigger mechanism.
 - h. Cable and latching system characteristics:
 - 1) Assembled prior to being installed in door.
 - 2) Installed in door as complete assembly.
 - 3) Installed independently of exit device installation, and capable of functioning on door prior to device and trim installation.
 - 4) Connected to exit device at single attachment point.
 - 5) Bottom latch height adjusted from single point, after system is installed and connected to exit device, while door is hanging
 - 6) Latch position altered up and down 2 inches (51 mm) without additional adjustment.
 - 7) System may be removed while door is hanging.
 - 8) Configure latchbolt mounting: double or single tab mount for steel doors, and wood doors, face mount for aluminum doors, eliminating requirement of tabs.
 - 9) Provide adjustable exit device to latch center line adjustment. Ensures double tab mounting option for top latch, regardless of exit device centerline.
- 6. Provide exit devices with manufacturer's approved strikes.
 - 7. Provide exit devices cut to door width and height. Locate exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
 - 8. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
 - 9. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion that is removed by use of a keyed cylinder, which is self-locking when re-installed.
 - 10. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
 - 11. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.
 - a. Lever Style: Match lever style of locksets.

2.6 ELECTRIC STRIKES

A. Manufacturers and Products: Von Duprin 6000 Series

- 1. Provide electric strikes designed for use with type of locks shown at each opening.
- 2. Provide electric strikes UL Listed as burglary-resistant.
- 3. Where required, provide electric strikes UL Listed for fire doors and frames.
- 4. Provide fail-secure type electric strikes, unless specified otherwise.

5. Coordinate voltage and provide transformers and rectifiers for each strike as required.

2.7 KEYS, KEYING, AND KEY CONTROL

- A. See Keying Requirements in this section

2.8 CLOSERS

- A. Surface Closers: LCN 4010/4110 Series

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. Certify surface mounted mechanical closers to meet fifteen million (15,000,000) full load cycles. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 11/16 inch (17 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers. When closers are parallel arm mounted, provide closers which mount within 6-inch (152 mm) top rail without use of mounting plate so that closer is not visible through vision panel from pull side.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI/BHMA Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting. Use through bolts to attach closer to door.

- B. Surface Closers: LCN 1460 Series

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory.
2. Provide door closers with fully hydraulic, full rack and pinion action cylinder.
3. Closer Body: 1-1/4 inch (32 mm) diameter, with 5/8 inch (16 mm) diameter heat-treated pinion journal.

4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Pressure Relief Valve (PRV) Technology: not permitted.
8. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting. Use through bolts to attach closer to door.

2.9 OTHER HARDWARE

- A. Door stops: Provide stops to protect walls, casework or other hardware.
 1. Except as otherwise indicated, provide stops (wall, floor or overhead) at each leaf of every swinging door leaf.
 2. Where wall or floor stops are not appropriate, provide overhead holders.
- B. Weatherstrip and Gasket
 1. Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled.
 2. Provide non-corrosive fasteners as recommended by the manufacturer for application indicated.
- C. Thresholds
 1. Except as otherwise indicated, provide standard metal threshold unit of type, size and profile as detailed or scheduled.
- D. Silencers
 1. Interior hollow metal frames, 3 for single doors, 2 for pairs of doors.
- E. Kickplates
 1. Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of bronze or stainless steel to match other hardware.

2.10 HARDWARE FINISH

- A. Provide the following finishes unless noted differently in hardware groups:

| | |
|----------|---|
| Hinges | 630 Stainless Steel Exterior, 652 Dull Chrome Interior |
| Locksets | 626 Satin Chrome |

| | |
|---------------------|---------------------|
| Exit Devices | 626 Satin Chrome |
| Closers | 689 Aluminum |
| Kickplates | 630 Stainless Steel |
| Other Hardware | 626 Dull Chrome |
| Thresholds | Aluminum |
| Weatherstrip/Sweeps | Aluminum |

2.11 KEYING REQUIREMENTS

- A. All keyed cylinders shall be subject to a new Schlage Masterkey system.
- B. Furnish cylinders with construction cores. Following construction supply permanent keyed cores.
- C. Cylinders to be furnished with visual key control with key code. Stamped on the face of the keys and marked on the back or side of the cylinders.
- D. Key Quantities
 - 6 EA Master Keys
 - 4 EA Control Keys
 - 2 EA Construction Control Keys
 - 10 EA Construction Keys
 - 3 EA Change Keys per keyed alike group

EXECUTION

3.1 PREPARATION

- A. Ensure that walls and frames are square and plumb before hardware installation.
- B. Locate hardware per SDI-100 and applicable building, fire, life-safety, accessibility, and security codes. Notify Architect of any code conflicts before ordering materials.

3.2 INSTALLATION

- A. Do not install surface mounted items until finishes have been completed on substrate. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate for proper installation and operation.
- B. Locate floor stops not more than 4 inches from the wall.
- C. Drill pilot holes for fasteners in wood doors and/or frames.

3.3 ADJUSTING

- A. Adjust and check for proper operation and function. Replace units, which cannot be adjusted to operate freely and smoothly.
- B. Hardware damaged by improper installation or adjustment methods to be repaired or replaced to Owner's satisfaction.

3.4 FOLLOW UP INSPECTION

- A. Installer to provide letter of agreement to Owner that approximately 6 months after substantial completion, installer will visit project with representative of the manufacturers of the locking devices and door closers to accomplish the following:
 - 1. Re-adjust locks and closers
 - 2. Evaluate maintenance procedures and recommend changes or additions, and instruct Owner's personnel.
 - 3. Identify items that have deteriorated or failed.
 - 4. Submit written report identifying problems and likely future problems.

3.5 DEMONSTRATION

- A. Demonstrate electrical, electronic and pneumatic hardware system including adjustment and maintenance procedures












3.6 PROTECTION/CLEANING

- A. Cover installed hardware, protect from paint, cleaning agents, weathering, carts/barrows, etc. Remove covering materials and clean hardware just prior to substantial completion. Clean adjacent wall, frame and door surfaces soiled from installation/reinstallation process.

RESIDENTIAL DOOR HARDWARE GROUPS





Hardware Group No. R01

Provide each SGL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|-----------|-----------------------|-------------------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> |  | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>DEADBOLT</u> | <u>BE467F GRW 6 VDC</u> |   | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>PASSAGE SET</u> | <u>ND10S RHO</u> |  | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>1461</u> |  | <u>689</u> | <u>LCN</u> |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> |  | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR STOP</u> | <u>060</u> |  | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>488SBK PSA</u> |  | <u>BK</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR SWEEP</u> | <u>39A</u> |  | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>THRESHOLD</u> | <u>545A-223</u> |  | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>VIEWER</u> | <u>U698</u> |  | <u>626</u> | <u>IVE</u> |





Hardware Group No. R02

Provide each SGL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|-----------|--------------------|-----------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5PB1 3.5 X 3.5</u> |  | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>PASSAGE SET</u> | <u>F10 ELA</u> |  | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR STOP</u> | <u>060</u> |  | <u>652</u> | <u>IVE</u> |
| <u>3</u> | <u>EA</u> | <u>SILENCER</u> | <u>SR64/SR65</u> |  | <u>GRY</u> | <u>IVE</u> |



Hardware Group No. R03

Provide each SGL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|-----------|---------------------|-----------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5PB1 3.5 X 3.5</u> |  | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>PRIVACY LOCK</u> | <u>F40 ELA</u> |  | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR STOP</u> | <u>060</u> |  | <u>652</u> | <u>IVE</u> |
| <u>3</u> | <u>EA</u> | <u>SILENCER</u> | <u>SR64/SR65</u> |  | <u>GRY</u> | <u>IVE</u> |

Hardware Group No. R04

Provide each SL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|-----------|---------------------------------|-----------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>1</u> | <u>EA</u> | <u>MULTIPLE BYPASS PACK</u> | <u>111MD</u> |  | | <u>JOH</u> |
| <u>3</u> | <u>EA</u> | <u>FLUSH PULL</u> | <u>221</u> |  | <u>626</u> | <u>IVE</u> |










Hardware Group No. R05

Provide each SL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|--|--------------------|---|--|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>1</u> | | | <u>HARDWARE BY DOOR / FRAME MANUFACTURER BY SLIDER SUPPLIER</u> | | | |

Hardware Group No. R06 (Rehabilitated Building Utility Access Doors)

Provide each SGL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|-----------|-----------|-----------------------|-------------------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5 NRP</u> |  | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>STOREROOM LOCK</u> | <u>ND80RD RHO</u> |  | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>FSIC CORE</u> | <u>23-030 EV29 S</u> |  | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>4111 CUSH</u> |  | <u>689</u> | <u>LCN</u> |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> |  | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>50AA-S</u> |  | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR SWEEP</u> | <u>39A</u> |  | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>THRESHOLD</u> | <u>655A-223</u> |  | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>RAIN DRIP</u> | <u>142A</u> |  | <u>A</u> | <u>ZER</u> |



HARDWARE GROUP NO. R07

Provide each PR door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|------------------------------|--|---------------|---------------|------------|
| <u>6</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>MANUAL FLUSH BOLT</u> | <u>FB358 OR FB458 VERIFY</u> | | <u>626</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>DUST PROOF STRIKE</u> | <u>DP2</u> | | <u>626</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>STOREROOM LOCK</u> | <u>AL80PD NEP</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>4040XP EDA ACTIVE LEAF</u> | | <u>689</u> | <u>LCN</u> |
| <u>2</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 1" LDW B-CS TKTX</u> | | <u>630</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>WALL STOP</u> | <u>WS406/407CCV</u> | | <u>630</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>MEETING STILE</u> | <u>328AA-S</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>488SBK PSA</u> | | <u>BK</u> | <u>ZER</u> |

Hardware Group No. ENGAGE

Provide each SGL door(s) with the following:

| <u>QT</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINIS</u> | <u>MFR</u> |
|------------|-----------|-------------------------|------------------------------|---|--------------|------------|
| <u>Y</u> | | | | | <u>H</u> | |
| <u>1</u> | <u>EA</u> | <u>MULTITECH READER</u> | <u>MT20W</u> |  | <u>BLK</u> | <u>SCE</u> |
| | | | <u>ADD FOR SITE TRAINING</u> | | | |
| <u>50</u> | <u>EA</u> | <u>CREDENTIAL</u> | <u>9651T</u> |  | <u>BLK</u> | <u>SCE</u> |
| | | | <u>CONSTRUCTION</u> | | | |
| <u>100</u> | <u>EA</u> | <u>CREDENTIAL</u> | <u>9691T</u> | | <u>BLK</u> | <u>SCE</u> |

COMMUNITY BUILDING – DOOR HARDWARE

HARDWARE GROUP NO. C01

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|------------------------|--------------------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1HW 5 X 4.5 NRP</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>PANIC</u> | <u>98-NL-OP-110MD-SNB</u> | | <u>626</u> | <u>VON</u> |
| | | <u>HARDWARE</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>RIM CYLINDER</u> | <u>20-057</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>ELECTRIC STRIKE</u> | <u>6111 FSE 12/24 VAC/VDC</u> | <u>✓</u> | <u>630</u> | <u>VON</u> |
| <u>1</u> | <u>EA</u> | <u>90 DEG OFFSET</u> | <u>8190HD 12" O</u> | | <u>630</u> | <u>IVE</u> |
| | | <u>PULL</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>OH STOP</u> | <u>100S</u> | | <u>630</u> | <u>GLY</u> |
| <u>1</u> | <u>EA</u> | <u>SURF. AUTO</u> | <u>9542 MS AS REQ (120/240</u> | <u>✓</u> | <u>ANCLR</u> | <u>LCN</u> |
| | | <u>OPERATOR</u> | <u>VAC)</u> | | | |
| <u>2</u> | <u>EA</u> | <u>ACTUATOR, JAMB</u> | <u>8310-818T</u> | <u>✓</u> | <u>630</u> | <u>LCN</u> |
| | | <u>MOUNT</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>RAIN DRIP</u> | <u>142AA</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>50AA-S</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR SWEEP</u> | <u>39A</u> | | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>THRESHOLD</u> | <u>655A-223</u> | | <u>A</u> | <u>ZER</u> |

HARDWARE GROUP NO. C02

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|------------------------|-------------------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1HW 5 X 4.5 NRP</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>PANIC</u> | <u>98-NL-OP-110MD-SNB</u> | | <u>626</u> | <u>VON</u> |
| | | <u>HARDWARE</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>RIM CYLINDER</u> | <u>20-057</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>ELECTRIC STRIKE</u> | <u>6111 FSE 12/24 VAC/VDC</u> | <u>✓</u> | <u>630</u> | <u>VON</u> |
| <u>1</u> | <u>EA</u> | <u>90 DEG OFFSET</u> | <u>8190HD 12" O</u> | | <u>630</u> | <u>IVE</u> |
| | | <u>PULL</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>OH STOP</u> | <u>100S</u> | | <u>630</u> | <u>GLY</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE</u> | <u>4040XP EDA</u> | | <u>689</u> | <u>LCN</u> |
| | | <u>CLOSER</u> | | | | |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>50AA-S</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>RAIN DRIP</u> | <u>142AA</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR SWEEP</u> | <u>39A</u> | | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>THRESHOLD</u> | <u>655A-223</u> | | <u>A</u> | <u>ZER</u> |
| <u>1</u> | | | <u>CARD READER - WORK</u> | | | |
| | | | <u>OF DIVISION 28</u> | | | |
| <u>1</u> | | | <u>POWER SUPPLY - WORK</u> | | | |
| | | | <u>OF DIVISION 28</u> | | | |

HARDWARE GROUP NO. C03

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|---------------------------|------------------------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>STOREROOM LOCK</u> | <u>AL80PD NEP</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>LOCK GUARD</u> | <u>LG12</u> | | <u>US32D</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>4040XP REG OR PA AS REQ</u> | | <u>689</u> | <u>LCN</u> |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>WALL STOP</u> | <u>WS406/407CCV</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>50AA-S</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>RAIN DRIP</u> | <u>142AA</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>DOOR SWEEP</u> | <u>39A</u> | | <u>A</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>THRESHOLD</u> | <u>655A-223</u> | | <u>A</u> | <u>ZER</u> |

HARDWARE GROUP NO. C04

Provide each PR door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|------------------------------|--|---------------|---------------|------------|
| <u>6</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>MANUAL FLUSH BOLT</u> | <u>FB358 OR FB458 VERIFY</u> | | <u>626</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>DUST PROOF STRIKE</u> | <u>DP2</u> | | <u>626</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>STOREROOM LOCK</u> | <u>AL80PD NEP</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>4040XP EDA ACTIVE LEAF</u> | | <u>689</u> | <u>LCN</u> |
| <u>2</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 1" LDW B-CS TKTX</u> | | <u>630</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>WALL STOP</u> | <u>WS406/407CCV</u> | | <u>630</u> | <u>IVE</u> |
| <u>2</u> | <u>EA</u> | <u>MEETING STILE</u> | <u>328AA-S</u> | | <u>AA</u> | <u>ZER</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>488SBK PSA</u> | | <u>BK</u> | <u>ZER</u> |

HARDWARE GROUP NO. C05

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|-----------------------|------------------------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>PRIVACY LOCK</u> | <u>L9040 17A L583-363 L283-722</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>SURFACE CLOSER</u> | <u>1461 REG</u> | | <u>689</u> | <u>LCN</u> |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 1" LDW B-CS TKT</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>KICK PLATE</u> | <u>8400 10" X 2" LDW B-CS</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>WALL STOP</u> | <u>WS406/407CCV</u> | | <u>630</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>GASKETING</u> | <u>488SBK PSA</u> | | <u>BK</u> | <u>ZER</u> |

HARDWARE GROUP NO. C06

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|----------------------|-----------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>ENTRANCE LOCK</u> | <u>AL53PD NEP</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>WALL STOP</u> | <u>WS406/407CCV</u> | | <u>630</u> | <u>IVE</u> |
| <u>3</u> | <u>EA</u> | <u>SILENCER</u> | <u>SR64/SR65</u> | | <u>GRY</u> | <u>IVE</u> |




HARDWARE GROUP NO. C07

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | <u>ITEMID</u> | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|---------------------------|-----------------------|---------------|---------------|------------|
| <u>3</u> | <u>EA</u> | <u>HINGE</u> | <u>5BB1 4.5 X 4.5</u> | | <u>652</u> | <u>IVE</u> |
| <u>1</u> | <u>EA</u> | <u>ENTRANCE LOCK</u> | <u>AL53PD NEP</u> | | <u>626</u> | <u>SCH</u> |
| <u>1</u> | <u>EA</u> | <u>FIRE/LIFE WALL MAG</u> | <u>SEM7850</u> | | <u>689</u> | <u>LCN</u> |

Hardware Group No. ENGAGE

Provide each SGL door(s) with the following:

| <u>QTY</u> | | <u>DESCRIPTION</u> | <u>CATALOG NUMBER</u> | | <u>FINISH</u> | <u>MFR</u> |
|------------|-----------|-------------------------|------------------------------|---|---------------|------------|
| <u>1</u> | <u>EA</u> | <u>MULTITECH READER</u> | <u>MT20W</u> |   | <u>BLK</u> | <u>SCE</u> |
| | | | <u>ADD FOR SITE TRAINING</u> | | | |
| <u>50</u> | <u>EA</u> | <u>CREDENTIAL</u> | <u>9651T</u> |  | <u>BLK</u> | <u>SCE</u> |
| | | | <u>CONSTRUCTION</u> | | | |
| <u>100</u> | <u>EA</u> | <u>CREDENTIAL</u> | <u>9691T</u> | | <u>BLK</u> | <u>SCE</u> |

END OF SECTION

RESIDENTIAL REHABILITATED BUILDINGS DOOR HARDWARE INDEX

Legend:

↗ Electrified Opening

| Door# | HwSet# |
|----------|--------|
| A1 ↗ | R01 |
| B1 | R02 |
| C1 | R03 |
| D1 | R02 |
| D2 | R02 |
| E1 | R04 |
| E2 | R04 |
| E3 | R04 |
| E4 | R04 |
| F1 | R05 |
| 101 | R06 |
| 102 | R06 |
| ENGAGE ↗ | ENGAGE |

RESIDENTIAL NEW CONSTRUCTION BUILDINGS DOOR HARDWARE INDEX

Legend:

↗ Electrified Opening

| Door# | HwSet# |
|----------|--------|
| A1 ↗ | R01 |
| B1 | R02 |
| C1 | R03 |
| D1 | R02 |
| D2 | R02 |
| D5 | R02 |
| E2 | R04 |
| E1 | R04 |
| E3 | R04 |
| E5 | R04 |
| E6 | R04 |
| F1 | R05 |
| 110 | R06 |
| 111 | R06 |
| 210 | R06 |
| ENGAGE ↗ | ENGAGE |

COMMUNITY BUILDING DOOR HARDWARE INDEX

Legend:

↗ Electrified Opening

| Door# | HwSet# |
|--------|--------|
| 100 ↗ | C01 |
| 107 | C05 |
| 108 | C05 |
| 109A ↗ | C01 |
| 109B | MFR. |

| Door# | HwSet# |
|----------|--------|
| 109C | MFR. |
| 109D | C02 |
| 109E ✎ | C07 |
| 109F | C02 |
| 109G | C04 |
| 110A | C04 |
| 110B | C04 |
| 111 | C03 |
| 112 | C03 |
| 113 | C06 |
| 114 | C06 |
| 116 ✎ | C07 |
| 117 | C01 |
| 117A | C04 |
| 119 ✎ | C06 |
| 120A | C06 |
| 120B ✎ | C06 |
| 121 ✎ | C07 |
| ENGAGE ✎ | ENGAGE |

SECTION 27 00 00

LOW VOLTAGE SYSTEMS GENERAL CONDITIONS

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Conform to General Conditions, Supplementary Conditions, the modifications thereto and Division 01 - General Requirements for all work in Division 26.

1.2 SUMMARY

- A. **This is a design/build specification.** Contract Documents are meant to provide information (scope, performance requirements, preliminary quantities and locations, etc) for Bidding by Design-Build Contractors only. All final quantities and locations of equipment and devices shall be coordinated with the Fire Marshal/ Local AHJ (as applicable), Architect and Owner prior to the start of construction.
- B. Design Intent: The project includes Electrical, Fire Alarm and Low Voltage systems for a campus wide substantial renovation to an existing low-income apartment complex consisting of 24 existing apartment buildings owned by King County Housing Authority, located in Kirkland WA. The renovation includes upgrades to (5) 4-unit Townhouse buildings, (8) 8-unit stacked flat buildings and (11) 12-unit buildings where the existing 8-unit floor plan is receiving an addition of 4 new units. See entire Bid Set (Drawings and Specifications) for complete project information and requirements.
- C. All Fire Alarm and Low Voltage Systems are Design-Build; Contract Documents (drawings and specifications) are meant to provide information (scope, performance requirements, preliminary quantities and locations, etc) for Bidding by Design-Build Contractors only.
- D. The Design-Build Contractors shall design, provide and install complete and fully operational and coordinated systems that meet all requirements of the Owner, local AHJ and as per the Project Contract Documents.
 - 1. All voice and data cabling design shall be performed by an RCDD or by a designer with five or more years of experience with telecommunications cabling design. Contractor to provide proof of designer qualifications.
- E. Low Voltage Systems to be provided for the Project include:
 - 1. Fire Alarm System.
 - 2. Telecom Systems.
 - 3. CATV System.
- F. The Contractor shall provide all labor, materials, equipment and devices, supports, etc necessary for satisfactory installation of fire alarm and low voltage work ready to operate in strict accordance with Code requirements and these specifications and drawings including but not limited to all switches, routers, racks, patch panels, patch cables, 110 blocks, terminations, etc. The Contractor

shall also provide permanent labeling at both ends of all low voltage cabling, color coded for each system, which shall match the numbering scheme of the Low Voltage system As-Built drawings for all terminations.

1. The Contractor shall test all terminations to ensure they are in good working order. Any and all faulty cables and/ or terminations shall be replaced at no cost to the Owner.
- G. All final quantities and locations of equipment and devices shall be coordinated with the Fire Marshal/ Local AHJ (as applicable), Architect and Owner prior to the start of construction.
- H. Sustainability Goals: The Project is pursuing Evergreen Sustainable Development Standards (ESDS) Certification. The Contractor shall coordinate with the Architect and General Contractor to ensure compliance with the Prerequisites and intended Credits for the project. See Division 01 Specification and subsequent Division 26, 27 and 28 Specifications for additional information and requirements.
- I. The Contractors shall provide all labor, materials, equipment and devices, supports, etc necessary for satisfactory installation of fire alarm and low voltage work ready to operate in strict accordance with Code requirements and these specifications and drawings.
- J. Related Sections: All Division 01, 26, 27 and 28 Specification Sections included in the Contract Documents.
- K. Commissioning Activities and Submittals: The Project shall be commissioned per Energy Code and ESDS requirements. The Contractor shall coordinate with the General Contractor, Architect and Commissioning Agent and provide support for the complete commissioning process as required. See Divisions 01, 26, 27 and 28 for additional information.

1.3 COORDINATION MEETINGS

- A. The Design-Build Low Voltage Contractor shall coordinate with the Electrical and General Contractor to arrange for two coordination meetings/ conference calls for the low voltage systems for the project. The attendees shall include the Low Voltage Contractor, the Electrical Contractor, the General Contractor, the Owner/ Owner's Rep, the Owner's IT Department, the Architect and the Electrical Engineer.
- B. The first meeting/ conference call shall occur within four (4) weeks of the Contractor receiving notice to proceed on the project and before the Low Voltage Contractor has issued their first set of shop drawings for the Low Voltage systems for the project. The intent of this meeting is for the Low Voltage Contractor to discuss design intent with the Owner and confirm the requirements for all systems.
- C. The second meeting/ conference call shall occur within two (2) weeks of the Low Voltage Contractor issuing their first set of shop drawings for the Low Voltage systems for the project. The intent of this meeting is for the Low Voltage

Contractor to discuss specific equipment and device locations with the Owner and Architect.

1. The Design-Build Low Voltage Contractor shall issue their first round of shop drawing and schedule the second coordination meeting/ conference call before any low voltage systems, devices, equipment, etc have been roughed in.
2. The second meeting /conference call shall be scheduled to allow for enough time for the Design-Build Low Voltage Contractor to issue a second set of shop drawings for Owner and Engineer review and comment before rough-in for these systems needs to begin.
3. Any equipment, devices, etc for any low voltage systems roughed-in before the second meeting/ conference call shall be relocated as needed at the Contractor's expense.

1.4 SYSTEMS REQUIREMENTS

- A. The Fire Alarm and Low Voltage Contractors shall provide all racks, parts, pieces, cabling, equipment, devices, supports, etc required for complete and fully operational low voltage and fire alarm systems per Code, AHJ, and Owner requirements.
- B. FIRE ALARM SYSTEM
 1. See Specification Section 28 46 00.
- C. TELECOM AND CATV SERVICES:
 1. The Contractor shall coordinate with the Owner to confirm the desired telecom utilities for the project. For bidding purposes, assume two providers for the building (Zipty Fiber and Xfinity/Comcast).
 2. The Electrical Contractor shall coordinate with the Owner's desired telecom providers to bring service to the building.
 3. The Electrical Contractor shall also coordinate with any existing providers at the site to relocate and/ or remove all existing conduit and cabling in conflict with the scope of the project.
 4. See Site Plan for preliminary conduit requirements and service points. Contractor to confirm final requirements and service points with utility service providers.
 - a. For Zipty Fiber service conduits, maximum allowed is 270-degrees of bends before a Zipty Fiber approved pull box must be installed. Provide 36-inch radius sweeps.
 - b. For Comcast service conduits, maximum allowed is 270 degrees of bends. Provide 36-inch radius sweeps.
- D. TELECOM AND CATV SYSTEMS:
 1. See the Bid Set Electrical drawings for additional information and requirements including preliminary device quantities and locations for bidding purposes.
 2. The Contractor shall design, provide and install complete and fully operational Telecom and CATV systems for the project. Coordinate exact requirements, locations and device types with the Owner.
 3. System Risers:

- a. Comcast will provide all broadband coaxial cable or fiber from the MDF room to each IDF. Electrical Contractor to coordinate with Comcast to confirm conduit requirements.
 - b. Low Voltage Contractor shall provide riser cabling for all other low voltage systems/ providers and for the Owner's network. Confirm requirements with individual utility service providers and the Owner.
 - c. Low Voltage Contractor shall provide a line-item price to remove cabling for Ziplly Fiber service should Ziplly Fiber provide fiber vertically for the project.
4. Telecom equipment and cabling shall meet TIA performance criteria for Category 6. All cabling is to be terminated with Category 6 jacks.
 5. The Design-Build Contractor shall coordinate with the Owner to confirm telecom system requirements prior to the start of design.
 6. The CATV system shall consist of cable television service and a coaxial cable distribution system.
 - a. Headend equipment shall consist of receiving equipment and associated signal distribution amplification and equalization.
 - b. Distribution of cable television service signals, which includes coordinating with Owner's selected service provider for installation of cable to the service point ready for connection into the distribution system. Obtain signal levels and noise and distortion characteristics from service provider as the point of departure for system layout and final equipment selection.
 - c. Cable distribution system consisting of coaxial cables, user interfaces, signal taps and splitters, RF amplifiers, signal equalizers, power supplies, and required hardware, complying with CEA-310-E and CEA-2032 and resulting in performance parameters specified in this Section. System shall be capable of distributing television channels according to CEA-542-B.
 7. Dwelling Units:
 - a. Media panels are to be provided in the units; CATV and phone outlets in each unit are to be homerun from these Media Panels (see drawings).
 - 1) Provide Primex 42-inch SOHOpro P4200 42-inch Narrow Deep enclosure with hinged lid or pre-approved equal sized as required to house phone, data, and CATV terminations and distribution components.
 - b. Contractor shall provide one RG-6 cable and two CAT6 cables to each media panel from the serving IDF closet.
 - 1) Where units are over 150 ft from the IDF closet, Contractor shall provide RG-11 cabling in lieu of RG-6.
 - 2) Contractor to install contractor provided 12.7mm Duraline with fiber to each unit.
 - 3) Contractor to provide alternate pricing to install Ziplly Fiber provided ruggedized fiber to each unit.
 - 4) Contractor to provide line-item pricing to remove one CAT6 cable to each unit from Project.
 - c. See typical unit enlarged plan in the Bid Set Drawing set for design intent for units.

8. In addition to devices noted on the Bid Set drawings, the Design-Build Contractor shall also provide:
 - a. Dedicated phone lines for the access control, fire alarm and two-way communication systems and for the elevator as required by Code, local AHJ and the Fire Marshal.
 - b. Any other devices required by Code, AHJ or Fire Marshal.

1.5 CODES AND STANDARDS:

- A. All work shall meet or exceed the requirements of the current versions of all applicable Federal, State, and Local Codes and Standards including but not limited to:
 1. National Electrical Code (NEC) with Local Amendments.
 2. Washington State Residential Energy Code with Local Amendments.
 3. ESDS Requirements.
 4. International Fire Code (IFC) with Local Amendments.
 5. International Building Code (IBC) with Local Amendments.
 6. International Mechanical Code (IMC) with Local Amendments.
 7. Uniform Plumbing Code (UPC) with Local Amendments.
 8. The Americans with Disabilities Act (ADA).
 9. Illuminating Engineering Society of North America (IESNA) Standards and Recommended Practices.
 10. National Fire Protection Association (NFPA) Standards and Recommended Practices.
 11. Applicable Standards of the following organizations (see subsequent Division 26, 27 and 28 sections for additional information):
 - a. American National Standards Institute (ANSI).
 - b. American Society for Testing Materials (ASTM).
 - c. Building Industry Consulting Services International (BICSI)
 - d. Institute of Electrical and Electronics Engineers (IEEE)
 - e. National Electrical Manufacturer's Association (NEMA)
 - f. U.S. Department of Housing and Urban Development (HUD)
 - g. Underwriter's Laboratories (UL) standards.
 12. Utility Service Provider Requirements.

1.6 SUSTAINABLE DESIGN REQUIREMENTS:

- A. Comply with Construction Management Plan. Refer to Division 01.
- B. ESDS-Compliant Products: Inside the building envelope, use materials that contain acceptable or lower levels of VOC per referenced standards in Rating System Requirements and no added urea-formaldehyde. Cleaning products used during construction and close-out procedures shall meet Green Seal standards GS-34, GS-37, and SG-40, or the California Code of Regulations, Title 17 Section 94509, VOC standards for cleaning products.
- C. Refer to Division 01 for a complete list of ESDS Prerequisites and Credits anticipated for the project.

1.7 PERFORMANCE REQUIREMENTS

- A. Firestopping: Conform to International Building Code with local amendments, Fire Marshal, and UL for fire resistance ratings and surface burning characteristics.

1.8 PRODUCT SUBSTITUTIONS

- A. Manufacturers and models of equipment and material indicated in Divisions 27 and 28 Specifications and on drawings are those upon which the fire alarm and low voltage systems designs are to be based; other manufacturers with products considered equal in general quality may also be listed without specific model designation. Manufacturers not listed shall be submitted for approval prior to submission of Bid by the Contractor, see Division 01.
- B. Any equipment other than the basis of design is considered a substitution; this includes equipment from any alternate manufacturers listed without specific model designation in the Contract Specifications and / or Drawings.
- C. Pre-Bid Substitutions will be evaluated based on product manufacturer only. Specific product model, specifications, options and accessories will be evaluated during submittals. Approval of a manufacturer substitution does not constitute approval of the submitted product.
- D. In selecting substitute equipment, the Contractor is responsible for and shall guarantee equal performance and fit. Cost of redesign and all additional costs incurred to accommodate the substituted equipment shall be borne by the Contractor.
- E. Approval of proposed substitution does not grant the Contractor approval for deviation from the contract requirements.
- F. Unless indicated otherwise, "or approved equal" may be assumed for all products in Divisions 26, 27 and 28.

1.9 DESIGN DRAWINGS

- A. All drawings, specifications and calculations prepared by the Fire Alarm Design-Build Contractor shall be stamped by an Engineer currently registered in the State of Washington.
- B. The Design-Build Contractor shall submit drawings and diagrams for review and for job coordination:
 - 1. Permit / Construction Drawings for review. These drawings shall be submitted at two milestones as selected by the Architect in electronic PDF format.
 - a. The Contractors' drawings shall match the layout of the Architectural drawings.
 - b. Fire Alarm systems shall be provided in a separate set of drawings by the Fire Alarm Contractor.
 - c. The Drawing Sets shall include at a minimum:
 - 1) Symbols, Legend and drawing list sheets.

- 2) Low Voltage Systems (Telecom, CATV, access control, etc) floor plan drawings.
- 3) Low Voltage Systems riser diagrams.
- 4) Fire Alarm System sheets and calculations approved by the local Fire Marshal/ AHJ.

1.10 SUBMITTALS

- A. Provide one electronic copy of product data submittals for all products listed under "Part 2 Products" of Divisions 27 and 28 Specification Sections and all additional products noted on drawings or required for completion of sequence of operations.
- B. Provide the Submittals so as not to delay the construction schedule; allow at least two weeks for review of each submittal and re-submittal.
- C. Electronic: Submittals shall be complete in one PDF file for each Division with bookmarks for each Specification Section and Principal Category. Multi-file submittals will be returned without review.
 1. First Page: Name of Project, Owner, Location & Contracting Company.
 2. Index Page: List of specification sections and principal categories with contents by Tag or item.
 3. Bookmarks: Electronic bookmark of each specification section and principal category corresponding to listing in index.
- D. Clearly indicate on each page the equipment schedule designation (Tag) and/or specification section, as applicable. Indicate selected model and all accessories intended for use.
- E. Equipment vendor cover page with contact information shall precede submittal by that vendor.
- F. Submitted product information shall include (as applicable) but not be limited to the following information:
 1. Product description.
 2. Manufacturer and model.
 3. Dimensions.
 4. Performance Ratings.
 5. Construction Materials.
 6. Ratings (i.e. UL, ASTM, NEMA, etc).
 7. Electrical characteristics (Voltage, Phase, Wattage, Breakers, etc).
 8. Engineering technical data.
 9. Sound level data.
 10. Vibration Isolation.
 11. Controls and wiring diagrams.
 12. Accessories.
- G. If requested in subsequent Specification Sections or by Architect or Engineer, submit Manufacturer's Installation Instructions on any equipment, procedures, or certifications so requested.

- H. Do no ordering, fabrication or manufacturing of products until return of approved submittals.
- I. The Contractor agrees to pay for the Engineer's review cost of the Division 27 and 28 Submittals beyond one resubmittal where resubmittals are required due to deficiencies in the Contractor's Submitted material.

1.11 SHOP DRAWINGS

- A. The Contractor shall submit drawings and/or diagrams for review and for job coordination:
 - 1. Slab plans marked up with all penetrations required for electrical, fire alarm and low voltage systems. Sizes of penetrations shall be indicated on the plans and penetration locations shall be dimensioned from major building lines. The Contractor shall submit these slab plans to the Architect for review.
 - 2. For all special or custom-built items or equipment.
 - 3. In all cases where deviation from the Contract Drawings are contemplated because of job conditions, interference or substitution of equipment, or when requested by the Engineer for purposes of clarification of the Contractor's intent.
 - a. By submission of revised design shop drawings, the Contractor acknowledges that coordination has been done with all other trades to ensure that all equipment fits and remains accessible with all Code required clearances and that no conflicts exist.
- B. The Architect's review of shop drawings shall not relieve the Contractor of the responsibility for deviations from the Contract drawings or specifications, unless he has, in writing, called the attention of the Architect to such deviations at the time of the submission, nor shall it relieve him from responsibility for errors or omission in such shop drawings.

1.12 ESDS RELATED DOCUMENTATION AND ACTIVITIES

- A. Provide commissioning documentation per EA Prerequisite 1 and as the Commissioning Authority (CxA) requests.
- B. Comply with IAQ Management Plan by the general contractor.
- C. Submit the ESDS VOC Form, for any VOC-containing material to be used inside the building envelope, including materials for patching, touch-up and cleaning
- D. Construction Waste Management: Retain and submit all trip and tip tickets for all construction debris and waste removed from site, indicating material content, tonnage, date hauled and facility to where materials were hauled. This submittal is to the general contractor only.

1.13 PLAN REVIEW AND PERMITS

- A. In addition to the distribution requirements specified in other Specification Sections, the Design-Build Contractors shall make all required submissions to the Authorities Having Jurisdiction (AHJ) for Plan Review, Permits and approval for

applicable low voltage systems (Fire Alarm, etc). The Contractors shall pay all fees related to said submissions. The Contractors shall revise their design and resubmit as needed to obtain AHJ approval. All additional and / or revisions to the Contractor's designs required to obtain AHJ approval shall be carried out by the Contractor at no additional cost to the Owner – this includes the fees associated with any resubmissions. The Contractors shall submit all comments received from the AHJ to the Architect and Engineer.

- B. The Contractor shall not commence work until a permit (or "get started" permit where allowed by the AHJ) is obtained. Contractor is solely responsible for ensuring that the permit application and any revisions are submitted in a timely manner so as not to impact project schedule.

1.14 QUALITY ASSURANCE

- A. The Contractors shall perform all work per current versions of all applicable Codes and Standards with state and local amendments – see "Codes and Standards" paragraph above.
- B. All equipment and devices shall be UL-Listed and Labeled and shall be acceptable to the Authority Having Jurisdiction as suitable for the use and location for which they are intended.
- C. Provide all like items (telecom outlets, patch panels, faceplates, etc) from one manufacturer.

1.15 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in Divisions 27 and 28 Specification Sections with a minimum of three years' experience.
- B. Installer: Company specializing in performing Work included in Divisions 27 and 28 on projects of similar type and scale with a minimum of three years' experience.

1.16 DELIVERY, STORAGE AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. The Contractor shall keep all equipment, devices, conduit, etc in a dry, secured, protected area. The location shall be coordinated with the Architect and General Contractor prior to the start of Construction. See Division 01 for additional delivery, storage and handling requirements.
- C. Where original packaging is insufficient, provide additional protection. Maintain protection in place until installation.
- D. Inspect all products and materials for damage prior to installation.

- E. Protect conduit from all entry of foreign materials by providing temporary end caps or closures on conduit and fittings.
- F. Protect materials and finishes during handling and installation to prevent damage.
- G. Comply with manufacturer's installation instruction for rigging, unloading and transporting equipment.

1.17 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply fire stopping materials when temperature of substrate material and ambient air is below 60 degrees F. Maintain this minimum temperature before, during, and for minimum 3 days after installation of fire stopping materials.
- B. Coordinate with General Contractor to have ventilation provided in areas to receive solvent cured materials.
- C. Do not install underground conduit when bedding is wet or frozen.

1.18 FIELD MEASUREMENTS

- A. Verify field measurements prior to ordering racks and other equipment.
- B. Verify by field measurements that equipment and rack sizes and configurations are compatible with wall construction and layout.
- C. Existing systems and utility lines indicated on drawings are in accordance with information furnished to the Architect and may not be complete. Contractor is responsible for locating, uncovering, disposing of or maintaining and documenting exact locations of existing systems.

1.19 COORDINATION

- A. The Contractor shall visit the site and become familiar with existing conditions affecting work. The Contractor shall include in their Bid the costs for all work and / or materials required to comply with the requirements of the Contract Documents based on the actual existing conditions. Failure to visit the Site and verify actual existing conditions does not relieve the Contractor of these requirements; no change orders will be paid due to lack of verification of existing conditions whether they are specifically noted in the Contract Documents or not.
- B. The Contractor shall verify the locations of any overhead or buried utilities on or near the Project site. Determine such locations in conjunction with all public and private utility companies and with all authorities having jurisdiction.
- C. Existing systems and utility lines indicated on drawings are in accordance with information furnished to the Architect and may not be complete. Contractor is responsible for locating, uncovering, disposing of or maintaining existing systems.

- D. Where the word 'verify' is used on the documents, the contractor shall field verify the existing conditions and modify the scope of the installation as required to meet the verified conditions without additional cost to the Owner.
- E. Where the drawings or specifications call out for the contractor to field verify and / or coordinate locations and requirements this verification / coordination is to be completed prior to any equipment, devices, supports, conduits, etc are installed / roughed-in. Any equipment, devices, supports, conduits, etc installed at locations unacceptable to the design team (either for aesthetics or functionality) due to the contractor failing to field verify / coordinate shall be relocated at the contractor's expense.
- F. Electrical and Low Voltage Systems drawings are diagrammatic and do not indicate all possible site conditions. The contractor shall verify all measurements, dimensions and connections on site and coordinate between trades to preclude interferences. The contractor shall provide adjustments as necessary to fit actual conditions.
- G. The scale of each drawing is relatively accurate, but the Contractor is warned to obtain the necessary dimensions for any exact takeoffs from the Architect. No additional cost to the Owner will be considered for failure to obtain exact dimensions where not clear or in error on the drawings. Any device or equipment roughed in improperly and not positioned on implied centerlines or as required by good practice shall be repositioned at no cost to the Owner.
- H. In the event of a conflict with other trades of work, the following priority from highest to lowest shall be followed: Structural, lighting, HVAC, plumbing/piping and sprinklers. Starting with the lowest priority, the Electrical, HVAC, plumbing, and sprinkler contractors shall provide whatever materials, offsets, labor etc. is required to resolve the conflict.
- I. Advise the Architect of any modifications required to suit the equipment furnished. Costs for modifications due to equipment substitution will be borne by the contractor.
- J. When discrepancies occur between plans and specifications, the Architect will determine which takes precedence and the Contractor shall perform the selected requirement at no additional cost.
- K. Wherever conflicts occur between different parts of the Contract Documents the greater quantity, the better quality, or larger size shall prevail unless the Architect informs the Contractor otherwise in writing.
- L. Coordinate trenching, excavating, bedding, backfilling of buried systems with requirements of this specification.
- M. Coordinate wall openings, rough-in locations, concrete housekeeping pads, and conduit rough-in locations to accommodate Work of Divisions 26, 27 and 28.
- N. The Contractor shall coordinate with the Architectural plans and Project structure when locating equipment and devices and routing conduit and cabling.

- O. The Contractor shall coordinate with the General Contractor and provide slab plans marked up with all penetrations required for electrical, fire alarm and low voltage systems. Sizes of penetrations shall be indicated on the plans and penetration locations shall be dimensioned from major building lines. The Contractor shall submit these slab plans to the Architect for review.
- P. The Contractor shall coordinate conduit and cabling routing and equipment and device locations with all other trades to ensure all Code required clearances are maintained and equipment and devices remain accessible after the work of all trades is complete.
- Q. The Contractor shall consult the approved shop drawings of all other trades and crafts to ensure coordination with final locations of cabinetry, counters, appliances, equipment, structural members, etc. Conflicts are to be resolved with the Architect and General Contractor prior to rough-in. The Contractor shall not be paid for relocation work (including cutting, patching, and finishing) required due to a lack of coordination prior to installation.
- R. See the Architectural drawings for the exact locations of low voltage devices. The Contractor shall make minor changes (less than 6-feet in any direction) in the location of conduit, boxes, devices, etc from the locations shown in the drawings without extra charge to the Owner where required by coordination or if directed by the Architect or Owner.
- S. Prior to the start of Construction, coordinate locations and connection requirements for all line voltage power connections with the Electrical Contractor and Engineer.

1.20 PROJECT CLOSEOUT

- A. Completion, submission and approval of the following is required for final project closeout:
 - 1. Walk through the Project with the Owner and Architect to make note of deficiencies.
 - 2. Execution of Owner's, Architect's and Engineer's final observation reports (punchlist).
 - 3. Operating and Maintenance Instructions.
 - 4. Operating and Maintenance Manual.
 - 5. Equipment Cleaning.
 - 6. Record Drawings.
 - 7. Testing.
 - 8. Commissioning and Commissioning Report.
 - 9. Warranty.
- B. See other Divisions 01, 27 and 28 Specification Sections for additional requirements.

1.21 OPERATING AND MAINTENANCE INSTRUCTIONAL TRAINING

- A. General: In addition to requirements of Division 01, following initial operation of Electrical systems and prior to acceptance by the Architect, perform the following services:

1. At least two weeks prior to each instruction period, give written notification of readiness to proceed to the Architect and Owner, and obtain mutually acceptable dates.
2. Conduct demonstrations and instructions for the Owner's representatives, pointing out requirements for operating, servicing and maintaining equipment and systems. Describe general system operation and specific equipment functions. Cover all equipment and device calibration; systems set up, adjustments and programming; and safeties and alarms.
3. Furnish qualifications of Contractor's personnel in charge of the instruction; foreman position is minimum acceptable. Where equipment startup is performed by supplier's or manufacturer's personnel, those personnel should also provide training on that equipment.
4. During demonstrations and instructions include and reference information from maintenance manuals and contract drawings.
 - a. Provide documentation of all instruction which includes:
 - 1) Date and time of instruction.
 - 2) Name, affiliation and qualifications of the instructor.
 - 3) Name and affiliation of the attendees.
 - 4) Topics, systems, and equipment covered.
 - 5) Length of instruction.
5. Minimum duration of instruction periods:
 - a. Telecom and CATV Systems 1 hour
 - b. Fire Alarm Systems See Section 28 46 00

1.22 OPERATING AND MAINTENANCE MANUALS

- A. Contents: Furnish, in accord with Division 01, one PDF and one bound copy of operating and maintenance manuals to include the following:
 1. The Job name and address.
 2. Names, addresses and telephone numbers of the Contractor, sub-contractors and local companies responsible for maintenance of each system or piece of equipment.
 3. Manufacturers, suppliers, contractor names, addresses and phone numbers.
 4. Written guarantees.
 5. Warranty service contractors' names, address and phone numbers (if different from above).
 6. Copies of approved brochures and Shop Drawings as applicable for all submittal items.
 7. Manufacturer's printed operating procedures to include start-up and routine and normal operating instructions; and control, shutdown, and emergency instructions.
 8. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; and adjusting instructions.
 9. Part numbers of all replaceable items.
 10. Operation sequences.
 11. Record drawings corrected and completed.
 12. Completed equipment start-up forms and checklists.
 13. Final copy of testing reports.

- B. Operation and Maintenance Data:
 - 1. Include spare parts lists for all equipment as applicable.
 - 2. Submit installation instructions, adjustment instructions, and spare parts lists for all equipment.
 - 3. Submit inspection period, cleaning methods, recommended cleaning materials, and calibration tolerances.
 - 4. Submit manufacturer's descriptive literature, operating instructions, and maintenance and repair data.

- C. Binders:
 - 1. Furnish typewritten or printed index and tabbed dividers between principal categories.
 - 2. Bind each manual in a hard-backed loose-leaf binder.
 - 3. Imprint on Cover:
 - a. Name of Project.
 - b. Owner.
 - c. Location of project.
 - d. Architect.
 - e. Contractor.
 - f. Year of Completion.
 - 4. Imprint on backing:
 - a. Name of Project.
 - b. Year of completion.

- D. PDFs:
 - 1. Provide PDF with bookmarks for each Specification Section and / or Principal Category.
 - a. First Page: Name of Project, Owner, Location & Contracting Company.
 - b. Index Page: List of specification sections with contents by Tag or item.
 - c. Bookmarks: Electronic bookmark of each specification section corresponding to listing in index.

- E. Submittal:
 - 1. Preliminary Copies: Prior to scheduled completion of the project, submit one PDF copy for review by the Architect.
 - 2. Final Copies: After approval of the preliminary copy, submit one PDF and one bound copy to the Owner.

1.23 RECORD DRAWINGS

- A. Prepare record documents in accordance with the requirements of Division 01 Specification Section "Contract Closeout."

- B. Label each drawing as "Record Drawing" with Low Voltage Contractors' name and date.

- C. During construction, maintain an accurate record set of the drawings of the installation on project site at all times; keep this set in a safe location, protected from the environment.

- D. Submit one digital file with all drawings in PDF format.
- E. Make all notes and revisions on PDF set in red.
- F. In addition to the requirements specified in Division 01 and in other Division 26, 27 and 28 Specification Sections, indicate installed conditions (locations, sizes, burial depths, arrangements, etc) for:
 - 1. Major raceway systems – Interior and Exterior – dimensions from prominent building lines.
 - 2. Utility service conduit (power and telecom) and connections, dimensions from prominent building lines.
 - 3. Locations of all conduits provided for future use with intended future use identified.
 - 4. Equipment locations (exposed and concealed) shown to scale and dimensioned from prominent building lines.
 - 5. Final numbering for all low voltage terminations.
 - 6. Approved substitutions, Contract Modifications, and actual equipment and materials installed.

1.24 TESTING

- A. All cabling shall be tested by a certified installer.
- B. Provide completed start-up forms and checklists.
 - 1. Contractor to test all horizontal UTP cables per TIA 568.B.2 for CAT6 performance requirements.
- C. Perform testing of fire alarm, two-way communications, and DAS systems as described in Division 26, 27 and 28 Specification Sections and as required by applicable codes and ordinances.
- D. Written verification of testing to be signed by Owner's Representative.

1.25 WARRANTY AND CONTRACTOR'S GUARANTEE

- A. All work, material and equipment shall be free of defect, complete and in perfect operating order at time of delivery to Owner.
- B. The Contractor shall, without cost to the Owner, correct all defects and failures discovered within one year from date of final acceptance for all electrical, fire alarm, two-way communications, and DAS systems, except when in the opinion of the Architect a failure is due to neglect or carelessness of the Owner.
 - 1. See individual Specification Sections for additional requirements.
 - 2. Telecom terminations and cabling shall be provided with a 15 year warranty.
- C. The guarantee of the Contractor is independent of shorter time limits by any manufacturer of equipment furnished. Submit with Operation and Maintenance Manual all guarantees which exceed one year.
- D. The Contractor shall make all necessary control adjustments during first year of operation.

- E. The presence of any inspector or observer at any point during construction does not relieve the Contractor from responsibility for defects discovered after completion of the work.
- F. Refer to Division 01, 26, 27 and 28 Specification Sections for additional Warranty requirements.

PART 2 PRODUCTS

2.1 CABLE TRAYS

- A. Subject to compliance with requirements, provide equipment, devices and cabling by one of the following manufacturers or a pre-approved equal:
 - 1. Cable Management Solutions, Inc.
 - 2. Cablofil Inc.
 - 3. Cooper B-Line, Inc.
 - 4. Cope; Atkore International.
 - 5. GS Metals Corp.
 - 6. Monosystems, Inc.
 - 7. MP Husky Cable Tray and Cable Bus.
 - 8. Wiring Device-Kellens; Hubbell Incorporated
- B. Comply with TIA/EIA-569-A.
- C. Sizes and Configurations: See the Drawings for preliminary requirements for types, materials, sizes, and configurations. Confirm final sizes and configurations with the Low Voltage Design-Build Contractor.
- D. Cable Trays and Accessories: Identified as defined in NFPA 70 and marked for intended location, application, and grounding.
 - 1. Source Limitations: Obtain cable trays and components from single manufacturer.
- E. Description:
 - 1. Width: as indicated on Drawings.
 - 2. Minimum Usable Load Depth: 6 inches (150 mm).
 - 3. Straight Section Lengths: 10 feet (3.0 m) or 12 feet (3.7 m), except where shorter lengths are required to facilitate tray assembly.
 - 4. Rung Spacing: 6 inches (150 mm) o.c.
 - 5. Radius-Fitting Rung Spacing: 9 inches (225 mm) at center of tray's width.
 - 6. Support Point: Splice fittings shall be hanger support point.
 - 7. Support Spacing: Support each section at midpoint. Support wall-mounted sections a maximum of one-sixth of the section length from each end.
 - 8. Unbalanced Loads: Maintain cable tray rungs within six degrees of horizontal under all loading conditions.
 - 9. Splicing Assemblies: Bolted type using serrated flange locknuts.
 - 10. Splicing Assembly Capacity: Splices located within support span shall not diminish rated loading capacity of cable tray.
 - 11. Splices and Connectors: Protect cables from edges of center rail and do not intrude into cable fill area.

12. Materials: Aluminum alloy 6063-T6 according to ANSI H35.1/H 35.1M for extruded components, and Alloy 5052-H32 or Alloy 6061-T6 according to ANSI H35.1/H 35.1M for fabricated parts.
13. Hardware: Chromium-zinc-plated steel, ASTM F1136.

F. CABLE TRAY GROUNDING

1. Ground cable trays according to NFPA 70 unless additional grounding is specified. Comply with requirements in Section 26 05 26 "Grounding and Bonding for Electrical Systems" and the design drawings.
2. Cable trays shall be bonded together with splice plates listed for grounding purposes or with listed bonding jumpers.
3. When using epoxy- or powder-coat painted cable trays as a grounding conductor, completely remove coating at all splice contact points or ground connector attachment. After completing splice-to-grounding bolt attachment, repair the coated surfaces with coating materials recommended by cable tray manufacturer.
4. Bond cable trays to power source for cables contained within with bonding conductors sized according to NFPA 70, Article 250.122, "Size of Equipment Grounding Conductors."

2.2 UTP CABLE

- A. Subject to compliance with requirements, provide equipment, devices and cabling by one of the following manufacturers or a pre-approved equal:
1. Belden CDT, Inc, Electronics Division.
 2. Berk-Tek.
 3. CommScope, Inc.
 4. KRONE, Inc.
 5. Superior Essec, Inc.
- B. Description: 100-ohm, 100 pair UTP formed into 25-pair binder groups covered with thermoplastic jacket.
1. Comply with TIA/ EIA-568-B.2, Category 6.

2.3 TELECOM/ CATV EQUIPMENT:

- A. Subject to compliance with requirements, provide equipment, devices and cabling by one of the following manufacturers:
1. Belden, Inc.
 2. Cooper B-Line.
 3. Hubbell Premise Wiring.
 4. Legrand.
 5. Leviton Commercial Networks Division.
 6. Motorola, Inc.; Connected Home Solutions.
 7. Ortronics, Inc.
 8. Tyco Electronic Corporation.
- B. The telecom equipment, devices and cabling shall meet TIA performance criteria for Category 6. All cabling shall be terminated with Category 6 RJ45 jacks.
- C. MEDIA PANELS (SMART BOXES):

1. Provide Primex 42-inch plastic enclosure or pre-approved equal sized as required to house phone, data, and CATV terminations and distribution components.
2. Media Panel shall include an internal duplex receptacle.
3. Provide Leviton CAT6 RJ-45 splitter or pre-approved equal for voice/ data and CATV distribution.

2.4 HANGERS AND SUPPORTS

- A. See Specification Section 26 00 01.

2.5 LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

- A. See Specification Section 26 05 19.

2.6 GROUNDING AND BONDING

- A. See Specification Section 26 05 26.

2.7 RACEWAY AND BOXES

- A. See Specification Section 26 05 33.

2.8 IDENTIFICATION FOR LOW VOLTAGE SYSTEMS

- A. See Specification Section 26 05 53.

PART 3 EXECUTION

3.1 DOCUMENTATION

- A. Additional plan submittals to reviewing authority: If additional drawing submittals are required at any time during construction the Contractor shall submit drawings, review with authority, and pick up subsequent approved drawings. The Contractor will revise and/or prepare drawings for submittal.

3.2 MOCK-UPS

- A. The Contractor shall completely mock-up one of each typical unit type (exact units and areas to be chosen by the Architect and Owner) by marking the intended locations of all equipment and devices.
- B. Before starting installation of equipment and devices, the Electrical Contractor shall walk through all mocked-up areas with the Owner, Architect, and General Contractor to receive approval for all locations.
- C. The Electrical Contractor shall relocate equipment and devices in the mock-ups per the Owner and Architect's instructions.
- D. The Electrical Contractor shall relocate any equipment and devices installed prior to the approval of the mocked-up areas by the Architect and Owner at the Electrical Contractor's expense.

3.3 INSTALLATION

- A. The Contractor shall conceal all conduit, cabling and boxes in finished areas unless indicated otherwise or granted specific permission by the Architect. Install all conduit and cabling perpendicular or parallel with building lines wherever possible.
- B. In open ceiling areas, all cabling shall be installed in conduit. Conduit shall be painted; color as selected by the Architect.
- C. Coordinate the locations of equipment and outlets with all other trades.

3.4 INSPECTION

- A. Do not allow any work to be covered up or enclosed until inspected, tested and approved by the Architect and all authorities having jurisdiction over the work (including the electric and telecom utility providers for utility service infrastructure work).
- B. Should any work be enclosed or covered up before such inspection and testing, the Contractor shall at his own expense uncover said work, and after it has been inspected, tested and approved, make all repairs as necessary to restore all work disturbed by him to its original condition including paying other trades to repair work under their scope that was disturbed.

3.5 FIELD QUALITY CONTROL

- A. Conducts tests of equipment, devices, and systems as required by NFPA, BICSI, local Codes and the local AHJ.
 - 1. Provide a Service Technician with all tools, instruments, etc required to complete required tests.
 - 2. Coordinate with the Owner, Architect and General Contractor; tests should be performed in the presence of the Owner and Architect unless given specific permission otherwise.
- B. Refer to individual Division 26, 27 and 28 Specification Sections for additional requirements.

3.6 CLEANING

- A. Clean adjacent surfaces of fire stopping materials.
- B. Clean interior and exterior of all equipment. Equipment shall be free of dirt, construction debris, corrosion, etc.
- C. Adequate provisions shall be made during construction to eliminate dirt, debris or other material from entering and collecting inside of conduit and equipment. Any collection of material shall be thoroughly cleaned before owner occupancy.
- D. Clean exterior of all exposed conduit.
- E. Use ESDS Compliant Products: Materials intended for use inside the building envelope, including those used for patching, painting, touch-up, and cleaning,

must contain acceptable levels of VOC's and contain no added urea-formaldehyde.

3.7 CUTTING, FITTING, REPAIRING AND PATCHING

- A. Arrange and pay for all cutting, fitting, repairing, patching and finishing of work by other trades where necessary for installation of low voltage systems work. Perform work only with craftsmen skilled in their respective trades.
- B. Avoid cutting where possible by setting sleeves, frames, etc., and by coordinating for openings in advance. Assist other trades in securing correct location and placement of rough-frames, sleeves, openings, etc. for low voltage systems installations.
- C. Cut all holes neatly and as small as possible to admit work. Perform cutting in manner so as not to weaken walls, partitions or floors. Drill holes required to be cut in floors without breaking out around holes.

3.8 SALVAGE

- A. Remove excess conduit and conductors. Remove scrap and all other excess materials from the site.
- B. Comply with contractor's Construction Waste Management Plan. Retain and submit all trip and tip tickets for all construction debris and waste hauling, indicating material content, tonnage, date hauled and facility to where materials were hauled.

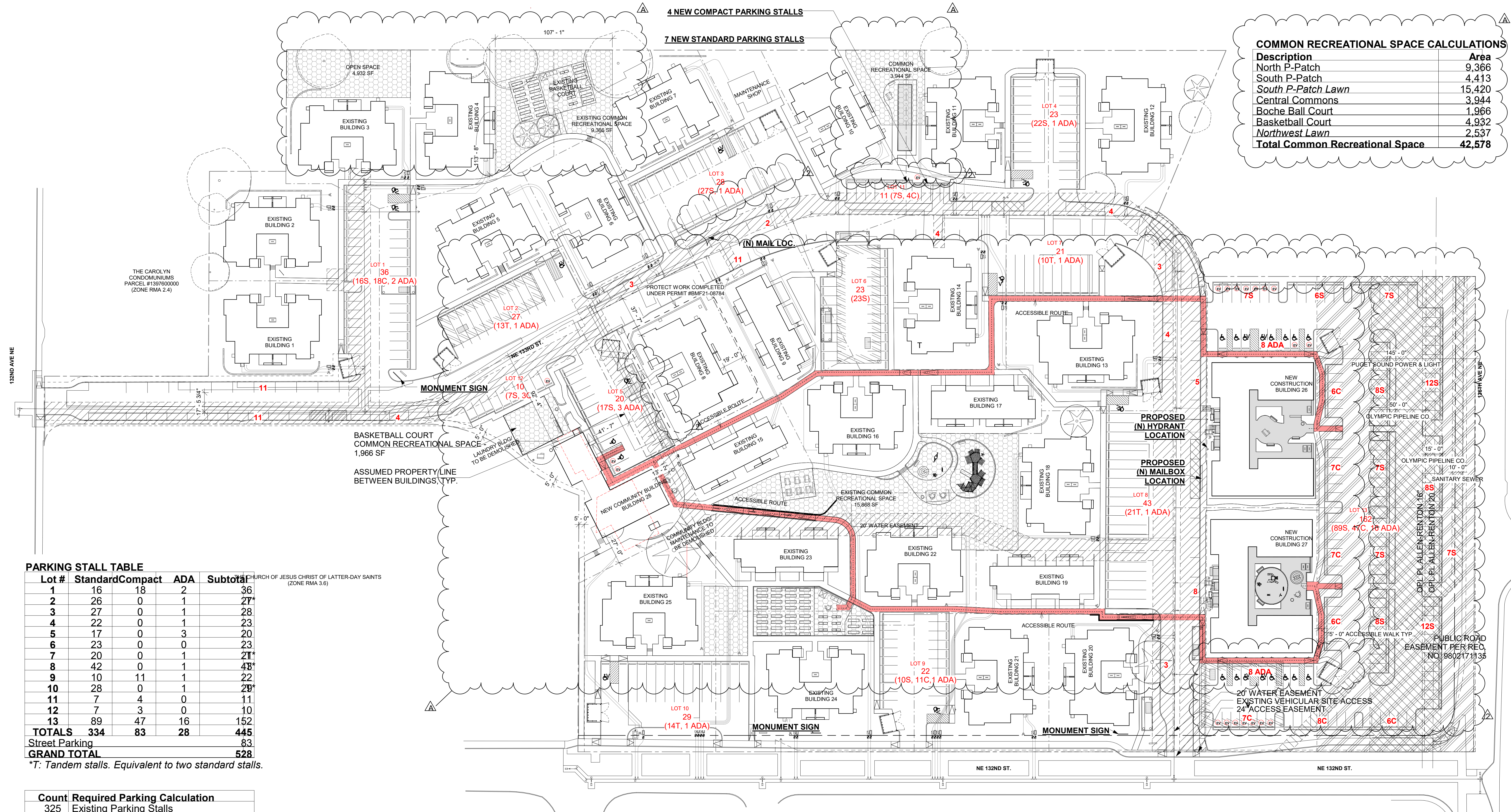
3.9 MANUFACTURERS' FIELD SERVICES

- A. Refer to individual Division 26, 27 and 28 Specification Sections for requirements.

3.10 PROTECTION OF FINISHED WORK

- A. Protect adjacent surfaces from damage by material installation.

END OF SECTION



COMMON RECREATIONAL SPACE CALCULATIONS

| Description | Area |
|--|---------------|
| North P-Patch | 9,366 |
| South P-Patch | 4,413 |
| South P-Patch Lawn | 15,420 |
| Central Commons | 3,944 |
| Boche Ball Court | 1,966 |
| Basketball Court | 4,932 |
| Northwest Lawn | 2,537 |
| Total Common Recreational Space | 42,578 |

PARKING STALL TABLE

| Lot # | Standard | Compact | ADA | Subtotal |
|--------------------|------------|-----------|-----------|------------|
| 1 | 16 | 18 | 2 | 36 |
| 2 | 26 | 0 | 1 | 27 |
| 3 | 27 | 0 | 1 | 28 |
| 4 | 22 | 0 | 1 | 23 |
| 5 | 17 | 0 | 3 | 20 |
| 6 | 23 | 0 | 0 | 23 |
| 7 | 20 | 0 | 1 | 21 |
| 8 | 42 | 0 | 1 | 43 |
| 9 | 10 | 11 | 1 | 22 |
| 10 | 28 | 0 | 1 | 29 |
| 11 | 7 | 4 | 0 | 11 |
| 12 | 7 | 3 | 0 | 10 |
| 13 | 89 | 47 | 16 | 152 |
| TOTALS | 334 | 83 | 28 | 445 |
| Street Parking | | | | 83 |
| GRAND TOTAL | | | | 528 |

*T: Tandem stalls. Equivalent to two standard stalls.

Count Required Parking Calculation

| | |
|------------|---|
| 325 | Existing Parking Stalls |
| 465 | Required Parking Stalls per Unit Mix |
| 47 | 10% Guest Parking Requirement (465 x 10%) |
| 512 | Total Parking Required with 10% Guest Parking |
| 528 | Total Parking Stalls Provided |
| 28 | Required Accessible Parking Stalls $528 \times 0.05 = 26.4$ |
| 7 | Required Van Accessible Stalls $28/6 = 4.66$ |

1 SITE PLAN w/ PARKING LAYOUT
SCALE: 1" = 40'-0"



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