



**OWNER-CMAR GENERAL CONDITIONS
OF THE CONTRACT**

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SECTION 1: DEFINITIONS

- 1.1 **PROJECT**
The term Project is the total construction of which the work performed under the Contract Documents may be the whole or a part. The Project is identified by name, location, and a project number in the Owner-CMAR Construction Contract.
- 1.2 **WORK**
The term work includes all labor, materials, services, equipment, tools, transportation, power, water, permanent and temporary utilities, connections, provisions for safety, and all incidental and other things necessary to produce the finished construction as described by the Contract Documents.
- 1.3 **OWNER**
The Owner is the person or organization (e.g., Washoe County School District; WCSD) identified as such in the Owner-CMAR Construction Contract. The term Owner means the Owner and/or the Owner's authorized representative(s).
- 1.4 **ARCHITECT**
The Architect is the person or organization responsible for the design of the Project and the preparation of the Drawings and Specifications on behalf of the Owner. The term Architect means the Architect and/or the Architect's authorized representatives.
- 1.5 **CONSTRUCTION MANAGER AT RISK (CMAR)**
The CMAR is the person or organization identified as such in the Owner-CMAR Construction Contract. The term CMAR means the CMAR and/or the CMAR's authorized representatives.
- 1.6 **SUBCONTRACTOR**
A Subcontractor is a person or organization who has a direct contract with the CMAR to perform any of the work. The term Subcontractor means a Subcontractor and/or the Subcontractor's authorized representatives.
- 1.7 **SUB-SUBCONTRACTOR**
A Sub-Subcontractor is a person or an organization with direct or indirect contract with a Subcontractor to perform any of the work. The term Sub-Subcontractor means a Sub-Subcontractor and/or the Sub-Subcontractor's authorized representatives.
- 1.8 **WRITTEN NOTICE**
Written notice shall be deemed to have been duly served when delivered in person to the individual or member of the firm or to an officer of the organization for whom it was intended, or when sent by mail to the last known business address, or when sent by e-mail or facsimile. Minutes of construction progress meetings and/or Requests for Information (RFI) do not constitute written notice.
- 1.9 **CALENDAR DAYS**
All references to a 'day' or to 'days' in the Contract Documents shall be understood to mean calendar days unless specifically indicated otherwise. A calendar day shall be understood to be any day of the year including weekends and holidays.

1.10 BUILDING OFFICIAL

The Building Official is the Building Official of the Authority Having Jurisdiction (AHJ). Any changes to the work that could be construed to have a potential code impact shall be reviewed and approved by the Building Official.

1.11 GUARANTEED MAXIMUM PRICE

The Guaranteed Maximum Price (GMP) is the maximum cost for the work as outlined in the Owner-CMAR Construction Contract and is also referred to as the Contract Sum in various Contract Documents including the CMAR General Conditions of the Contract.

1.12 CMAR'S CONTINGENCY

The CMAR's Contingency is an itemized amount that may be utilized by the CMAR, at the CMAR's discretion to complete the contract work. The CMAR's Contingency shall be used for missing items, coordination discrepancy between documents, drawing, details, and specifications, corrections by RFI, ASI, and CCD that further define the intent of the improvement, or "holes" within the scope of work or sub-bids or other items that are needed to complete the work, all of which must be agreed to by the Owner, Architect and the CMAR in an executed CMAR Contingency Change Order per requirements of section 2.4). Any portion of the CMAR's Contingency that remains when the work is completed shall be returned to the Owner in accordance with the Owner-CMAR Construction Contract.

1.13 OWNER'S CONTINGENCY

The Owner's Contingency belongs solely to the Owner for the purpose of being allocated towards stipulated additional unforeseen or owner requested work (as itemized in an executed Change Order). Any portion of the Owner's Contingency that remains when the work is completed belongs to the Owner in accordance with the percentage values listed in the Owner-CMAR Construction Contract. If any such claims remain unsatisfied after final payment is made, the CMAR shall refund to the Owner all monies the Owner may be compelled to pay in discharging such claims and any costs related thereto.

1.14 CONTRACT

All Contract Documents form the entire Contract between the Owner and the CMAR. The Contract Documents consist of all the following:

- A. Owner-CMAR Construction Contract Document
- B. General Conditions of the Contract for Construction Manager at Risk (including Division 1 Requirements)
- C. CMAR Interview Submittal
- D. CMAR Fee Proposal
- E. Owner's Request for Proposal (RFP) Solicitation
- F. RFP Addenda and Amendments
- G. Wage Rates for Washoe County
- H. Performance and Payment Bonds
- I. Labor and Materials Bonds (if applicable to the Contract)
- J. Certificate(s) and related Endorsements of Insurance Liability
- K. Specifications
- L. Drawings
- M. Change Orders (if applicable)

1.15 SUBMITTALS AND SHOP DRAWINGS

Submittals and shop drawings are drawings, diagrams, illustrations, performance charts, brochures, samples, and other data, which are prepared by the CMAR or any Subcontractor, manufacturer, supplier, or distributor, which illustrate some portion of the work. Samples are physical examples furnished by the CMAR to illustrate materials, equipment, finishes, or workmanship, and to establish standards by which the work will be judged.

1.16 RULES AND REGULATIONS

The CMAR shall comply with all applicable portions of the Nevada Revised Statutes (NRS) (including, but not limited to, NRS Chapter 338). The CMAR shall comply with NRS 338.125 (which pertains primarily to discrimination against employees and applicants because of race, creed, color, national origin, sex, or age). A violation of any provision contained in NRS 338.125 shall constitute a material breach of the Contract.

1.17 ALLOWANCES

An Allowance is a specific value designated by the Owner for use to accommodate work that could not be identified adequately for bidding purposes in the original construction documents. Any portion of an Owner's Allowance that remains when the work is completed belongs to the Owner.

SECTION 2: CONTRACT DOCUMENTS

2.1 INTENT AND INTERPRETATION

2.1.1 The Contract Documents are complementary, and what is required by anyone shall be as binding as if required by all. In the event of an inconsistency between or within any of the Contract Documents listed above, or between any of the applicable codes, the better quality or greater quantity of work shall be provided, at no additional cost to the Owner. If the terms, provisions, conditions, specifications, or requirements contained in one Contract Document should conflict with those contained in another, then such conflict shall be resolved in accordance with the following order precedence:

- 1) Owner-CMAR Construction Contract
- 2) General Conditions of the Contract for Construction Manager at Risk (including Division 1 requirements)
- 3) Owner's Request for Proposal (RFP) for CMAR Solicitation
- 4) RFP Addenda and Amendments
- 5) CMAR Interview Submittal
- 6) CMAR Fee Proposal
- 7) Specifications
- 8) Drawings (including Notes)

2.1.2 Specifications shall take precedence over notes on drawings. Large scale drawings shall take precedence over smaller scale drawings.

2.1.3 The Contract Documents are intended to include and require all items, which are necessary for the proper execution and completion of the work.

2.1.4 Interpretations of the Drawings and Specifications and the intent, which are necessary to the proper execution and completion of the work, will be made by the

Architect. Words which have well known technical, or trade meanings are to be interpreted in accordance with such recognized meanings.

- 2.1.5 The organization of the Specifications into divisions and sections, and the arrangement of the Drawings, shall not be construed to establish controls or limitations on the CMAR regarding dividing the work among Subcontractors, or in establishing the extent of work to be performed by any specific trade.

2.2 EXISTING CONDITIONS

- 2.2.1 It is the CMAR's responsibility to ascertain any existing conditions that may affect the cost of the proposed work, which could have been discovered by reasonable examination of the site. Reasonable examination shall not be construed to mean any sort of examination that requires the physical removal of any permanent improvement or physical barrier or the excavation or testing of any existing soil.
- 2.2.2 No additional costs shall be allowed to the CMAR for existing conditions, which could have been discovered by reasonable examination of the site. Reasonable examination shall not be construed to mean any sort of examination that requires the physical removal of any permanent improvement or physical barrier or the excavation or testing of any existing soil.
- 2.2.3 Existing improvements visible at the job site, for which no specific disposition is made in the Contract Documents, but which could reasonably be assumed to interfere with the satisfactory completion of the work, shall be removed and disposed of by the CMAR at no additional cost to the Owner, after written notification is given to the Owner.
- 2.2.4 The geotechnical report issued with the Contract Documents is provided for the CMAR's information and is not a Contract Document. The Owner does not guarantee the accuracy or completeness of the report and shall not be liable for any additional work or cost arising out of conclusions reached by the CMAR based upon the geotechnical report. The CMAR assumes all responsibility for any conclusions reached by the CMAR based on the geotechnical report.

2.3 REQUEST FOR INFORMATION

- 2.3.1 The CMAR shall, upon discovering any discrepancy, conflict, or inconsistency in the Contract Documents, immediately submit a Request for Information (RFI) to the Architect. The Architect, upon receipt of any such request, will promptly investigate the circumstances and give appropriate instructions to the CMAR but will take such action only after consultation with the Owner. Until such written instructions are given, any work done by the CMAR, either directly or indirectly relating to such discrepancy, conflict, or inconsistency will be at the CMAR's own risk, and they shall bear all costs arising therefrom. The CMAR shall maintain a sequential log of all questions and inquiries (RFIs).
- 2.3.2 No work shall be performed by the CMAR without adequate Drawings or Specifications, or that conflicts with or is contrary to the Contract Documents. The CMAR shall immediately report to the Owner and the Architect any discrepancy, conflict, or inconsistency that they may discover, or should have discovered, in the Contract Documents. If the CMAR performs any work contrary to the Contract

Documents, they shall be solely responsible and shall bear all costs attributable thereto.

- 2.3.3 Requests for Information shall be limited to one specific issue or group of related issues and shall not address multiple issues. The Architect will review and respond to RFIs within five (5) working days from the date that the RFI is received by the Architect. RFIs shall be issued by the CMAR to the Architect in a reasonable and orderly sequence and then delivered to the Architect.

2.4 CHANGES IN THE WORK & CHANGE ORDER MARK-UPS

- 2.4.1 A Change Order (Owner and CMAR Contingency) is an amendment to the Owner-CMAR Construction Contract and is a written order to the CMAR signed by the Owner and the CMAR, issued after the execution of the Contract, authorizing a change in the work and/or an adjustment in the Contract Sum or the Contract Time.
- 2.4.2 The Owner and the Architect have the authority to order minor changes in the work, which do not involve an adjustment to the Contract Sum or an extension of the Contract Time. Such changes shall be binding on the CMAR.
- 2.4.3 The CMAR shall not proceed with changes to the work without a Change Order or a Construction Change Directive. If the CMAR proceeds with changes to the work without proper written approval, the CMAR does so at the CMAR's own risk.
- 2.4.4 Should any event or circumstance occur that the CMAR believes may constitute a change in the work entitling the CMAR to an adjustment to the Contract Sum or the Contract Time, the CMAR shall issue written notice and a request for a Change Order to the Owner within seven (7) days of the occurrence of such event or circumstance. Such written notice shall be issued by the CMAR for any event or circumstance that the CMAR knows, or should have known, to have a potential impact on the work. The request shall describe in detail the related causes and any potential impact on the work. The CMAR shall also identify any anticipated adjustment to the Contract Sum and/or to the Contract Time as a result of such impact. Failure to submit such written notice and a request within the time stipulated and with the information required by this section shall constitute a waiver by the CMAR of the right to a Change Order.
- 2.4.5 The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:
- A. By unit prices stated in the Contract Documents or as subsequently agreed upon.
 - B. By a lump sum proposal, which is mutually accepted, is properly itemized by contractor/subcontractor, and includes the following:
 - i. Labor, including benefits, payroll taxes, and Workers' Compensation insurance or any other associated labor costs.
 - ii. Materials entering permanently into the work, including sales tax.
 - iii. Costs for equipment utilized to perform the Change Order work.

iv. Mark Up / Fee per 2.4.6

C. By a not-to-exceed maximum cost, which is based on the actual cost of time and materials, properly itemized, and verified, and includes the following:

i. Labor, including benefits, payroll taxes, and Workers' Compensation insurance.

ii. Materials entering permanently into the work, including sales tax.

iii. Costs for equipment utilized to perform the Change Order work.

iv. Mark Up / Fee per 2.4.6

2.4.6 The costs for changes in the work may be increased by the CMAR and Subcontractor (all tiers) to include taxes (if applicable), insurance, bonding, BIM model changes as necessary, profit and overhead, CMAR and subcontractor profit and overhead on lower tier Subcontractor work, and profit and overhead on work done by the CMAR's own forces. This fixed mark-up shall not exceed the amounts stipulated below for a single Change Order item, or for any group of related items, and shall be full compensation for the cost of insurance, bonding, overhead and profit related to the Change Order. CMAR and Subcontractor shall not be entitled to additional costs for supervision or field office personnel due to a change unless that change includes additional time. In that case, the CMAR shall be allowed to calculate costs for supervision and field office personnel who are directly attributable to the change. Administration or preparation costs shall not be allowed, and no other costs or expenses are agreed to unless otherwise agreed to in writing. All proposals shall be submitted to the Architect in sufficient detail to perform a complete analysis of all costs. The CMAR shall submit backup documentation to substantiate itemized costs, which may include, but are not limited to, payroll, invoices for materials, and invoices for equipment utilized in Change Order work. Labor rates or additional rates not identified as part of Prevailing Wage rates shall be identified and approved by Owner prior to start of construction.

The allowable mark-up fee for contractor bonding shall be in addition to the fee noted in the Change Order Mark-Up Schedule (next page) for the Prime Contractor only and shall not exceed one percent (1%) of the change if applicable.

CHANGE ORDER MARK-UP SCHEDULE

1. Additive Change Order (for the entity performing the work):	
<u>Total Cost of Change Order</u>	<u>Allowable Fee</u>
+\$0.01 to +\$9,999.99	15% of the Total Cost
+\$10,000.00 and above	10% of the Total Cost
2. Additive Change Order (Contractor Markup) Subcontractor work:	
<u>Total Cost of Change Order</u>	<u>Allowable Fee</u>
Any Amount	5% of the Total Subcontractor Fee
3. Deductive Change Order:	
<u>Total Credit Cost of Change Order</u>	<u>Credit Fee to be Applied</u>
Any Amount	5% of the Total Credit Cost. (Deductive)
<p><i>Example of Deductive Change: Assume <\$5,000.00> to be credited. The Contractor must include a 5% credit for profit and overhead, i.e., \$5,000.00 X 0.05 = <\$5,250.00> total credit to the Contract.</i></p>	

- 2.4.7 Execution of a Change Order shall be considered complete and final adjustment of the Contract Sum and the Contract Time and represents complete and final resolution of all matters related to, or arising out of, the Change Order. The CMAR may not reserve the right to make further claims regarding any executed Change Order. Any attempt by the CMAR to reserve such a right shall be considered invalid and unenforceable.
- 2.4.8 All requests for changes in the work shall be submitted to the Owner and the Architect in sufficient detail to allow a complete analysis of all proposed costs. The CMAR shall submit invoices for materials and equipment utilized in Change Order work. Labor rates, including fringe benefits, shall be in conformance with the applicable prevailing wage rates as defined in the Contract Documents and/or related to the Project.
- 2.4.9 The CMAR shall submit detailed rationale and justification for labor rates utilized in Change Order work.
- 2.4.10 The CMAR will not be entitled to a Change Order for any work including the intent of work that reasonably could have or should have been identified as necessary during the CMAR's participation in the design review process as defined in the Owner-CMAR Preconstruction Contract. The CMAR and the Owner mutually agree that the Owner shall have the right to issue one or more Change Orders at or near the end of the Project, requiring work to be performed after the expiration of the Contract Time, without the assessment of liquidated damages to the CMAR; however, the allowance made for the completion of such incidentals will not negate or affect the Owner's right to assess any liquidated damages that the Owner may be entitled to as a result in the delays of the Project in its entirety by fault of the CMAR. The scope of such Change Orders shall be limited to work that is deemed by the Owner to be incidental in nature and necessary to allow for proper completion of the Project.

2.5 CONSTRUCTION CHANGE DIRECTIVE

- 2.5.1 A Construction Change Directive (Directive) is a written instruction to the CMAR, signed by the Owner and the Architect, which shall serve as formal and binding direction for the CMAR to proceed with a defined change in the work. The Directive may be implemented when deemed necessary as an interim action until a Change Order can be formally assessed and executed. Upon receipt of a Construction Change Directive, the CMAR shall promptly proceed with the directed changes.
- 2.5.2 The Owner, without invalidating the Contract, may order changes in the work utilizing a Construction Change Directive with the Contract Sum and/or the Contract Time being adjusted as deemed appropriate. The CMAR shall comply with the provisions of Section 2.4.4 if the CMAR believes that a Construction Change Directive has a potential impact on the Contract Time or the Contract Sum.

2.6 USE OF CONTRACT DOCUMENTS BY CMAR

- 2.6.1 Copies of the Contract Documents, which are reasonably necessary for the proper execution, progress, and satisfactory completion of the work, shall be provided to the CMAR by the Owner. Copies so furnished are not to be used by the CMAR on any other project.

SECTION 3: CONTRACT

3.1 ENTIRE CONTRACT

- 3.1.1 The Contract (as made up of the Contract Documents) for preconstruction and construction related services represents the entire and integrated agreement between the Owner and the CMAR and supersedes all prior negotiations, representations, or agreements, either written or oral.
- 3.1.2 The Contract shall not be binding on either the Owner or the CMAR until the Owner-CMAR Construction has been approved and signed by authorized representative of both the Owner and CMAR; Performance and Payment Bond(s) and Labor and Materials Bond(s) (when applicable to the Contract) have been properly signed and submitted by the CMAR to the Owner; and a valid Certificate of Liability Insurance is submitted by the CMAR to Owner and that has been approved by the Owner to meet the needs of the Contract.
- 3.1.3 Execution of the Owner-CMAR Construction Contract shall constitute the CMAR's representation that the CMAR has carefully examined the contents of all Contract Documents that the CMAR has read and understands the same, and specifically agrees to be bound thereby. Additionally, execution of the Owner-CMAR Construction Contract by the CMAR shall represent that the CMAR has inspected the site, familiarized itself with all local conditions, laws, and regulations under which the work is to be performed and has correlated this knowledge with the requirements of the Contract Documents.
- 3.1.4 The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and the CMAR; between the Owner and a Subcontractor; or, between any persons or entities other than the Owner and the

CMAR. The Architect shall, however, have authority to act on behalf of the Owner, to the extent provided in the Contract Documents.

- 3.1.5 The laws of the State of Nevada and the applicable rules and regulations of the State of Nevada's departments, agencies, and institutions shall govern the Project and the work. All provisions of law and clauses required by law to be inserted in the Contract shall be deemed to be inserted therein, and the Contract shall be read and enforced as though such provision were included therein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall be physically amended to make such insertion or correction.
- 3.1.6 The Contract Sum is the sum stated in the Owner-CMAR Construction Contract and is the total dollar amount payable by the Owner to the CMAR for the complete and approved performance of the work in strict conformance with the Contract Documents. The Owner's Contingency belongs solely to the Owner for the purpose of being allocated towards stipulated additional work.

3.2 CONTRACT TIME

- 3.2.1 The Contract Time is the period of time (in calendar days) allotted in the Contract Documents for the completion of the work. A calendar day shall be understood to be any day of the year including weekends and holidays (refer to Section 1.9).
- 3.2.2 The date of commencement of the work is the date established in the Notice to Proceed issued by the Owner to the CMAR.
- 3.2.3 The CMAR shall begin the work on the starting date established in the Notice to Proceed. The CMAR shall perform the work expeditiously with adequate forces and shall complete the work within the Contract Time.
- 3.2.4 CMAR shall coordinate hours with the Owner prior to scheduling the work. Unless otherwise agreed upon, normal working days are:
- ❖ When school is not in session: For all sites, Monday through Friday, excluding holidays observed by the Owner, between the hours of 7:00 a.m. and 3:30 p.m.
 - ❖ When school is in session: Monday through Friday, excluding holidays observed by the Owner:
 - ❖ Elementary School Sites - between the hours of 3:30 p.m. until 11:00 p.m.
 - ❖ Middle School Sites - between the hours of 2:30 p.m. until 11:00 p.m.
 - ❖ High School Sites – between the hours of 3:00 p.m. until 11:00 p.m.
- 3.2.5 If the CMAR desires to work on any weekend day, any Owner's observed holiday, a n d / or during any other hours of the day they shall request and obtain the Owner's written approval at least Three (3) days in advance of the requested deviation. The Owner reserves the right to change working hours to coordinate with school schedules and staff availability. The owner reserves the right to charge for owner provided services, inspections, QA/QC, access service, etc., for all non-working days and hours per 3.2.4.

- 3.2.6 It is expressly understood and agreed that the Contract Time is a reasonable and acceptable time for completion of the work considering the requirements of the Contract Documents, the type and scope of the Project, and the usual industrial and labor conditions prevailing in the locality of the Project.
- 3.2.7 It is expressly understood and agreed that the Contract Time includes adequate time to allow for usual weather/smoke delays considering the climatic conditions in the area of the Project. No adjustments to the Contract Time will be allowed on account of usual weather or subsequent building/site conditions. The CMAR shall include adequate float or other allowance in the CMAR's construction schedule to accommodate weather conditions that may be associated with weather dependent work. Any extension of time for weather will be per specification 1310B.
- 3.2.8 The Contract Sum is based on the Contract Time specified in the Owner-CMAR Construction Contract and shall not be based on an early completion schedule. No additional compensation shall be granted to the CMAR for delays to an early completion schedule and any such claim is hereby waived.

3.3 CONTRACT TIME EXTENSIONS

- 3.3.1 An extension of the Contract Time for a delay will be allowed only in the case that a full normal working day is lost. Delays will not be allowed for lost partial days or for lost non-working days.
- 3.3.2 All requests by the CMAR for extensions of the Contract Time due to delays to the work shall be made in writing to the Owner and the Architect within seven (7) calendar days after the start of the delay. Each request shall describe in detail the event or events causing the delay, any related causes, and any impact to the work. Failure to submit such requests within the stipulated time and with the information required by this paragraph shall constitute a waiver by the CMAR of the CMAR's right to an extension of the Contract Time based upon this event or issue.
- 3.3.3 If the CMAR is delayed at any time in the progress of the work by any act or neglect of the Owner or the Architect, or by any employee of either, by any separate contractor employed by the Owner, or by circumstances that are agreed to be beyond the control and without the fault of the CMAR and the CMAR's Subcontractors and suppliers, the Contract Time may be extended by Change Order for such reasonable time as the Owner may determine.
- 3.3.4 The CMAR shall not claim or be entitled to any compensation or damages from the Owner because of delays caused by persons other than the Owner, or the Owner's agents and employees, and any entitlement thereto is hereby waived. The CMAR agrees that the CMAR's remedy in the event of a delay caused directly by the Owner, or by the Owner's agents and employees, shall be an extension of Contract Time that includes General Conditions costs and supervision costs at the same rate as agreed upon in the Contract Documents. Exceptions include where the delay unreasonably interferes with the CMAR's ability to complete the work within the Contract Time; so unreasonable in length as to amount to an abandonment of the work; is caused by fraud, misrepresentation, concealment, or other bad faith by the Owner; is caused by active interference by the Owner; and/or is caused by a decision made by the Owner to add significant scope or duration to the work.

- 3.3.5 The CMAR must submit any request for an extension of Contract Time in strict conformance with this section.
- 3.3.6 Should the CMAR request and be allowed cumulative time extensions, which cause the Contract Time to end on a non-workday (i.e., a weekend day or a holiday), the non-workday(s) may, at the Owner's discretion, be added to the Contract Time such that the Contract Time ends on a working day.
- 3.3.7 Extensions to the Contract Time will only be allowed for delays that affect the baseline critical path (without revision) for completion of the entire work as identified in the approved construction schedule.
- 3.3.8 Extensions to the Contract Time will not be allowed for delays, which could have been avoided by the exercise of care, prudence, foresight, weather protection, weather procedures, and/or diligence by the CMAR, or for delays resulting from correction of work rejected as defective or as failing to conform to the Contract Documents.

NOTE:

- ❖ ***No increase in cost or extension in performance time will be considered for failure to know the conditions to be encountered as to the character, quality, and quantity of the work to be performed, and materials to be furnished, and as to the requirements of the specifications.***
- ❖ ***No increase in cost or extension in performance time will be considered for material escalation. Section 01027 – Applications for Payment, Part 1, Subpart 1.3, Schedule of Values, B, 5 of the contract documents provides a provision for the storage of materials, off-site, if necessary, to help in managing the project costs and to hedge against potential future material price increases.***

3.4 **SUBSTANTIAL COMPLETION**

- 3.4.1 Substantial Completion is the stage in the progress of the work, or a designated portion thereof, when construction is sufficiently complete in accordance with the Contract Documents, so that the Owner can occupy and/or utilize the work (or portion thereof) for the work's intended use. The work will not be considered substantially complete if any of the following conditions exist:
- A. Any of the work is incomplete or defective including work identified in the final punch list, which in the opinion of the Owner, would prevent or interfere with occupancy and/or full use of the facility.
 - B. The Project's mechanical systems have not been tested, balanced, or accepted as being fully complete (including commissioning when applicable).
 - C. The Project's electrical and life safety systems have not been tested and accepted as being fully complete (including commissioning when applicable).
 - D. A Certificate of Occupancy has not been issued by the Building Official (either a Temporary/Conditional or a Final/Unconditional Certificate of Occupancy).
 - E. Final clean-up is not complete.

3.4.2 The following procedure shall be used in establishing Substantial Completion of the work, unless otherwise agreed to in writing:

- A. When the CMAR determines that the work, or a portion thereof, which the Owner agrees to accept separately, is substantially complete, the CMAR shall submit written notice thereof to the Owner and the Architect and shall include a punch list of all items which remain to be completed or corrected. Failure to include any items on the list does not alter the CMAR's responsibility to complete all the work in accordance with the Contract Documents.
- B. Inspections for Substantial Completion may be requested by the CMAR only after the status of completion has been reviewed and assessed by the Owner and the Architect. Upon such review the Owner and/or the Architect will issue a list of any observed deficiencies that affect the issuance of a Certificate of Substantial Completion. If the Owner and the Architect, based on an on-site inspection, agree that the work is substantially complete, the Architect may provide the CMAR with a list of additional corrective items, which shall be added to the CMAR's and the Owner's punch lists.
- C. If the Owner and the Architect, based on an on-site inspection, determine that the work is not substantially complete, the Architect will notify the CMAR in writing, and will provide a list of observed deficiencies. The CMAR shall remedy the deficiencies and submit another written request for Substantial Completion.
- D. When the Owner and the Architect determine that the work is substantially complete, the Owner will prepare a Certificate of Substantial Completion, which shall establish the date of Substantial Completion, state the responsibilities of the Owner and the CMAR for maintenance, heat, utilities, and insurance, and fix the time within which the CMAR shall complete the punch list items that are attached to the Certificate of Substantial Completion.
- E. The Certificate of Substantial Completion, when signed by the Owner and the CMAR, shall serve to document the CMAR's acceptance of the responsibilities assigned to him in such Certificate.

3.4.3 No payment, nor any use or occupancy of the Project, or any portion thereof, by the Owner, shall constitute acceptance of any work that is not completed in accordance with the Contract Documents, nor shall it relieve the CMAR of full responsibility for correcting defective work or materials found at any time prior to completion of the entire Project or during the warranty period.

3.5 FINAL COMPLETION

3.5.1 When the CMAR considers the work fully completed, they shall submit written notice to the Owner and the Architect confirming all the following:

- A. The work has been fully completed in accordance with the Contract Documents and is ready for final inspection.
- B. All punch list items have been corrected or completed.

- C. All equipment and systems have been tested, adjusted, and balanced and are fully operational.
- D. All training required by the Contract Documents has been provided.
- E. All operation and maintenance manuals and “as-built” drawings have been submitted to the Architect in accordance with the Contract Documents and have been accepted as being complete.
- F. All surety releases required by the Contract Documents have been submitted to the Owner.

3.5.2 The Architect and Owner will perform a final inspection of the work. If the work is found to be incomplete or defective, the CMAR will be notified in writing and provided with a list of observed deficiencies. The Owner may withhold such payment as deemed appropriate to ensure the correction of the deficiencies. Should the CMAR fail to promptly correct the deficiencies noted in the final punch list, the Owner may, upon a seven (7) day written notice to the CMAR, hire another contractor to correct such deficiencies, notify the CMAR’s Surety, and/or otherwise complete or correct the listed deficiencies, at the CMAR’s expense.

3.5.3 When the work and all requirements of the Contract Documents are fully and satisfactorily completed, the Owner will pay to the CMAR a final payment consisting of the remaining unpaid balance of the Contract Sum due to the CMAR. The acceptance of the final payment by the CMAR shall constitute a full and final release and waiver of all CMAR claims and rights of claim against the Owner relating to or pertaining to the work.

3.6 WARRANTY REQUIREMENTS

3.6.1 The CMAR and the CMAR’s Surety shall unconditionally guarantee all workmanship and materials incorporated in the work to be and remain free of defects for a period of one (1) year from the date of the Certificate of Substantial Completion, or for such longer periods as stipulated in the Contract Documents.

3.6.2 When the work, or a portion thereof, is accepted as being substantially complete, the warranty period will commence on the date of the Certificate of Substantial Completion for the completed portion of the work.

3.6.2.1 The CMAR shall provide a list of all warranties cataloged by specification sections and duration of warranty and shall include the manufacturer’s local contact representative and service provider for each.

3.6.3 The CMAR shall perform all services and maintenance on any equipment that is operated prior to the date of the Certificate of Substantial Completion. Such service and maintenance shall be performed in accordance with the equipment manufacturer’s written instructions, and as required to maintain the equipment warranty.

3.6.4 Within the one (1) year warranty period, and for such longer periods as specified in the Contract Documents, the CMAR shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom. The Owner shall promptly notify the CMAR in writing of any observed defects. The CMAR shall ensure that the

corrective work is commenced within seven (7) days of such notice and completed in an expeditious and timely manner.

3.6.5 The obligations of the CMAR herein shall be in addition to and not in limitation of any obligation imposed by law.

3.7 LIQUIDATED DAMAGES

3.7.1 Prior to the end of the one (1) year warranty period (approximately eleven (11) months after the date of the Certificate of Substantial Completion, on a date scheduled by the Owner) the CMAR and all requested Subcontractors shall attend a warranty inspection. The CMAR shall take immediate action to remedy, at no cost to the Owner, all warranty items identified during the warranty inspection.

3.7.2 It is hereby mutually understood and agreed, by and between the CMAR and the Owner, that the Contract Time, as specified in the Contract, is an essential condition of the Contract. It is further mutually understood and agreed that both the work and the Contract Time shall commence on the starting date established in the Notice to Proceed.

3.7.3 The CMAR agrees that all the work shall be prosecuted regularly, diligently, and without interruption at a rate of progress that will ensure completion of the work within the Contract Time/s.

3.7.4 If the CMAR shall neglect, fail, or refuse to achieve Substantial Completion/s, including interim/internal or area substantial completion of the work within the approved scheduled date/s and/or Contract Time and per the original baseline schedule, then the CMAR and the CMAR's Surety do hereby agree, as part of the consideration for the Contract, to pay to the Owner, not as a penalty, but as liquidated damages, the amount of money specified in the Owner- CMAR Construction Contract for each and every excess calendar day that is required to achieve Substantial Completion of the work. The specified liquidated damages shall be the Owner's sole and exclusive remedy for excess calendar days. The CMAR agrees to and hereby waives any defense as to the validity or enforceability of any liquidated damages payable by the CMAR under the Contract on the grounds that such damages are a penalty or that such damages are disproportionate to the actual damages sustained by the Owner.

3.7.5 The CMAR and the Owner mutually agree that in the event of a delay the actual damages to be suffered by the Owner are difficult to determine and accurately quantify. Accordingly, the CMAR, the CMAR's Surety, and the Owner agrees that the amount specified in the Owner-CMAR Construction Contract for liquidated damages is the appropriate and best estimate of the damages that would be incurred by the Owner should the work not be completed within the Contract Time.

3.7.6 Should the remaining balance of the Contract Sum be insufficient to cover the specified liquidated damages due the Owner, then the Owner shall have the right to recover such damages from the CMAR and/or the CMAR's Surety.

3.7.7 Liquidated damages shall cease to be assessed on the date that Substantial Completion is achieved provided the CMAR completes all punch list work within the time limit stipulated in the Certificate of Substantial Completion. If the CMAR does

not complete all the punch list work within the time limit stipulated in the Certificate of Substantial Completion, the assessment of liquidated damages shall resume on the date that the stipulated time limit expires and shall continue until all such punch list work is completed.

3.8 CLAIMS FOR DAMAGES

- 3.8.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of that party's employees, agents, or others for whose acts they is legally liable, claim shall be made in writing to such other party within seven (7) days after the first knowledge of such injury or damage. Any costs to the Owner caused by defective or ill-timed work performed by the CMAR shall be paid by the CMAR.
- 3.8.2 Except for damages mutually agreed upon by the Owner and the CMAR as liquidated damages in accordance with This section and excluding losses covered by insurance that is required by the Contract; the Owner and the CMAR agree to mutually waive all claims against each other for any consequential damages suffered or incurred by the other party that arise from or relate to the Contract, including, without limitation, rental expenses or other damages resulting from a loss of use or availability of the work, lost income, lost profit, lost financing or opportunity, lost business or reputation, principle office expenses, and loss of management or employee availability, productivity, opportunity, or services.
- 3.8.3 The provisions of This section shall also apply to termination of the Contract and shall survive such termination. The CMAR shall require similar waivers in all contracts with the CMAR's Subcontractors and others retained on the Project.

3.9 DISPUTE RESOLUTION

- 3.9.1 Except as provided in this section any controversy or claim arising out of or related to the Contract Documents or the work shall be subject to all provisions of Section 3.9.
- A. The provisions of Sections 3.9.1 through 3.9.7 do not apply if the Owner has given notice to the Surety under *Section 3(A) of the Performance Bond*. If the Owner discovers construction defects after the warranty period has expired, the Owner has the right to immediately a demand for binding arbitration or alternatively, file a judicial action in any Nevada court of competent jurisdiction. When the CMAR accepts final payment pursuant to Section 8.4, the CMAR waives all rights under this section, including the filing of binding arbitration, and any right to file a judicial action.
- 3.9.2 Unless otherwise agreed to in writing, the CMAR shall continue the work and maintain the construction schedule of the work during any dispute resolution proceedings. If the CMAR continues to perform in accordance with the Contract Documents, the Owner shall continue to make payments in accordance with the Contract Documents.
- 3.9.3 In the event that a claim, dispute, or controversy arises between the parties, which is related to the Contract Documents or the work, the party asserting the claim, dispute, or controversy must provide written notice (Notice of Dispute) to the other party within thirty (30) days of the occurrence(s). The written notice shall set forth with

specificity the nature of the claim or controversy, the relief sought, any other pertinent matters relating thereto, and shall comply with Section 1.8. Notice from the CMAR to the Owner shall be addressed to the Chief Capital Projects and Facilities Management Officer of WCSD (Administrator). Failure of either party to provide proper notice as required herein shall forever bar that party from any remedy thereon, including seeking any dispute resolution and/or judicial action. The notice and time requirements set forth herein shall not apply to warranty claims or construction defect claims that the Owner may have against the CMAR. Upon receipt of a Notice of Dispute, the Administrator shall within five (5) business days to have WCSD's Director of Construction engage in good faith, direct negotiations with the CMAR's principal field personnel, including, but not limited to the CMAR's Superintendent and Project Manager. If the Owner initiates the Notice of Dispute, the direct discussions must take place within five (5) days of the date of the Notice of Dispute. If the Owner and CMAR representatives are not able to reach a resolution, the Administrator shall immediately inform the CMAR's Principal in writing that resolution was not achieved and arrange for a meeting with the CMAR's Principal. Upon receipt of such notice, the CMAR's representative(s) must meet with the Administrator within five (5) business days, or as otherwise agreed to, and engage in good faith negotiations in an effort to reach a resolution.

- 3.9.4 If the dispute remains unresolved after twenty (20) calendar days from the date of the initial meeting between the CMAR's principal field personnel and the Administrator, either Party may declare the dispute resolution at an impasse by sending a written notice (Notice of Dispute Resolution Impasse) to the other Party in compliance with this section.
- 3.9.5 Mediation shall be the first step in the Dispute Resolution Impasse procedure. Within five (5) business days of the receipt of the Notice of Dispute Resolution Impasse, the Parties must choose a mediator by mutual agreement or initiate the services of the American Arbitration Association (AAA), in accordance with its Construction Industry Mediation Rules, to elicit the services of a mediator who is agreeable with both Parties. The Parties recognize the need to have minimal delay in the dispute resolution process and commit to scheduling mediation sessions as soon as practicable after impasse is declared. Agreements reached in formal mediation shall be enforceable as settlement agreements in any court of competent jurisdiction. The fees and expenses of the formal mediation shall be shared equally by all Parties. Each Party shall be responsible for their own costs, expenses, consultant fees, and attorney fees incurred in the presentation or defense of any claim, dispute, or controversy that is brought before the mediator. If, after mediation session(s) the Parties are not able to reach resolution, either Party may demand to take those issues to binding arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.
- 3.9.6 Upon a demand by either Party for binding arbitration after mediation, the Parties may choose an arbitrator by mutual agreement or utilize the services of AAA, according to AAA's Construction Industry Arbitration Rules, to elicit the services of an arbitrator who is agreeable with both Parties. The Parties recognize the need to have minimal delay in the dispute resolution process and commit to schedule the hearing with an arbitrator as soon as practicable after the demand for binding arbitration is received. The fees and expenses for arbitration shall be shared equally by all Parties. Each Party shall be responsible for their own costs, expenses, consultant fees, and attorney fees incurred in the presentation or defense of any

claim, dispute, or controversy that is brought to arbitration. The arbitrator's award shall be final and binding and only reviewable according to the provisions of the Uniform Arbitration Act of 2000, codified in NRS 38.

3.10 CONTRACT TERMINATION BY THE CMAR

3.10.1 The CMAR may, upon seven (7) days written notice, terminate the Contract after the work is stopped for a period of sixty (60) consecutive calendar days through no act or fault of the CMAR and/or their employees or agents, Subcontractor, Sub-Subcontractor, or due to issuance of a court order or other order from a public authority having jurisdiction. If the CMAR terminates the Contract under certain terms specified herein, the CMAR may recover from the Owner payment for work completed and approved, including reasonable overhead, profit, and termination costs. The CMAR will not be entitled to overhead and profit on any unperformed work.

3.11 CONTRACT TERMINATION BY THE OWNER

3.11.1 If any one of the following occurs, then the Owner may, without prejudice to any other right or remedy, and after giving the CMAR and the CMAR's Surety seven (7) days written notice, terminate the employment of the CMAR:

- A. The CMAR is adjudged bankrupt; or
- B. The CMAR makes a general assignment for the benefit of the CMAR's creditors; or
- C. A receiver is appointed on account of the CMAR's insolvency; or
- D. The CMAR persistently or repeatedly refuses or fails to supply an adequate number of properly skilled workers, proper supervision, or proper materials; or
- E. The CMAR fails to make prompt payment to Subcontractors or to materials suppliers for materials or labor; or
- F. The CMAR disregards any law, ordinance, rule, regulation, or order of any Public authority having jurisdiction.
- G. The CMAR otherwise materially breaches the Contract.

3.11.2 Upon termination by the Owner, the Owner may take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the CMAR and may finish the work utilizing whatever means and methods the Owner deems appropriate.

3.11.2.1 Should the Owner terminate the Contract for any of the reasons, the CMAR shall not be entitled to receive any further payment until the entire work is fully complete and the actual amount due the CMAR can be properly determined.

3.11.2.2 If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, including compensation for any additional professional services, such excess shall be paid to the CMAR. If such costs exceed the unpaid balance,

the CMAR or the CMAR's Surety shall promptly pay the difference to the Owner.

3.11.3 The Owner expressly reserves the right to terminate the Contract at any time due to a national emergency, court injunction, or for any reason determined to be in the best interest of the Owner, by giving the CMAR and the CMAR's Surety seven (7) days written notice. The CMAR shall be paid for work completed and approved, including reasonable overhead, profit, and termination costs. The CMAR will not be entitled to overhead and profit on any unperformed work.

3.12 SEPARATE CONTRACTS

3.12.1 The Owner reserves the right to award other separate contracts in connection with other portions of the Project.

3.12.2 The CMAR shall afford the Owner's separate contractors, reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work and shall properly interface and coordinate the CMAR's work with theirs.

3.12.3 If any part of the CMAR's work depends on the proper execution of the work of any separate contractor, the CMAR shall inspect and promptly report to the Owner and the Architect in writing any discrepancies or defects in such other work. Failure of the CMAR to so inspect and report shall constitute an acceptance of the separate contractor's work as fit and proper to receive the CMAR's work, except as to defects which may develop in the other separate contractor's work after the execution of the CMAR's work.

3.12.4 The CMAR shall do all cutting, fitting, and patching of the work that may be required to accommodate and incorporate the work of any separate contractor, as shown upon or as reasonably implied by the Contract Documents. The CMAR shall not endanger or alter the work of any separate contractor.

3.12.5 Should the CMAR cause damage to the work or property of any separate contractor on the Project, the CMAR shall, upon written notice, settle with the separate contractor. If any separate contractor asserts any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the CMAR, who shall indemnify, hold harmless, and defend the Owner against any such claim.

3.12.6 If a dispute arises between the CMAR and a separate contractor as to their responsibility for any costs or damages to the Project, the Owner may assign and charge such costs or damages to the CMAR and/or the separate contractor as the Owner, in the Owner's sole discretion, determines to be appropriate.

3.13 ASSIGNMENT

3.13.1 The CMAR binds itself and each of the CMAR's partners, successors, assigns and legal representatives to the Owner and to the Owner's partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

3.13.2 The CMAR shall not assign or sublet the Contract, in whole or in part, without the written consent of the Owner, nor shall the CMAR assign any monies due or to become due to them hereunder, without the prior written consent of the Owner.

3.14 SEVERABILITY

3.14.1 The Contract and the various provisions thereof are severable. Should any part, clause, provisions, or terms be declared invalid, ineffective, or unenforceable, the remaining provisions of the Contract shall remain in full legal force and effect.

3.15 INDEMNIFICATION

3.15.1 To the fullest extent permitted by law, the CMAR shall defend, indemnify, and hold harmless the Owner, the Architect, the Architect's consultants, and the agents and employees of any of them from and against all claims, damages, losses, and expenses, including, but not limited to attorneys' fees arising out of or resulting from performance of the work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) caused by the negligent acts or omissions of the CMAR, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph.

3.15.2 The Owner and the CMAR shall each indemnify the other for any losses principally caused by the indemnifying party.

3.15.3 In any/all claims against the Owner or the Architect or any of their officers, agents, or employees by any employee of the CMAR, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation hereunder shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CMAR or any Subcontractor under Workers' Compensation acts, disability benefit acts, or other employee benefit acts.

3.15.4 Obligations of the CMAR hereunder shall not extend to the liability of the Architect, the Architect's agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or the giving of or the failure to give directions or instructions by the Architect, the Architect's agents or employees, provided such giving or failure to give is the primary cause of the injury or damage.

3.15.5 The obligations of the CMAR hereunder shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist pertaining to a party or person described herein. This indemnification obligation shall not be diminished or limited in any way by the limits of insurance required in this Contract or otherwise available to the CMAR.

3.15.6 All indemnification obligations of the CMAR shall survive final payment.

3.16 COMPLIANCE WITH NRS 338.0117

3.16.1 The CMAR shall comply with all the requirements listed herein for the duration of the Project as attested to by the CMAR in the CMAR's Affidavit of Compliance. The CMAR shall submit a report substantiating the CMAR's successful compliance with each listed requirement prior to submitting the CMAR's final progress payment application:

- A. At least fifty percent (50%) of all workers collectively employed by the CMAR, including any of those workers employed by the CMAR's Subcontractors, will hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles; and
- B. All vehicles used primarily for the Project will be registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the Department of Motor Vehicles pursuant to NRS 706.826; or will be registered in the State of Nevada; and
- C. The CMAR and all the CMAR's Subcontractors will maintain and make available for inspection within this State all payroll records relating to the work and related Project.

3.16.2 In the event that the CMAR cannot meet the requirements of Section 3.16.1, the CMAR must provide Written Notice to the Owner within seven (7) days of the CMAR's discovery of that fact and include a detailed explanation of why the requirements of Section 3.16.1 cannot be met.

3.16.3 If the CMAR causes a material breach of the Contract as a result of a failure to comply with the requirements of Section 3.16.2 the CMAR is liable to the Owner for a penalty in the amount of one percent (1%) of the Contract Sum.

3.16.4 All contracts between the CMAR and a Subcontractor or supplier, and each contract between a Subcontractor and a Sub-Subcontractor or supplier must provide that:

- A. If a party to a contract causes a material breach of the contract between the CMAR and the Owner as a result of a failure to comply with the requirements of this section, the party is liable to the Owner for a penalty in the amount of one percent (1%) of the cost of the largest contract to which it is a party; and
- B. The right to recover the amount determined pursuant to this section by the Owner may be enforced by the Owner directly against the party that causes the material breach; and
- C. No other party is liable to the Owner for a penalty as set forth this section.

3.17 CMAR BIDDING PROCEDURES & OWNER'S OVERSIGHT

NOTE:

All CMAR self-performed proposals/bids shall be received by the Owner from the CMAR no less than twenty-four (24) hours prior to the scheduled Subcontractor bid due date.

- 3.17.1 The CMAR shall coordinate with, document, and disclose to the Owner all qualification, bidding, and contracting procedures utilized in assessing, negotiating with, and contracting with Subcontractors as required by NRS 338.16991 and 338.16995 and by the Contract Documents.
- 3.17.2 The CMAR shall coordinate all bid openings with the Owner and the Owner shall attend all bid openings.
- 3.17.3 The CMAR shall obtain a minimum of three (3) proposals/bids on all items of work unless a lesser number of proposals/bids is deemed acceptable and is pre-approved by the Owner in writing.
- 3.17.4 If the CMAR has pre-qualified at least three (3) Subcontractors for a particular trade and then receives less than three (3) the CMAR shall not open the associated proposals/bids until the CMAR obtains written direction from the Owner regarding how to proceed.
- 3.17.5 Immediately following the opening of Subcontractor proposals/bids, the CMAR shall provide the Owner with copies of all Subcontractor proposals/bids along with a list of all Subcontractors who submitted proposals/bids. This list shall include at minimum the contact information for the Subcontractor, the associated trade, any exclusions, any stipulations/exceptions, and the bid amount.
- 3.17.6 The CMAR shall demonstrate to the satisfaction of the Owner that the CMAR has adequate previous experience on any work that the CMAR intends to self-perform and shall also provide evidence that the CMAR's proposed cost for such work is lower than the other bids received for that work.

3.18 CMAR PRE-QUALIFICATION OF SUBCONTRACTORS

- 3.18.1 Prior to advertisement for Subcontractor qualifications the CMAR shall provide the Owner with a copy of the Subcontractor pre-qualification application for review and approval.
- 3.18.2 The CMAR shall pre-qualify all Subcontractors whose scope of work is more than one percent (1%) of the total estimated cost of construction in compliance with all requirements of NRS 338.16991 and 338.16995 and with all provisions under this section.
- 3.18.3 The CMAR shall pre-qualify at least three (3) Subcontractors for each trade/discipline of work unless the Owner issues written authorization to pre-qualify less than three (3) Subcontractors for a specific scope of work.
- 3.18.4 When pre-qualifying a Subcontractor the CMAR shall consider and utilize only the criteria listed in NRS 338.16991(a-j). Per NRS 338.16991(5-7), the Owner shall ensure that each Subcontractor determination has been made per the required criteria.
- 3.18.5 The CMAR shall notify each applicant and the Owner in writing of a determination made pursuant to the required criteria per NRS 338.166991(a-j). Any applicant who is not qualified may be appealed to NRS 338.1381 to the Owner with whom the CMAR has entered a contract for the construction of the work.

3.18.6 All Subcontractors, regardless of the value of their portion of the work, shall have and maintain a State of Nevada Contractor's license in good standing for the entire duration of the work, and must not be disqualified by the State Public Works Division pursuant to NRS 338.1376.

3.18.7 The CMAR shall maintain a record of all documents generated and received in connection with the pre-qualification of Subcontractors.

3.19 CMAR REQUEST FOR PROPOSALS/BIDS FROM SUBCONTRACTORS

3.19.1 The CMAR shall provide the Owner with a copy of the CMAR's request for Subcontractor proposals along with all associated documentation for review prior to issuing the request to Subcontractors.

3.19.2 CMAR is to verify that receiving Subcontractors were pre-qualified for the trade and/or scope of work that the proposal applies and provide said verification to the Owner.

3.19.3 If a MANDATORY Pre-Proposal/Bid Meeting was held, the CMAR is to verify that any Subcontractor submitting a proposal/bid attended said meeting.

SECTION 4: THE OWNER

4.1 OWNER'S RESPONSIBILITIES

4.1.1 The Owner will provide general administration of the Contract Documents, including performance of the functions described herein. Such general administration shall not relieve the CMAR of complete responsibility for the means and methods of construction and performance of the work in accordance with the Contract Documents.

4.1.2 The Owner shall furnish site surveys describing the topography and physical characteristics, legal limits, and utility locations for the Project site.

4.1.3 Except for securing permits, which is the responsibility of the CMAR under the Contract Documents, the Owner shall pay for all costs associated with plan checking, building permits, easements, utility connection fees for permanent structures, and/or permanent changes in existing facilities.

4.1.4 Information or services under the Owner's control shall be furnished by the Owner within a reasonable time to avoid delays in the orderly progress of the work.

4.1.5 Prior to the start of construction, the Owner shall obtain all land and rights-of-way necessary for the carrying out and completion of the work.

4.1.6 In the event of termination of the employment of the Architect, the Owner shall appoint a replacement whose status under the Contract Documents shall be that of the former Architect.

4.1.7 The Owner will issue the Notice to Proceed and Certificate of Substantial Completion.

4.1.8 The preceding items are in addition to other duties, responsibilities, and rights of the Owner enumerated throughout the Contract Documents.

4.2 OWNER'S AUTHORITY

- 4.2.1 The Owner, Owners CMA, and the Architect shall always have access to the work. The CMAR shall provide proper equipment and facilities for such access and inspection. If any work is required to be tested or approved, the CMAR shall give the Owner timely notice of the CMAR's readiness for inspection. Neither the observations of the Owner or the Architect in the general administration of the Contract, nor any inspections, tests, or approvals shall relieve the CMAR from the CMAR's obligation to perform the work in accordance with the Contract Documents.
- 4.2.2 If the Owner or the Architect determines that the CMAR has proceeded with work that does not comply with the Contract Documents, then the CMAR shall be required to correct such work at the expense of the CMAR.
- 4.2.3 The Owner will not be responsible for the acts or omissions of the CMAR or any Subcontractor, or any of their agents or employees, or any other persons performing any of the work.
- 4.2.4 If the CMAR defaults or neglects to carry out the work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven (7) days written notice to the CMAR, and without prejudice to any other remedy it may have, make good such deficiencies. In such case, an appropriate Change Order shall be issued deducting from the payments then or thereafter due the CMAR the cost of correcting such deficiencies, including the cost of the additional professional services made necessary by such default, neglect, or failure. If the payments then or thereafter due to the CMAR are not sufficient to cover such amount, the CMAR shall immediately pay the difference to the Owner.
- 4.2.5 If the CMAR fails to carry out the work in accordance with the Contract Documents or fails to correct work which is not in accordance with the Contract Documents, the Owner, by written notice, may order the CMAR to stop the work, or any portion thereof, until the cause for such order has been eliminated. The CMAR shall not be entitled to any compensation or to any additional time for such work stoppage.

4.3 INSPECTION BY THE OWNER

- 4.3.1 The Owner's Construction Project Manager and/or Project Coordinator/Inspector and/or Construction Project Agent has authority to enforce compliance with the Contract Documents and to direct the CMAR to correct non-complying work. The Architect will render interpretations of the Drawings and Specifications as may be necessary to assist the Construction Project Manager and/or Project Coordinator/Inspector with proper assessment of non-complying work.
- 4.3.2 The Owner's Construction Project Manager and/or Project Coordinator/Inspector and/or Construction Project Agent may direct the CMAR to stop any unsafe work, any non-complying work, and/or any work that presents a life-safety concern. The CMAR shall not be entitled to any compensation or to any additional time for such work stoppage.
- 4.3.3 Once the CMAR is advised of non-complying work, proceeding with that work or with any related work shall be at the CMAR's risk and at the CMAR's expense.

- 4.3.4 The CMAR shall provide the Owner's Construction Project Manager and/or Project Coordinator/Inspector and/or Construction Project Agent with a minimum twenty-four (24) hour written notice of all desired inspections required by inspections that are performed by the Owner. The CMAR shall be responsible for scheduling all testing inspections, commissioning, with the professional consultant and/or firm doing any testing and special inspection work, as well as all inspections required by the Authority Having Jurisdiction (AHJ), State, Fire, or any other AHJ required inspections.
- 4.3.5 The CMAR will be charged for extra inspection services when any work requiring inspection is performed during time periods other than the proposed and agreed upon schedule provided to the Owner by the CMAR. The charges shall be based on the current rate of pay for the Owner's personnel, including any applicable travel and per diem expenses. Charges for extra inspection services beyond the agreed upon schedule provided to the Owner by the CMAR will be processed as deductive changes to the Contract Sum.
- 4.3.6 The Owner shall be permitted to inspect the work, materials, payroll records, personnel records, invoices for materials, and other relevant data of the CMAR and Subcontractors. Such inspection by the Owner shall not be considered a warranty as to the fitness or acceptability of the work, materials, payrolls, records of personnel, invoices for materials and other relevant data and work, and shall not relieve the CMAR or the CMAR's Subcontractors of their obligations or duties required by the Contract Documents.

SECTION 5: THE CONSTRUCTION MANAGER AT RISK (CMAR)

5.1 CMAR'S REVIEW OF CONTRACT

- 5.1.1 The CMAR shall carefully study and compare all parts of the Contract Documents with each other and with all information furnished by the Owner and shall immediately report any discrepancies, conflicts, or inconsistencies that they discover in writing to the Owner and the Architect.
- 5.1.2 The CMAR shall not be liable to the Owner and/or the Architect for any damages resulting from discrepancies, conflicts, or inconsistencies in the Contract Documents unless the CMAR recognized, or should have recognized, such discrepancies, conflicts, or inconsistencies and failed to report them to the Owner and the Architect. No mobilization shall commence, and no work shall be performed until all required insurance certificates have been provided to the Owner.
- 5.1.2 If the CMAR performs any work knowing that it involves a recognized discrepancy, conflict, or inconsistency in the Contract Documents, without specific notice to the Owner and the Architect, the CMAR shall assume all responsibility for such performance, including but not limited to, any/all costs for correction.
- 5.1.3 The CMAR shall submit cost proposals, progress schedules, payrolls, reports, estimates, records, and other data as the Owner or Architect may request concerning work self-performed under the Contract.

5.2 CMAR'S RESPONSIBILITIES

- 5.2.1 The CMAR shall perform and complete the work in a timely and professional manner

and in strict conformance with the Contract Documents.

- 5.2.2 The CMAR shall prepare and submit daily reports to the Owner and the Architect within two (2) days of the reported day. Reports shall include workers on site, work performed, weather conditions, material and equipment deliveries, outstanding issues, and pending RFIs.
- 5.2.3 The CMAR shall supervise and direct all portions of the work. The CMAR shall be solely responsible for all construction procedures, methods, techniques, sequences, and safety, and for coordinating all portions of the work to comply with the Contract Documents. The CMAR shall be responsible for the acts and omissions of the CMAR's employees and Subcontractors, their agents and employees, and all other persons performing any of the work.
- 5.2.4 The CMAR and each Subcontractor shall have and maintain a State of Nevada Contractor's license in good standing for the entire duration of the work.
- 5.2.5 The CMAR shall at all times enforce good discipline and order among the CMAR's employees and Subcontractors and shall, at the CMAR's own cost, provide the security necessary to adequately protect the work.
- 5.2.6 The CMAR shall at all times, and at the CMAR's own cost, safely guard and protect the Owner's property, the work, and all property adjacent to the Project, from damage, injury, or loss in connection with the Project and shall replace or make good any such damage, injury, or loss. The CMAR shall be responsible for the protection of adjacent property and the maintenance of passageways, guard fences, and other protective facilities.
- 5.2.7 The CMAR shall give all notices and shall comply with all laws, ordinances, rules, orders, and regulations of all public authorities, relating to the performance of the work.
- 5.2.8 In the event of a temporary suspension of the work, and/or during inclement weather, the CMAR shall protect, and shall cause the Subcontractors and Sub-Subcontractors to protect the work and materials against damage, injury, or loss. If any work or materials become damaged, injured, or lost due to any cause within the CMAR's control, such work and materials shall be removed and replaced at the expense of the CMAR.
- 5.2.9 It shall be the CMAR's responsibility to ensure that all construction loading of the structural decks complies with the metal deck manufacturer's allowable loading criteria. The storage of materials and the use of mechanical lifts or other heavy moveable or stationary equipment utilized on elevated concrete slabs to perform work shall be conducted in a safe manner, so as to not cause any damage or deformation to steel decks or other portions of the structure. The CMAR shall take all necessary precautions, including hiring a structural engineer, when necessary, to evaluate the imposed loadings on elevated slabs from materials, workforce, lifts, and equipment, in order to comply with the deck manufacturer's safe loading criteria and deflection limitations. The CMAR shall be fully responsible for any damage caused to elevated slabs or other portions of the work as a result of construction-imposed loads utilized in performing the work. The CMAR shall include adequate provisions in the CMAR's bid to accommodate any limitations, restrictions, or additional costs that are necessary

to meet the deck manufacturer's requirements for the metal deck type, spans, and materials specified in the bid documents. The CMAR shall not be entitled to an increase in the Contract Sum or an extension to the Contract Time for complying with any of the requirements of this section.

5.2.10 The CMAR shall ensure that all ductwork either stored on site or installed at the Project site is thoroughly sealed to protect against dirt and moisture until such time that the Project site/building is deemed, by the Owner, to be adequately clean to allow for start-up of the associated air handling equipment. Should ductwork not be sealed as specified, then the CMAR shall have such ductwork professionally cleaned to an as-new condition at no cost to the Owner.

5.3 SUPERINTENDENT, ASSISTANTS & EMPLOYEE SUBSTITUTIONS

5.3.1 The CMAR shall employ a competent full-time Superintendent and necessary assistants who shall be in attendance at the Project site throughout the progress of the work. The Superintendent shall represent the CMAR and have full authority to act on the CMAR's behalf.

5.3.2 CMAR firm shall not substitute a different employee for an employee whose resume was submitted during the proposal phase of the Request for Proposal solicitation unless: (A) the employee whose resume was submitted is no longer employed by the CMAR; (B) if the employee is unavailable for medical reasons; (C) or if the Owner entered into a contract with the CMAR for Preconstruction services pursuant to NRS 338.1693 more than ninety (90) days after the date on which the final ranking of application was made pursuant to NRS 338.1696(7).

5.4 LABOR AND MATERIALS & APPRENTICE UTILIZATION ACT

5.4.1 Unless otherwise specifically stated in the Contract Documents, the CMAR shall provide and pay for all labor, materials, tools, equipment, water, light, power, heat, transportation, supervision, temporary construction services, procedures, and facilities of every nature required to properly execute and complete the work in accordance with the Contract Documents. All materials shall be installed in strict compliance with the Contract Documents and the recommendations of the manufacturer.

5.4.2 In any case where the manufacturer's installation instructions conflict with the Contract Documents the CMAR shall bring such conflict to the attention of the Owner and the Architect prior to installing the associated materials or equipment, such that the Owner and the Architect may provide direction for an appropriate resolution to the identified conflict. If the CMAR proceed with installing any materials or equipment in a manner contrary to the manufacturer's instructions without first notifying the Owner and the Architect, then the CMAR shall remove and reinstall the materials or equipment in accordance with the manufacturer's instructions at no cost.

5.4.3 The CMAR shall not employ or contract with any firm or organization that is unfit or unskilled in the work to be performed. The CMAR shall not discriminate or allow discrimination against any employee or applicant for employment because of sex, race, color, creed, or national origin. The CMAR shall comply with and shall require the CMAR's Subcontractors to comply with all applicable provisions of NRS Title 28

(Public Works and Planning) and NRS Title 53 (Labor and Industrial Relations).

- 5.4.4 The CMAR shall not discriminate or allow discrimination against any employee or applicant for employment because of association, union, or any other affiliation or non-affiliation.

The CMAR shall comply strictly with the requirements of NRS 338 and shall pay, if required by statute, prevailing wage rates for the appropriate labor positions as outlined in "Washoe County - Prevailing Wage Rates for Public Works, State of Nevada" for projects that are \$100,000 or greater. Prevailing wage shall be paid for all work through punch list and issuance of Notice of Completion.

Wage rates as published by the Labor Commissioner of the State of Nevada are available as follows:

Office of Labor Commissioner

1818 College Parkway, Suite 102

Carson City, NV 89706

- Phone: (775) 684-1890
- Email: mail@Labor.nv.gov
- Website: <https://labor.nv.gov/>

The CMAR shall comply strictly with the requirements of NRS 338, and the Apprenticeship Utilization Act as reformed by Senate Bill 82 (SB82) in the 2023 Legislative Session effective January 1, 2024. Please refer to the Labor Commissioner's website specifically for a copy of [Senate Bill 82, Presentation Senate Bill 82 dated 12-12-23](#), [Senate Bill 82 OLC Summary dated 12-12-23](#) and any other posted information.

https://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/

A CMAR engaged in public works construction who employs workers on one or more public works projects during a calendar year pursuant to NRS 338.040 shall use apprentices for a portion of the total hours of labor worked for each apprenticed craft or type of work to be performed on those public works.

When a public works project is subject to the Apprenticeship Utilization Act it shall be the Contractor's responsibility to ensure that the work is categorized appropriately. (i.e., vertical or horizontal). CMAR #24-96-C-04-MS has been categorized as a *VERTICAL* project by the Owner.

It is the CMAR's responsibility to comply, document and report directly to the Labor Commissioner annually if they have performed a certain number of hours or more on public works projects. Failure to comply, document and report could result in financial penalties and disqualification per NRS.

- 5.4.5 When required by the Contract Documents, the CMAR shall ensure that all employees on the Project are paid in accordance with the Prevailing Wage Rates as published in the Contract Documents and as issued by the State Labor Commissioner for the area or place of the work. The CMAR shall forfeit, by deductive Change Order, the amounts stipulated in NRS 338.060, should the CMAR fail to comply with any of the applicable prevailing wage rate requirements.

- 5.4.6 The CMAR shall ensure that all the CMAR's Subcontractors comply with the reporting requirements of NRS 338.070.
- 5.4.7 All work performed after regular working hours, on weekends or legal holidays, shall be performed without additional expense to the Owner unless previously agreed to otherwise by the Owner.
- 5.4.8 Unless otherwise specifically required, all materials and equipment incorporated in the work shall be new, free of faults and defects, and shall conform to the Contract Documents. If required, the CMAR shall furnish evidence, satisfactory to the Owner, as to the type and quality of all materials and equipment.
- 5.4.9 No materials or equipment for the work shall be purchased by the CMAR, nor shall the CMAR permit any Subcontractor to purchase materials or equipment, which are subject to any chattel mortgage, or are under a conditional sale contract or other security agreement by which any right, title, or interest is retained by the seller.
- 5.4.10 All materials and equipment used in the work shall be subject to inspection and testing in accordance with accepted standards to ensure conformity with the requirements of the Contract Documents, laws, ordinances, rules and regulations, or orders of any public authority having jurisdiction. Where specific certificates concerning materials and/or equipment are required, securing payment for the prompt delivery of such certificates shall be the responsibility of the CMAR. Such certificates shall be executed by qualified firms acceptable to the Owner, shall include all information required by the Contract Documents and shall clearly refer specifically to the relevant materials and/or equipment.

5.5 TEMPORARY UTILITIES, HEATING, AND COOLING

- 5.5.1 The CMAR shall be solely responsible for providing all necessary temporary utilities. The CMAR shall pay all costs related thereto, including, but not limited to, applications, fees, permits, engineering, and any other costs as may be required to acquire temporary utilities. The Owner will not be responsible for any delays or costs related to obtaining temporary utilities unless otherwise agreed to by the Owner.
- 5.5.2 Temporary utilities may be connected to the Owner's existing metered utilities only with the Owner's and utility company's written authorization. Any connection to the Owner's existing utilities shall be separately metered to allow for proper allocation of utility costs unless another arrangement is specifically agreed to and authorized by the Owner in writing. Temporary meters shall be removed upon completion of the work.
- 5.5.3 The CMAR shall be solely responsible for providing temporary heating, cooling, and/or ventilation as required to prevent degradation or damage to the work unless otherwise agreed to by the Owner. The permanent heating, cooling, and air handling systems shall not be utilized for the purpose of temporary heating, cooling, or ventilation until the Owner approves of such use in writing. In no case shall the permanent heating, cooling, or air handling systems be operated until they are complete, including formal start-up, check-out, and testing and balancing. Utilization of any of the permanent heating, cooling, or air handling systems prior to Substantial Completion shall not impact the specified warranty for such equipment, which shall begin on the date of Substantial Completion.

5.6 EMERGENCIES

- 5.6.1 In case of an emergency, which threatens loss or damage to property, personal injury, or life safety, the CMAR shall immediately take all feasible actions to prevent or mitigate such loss, damage, injury, or death, without awaiting instructions from the Owner or the Architect. The CMAR shall notify the Owner and the Architect in writing of such emergency at the first feasible opportunity.
- 5.6.2 The amount of reimbursement claimed by the CMAR on account of any emergency action shall be determined in the manner provided herein for claims.
- 5.6.3 The CMAR shall maintain a current emergency telephone number list at the job site. The list shall include telephone numbers for the CMAR's Superintendent and for other responsible CMAR representatives that can be contacted after normal working hours in the event of an emergency. This list shall be prominently posted both inside and outside of the CMAR's field office.

5.7 PROGRESS PHOTOGRAPHS

- 5.7.1 The CMAR shall take not less than twelve progress photographs of the work each month at a minimum resolution of 640 by 480 pixels. The photographs shall be taken with the intent of providing a clear and complete depiction of overall Project progress. Each photograph is to be clearly marked with the time, date, location/view, and other details sufficient to identify the subject.
- 5.7.2 Camera view/locations shall be coordinated with and approved by the Owner or the Architect.
- 5.7.3 Progress photos shall be stored on an electronic jump-drive/flash drive and issued to the Owner along with each progress payment application. Other data storage formats will be acceptable to the Owner with prior approval.

5.8 TAXES, PERMITS, FEES, AND NOTICES

- 5.8.1 The CMAR shall pay all sales, consumer, use, and other taxes required by law.
- 5.8.2 The CMAR shall secure and pay for all construction-related permits, fees, and licenses necessary for the proper execution and completion of the work, including, but not limited to, dust control permits, storm water mitigation permits, and temporary utility tap fees. Municipal or county plan checking, building permit or permanent utility usage fees will be the responsibility of the Owner.
- 5.8.3 The CMAR shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the work. If the CMAR discovers that any of the Contract Documents are at variance therewith, he shall immediately notify the Owner and the Architect in writing. If the CMAR performs any work which he knows or should have known to be contrary to such laws, ordinances, rules, and regulations, or orders, without such written notice and written instruction from the Owner or Architect, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

5.9 PROJECT SIGNS

- 5.9.1 Within thirty (30) days of the Notice to Proceed, and maintain for the life of the Project, the CMAR shall erect one painted Project identification sign of the design, text, and colors designated by the Architect, measuring 4 feet by 8 feet (4' x 8'), in the format directed by the Owner.
- 5.9.2 This sign shall be the only CMAR sign displayed on the Project site. The sign shall include as a minimum the Project name, the Architect, the CMAR, and major Subcontractors.

5.10 ACCESS ROADS

- 5.10.1 The CMAR shall use designated access roads as directed by the Owner, and the CMAR shall always keep these roads passable. The CMAR shall be entirely responsible for any damage to roads, trees, shrubs, gates, fences, grass, curbs, gutters, and driveways due to construction usage. All damaged portions shall be restored by the CMAR, at the CMAR's own cost, to the same condition as existed before the commencement of the work.
- 5.10.2 Dirt roads shall be periodically sprinkled with water when dust conditions create an onsite or offsite hazard or nuisance to workers, neighboring properties, or the public in general. The CMAR shall secure and pay for any dust control permits required by State or local jurisdictions.

5.11 CONSTRUCTION SURVEYS

- 5.11.1 Unless otherwise expressly provided for in the Contract Documents, the CMAR shall furnish and pay for all construction surveys necessary for execution of the work or required by the Contract Documents.

5.12 ARCHAEOLOGICAL FINDINGS

- 5.12.1 Any historic, prehistoric, archeological evidence, or artifacts discovered on the site shall remain undisturbed and shall be reported immediately to the Owner in writing. Any such findings are the property of the Owner.

5.13 SUBSURFACE CONDITIONS

- 5.13.1 Should the CMAR encounter subsurface or hidden conditions at the site materially differing from those indicated in the Contract Documents, the CMAR shall immediately give written notice to the Owner and the Architect of such conditions before they are disturbed. The Architect will investigate the conditions, and if found to materially differ, the Architect will, after consultation with the Owner, make such changes in the Contract Documents as deemed necessary. Any increase or decrease in costs resulting from such changes will be adjusted by Change Order.
- 5.13.2 The CMAR shall perform all work in strict conformance with the current "*Call Before You Dig*" program applicable at the location of the Project.

5.14 PATENTS AND ROYALTIES

5.14.1 To the fullest extent permitted by law, the CMAR shall defend and hold harmless the Owner and the Owner's officers, agents, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of claimed infringement of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the work, including the use of the work by the Owner, unless otherwise specifically stipulated in the Contract Documents.

5.14.1.1 If the CMAR uses any design, device or materials covered by letters, patent, or copyright, the CMAR shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device, or material.

5.14.1.2 It is mutually agreed and understood, that without exception, the Contract Sum includes all royalties or costs arising from the use of any such design, device, or materials in the work.

5.15 MATERIALS TESTING

5.15.1 Testing of construction materials delivered to the job site shall be carried out by the Owner unless otherwise required in the Contract Documents. The Owner shall select the testing laboratory or inspection agency to carry out this work. The purpose of such testing is to verify conformity of materials and/or equipment with the Contract Documents. Where tests indicate conformity, costs of testing will be paid by the Owner; where tests indicate non-conformance, costs of re-testing will be paid by the CMAR by deductive Change Order.

5.15.2 If special inspection or testing requirements are established by any of the Contract Documents, performance of and payment for such inspection or testing shall be as specifically stated therein. If the manner of payment is not specified or if there is no mention of such inspection or testing in the Contract Documents, but such inspection is judged necessary by the Owner, then the Owner shall pay the cost thereof. The CMAR shall cooperate toward minimizing the cost of such inspection and testing.

5.15.3 All testing and inspection carried out by the Owner is for the benefit of the Owner and not the CMAR. Lack of performance or failure on the part of any testing laboratory or inspection agency retained by the Owner shall not relieve the CMAR of the CMAR's responsibility to complete the work in accordance with the Contract Documents.

5.16 CORRECTION OF THE WORK

5.16.1 If any work is covered prior to either a specified or a requested inspection, the CMAR shall uncover the work for observation and if found to be defective or non-conforming shall replace the work at no cost to the Owner.

5.16.2 If any work has been covered, which the Owner or the Architect has not specifically requested to observe prior to being covered, the Owner may request to see such work and it shall be uncovered by the CMAR. If the uncovered work is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If the

uncovered work is not in accordance with the Contract Documents, the CMAR shall pay such costs.

- 5.16.3 The CMAR shall promptly correct all work rejected as defective or as failing to conform to the Contract Documents, whether observed before or after the Certificate of Substantial Completion is issued, and whether or not fabricated, installed, or completed. The CMAR shall bear all costs of correcting such rejected work, including, but not limited to, the cost for additional professional services.
- 5.16.4 The CMAR shall bear all costs associated with making good all work of separate contractors destroyed or damaged by removal or correction.
- 5.16.5 If the CMAR does not remove defective or non-conforming work immediately upon written notice, the Owner may remove it and may store the materials or equipment at the expense of the CMAR. If the CMAR does not pay the cost of such removal and storage immediately upon written notice, the Owner may sell such work at auction or at private sale to recover the related costs. If such proceeds do not cover all related costs incurred by the Owner, the difference shall be charged to the CMAR and an appropriate Change Order shall be issued.
- 5.16.6 If the CMAR fails to correct defective or non-conforming work, the Owner may correct it at the CMAR's expense.
- 5.16.7 If the Owner prefers to accept non-conforming work, he may do so instead of requiring its removal or correction, in which case an appropriate reduction will be made to the Contract Sum, or, if the amount is determined after final payment, such amount shall be paid to the Owner by the CMAR immediately upon written notice.
- 5.16.8 All damage or loss to any property caused in whole or in part by the CMAR, any Subcontractor, Sub-Subcontractor, anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the CMAR, except damage or loss attributable to errors and/or omissions in the Contract Documents.

5.17 SUBCONTRACTORS & SUBSTITUTES

- 5.17.1 After submitting the required Subcontractor information to the Owner, the CMAR shall not contract with any other Subcontractor nor change Subcontractors without proper justification and without the prior written approval of the Owner.
- 5.17.2 Should the CMAR decide for any reason to substitute a Subcontractor for work that the CMAR listed to be self-performed, the CMAR shall provide a written explanation of why the Subcontractor was not utilized in the original list and why the substitution is in the best interest of the Owner and allowed by NRS. The Owner reserves the right to either approve or deny such requests.
- 5.17.3 If the Owner has a reasonable objection to any Subcontractor, and requests in writing a change in Subcontractors, the CMAR shall submit an acceptable substitute, and the Contract Sum may be increased or decreased by any reasonable costs directly caused by such substitution.

- 5.17.4 The CMAR shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind Subcontractors to the CMAR by all Contract Documents. These provisions shall include, but shall not be limited to, the following:
- A. Require that the Subcontractor's work be performed in accordance with the requirements of the Contract Documents and be guaranteed for a period of one year after the date of Substantial Completion, or as may be required in the Contract Documents.
 - B. Require that the Subcontractor's work be performed in accordance with the CMAR's construction schedule to ensure completion within the Contract Time.
 - C. Require that all claims by the Subcontractor for additional costs or extensions of time with respect to subcontracted portions of the work shall be submitted to the CMAR in the time and manner provided in the Contract Documents for like claims by the CMAR upon the Owner.
- 5.17.5 The CMAR shall pay each Subcontractor, within ten (10) calendar days after receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the CMAR on account of each Subcontractor's work. The CMAR shall also require that each Subcontractor make similar payments to each Sub-Subcontractor.
- 5.17.6 The CMAR shall be as fully responsible to the Owner for the acts and omissions of the CMAR's Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of the persons directly employed by him. If, through acts or neglect on the part of the CMAR, any Subcontractor suffers loss or damage, the CMAR agrees to settle with such Subcontractor. If such Subcontractor asserts any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the CMAR, who shall indemnify, hold harmless, and defend the Owner against any such claim.
- 5.17.7 If the CMAR fails to make appropriate payments to any Subcontractor, Sub-Subcontractor, worker, and/or supplier, then the Owner may pay unpaid bills and/or withhold from the CMAR's unpaid compensation a sum of money deemed reasonably sufficient to reimburse the Owner or pay any/all such claims until satisfactory evidence is furnished that all such liabilities have been fully discharged by the CMAR; however, in no event shall the provisions of this paragraph be construed to impose any obligations upon the Owner to the CMAR, Subcontractors, Sub-Subcontractors, workers, and/or suppliers. In paying any unpaid bills of the CMAR, the Owner shall be deemed the agent of the CMAR, and any payment so made by the Owner, shall be considered as a payment made under the Contract Documents by the Owner to the CMAR, and the Owner shall not be liable to the CMAR for any such payment made in good faith.
- 5.17.8 The CMAR shall be responsible for the proper distribution of all insurance recoveries resulting from an insured loss under the Contract.
- 5.17.9 The Owner may furnish to a Subcontractor or supplier information regarding payments to the CMAR on account of work done by such Subcontractor or supplier, if requested.

5.17.10 Neither the Owner nor the Architect shall have any obligation to pay or to see to the payment of any monies to any Subcontractor, worker, or supplier, except as may otherwise be required by law.

5.17.11 Prior to receiving or accepting any payment, each Subcontractor must have a valid Nevada business license, pursuant to 2013 Legislative Session Senate Bill 404.

5.18 SAFETY PROGRAM & HOT WORK PERMIT

5.18.1 In order to be eligible to provide labor on the Project, the CMAR must have in existence a Safety Program. This requirement is a reasonable precaution to ensure a safe working environment on construction projects that may involve workers being in relatively close contact with students, staff, and the community.

5.18.2 The CMAR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.

5.18.3 All work shall be performed in strict accordance with the most current edition of the State of Nevada Occupational Safety and Health Standards.

5.18.4 The CMAR shall take all necessary precautions for the safety of, and shall provide all necessary protection to prevent damage, injury, or loss to:

A. All employees on the Project and all other people who may be affected thereby.

B. All work, whether in storage on or off the site.

C. All property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities.

5.18.5 The CMAR shall comply with all applicable laws, ordinances, rules, and regulations of any public authority having jurisdiction for the safety of persons or property, or to protect them from damage, injury, or loss. The CMAR shall erect and maintain, as required by existing conditions and by the progress of the work, all necessary safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating regulations, and notifying Owners and users of adjacent properties.

5.18.6 The CMAR's Project Superintendent, unless otherwise designated in writing by the CMAR to the Owner, shall serve as the responsible member of the CMAR's organization at the site, whose duty shall be supervision and practice of the CMAR's Safety Program (and the prevention of accidents. In any emergency affecting the safety of persons or property, the CMAR shall act, at discretion, to prevent threatened damage, injury, or loss.

5.18.7 The CMAR shall be responsible for the safe operation of all equipment, for utilizing safe construction methods, and for any damage which may result from failure or from improper construction, maintenance, or operation.

- 5.18.8 The CMAR shall securely fence, barricade, cover, or otherwise adequately protect all excavations, holes, shafts, or other hazards to guard against danger to persons or animals and shall properly maintain such protection until the completion of the Project.
- 5.18.9 The CMAR shall immediately notify the Owner, and shall take immediate action to prevent damage, injury, or loss, should any suspected hazardous materials be encountered during the course of work on the Project.
- 5.18.10 Prior to conducting any hot work (welding, brazing, soldering, cutting, grinding, etc.) in an existing building the CMAR shall complete and submit to the Owner a Hot Work Permit (utilizing the associated form as issued by Factory Mutual or Global Risk Consultants).

5.19 SITE MANAGEMENT & CLEANUP PROCEDURES

- 5.19.1 The CMAR shall confine operations at the site to areas permitted by law, ordinances, permits, and the Contract Documents, and shall not unreasonably encumber the site. The CMAR shall always keep the site and the work free from accumulation of waste materials and debris resulting from the CMAR's operations.
- 5.19.2 The CMAR shall obtain any required dust control permit and shall implement a dust control program prior to beginning any activity at the Project site. The CMAR's dust control program shall comply with all applicable state and local requirements. At a minimum, the CMAR shall periodically shower the entire construction site with water as required to prevent blowing dust from becoming a hazard or nuisance to workers, neighboring properties, or the public.
- 5.19.3 The CMAR shall develop and implement a stormwater pollution prevention plan complying with the most current version of the federal Environmental Protection Agency Construction General Permit, or with applicable state or local stormwater pollution prevention requirements, whichever is more stringent.
- 5.19.4 Upon completion of the work the CMAR shall remove all waste materials, debris, tools, construction equipment and machinery, and surplus materials from the Project site. The CMAR shall clean all surfaces and leave the work in a finished, cleaned, washed, waxed, and polished condition. The cleanup requirements are also specifically applicable to all mechanical equipment and to all mechanical equipment rooms.

5.20 ROOFING INSTALLATION AND PROTECTION

- 5.20.1 No work including staging or access to other portions of the work shall be permitted on the finished membrane.
- 5.20.2 All roofing work shall commence at the furthest point from the workers' access and progress back towards the access point.
- 5.20.3 If staging, access, or work is required on the finished membrane, the CMAR shall provide protection along the access path and under the work extending 48 inches beyond the required work area. Protection shall consist of ¾ inch plywood over a heavy canvas tarp with sandbag ballasts as required to prevent the plywood from becoming airborne during strong winds.

5.21 QUALITY ASSURANCE & QUALITY CONTROL PROGRAM

5.21.1 The CMAR shall develop and implement an appropriate Quality Assurance & Quality Control Program for the Project including monthly reporting and resolution log. A detailed description of the program shall be furnished to the Owner and the Architect for review and approval prior to submitting the first progress payment application.

5.22 DRUG AND ALCOHOL POLICY

5.22.1 In order to be eligible to provide labor on the Project, the CMAR must have in existence a Drug and Alcohol Policy. This requirement is a reasonable precaution to ensure a safe and drug-free environment on school construction projects that may involve workers being in relatively close contact with students.

5.22.2 All other contractors who provide labor on WCSD projects, regardless of tier, shall have in place a Drug and Alcohol Policy applicable to all workers who will be employed on those projects.

5.22.3 Drug and Alcohol Policies must meet the minimum requirements of the Owner. The CMAR shall demonstrate compliance with this provision by submitting a certification under penalty of perjury that the Drug and Alcohol Policy is in place, that it will be actively enforced, and that all workers who will be employed on the Project will have undergone the pre-placement drug testing required by WCSD.

5.22.4 WCSD, as the Owner, is empowered to review any/all contractors' records of enforcement of any/all contractors' Drug and Alcohol Policy at any time during the period following award of the resulting contract up to and including completion of the Project in order to determine whether the Drug and Alcohol Policy is in fact being enforced. Any/all contractors shall forthwith deliver to the WCSD any/all records requested to determine compliance with the Drug and Alcohol Policy requirement. Failure to maintain or rigorously enforce the Drug and Alcohol Policy or to timely respond to the Owner demands for production of records relating to the Drug and Alcohol Policy may result in termination of the Project contract at no cost to the Owner.

5.23 ENVIRONMENTAL SAFETY REGULATIONS

MATERIAL DISTURBANCE PERMIT INFORMATION

(UPDATED AS OF FEBRUARY 2021)

NOTE: Any questions regarding the MDP requirements of this solicitation must be submitted in writing via email to solicitations@washoeschools.net or directly on the WCSD Solicitations website at <https://solicitations.washoeschools.net/Purchasing>.

The building Material Disturbance Permit (MDP) is a WCSD document that identifies asbestos and lead site-specific information, and it is issued by the Environmental, Safety, and Assessment (ES&A) Department. A site-specific MDP is required for each project. Each project and facility require a separate MDP because each facility has specific information and direction regarding asbestos and lead, as each facility is different in that regard. The MDP is to be requested by the Project Manager, or appointed WCSD representative, in accordance with current MDP requirements. No work or related project services can be performed by the awarded Bidder/Contractor in WCSD without a site specific MDP.

I. WATER SYSTEM DISTURBANCE

Improper closing of valves and other improperly conducted disruptions to WCSD facilities can result in cross connections and back siphoning of chemicals and other contaminants into the water supply. Since these disturbances are very important, WCSD has added a water system disturbance section to the MDP. Work, as a part of this contract, may involve the disturbance of a facilities water distribution system and, as such, the Contractor is required to comply with the Water System Disturbance Permit Appendix section of the Material, Water and Lead Disturbance Permit for any work impacting a facility water system.

The Contractor shall carefully comply with all requirements of the Material, Water, and Lead Disturbance Permit, and shall be aware of this process prior to bid preparation and any construction. The permit requirements are hereby made a part of this specification and contract to the same extent as if bound herein and shall apply to all Contractors and Subcontractors.

The Contractor shall be responsible for all costs incurred by WCSD, including the consultant, sampling and testing, clean-up, replacement of effected equipment, materials, etc., and any legal action that may result from an unauthorized disturbance of a water system caused by the Contractor or Subcontractors, resulting in a cross connection or backflow incident.

II. ASBESTOS

WCSD has approximately 60% of its facilities that contain asbestos-containing materials. Contractors performing disturbances to asbestos-containing materials must be properly licensed and trained per the EPA AHERA regulation, as well as other federal, state, and local regulations.

Since so many of the facilities contain asbestos, minor construction activities many times involve disturbance of materials which contain asbestos. These projects may involve “small scale-short duration” asbestos disturbances also termed “Attachments and Penetrations” to non-friable materials. As a part of this contract, the awarded Contractor will be required to include Attachments and Penetrations into the scope of each project.

A. Asbestos and the Material Disturbance Permit

The Contractor shall carefully comply with all the items of the Building Material Disturbance Permit (MDP) and shall review the permit and become familiar with its contents prior to bid preparation and any construction.

Once an MDP Request is received for a specific project, building materials that have been identified as being disturbed during construction, and/or demolition, will have been tested for the presence of asbestos. These materials will be identified as asbestos-containing or non-asbestos-containing on the building MDP(s) by WCSD’s AHERA Management Planner. The MDP must be referred to before any work commences. No outside asbestos sampling of building materials, by the Contractor or a Contractor hired asbestos consultant, is allowed.

All asbestos-containing material must be handled by contractors and/or individuals trained and certified in the removal of asbestos-containing building materials. No asbestos-containing materials shall be disturbed prior to authorization from WCSD. If any material is encountered that is not listed on the MDP, it shall immediately be brought to the attention of the Project Manager before any work continues that might disturb this material. If any building material listed in the disturbance permit as

containing asbestos is improperly disturbed, in the opinion of WCSD, by the Contractor or Subcontractor/s, WCSD will immediately hire a third-party asbestos consultant to investigate possible asbestos contamination, and an asbestos Contractor to perform any recommended clean-up.

The Contractor shall be responsible for all costs incurred by WCSD including the consultant, sampling and testing, clean-up, replacement of affected equipment, materials, etc., and any legal action that may result from an asbestos fiber release incident caused by the Contractor or Subcontractors.

B. Asbestos Abatement (removal of an asbestos material)

Attachments and Penetrations does not include the removal (other than drilling holes) of asbestos containing materials. Any removal of asbestos-containing materials is not an “Attachment and Penetration” activity, but rather an abatement, and any abatement of asbestos materials must be designed by an EPA AHERA certified Asbestos Project Designer. Any abatement project’s design will be the responsibility of WCSD to design and provide abatement specifications. Asbestos abatement (removal) must be conducted by an asbestos abatement Contractor, which will be supervised by WCSD and/or a WCSD hired asbestos abatement consultant. The abatement costs will be included in the scope of each project.

i. Asbestos – Attachments and Penetrations

Attachments and Penetrations, for the purpose of this document, is the drilling of holes, installing/removing screws, installing anchors, nails, and staples in non-friable asbestos-containing materials, in which the disturbance may release asbestos fibers. Attachments and Penetrations are minor disturbances that are normal activities such as installing conduits, mounting boxes or brackets, and removing equipment anchors from asbestos containing materials. The MDP will identify which materials at a specific site can be disturbed, and the minimum requirements to perform an asbestos disturbance.

ii. “Small Scale-Short Duration” – WCSD Attachment and Penetration Procedures

WCSD Attachment and Penetration Procedures that the Contractor must utilize, when identified as being required in the MDP, are available from the Project Manager. The Contractor shall submit a WCSD Attachment and Penetration Procedures to the Project Manager. The Project Manager will submit the documents to the ES&A Department for approval.

The Contractor can add additional requirements, but nothing required in the MDP and WCSD Attachment and Penetration Procedures may be omitted. The Contractor must submit the Attachment and Penetration Procedure to the Project Manager to get ES&A approval of these documents prior to any disturbance. The ES&A Department will notify the Contractor upon approval of these documents.

Once the approval of WCSD Attachment and Penetration Procedure and training certificates is received, the Contractor may schedule the disturbance, but must notify the ES&A Department immediately prior to disturbing the asbestos-containing materials. The Contractor shall provide this notice by calling the ES&A Attachment and Penetration hotline at (775) 325-8490, follow the

directions, and leave a message. ES&A Department personnel, Project Managers, Assistant Project Managers/PCIs, and other district personnel may conduct site visits to ensure compliance with the Contractor's submitted and approved procedures.

iii. Asbestos Training Certificates – Abatement

Abatement of asbestos-containing materials, as allowed and identified in the MDP, will be done by an Asbestos Abatement Contractor, with workers that have a minimum of 32-hour AHERA asbestos training (Asbestos Worker), and supervised by an abatement supervisor with 40-hour AHERA asbestos training (Contractor/Supervisor). Workers and supervisors must also get an annual refresher certificate if the original training is greater than one year old. Contractor training certificates will be submitted to the Project Manager at least two weeks prior to the start of the project. The ES&A Department will review the submitted training documentation, verify certificates as required, and approve the abatement workers and supervisors, so they can work on the assigned WCSD project. No one that has not been approved by the ES&A Department is authorized to perform any asbestos disturbances within WCSD.

New workers added after the start of the project will be approved by the ES&A Department within one 8-hour work period of the standard Monday thru Friday work schedule. Certification submittal will be serviced by the ES&A Department on a first come, first served basis. Delays reviewing the documentation will be anticipated and considered on any abatement schedule developed, and asbestos workers and supervisors will not be allowed to work in any way on that project until the documentation has been reviewed and approved.

iv. Asbestos Training Certificates – Attachment and Penetration

Contractors performing “Attachment and Penetration” work on non-friable asbestos- containing materials, as allowed, and identified in the MDP, will be required to have a minimum of 16 hours of AHERA asbestos training (Operations and Maintenance, or O&M), as well as an annual refresher certificate if the original training is greater than one year old. Contractor training certificates will be submitted to the Project Manager at least two (2) weeks prior to the start of the project. The ES&A Department will review the submitted training documentation, verify certificates as required, and approve the Attachment & Penetration technicians, so they can work on the assigned WCSD project. No one that has not been approved by the ES&A Department is authorized to perform any asbestos disturbances within WCSD.

New workers added after the start of the project will be approved by the ES&A Department within one 8-hour work period of the standard Monday through Friday work schedule. Certification submittal will be serviced by the ES&A Department on a first come, first served basis. Delays reviewing the documentation will be anticipated and considered on any Attachment and Penetration schedule developed, and Attachment and Penetration technicians will not be allowed to work in any way on that project until the documentation has been reviewed and approved.

v. Asbestos Air Sampling, Respiratory Protection, and Protective Suits

Asbestos personal air sampling is required during any asbestos disturbance. Asbestos air sampling results will be supplied to the ES&A Department, and the Project Manager, within 48 hours of the completion of a disturbance. Laboratory results will be emailed directly to the ES&A Department from the laboratory providing analysis. Handwritten results will not be allowed. Regardless of air sampling results, Contractors will not be allowed to submit a Negative Exposure Assessment so that they can discontinue the use of respirators and personal protective suits. WCSD reserves the right to require this requirement, to reduce the long-term exposure liability from Contractors and workers, which have disturbed this WCSD's asbestos materials.

If training certificates are issued for a class, those training certificates need to be submitted. Wallet cards will not be accepted as a training certificate unless no training certificate is provided by the training provider. In order for a wallet card to be accepted, the Contractor will supply a letter from the training provider stating that no training certificate was provided, and only wallet cards were supplied to attendees. Wallet cards are less desirable due to their small size and mitigate the ability to clearly read and verify all the information on the card. Contractors are encouraged to request a full size 8 ½" x 11" training certificate from the training providers.

III. LEAD PAINTS, COATINGS, CERAMIC TILE, AND LEAD-CONTAINING MATERIALS IN WCSD FACILITIES

A. Lead-containing paints, coatings, ceramic tile, and lead materials are present in WCSD facilities.

Vendors/Contractors that disturb lead-containing or potentially lead-containing paints, coatings, ceramic tile, and lead-containing materials, by law, are required to know all applicable regulations, and comply with all state and federal regulations that apply to the disturbances to lead-containing paints, coatings, ceramic tile, and lead-containing materials they are conducting. The regulations that are recommended by WCSD for a Contractor to be properly trained and knowledgeable related to lead disturbances, includes, but is not limited to, the following:

- OSHA Regulation CFR 1926.62 – Lead & Appendix A, B, C, and D – Lead Construction Standard
- OSHA Regulation CFR 1910. 1025 - Lead & Appendix A, B, C, and D – General Industry Standard
- EPA, 40 CFR Part 745 – Lead; Renovation, Repair, and Painting Regulation.

B. Lead and the Material Disturbance Permit

The Contractor shall carefully comply with all items of the Building Material Disturbance Permit (MDP) and shall review the permit and become familiar with its contents prior to bid preparation and any construction.

Once an MDP request is received for a specific project, building materials that have been identified as being disturbed during construction, and/or demolition, will have been tested for the presence of lead. These materials will be identified as lead- containing or not lead-containing on the building MDP(s) by WCSD's ES&A staff. The MDP must be referred to before any work commences. No outside lead sampling of building materials, by the Contractor or a Contractor hired lead consultant, is allowed.

All lead-containing materials must be handled by contractors and/or individuals trained and certified to perform lead disturbances. No lead-containing materials shall be disturbed prior to authorization from WCSD. If any building material listed in the disturbance permit as lead-containing are improperly disturbed, in the opinion of WCSD, by the Contractor or Subcontractor, WCSD will immediately hire a third-party lead consultant to investigate possible lead contamination, and a lead removal Contractor to perform any recommended clean-up.

The Contractor shall be responsible for all costs incurred by WCSD, including the consultant, sampling and testing, clean-up, replacement of the affected equipment, materials, etc., and any legal action that may result from a lead contamination incident caused by the Contractor or Subcontractors.

Vendors/Contractors accept and acknowledge, by signing the MDP, the existence of lead related regulations, and accept all liability related to the disturbance of lead- containing materials, citations resulting from, or any other costs WCSD may incur by the action of all parties of the Vendor's company or companies hired by the awarded Vendor to complete this project.

i. Construction Age of Buildings in WCSD

At the conception of adding lead information to MDPs, it was thought that lead-containing paints, coatings, and ceramic tile were much more likely to be present on more surfaces in WCSD's older facilities. However, recent sampling has shown lead containing paints, coatings and ceramic tiles DO routinely exist, even in its newest facilities. Due to that finding, the age of buildings is not as important as was originally thought. WCSD is still providing construction date information in MDPs because lead-based paint >5000 ppm is much less likely in facilities built after 1978.

ii. Pre – 1978 WCSD Buildings

Paint and coating sampling have shown that paints and coatings contain some levels of lead in the Districts' Pre-1978 facilities. Therefore, all persons performing any disturbance to coatings or paints in its Pre-1978 constructed facilities must utilize lead safe work practices. In addition, any person performing any disturbance to paints, coatings, ceramic tile, and lead-containing materials must have taken an OSHA lead action level training class from a WCSD ES&A Department approved training provider. If identified as lead-containing, the Contractor will be required to perform all disturbances as per the MDP, WCSD provided lead specification, and all local, state, and federal regulations.

iii. Post – 1978 WCSD Buildings

While it was originally thought that paints and coatings on materials other than metal surfaces and ceramic tile typically did not contain lead in WCSD post – 1978 constructed facilities, sampling has shown that is not the case. The MDP will provide specific historical sampling that has been conducted in WCSD facilities. If past sampling has shown the presence of lead-containing paints and coatings in the facility, the Contractor will be required to treat all painted and coated surfaces as lead-containing. If identified as lead-containing, the Contractor will be required to perform all disturbances as per the MDP, WCSD provided lead specification, and all local, state, and federal regulations.

The MDP will state all buildings identified above were constructed after 1978. While it was originally thought that paints, coatings, and ceramic wall tiles are less likely to contain lead in newer WCSD facilities, recent sampling has shown that lead-containing paints, coatings, and ceramic tiles DO routinely exist, even in its newest facilities. Due to that finding, Contractors must treat all paints, coatings, and ceramic tile as lead-containing unless WCSD project sampling has proven otherwise, and it will be deemed negative within the MDP and the project scope. The Vendor/Contractor must comply with all lead-containing or assumed lead-containing paint and coating disturbance instructions and requirements listed in the MDP, WCSD provided lead specifications, and all local, state, and federal regulations, unless the material has been proven, to the satisfaction of WCSD, that said materials do not contain lead.

iv. Lead Removal (The removal of a lead-containing material)

Attachments and Penetrations do not include any removal, demo, welding, sanding, abrading, sandblasting, cutting, grinding, heating, and torch cutting of lead-containing materials, and are not an “Attachment and Penetration” disturbance. These activities must be designed by an EPA Certified Lead Consultant. The project’s design for the above-listed activities will be the responsibility of WCSD to design and provide the specs as a part of this bid package. Lead activities listed above must be conducted by a lead removal Contractor, which will be supervised by WCSD and/or WCSD hired EPA Certified Lead Consultant. The lead activities costs will be included in the scope of each project.

v. Lead Attachments and Penetrations

Attachments and penetrations, for the purpose of this document, are the drilling of holes, installing/removing screws, and installing anchors, nails, and staples, in which the disturbance may release lead dust. Attachments and Penetrations are minor disturbances that are normal activities such as installing conduits, mounting boxes or brackets, and removing equipment anchors from lead-containing materials. The MDP will identify which materials at a specific site can be disturbed, and the minimum requirements to perform a lead disturbance.

vi. Lead Safe Work Practices – WCSD Attachment and Penetration Procedures

WCSD Attachment and Penetration Procedures that the Contractor must utilize, when identified as being required in the MDP, are available from the Project

Manager. The Contractor shall submit WCSD Attachment and Penetration Procedures to the Project Manager. The Project Manager will submit the documents to the ES&A Department for approval.

The Contractor can add additional requirements, but nothing required in the MDP and WCSD Attachment and Penetration Procedures may be omitted. The Contractor must submit the Attachment and Penetration Procedure to the Project Manager to get ES&A approval of these documents prior to any disturbance. The ES&A Department will notify the Contractor upon approval of these documents. Once the approval of WCSD Attachment and Penetration Procedure and training certificates is received, the Contractor may schedule the disturbance but must notify the ES&A Department immediately prior to disturbing the lead-containing materials. The Contractor shall provide this notice by calling the ES&A Attachment and Penetration hotline at (775) 325-8490, following the directions, leave a message. ES&A Department personnel, Project Managers, Assistant Project Managers/PCIs, and other district personnel may conduct site visits to ensure compliance with the Contractor's submitted and approved procedures.

vii. Lead Training Certificates – Removal and Attachments and Penetrations

The health and safety of all occupants of WCSD facilities is the number one priority of WCSD. To that end, technicians performing disturbances to lead-containing materials must have adequate training. Contractors performing lead disturbances, as allowed, and identified in the MDP, will be required to have a minimum of "OSHA Lead Action Level" training, as well as an annual OSHA Lead Action Level training certificate if the original training is greater than one year old, before being approved to perform lead disturbances. OSHA Lead Action Level training will be conducted in accordance with OSHA 1926.62(I)(2)(i) thru (viii) and all required topics identified in this standard will be completed to include:

- 1926.62(l)(2)(i) The content of this standard and its appendices.
- 1926.62(l)(2)(ii) The specific nature of the operations could result in exposure to lead above the action level.
- 1926.62(l)(2)(iii) The purpose, proper selection, fitting, use, and limitations of respirators.
- 1926.62(l)(2)(iv) The purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant).
- 1926.62(l)(2)(v) The engineering controls and work practices associated with the employee's job assignment including training of employees to follow relevant good work practices described in Appendix B of this section.
- 1926.62(l)(2)(vi) The contents of any compliance plan in effect.

- 1926.62(l)(2)(vii) Instructions to employees that chelating agents should not routinely be used to remove lead from the bodies and should not be used at all except under the direction of a licensed physician; and
- 1926.62(l)(2)(viii) The employee's right of access to records under 29 CFR 1910.20.

Certificates of Training showing that technicians have successfully completed an OSHA Lead Action Level course and are required to be properly submitted and approved by WCSD's ES&A Department prior to any Contractor's technician performing any disturbances to lead-containing or assumed lead-containing paints or coatings, or any other lead-containing materials. The training certificate must have "OSHA Lead Action Level Training" clearly identified on the training certificate and should have a sentence that states that the training topics covered in the class meet or exceed the training topics of OSHA 1926.62(l)(2)(i) thru (viii).

If training certificates are issued for a class, those training certificates need to be submitted. Wallet cards will not be accepted as a training certificate unless no training certificate is provided by the training provider. In order for a wallet card to be accepted, the Contractor will supply a letter from the training provider stating that no training certificate was provided, and only wallet cards were supplied to attendees. Wallet cards are less desirable due to their small size and mitigate the ability to clearly read and verify all the information on the card. Contractors are encouraged to request a full-size 8 ½" x 11" training certificate from the training providers.

It is important that Contractor's planning on doing the lead work within WCSD become familiar with the lead training requirements and spend the time confirming that the lead classes being taken are truly an OSHA Lead Action Level course, and not a lead awareness course as identified above. Many training providers have differing training class titles on the lead classes, but only training certificates that are noted as above will be accepted to fulfill the listed WCSD's training requirements. Contractors requiring training are responsible for providing the training providers a clear understanding of what training is required.

Full Lead worker initial and annual training certificates that comply with adjacent state requirements for lead worker certification, will be accepted in lieu of the OSHA Lead Action Level training certificate, as long as they are titled "Lead Worker" and then accompanied with a letter from the training provider certifying that the topics identified in OSHA 1926.62(l)(2)(i) thru (viii) were covered in that class. Contractors are responsible for ensuring and verifying training certificates meet the above-listed requirements. Training certificates that do not have "OSHA Lead Action Level or Lead Worker" will not be accepted or submitted.

Contractor training certificates will be submitted to the Project Manager at least two weeks prior to the start of the project. The ES&A Department will review the submitted training documentation and must pre-approve workers so they can work on the assigned WCSD project. No one that has not been approved by the ES&A Department is authorized to perform any lead disturbances.

New workers added after the start of the project will be approved by the ES&A Department within one 8-hour work period of the standard Monday through Friday work schedule. Certification submittal will be serviced by the ES&A Department on a first come, first served basis. Delays reviewing the documentation will be anticipated and taken into account on any Removal or Attachment and Penetration schedule developed, and Removal and/or Attachment and Penetration technicians will not be allowed to work in any way on that project until the documentation has been reviewed and approved.

viii. Renovation, Repair and Painting Regulations (RR&P) - 40 CFR Part 745.81

Effective April 22, 2010, contractors will be required to be trained and registered with the EPA to conduct regulation applicable renovations, repairs, and painting (RR&P) in all elementary schools or child occupied WCSD facilities constructed prior to 1978 when lead-based paints and coatings are being disturbed. Contractors are reminded that there are some childcare facilities in middle and high school locations, and the RR&P would apply at those locations as outlined in the RR&P regulation requirements.

In general, all firms that disturb 6 square feet of lead-based painted surface per room on the interior, or 20 square feet on the exterior, within a 30-day period in this facility, must comply with the EPA's Renovation, Repair and Painting (RR&P) regulation and must be registered with the federal EPA. Per the Regulation, the area of disturbance is calculated by adding up the entire surface areas being removed/disturbed, which then determines the amount of painted surface area disturbed. Work that involves window replacement or demolition of a painted surface, the EPA RR&P regulation applies regardless of size if lead-based paint is present.

WCSD requires all workers in RR&P projects involving lead disturbances to have, at a minimum, OSHA lead action level training. This regulation also requires that the Contractor must assign an EPA RR&P certified renovator that is responsible for ensuring and documenting all work is conducted in compliance with the EPA RR&P regulation. There are extensive record keeping and notification requirements that the Contractor must perform. All workers with the minimum OSHA lead action level training, but are not EPA RR&P certified renovator trained, must be trained, and supervised by the EPA RR&P certified renovator.

On a RR&P project, Contractors must have a minimum of one EPA RR&P certified renovator on-site that has successfully attended and passed an 8-hour EPA accredited renovator training course before working in any elementary schools or child occupied WCSD facilities constructed prior to 1978. The renovator's training certification must remain current. Recertification requirements through the attendance of refresher courses are a requirement of this regulation. The renovator must be on-site throughout the project. The certified renovator is responsible for ensuring that lead safe work practices are utilized per this EPA RR&P regulation, as well as per all WCSD lead requirements and policies that may be more stringent than the EPA and OSHA regulations.

The EPA RR&P regulation requires that personnel disturbing lead containing materials utilize lead safe work practices as identified in the EPA guidance document titled “Steps to Lead Safe Renovation, Repair and Painting,” pages 12 through 23.

This document is available electronically at:

https://www.epa.gov/sites/default/files/2013-11/documents/steps_0.pdf.

The Contractor shall submit lead safe work practice procedures, and all RR&P and OSHA lead action level training certificates to the Project Manager at least two weeks prior to the start of the project. The ES&A Department will review the submitted training documentation and must pre-approve workers so they can work on the assigned WCSD project. No one that has not been approved by the ES&A Department is authorized to perform any lead disturbances.

New workers added after the start of the project will be approved by the ES&A Department within one 8-hour work period of the standard Monday through Friday work schedule. Certification submittal will be serviced by the ES&A Department on a first come, first served basis. Delays reviewing the documentation will be anticipated and taken into account on any RR&P project schedule developed, and EPA RR&P certified renovators and workers will not be allowed to work in any way on that project until the documentation has been reviewed and approved.

This is a general overview of the regulation, and the Contractor must refer to the regulation for additional requirements and information. Fines are expensive and are levied toward the Contractor not WCSD, so compliance with this regulation is very important, and it is important that Vendors/Contractors are well versed in this regulation.

ix. Lead Air Sampling, Respiratory Protection and Protective Suits

Lead personal air sampling is required during any lead disturbance. Lead air sampling results will be supplied to the ES&A Department, and the Project Manager, within 48 hours of the completion of a disturbance. Laboratory results will be emailed directly to the ES&A Department from the laboratory providing analysis. Handwritten results will not be allowed. Regardless of air sampling results, Contractors will not be allowed to submit a Negative Exposure Assessment so that they can discontinue the use of respirators and personal protective suits. WCSD reserves the right to require this requirement, to reduce the long-term exposure liability from Contractors and workers, which have disturbed WCSD’s lead materials.

IV. INDOOR ENVIRONMENTAL QUALITY

Preventative job site practices will reduce the potential for residual problems with indoor air quality in completed buildings and reduce undue health risks for all workers. The following are the minimum standards required by WCSD for on-site construction in the district.

A. Existing HVAC System

When feasible, the HVAC system for the project area will be shut down for the duration of the project. If occupied spaces will be adversely affected by the shutdown of the system, construction area return registers should be sealed with polyethylene sheeting and secured as an alternative. Registers must be sealed prior to the start of work.

i. Separating Occupied Spaces from Non-Occupied

Keep work areas separate from occupied spaces with polyethylene sheeting (or similar) if there are no other natural barriers in place OR in spaces where air exchange will occur around the barriers.

ii. Ventilation

During the installation of carpet, paints, furnishings, and any other VOC emitting products, provide “spot” ventilation during application/installation and for at least 24 hours after the work is completed. In most cases, opening windows and doors will not be enough to effectively exhaust contaminants. It is recommended that an exhaust fan be used to pull polluted air out of the building. This can be accomplished by placing a fan in a window or door and temporarily sealing any opening around the fan with plastic. Additionally, a door or window at the opposite end of the room should be opened to allow fresh, outdoor air to flow across the work area and sweep polluted air out through the exhaust fan. As long as odors are present, the temporary exhaust ventilation must continue to operate. This may include nights and weekends, as necessary. Ventilation should continue for a minimum of 24 hours after the completion of the project or until there are no more noticeable odors.

iii. Construction Dust

Minimize the amount of dust in the air and on surfaces. Examples include the use of vacuum-assisted drywall sanding equipment and the use of vacuums instead of brooms to clean construction dust from floors.

iv. After Hours Scheduling

Schedule high dust-generating operations or extreme noise-generating activities for after normal working hours. (i.e., saw cutting, jack hammering) and install temporary barriers to confine dust, as necessary.

v. Gasoline/Diesel Powered Equipment

Electric-powered equipment must be used in lieu of diesel or gasoline-powered equipment. Gas and diesel equipment may not be used inside a WCSO building or near an outdoor fresh air building intake.

vi. Material Safety Data Sheets (MSDS)

MSDS must be made be maintained onsite and made available upon request as required by federal law.

vii. Construction Completion

Prior to the occupancy of the building but after the installation of new furniture, carpet, etc., the building should be flushed with 100% outside air for one to three days.

viii. Air Filters

Replace all filtration media immediately at the conclusion of the job.

ix. Monitoring Air Quality

Indoor air quality monitoring will be conducted randomly throughout the project. Results and any recommendations will be communicated through the building inspector to construction management.

x. Pre-Construction Work Area Inspection

Any overhead work including the roof, the Contractor shall conduct a pre-room condition walk-through with WCSD'S Project Manager to determine the level of cleanliness that will be expected at the completion of the project. Contractor shall be responsible for cleaning all exposed surfaces within the facility beneath the work area. At the completion of the project, the Contractor shall clean all exposed surfaces within the facility beneath the aforementioned work area including but not limited to all shelving, duct, lighting, flooring, furniture, etc.

LOCK OUT TAG OUT (LOTO) PROCEDURE

The Contractor will be responsible for the isolation and termination of all building systems that may be impacted by the scope of work within this bid. Contractor will coordinate all shut-down processes with the construction manager prior to any shutdowns up to and including Lock Out Tag Out procedures 24 hours prior to any shutdowns. WCSD will make the final determination of which systems and locations shall be isolated. All Lock Out Tag Out will be performed at the main service panel.

5.24 BUILDING INFORMATION MODELING (BIM) REQUIRED FOR NEW BUILDINGS

5.24.1 Building Information Modeling (BIM) is an intelligent 3D model-based process that gives architecture, engineering, and construction professionals the insight and tools to plan more efficiently, design, construct, and manage buildings and infrastructure.

5.24.2 The Level of Development (**LOD**) Specification is a reference that enables architecture, engineering, and construction professionals to specify and articulate with a high-level of clarity the content and reliability of BIMs at various stages in the design and construction process.

5.24.3 The LOD for this Project's BIM shall be LOD 300. At the completion of the Project, said model shall be provided to the Owner in full editable and usable format. The Model or Revit file will be provided to the awarded Contractor (except electrical). The Electrical Subcontractor will be required to provide the Subcontractor's own Revit file.

5.24.4 Required for new buildings, the BIM modeling, at a minimum, shall include:

- 1) all duct work and air handling equipment (ductwork shall show flanges) and model shall show insulation around duct work
- 2) all mechanical equipment
- 3) all hangers including Unistrut, clevis, all-thread, and strap material
- 4) duct fittings including HETO (high efficiency take off) and flex and diffusers/grilles
- 5) electrical work and controls conduit cumulating 1.5 inches or larger
- 6) mechanical access zones
- 7) fire/smoke or fire dampers including access zones.
- 8) mechanical piping larger than ¾ inch
- 9) refrigerant lines, no matter the size
- 10) cable tray
- 11) electrical equipment
- 12) all hangers and supports for electrical equipment
- 13) all light fixtures all power feeds including conduit or bus bars
- 14) outlets and switches where location is a priority for architectural
- 15) electrical equipment access zones
- 16) all occupancy sensors, daylight sensors, exit signs, fire alarm strobes and horns, cameras, speakers, and av equipment located in ceiling grid.
- 17) natural gas lines larger than ½ inch
- 18) plumbing lines larger than ½ inch
- 19) insulation shall be shown with the correct sizing on plumbing lines
- 20) all plumbing valves and cleanouts
- 21) access zones to plumbing valves and cleanouts
- 22) fire protection piping no matter the size
- 23) fire protection drops
- 24) fire protection equipment
- 25) the entire steel structure including beams, columns, supports, braces, bent plate, supports or secondary supports
- 26) all catwalks and their support systems
- 27) all concrete and block structures include walls, columns, or beams
- 28) all access doors in the architectural ceiling for access to all electrical, plumbing, and mechanical systems
- 29) ceiling grid
- 30) all walls, windows, and doors
- 31) lab hoods
- 32) soda machine lines
- 33) kitchen equipment and hoods

SECTION 6: THE ARCHITECT

6.1 ARCHITECT'S RESPONSIBILITIES

- 6.1.1 The Architect will provide all applicable professional services for the duration of the Project. The Architect is the Owner's representative and will advise and consult with the Owner for the duration of the Project.
- 6.1.2 The Architect will be the interpreter of the Drawings and Specifications and will render interpretations as may be necessary for proper execution of the work.

- 6.1.3 The Architect will review and respond to all Requests for Information issued by the CMAR within the time period stipulated in Section 2.3.
- 6.1.4 The Architect shall always have complete access to the work.
- 6.1.5 The Architect will make periodic visits to the site to observe the progress and quality of the work and to determine if the work is proceeding in accordance with the Contract Documents.
- 6.1.6 The Architect will review all shop drawings, samples, and submittals required by the Contract Documents.
- 6.1.7 The Architect will not be responsible for the acts or omissions of the CMAR and/or their agents or employees, or any Subcontractor, Sub-Subcontractor, or any other persons performing any of the work. Based upon site observations and the CMAR's progress payment applications, the Architect will review and make recommendations to the Owner, regarding the amounts claimed by the CMAR in each progress payment application.
- 6.1.8 The Architect will have authority to reject work which does not conform to the Contract Documents.
- 6.1.9 The Architect will prepare Change Orders and Construction Change Directives for review and approval by the Owner.
- 6.1.10 The Architect will have authority to order minor changes in the work that do not involve a change in the Contract Sum or the Contract Time.
- 6.1.11 The Architect shall attend and conduct all scheduled construction progress meetings at the Project site.
- 6.1.12 The Architect's decisions on matters relating to aesthetics will be final if consistent with the intent expressed in the Contract Documents.

SECTION 7: INSURANCE AND BONDING

7.1 GENERAL REQUIREMENTS OF INSURANCE DOCUMENTATION

- 7.1.1 Without limiting any of the other obligations or liabilities of the CMAR, the CMAR shall, at the CMAR's sole expense, procure, maintain, and keep in force not less than the following amounts, types, and coverages of insurance conforming to the minimum requirements set forth in this section, unless otherwise agreed to by the Owner in writing.
 - 7.1.1.1 The required insurance coverage shall be procured before any work commences on the Project and shall always be maintained continuously in force. If the CMAR fails to comply with this section, the CMAR shall be considered in default of the Contract, if determined by the Owner.
- 7.1.2 Without limiting any of the other obligations or liabilities of the CMAR, the CMAR shall, at the CMAR's sole expense, cause each Subcontractor and each Sub-

Subcontractor involved with the work of construction under the direction and control of the CMAR for this contract, to procure, maintain and keep continuously in force insurance types and limits to conform to the minimum requirements set forth in this section, unless otherwise agreed to beforehand by the Owner in writing.

- 7.1.2.1 The required insurance coverage shall be procured before any work commences on the Project and shall always be maintained continuously in force.
 - 7.1.3 Unless specified herein or otherwise agreed to by the Owner, the required insurance policy(s) and required endorsements shall be received and in effect prior to the commencement of work by the CMAR. The certificates for each insurance policy shall be signed by a person authorized by the insured's agent or broker and shall continue in force until the latter of the following conditions:
 - A. Final acceptance by the Owner of the completed work and acceptance of final payment by the CMAR.
 - B. At such time that the insurance is no longer required by the Owner under the terms of the Contract Documents.
 - C. The expiration of any applicable law (including any Statute of Repose), by which any party may bring a claim against the Owner.
 - 7.1.4 As evidence of compliance with the insurance required in the section, the CMAR shall furnish the Owner with all certificates of insurance liability coverage (using an Acord Form 25 or equivalent form approved by the Owner) prior to the award of the contract. The CMAR shall maintain original copies of Subcontractor insurance certificates for the duration of the Project and through the warranty period. Such records shall be furnished to the Owner upon request. The certificates for each insurance policy shall be signed by a person authorized by the insured's agent or broker.
 - 7.1.5 The Owner reserves the right to require and obtain complete, certified copies of any insurance policies required by the Contract Documents at any time. Complete copies of policies shall be furnished by the CMAR and by any Subcontractor or Sub-Subcontractor within thirty (30) days after a written request is issued by the Owner. In lieu of a required certificate of insurance the CMAR may furnish an original binder signed by an authorized representative of the Insurer(s) for a maximum of sixty (60) days from the date of inception of the associated policy(s). Said certificates of insurance or original binder must include the Additional Insured Endorsement as required in this section.
 - 7.1.6 Except as provided below, coverages shall not be suspended, cancelled, non-renewed or reduced in coverage or in limits by either the CMAR or by the CMAR's Insurer, without written notice by email to purchasing@washoeschools.net (preferred), or at a minimum via U.S. Mail of said suspension, cancellation, non-renewal, or reduction in coverage, or in limits by the CMAR or the Insurer given no less than thirty (30) days. The Contractor's insurance certificates shall include endorsement(s) stating that thirty (30) days' prior written notice will be given by the Insurer to the certificate holder if cancellation is to be before the expiration date set forth in the certificate.
 - 7.1.7 Cancellation by the Insurer for non-payment of premium requires that the Insurer give the CMAR a notice of cancellation ten (10) calendar days before the effective date

if the cancellation and the CMAR shall notify Owner immediately upon receipt of the notice.

- 7.1.8 CMAR's Insurers or Surety Company(s) shall have and maintain throughout the period for which coverage is required, an A.M. Best Company Rating of A- or better and an A.M. Best Company Financial Size Category of X or better, unless specifically waived or adjusted by the Owner.
- 7.1.9 Insurers or Surety Company(s) providing the insurance or providing the bonds required by this Contract must be either:
- A. Authorized by certificates of authority issued by the Department of Insurance of the State of Nevada; or
 - B. With respect only to Workers' Compensation, be authorized as Self-Insured under NRS 616.291.
- 7.1.10 The insurance provided by the CMAR and the CMAR's Subcontractors pursuant to this Contract shall apply on a primary basis and any other insurance or self-insurance maintained by the Owner shall be in excess of and not contributing to the insurance provided by or on behalf of the CMAR. Coverage maintained by the CMAR or the CMAR's Subcontractors shall apply first, before any other insurance, on a primary basis, and without application of a deductible or self-insured retention unless otherwise specifically agreed to by the Owner. Such approval shall not relieve the CMAR from payment of any deductible or self-insured retention owed on CMAR's insurance.
- 7.1.11 The Owner and the Architect shall be named as Additional Insured on all insurance provided by the CMAR and the CMAR's Subcontractors as required in this section (except for Workers Compensation). The Workers Compensation Insurance shall provide a Waiver of Subrogation endorsement as required in this section. The CMAR shall comply with all warranties required by the Insurer. Any deductible shall be the responsibility of the CMAR.
- 7.1.12 Failure to maintain the required insurance or surety requirements may result in termination of this contract at the Owner's option. If CMAR or its Subcontractors fail to maintain insurance as set forth herein, Owner shall have the right, but not the obligation, to purchase said insurance or bond at the CMAR's and/or Subcontractor's expense.
- 7.1.13 By requiring insurance herein, Owner does not represent that coverage and limits will necessarily be adequate to protect Owner and such coverage and limits shall not be deemed as a limitation on CMAR's or Subcontractor's liability under the indemnities granted to Owner in this contract.

7.2 COMMERCIAL GENERAL LIABILITY INSURANCE

- 7.2.1 The CMAR shall carry and maintain a Commercial General Liability (CGL) Insurance and, if necessary, a Commercial Umbrella Liability Insurance, provided on a form at least as broad as the Insurance Service Office (ISO) CG 00 01 12 07 and/or CG 00 01 04 13 occurrence forms and shall cover all operations, activities and exposures of the CMAR including, but not limited to, the following:

- A. Premises and Operations Liability.
- B. Products and Completed Operations Liability.
- C. Personal and Advertising Injury.
- D. Contractual Liability safeguarding the obligations assumed by the CMAR in the Contract Documents.
- E. Liability which the CMAR may incur as a result of the operations, acts, or omissions of the CMAR's Subcontractors, independent contractors, suppliers, their agents, or employees.
- F. "Claims Made" or "Modified Occurrence" coverage forms may not be used and are not acceptable (except for Professional Liability Insurance).
- G. Defense costs and expenses shall not reduce the limits of insurance and shall not apply within any aggregate limit of insurance unless approved by the Owner.

7.2.2 The CMAR's CGL coverage shall be \$1,000,000 per occurrence and \$2,000,000 in both the General Aggregate and Products/Completed Operations Aggregate or the amount customarily carried by CMAR, whichever is greater, combined single limit per occurrence for bodily injury, personal injury, and property damage.

7.2.2.1 The required limits of CGL coverage for Subcontractors shall be a minimum of \$1,000,000, or the amount customarily carried by the Subcontractor, whichever is greater, per occurrence for bodily injury, personal injury, and property damage. If the CMAR fails to comply with this section, the CMAR shall be considered to be in default of the Contract if determined by the Owner.

7.2.3 The General Aggregate must be on a "per project" basis. CGL coverage shall specifically apply to the acts and/or omissions of CMAR and the Subcontractors. The CGL coverage shall be maintained in full force and effect for five (5) years from the date of completion of the project and shall solely apply to this Project.

Products/Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$2,000,000
Each Occurrence	\$1,000,000
Excess/Umbrella Policy	\$10,000,000

7.2.4 The Owner's Project's Number, Project Name, and the Project's location shall be noted on each certificate of insurance. An additional certificate evidencing continuation of Commercial General Liability (CGL) insurance for completed operations shall be submitted with the final payment and thereafter upon renewal or replacement of such coverage until the expiration of the time required by the Owner under the terms of the Contract. Upon Owner's written request information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the CMAR with reasonable promptness.

- 7.2.5 The CMAR shall maintain per project coverage with separate limits of coverage applicable only to the work performed under that project's Contract. The minimum limits to be maintained by the CMAR (inclusive of any amounts provided by an Umbrella or other excess policy) shall be those that would be provided with the attachment of ISO Endorsement Amendment of Limits of Insurance (Designated Project or Premises) to a CGL insurance with the minimum amounts stated in this section.
- 7.2.6 The CMAR shall continue to maintain the required coverage (inclusive of any amounts provided by an Umbrella or excess policy) along with Products/Completed Operations coverage, without restrictive endorsements unless approved by the Owner, for the applicable statute of repose per NRS 11.202, 11.203, 11.204, 11.205, and 11.2055, or any applicable law as required under the Contract. Continuing CGL insurance shall be written on ISO occurrence form CG 00 01 12 07 or CG 00 01 04 13 (or a substitute form providing equivalent coverage) and shall, at minimum, cover liability arising from products-completed operations and liability assumed under an insured contract. Continuing CGL insurance shall have a Products-Completed Operation Aggregate of at least twice (2x) the amount each occurrence limit.
- 7.2.7 Additional Insured status and coverage to Owner, Owner's officials, officers, and employees shall be included in accordance with an endorsement attached to the insurance and under the commercial Umbrella, if, providing coverage at least as broad as the combination of forms, which include the unmodified ISO CG 20 10 07 04 and the ISO CG 20 37 10 01 endorsements.
- 7.2.8 The endorsement shall name and list Owner, Owner's officials, officers, and employees as Additional Insureds under the CGL and shall apply until the applicable state statute of repose has expired for potential defective workmanship.
- 7.2.9 This Additional Insured coverage shall apply on a primary basis and be "non-contributory" with respect to any other valid and applicable insurance, self-insurance or deductible afforded to Owner.
- 7.2.10 The status of Owner as an insured under a CGL obtained in compliance with this Contract Documents shall not restrict coverage under such CGL with respect to the escape of release of pollutants at or from a site owned or occupied by or rented or loaned to Owner.
- 7.2.11 There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, or damage to the named insured's work.

7.3 COMMERCIAL AUTO LIABILITY INSURANCE

- 7.3.1 The CMAR's Commercial Automobile Liability (CAL) Insurance coverage shall be \$1,000,000 minimum or the amount customarily carried by the CMAR, whichever is greater, combined single limit per accident for bodily injury and property damage. No aggregate limits may apply. Non-owned and hired automobile liability must be included in the policy.

7.3.2 The CMAR's CAL shall cover the CMAR's liability arising out of any auto and be written on any of the unmodified forms at least as broad as the (ISO CA 0001, CA 00 055, CA 00 12, CA 00 20). The form shall include coverage for any owned, non-owned, and hired autos used by the CMAR, its Subcontractors (if not separately insured), its employees, agents, or representatives. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in the 1990 and later editions of CA 00 01.

7.3.3 CMAR waives all rights against Owner and its agents, officers, directors, and employees for recovery of damages to the extent these damages are covered by the business CAL or Commercial Umbrella Liability Insurance obtained by CMAR pursuant to the Contract Documents.

7.4 WORKERS' COMPENSATION & EMPLOYER'S LIABILITY INSURANCE

7.4.1 The CMAR shall obtain statutory limits of Workers' Compensation and Employer's Liability Insurance for employees engaged on or at the site of the project in accordance with Chapters 616A to 616D, inclusive, and 617 of NRS.

7.4.2 Employers' Liability Insurance must be maintained in a minimum amount of \$1,000,000 in limits. If an excess policy is utilized, the policy will provide excess coverage for Employer's Liability Insurance.

7.4.3 The CMAR's Workers' Compensation Insurance shall comply with all statutory requirements of the State of Nevada. The CMAR's insurance or authorized self-insurance shall cover the CMAR, and to the extent not otherwise insured, the CMAR's Subcontractors of every tier for those sources of liability that would be covered by the standard Workers' Compensation Insurance as prescribed in NRS Chapter 616 and Employers Liability coverage without restrictive endorsements. Each Workers' Compensation insurance shall provide a Waiver of Subrogation endorsement against the Owner. In addition, where appropriate, coverage shall be included for any other applicable federal or state law, including but not limited to, the Longshore and Harbor Workers Compensation Act, Maritime including Jones Act, and Federal Employers Liability Act.

7.4.4 Subject to the restrictions of coverage found in the Nevada Industrial Insurance Act (NRS Chapter 616), there shall be no maximum limit on the amount of coverage for liability imposed by the Nevada Industrial Insurance Act, the Longshore and Harbor Workers Compensation Act, or any other coverage customarily insured under Part One of a standard Workers Compensation Insurance. The minimum amount of coverage for those coverages insured under Part Two of the Standard Workers' Compensation Insurance (inclusive of any amounts provided by an Umbrella or excess policy) shall be those amounts stated under in this section. If self-insured, such insurance must be provided to and approved by the Owner.

7.5 PROPERTY, BUILDERS RISK, INSTALLATION FLOATER, AND BOILER & MACHINERY INSURANCE

7.5.1 Property Insurance shall be on an ALL RISK or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage,

theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, false work, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. The Owner reserves the right to require the CMAR to provide other forms of Property Insurance if determined by the Owner.

- 7.5.2 Property Insurance shall cover the entire work of the Project, identified in the Contract Documents including reasonable compensation for Architect's services and expenses made necessary by an insured loss. Insured property shall include portions of the work located away from the site, but intended for use at the site, and shall also cover portions of the work in transit. If the Contract includes both construction of or additions to buildings or structures and the installation of machinery or equipment, Builders Risk Insurance shall include coverage during transit, interim off-site storage, and during post-installation testing. If the Contract is solely for the purpose of installation of machinery or equipment in existing buildings or structures, the CMAR shall provide an All-Risk Installation Floater including coverage during transit, interim off-site storage, and during post-installation testing.
- 7.5.3 For Builders Risk Insurance the amount of insurance is to be one hundred percent (100%) replacement cost plus an additional fifteen (15%) for debris removal of the completed value including foundations of the entire addition(s), building(s) or structure(s). In the event that such Builders Risk Insurance includes debris removal in excess of the policy limit, the limit shall not require the additional amount for debris removal. In the case of a remodel or renovation project, the policy limit shall be the greater of the project amount or \$500,000. The extra expense sublimit shall be the greatest of twenty percent (20%) of the policy limit or \$1,000,000.
- 7.5.4 The amount of insurance for an All-Risk Installation Floater shall be one hundred percent (100%) of the installed replacement cost value, and valuation shall be replacement cost.
- 7.5.5 The Builders Risk Insurance and/or the All-Risk Installation Floater must not be subject to any limitation or exclusion of coverage because of occupancy of the building(s), addition(s) or structure(s) in the course of construction or the putting to use of the machinery or equipment. The policy must be endorsed to provide that, subject to the notice of cancellation requirement, coverage will continue to apply until the Certificate of Substantial Completion is issued by the Owner for the building(s), building addition(s) or structure(s), or the machinery or equipment.
- 7.5.6 The CMAR shall maintain and provide a Boiler and Machinery Insurance with replacement cost endorsement with a minimum limit of twenty-five percent (25%) of the bid value unless such project is for the installation of fired equipment wherein the limit shall be one hundred percent (100%) of bid. The CMAR may be released from this responsibility by the Owner through written confirmation. The "connected and ready for use" requirement, underground property exclusion or any similar limitation shall be excluded. Such coverage may be incorporated as part of the Builders Risk Insurance through the elimination of exclusions for mechanical and electrical breakdown as well as the addition of coverage for damage stemming from change in temperature to machinery or equipment.

- 7.5.7 If applicable, there shall be no exclusion in the Builders Risk Insurance and/or Boiler and Machinery Insurance for any loss caused by or resulting from workmanship, construction, materials, specifications, or design defect. Nor shall there be any other exclusion in the policy which the Owner, at its sole discretion, finds unacceptable.
- 7.5.8 Owner and CMAR waive all rights against each other and each of their Subcontractors, Sub-Subcontractors, officers, directors, agents, and employees, for recovery for damages caused by fire and other perils to the extent covered by Builders Risk Insurance purchased pursuant to the requirements of this Contract, or any other property insurance applicable to the work. If the Builders Risk Insurance and other property insurance policies purchased as required in this section do not allow the Insured to waive rights of recovery against others prior to loss, CMAR shall cause them to be endorsed with a Waiver of Subrogation as required above.

7.6 PROFESSIONAL LIABILITY & EXTENDED REPORTING INSURANCE

- 7.6.1 Professional Liability (Errors and Omissions) Insurance shall apply to all activities performed under the Contract in a form acceptable to the Owner.
- 7.6.2 The CMAR will maintain Professional Liability (Errors and Omissions) Insurance during the term of the Contract Documents and for a period of three (3) years from the date of completion of the construction of the project unless otherwise agreed to by the Owner.
- 7.6.3 In the event that the CMAR goes out of business during the term of the Contract or the three (3) year period described above, the CMAR shall purchase at the request and expense of the Owner, if available, Extended Reporting Insurance for claims arising out of the CMAR's negligent acts and/or errors and omissions committed during the term of the Professional Liability Insurance. Professional Liability Insurance coverage shall be \$1,000,000 per claim minimum or the amount customarily carried by the CMAR, whichever is greater.

7.7 ELECTRONIC DATA LIABILITY INSURANCE

- 7.7.1 CMAR shall maintain Electronic Data Liability Insurance if applicable to the Project and insuring against liability arising out of the loss of, loss of use of, corruption of liability access, and/or inability to manipulate electronic data. This coverage shall be maintained with a limit of liability of not less than \$1,000,000.

7.8 POLLUTION LIABILITY INSURANCE

- 7.8.1 Contractor shall maintain in force for the full period of this Contract, unless otherwise approved by the Owner, Pollution Liability Insurance covering losses caused by pollution incidents that relate to the Project and arise from the operations of the Contractor and/or Subcontractors. Insurance shall apply to bodily injury, property damage, including loss of use of damaged property or of property that has not been physically injured, cleanup costs, and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims. The insurance affording these required coverages shall be written in an amount of at least \$1,000,000 per claim, with an annual aggregate of at least \$2,000,000.

- 7.8.2 Owner, its officers, and employees shall be included as an Additional Insured. If coverage as required is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this contract and that continuous coverage will be maintained or an extended discovery period will be exercised through the Statute of Repose beginning from the time that work under the Contract is completed.
- 7.8.3 If the Project includes the disposal of any hazardous or nonhazardous materials from the job site, the Contractor must furnish to the Owner evidence of the Pollution Liability Insurance maintained by the Disposal Site Operator for losses arising from the insured facility accepting waste under this Contract. Coverage must be maintained in minimum amounts of \$1,000,000 per loss, with an annual aggregate of at least \$2,000,000.
- 7.8.4 Pollution Liability Insurance policy must be equivalent to the ISO pollution liability-broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached.

7.9 PERFORMANCE AND PAYMENT BONDS

- 7.9.1 Per NRS 339.025, Performance and Payment Bonds are required for new construction, repair, or reconstruction of any public building or other public work or public improvement of any contracting body (e.g., WCSD/Owner) is awarded to any contractor. Upon award to the contractor, the contractor shall immediately cause to be executed all required Performance and Payment Bonds in a form acceptable to the Owner for one hundred percent (100%) of the Contract Sum. The Performance and Payment Bonds shall be furnished no later than fifteen (15) calendar days after the Contract is awarded.
- 7.9.2 The Owner reserves the right to require the CMAR to obtain Performance and Payment Bonds of any Subcontractor in the amount of one hundred percent (100%) of the Subcontractor's bid. If said bonds cannot be obtained within sixty (60) calendar days of notification, the Subcontractor shall be replaced at no additional cost to the Owner.
- 7.9.2.1 The Owner will pay the actual cost of any bond, if required by the Owner of the Subcontractor, not including any overhead and profit.
- 7.9.3 The Owner will not require the CMAR to increase the Performance and Payment Bonds to accommodate Change Orders. The Owner will not pay additional costs for increased bond fees resulting from Change Orders.
- 7.9.4 With respect only to the bonds required in this section, the CMAR shall furnish the Owner with properly executed bonds on forms acceptable to the Owner and shall have affixed to each bond a certified copy of a current Power of Attorney of the Attorney-In-Fact who executed the bond on behalf of the surety.

SECTION 8: PAYMENT

NOTE: Division 1, Section 01027 – Application for Payment shall also apply to this section.

8.1 SCHEDULE OF VALUES

- 8.1.1 Within fourteen (14) calendar days after the issuance of the Notice to Proceed, the CMAR shall submit to the Owner and the Architect a Schedule of Values of the various portions of the work, aggregating to the total Contract Sum, divided to facilitate payments to Subcontractors, prepared in a form acceptable to the Owner, and supported by such data to substantiate its correctness as the Owner may require.
- 8.1.2 The Schedule of Values, when approved by the Owner and the Architect, shall be the basis for each Progress Payment Application.
- 8.1.3 The Schedule of Values shall be itemized in accordance with the breakdown listed in the CMAR's GMP Proposal specific to the phase of construction the Project will be entering and according to the list of defined components included in this section.
- 8.1.4 The CMAR General Conditions shall be itemized in accordance with the breakdown listed in the CMAR GMP proposal specific to the phase of construction, per Section 9 herein, and the submitted CMAR Fee Proposal Form.

8.2 COST OF WORK

- 8.2.1 The Cost of the Work includes wages paid for labor in the direct hire of the CMAR in the performance of the work. Labor rates, including fringe benefits, shall be in conformance with the applicable Prevailing Wage Rates as published by the Nevada State Labor Commission for this Project.
- 8.2.2 The Cost of the Work includes the following:
 - A. Cost of all materials, supplies, and equipment incorporated in the cost of the work, cost of certificates for inspection and testing, transportation, storage, and handling.
 - B. All payments made by the CMAR to the Subcontractors and suppliers for the cost of the work performed under the Contract.
 - C. Cost of bonding as stipulated in Section 7 herein.
 - D. All allowable permits, fees, licenses, and tests.
 - E. Rental charges for all necessary machinery and equipment, exclusive of hand tools owned by workers, used for the work, whether rented from the CMAR or others.
 - F. Installation, repair and replacement, dismantling, removal, maintenance, transportation, and delivery costs will be at rates consistent with those prevalent in the area.

G. Sales, use, gross receipts, other taxes, tariffs, and/or duties related to Project for which the CMAR is liable.

8.3 PROGRESS PAYMENT APPLICATIONS

- 8.3.1 The CMAR shall submit a Progress Payment Application not more than once (1x) each month unless agreed by the owner, in the form required by the Owner. The CMAR shall submit all progress payments by line item and schedule of values. Each Progress Payment Application shall be accompanied by a current construction schedule, updated to reflect all change orders, and/or changes in the work, material invoices for all stored material, Contractor QA/QC log (5.21.1), Progress Photographs (5.7.3), and any other required or requested documentation.
- 8.3.2 The CMAR shall submit all progress payments by line items and schedule of values.
- 8.3.3 Each Progress Payment Application shall correctly set forth the value of all work satisfactorily performed to date, less five percent (5%) of that amount as a retained percentage. The Owner may pay the invoiced value, less retention, of materials properly stored on site or properly insured, or in approved, bonded, and insured facilities.
- 8.3.2.1 In no event will the CMAR be paid more than the listed value of each properly completed portion of the work, less the required retention, until the entire work has been successfully completed.
- 8.3.4 If payment is requested for materials or equipment not yet incorporated in the work, but delivered and properly stored at the site or at a bonded and insured facility previously approved by the Owner in writing, such payment shall be conditioned upon the CMAR's submission of documentation, satisfactory to the Owner, as deemed necessary to protect the Owner's interest, including applicable insurance and transportation to the job site. The risk of loss of such materials or equipment shall remain with the CMAR until final completion and acceptance of the work.
- 8.3.5 The CMAR guarantees that title to all work, materials, and equipment covered by a Progress Payment Application, whether incorporated into the Project or not, has passed to the Owner prior to issuing the Progress Payment Application.
- 8.3.4.1 Said title shall be free and clear of all liens, claims, security interests, or encumbrances, and that no work, materials, or equipment covered by a Progress Payment Application has been acquired by the CMAR, or by any other person.
- 8.3.4.2 This matter is subject to an agreement under which an interest therein, or an encumbrance thereon is retained by the seller/supplier or otherwise imposed by the CMAR or such other person.
- 8.3.4.3 This provision shall not be construed to relieve the CMAR of the CMAR's sole responsibility for the care and protection of the work, and to restore all damages thereto, nor shall serve as a waiver of the right of the Owner to require the fulfillment of all terms of the Contract Documents.

- 8.3.5 Upon receipt of each Progress Payment Application, and within a reasonable time, the Owner and the Architect will either approve the Progress Payment Application, modify the Progress Payment Application for such amount as is determined to be properly due, or reject the Progress Payment Application and notify the CMAR.
- 8.3.6 The Owner or the Architect may decline to approve any Progress Payment Application, or, because of subsequently discovered evidence or subsequent inspections, may nullify the whole or any part of a Progress Payment Application previously paid to such extent as may be necessary to protect the Owner from loss based on any of, but not limited to, the findings outlined below. When the findings are resolved, payment shall be approved for the associated amount withheld.
- A. Defective work not remedied.
 - B. Claims filed or reasonable evidence indicating the probable filing of claims.
 - C. Failure of the CMAR to make proper payments to Subcontractors and/or suppliers.
 - D. Reasonable doubt that the work can be completed for the unpaid balance of the Contract Sum.
 - E. Damage to a separate contractor, including, but not limited to Subcontractors.
 - F. Reasonable indication that the work will not be completed within the Contract Time.
 - G. Unsatisfactory execution of the work by the CMAR.
 - H. Failure to maintain any insurance required by the Contract Documents.
 - I. Any other material breach of the Contract Documents.
- 8.3.7 No payment by the Owner shall constitute an acceptance of any work not in accordance with the Contract Documents, nor shall it relieve the CMAR of full responsibility for correcting defective work or materials found at any time.

8.4 FINAL PAYMENT

- 8.4.1 When the Owner has received satisfactory evidence that all claims and obligations of the CMAR have been paid, discharged, or waived, the Owner will make final payment to the CMAR of all monies retained on all properly completed and accepted work.
- 8.4.2 Issuance of final payment shall constitute a waiver of all claims by the Owner except those arising from any of the following:
- A. Unsettled claims.
 - B. Guarantee or warranty issues.
 - C. Faulty or defective work.
 - D. Failure of the work to comply with the requirements of the Contract Documents.

- E. Latent defects in the work.
- F. Violations of laws, rules, or regulation.
- G. Indemnification claims.

8.4.3 The acceptance by the CMAR of final payment shall constitute a full and complete release to the Owner of: all claims by, and all liability to, the CMAR for all things done or furnished in connection with the work; and for every act and neglect of the Owner and any others for whom the Owner is or may be responsible relating to or arising out of performance of the work by the CMAR.

8.4.4 No payment, final or otherwise, shall operate to release the CMAR or the CMAR's surety from any obligations under the Contract and/or under the Performance and Payment Bonds.

8.4.5 As a condition of requesting or receiving final payment, the CMAR shall submit all operation and maintenance manuals, guarantees, as-built drawings, surety release, and all other close-out documents as may be applicable under the Contract Documents.

8.5 INTEREST PAYMENTS

8.5.1 Interest will be paid to the CMAR for monies that are retained on satisfactorily completed work, in accordance with NRS 338.515.

SECTION 9: GENERAL CONDITIONS OF THE CMAR

NOTE: For additional information, refer to CMAR Fee Proposal Form, Exhibit B, Page 2 of 2.

9.1 ALLOWABLE EXPENSES UNDER GENERAL CONDITIONS OF THE CMAR

9.1.1 The General Conditions of the CMAR include positions/salaries of CMAR's employees when stationed at the field office, in whatever capacity employed, employees engaged on the road expediting the production or transportation of material and equipment, and employees from the principal or branch office performing jobsite functions while located at the principal office. These positions/salaries include, but are not limited to the following:

- A. Project Superintendent
- B. Assistant Superintendent/Non-Working Foreman
- C. Project Manager (full and/or part-time)
- D. Senior Project Manager (full and/or part-time)
- E. Assistant Project Manager (full and/or part-time)
- F. Project Engineer (full and/or part-time)
- G. Project Administrator/Coordinator (full and/or part-time)
- H. Job Site Clerk
- I. Job Site Contract Coordinator (full and/or part-time)
- J. Project Estimator/Estimating Support

9.2 The General Conditions of the CMAR also include, but are not limited to the following:

- A. Project management; scheduling; equipment and employee costs; general conditions; and shall be categorically itemized and billed based upon the use and expense of completed work including time and material expense.
- B. The cost of all employee benefits and taxes including, but not limited to: unemployment compensation; social security; health; welfare; retirement; and other fringe benefits as required by law, labor agreements, or paid under the CMAR's standard personnel policy, insofar as such costs are actually paid to employees of the CMAR who are engaged in the work.
- C. The cost, including transportation and maintenance of, all materials, supplies, equipment, temporary facilities, and consumables that are used or consumed in the performance of the work.
- D. Sales, use, gross receipts, other taxes, tariffs, and/or duties related to the work for which the CMAR is liable.
- E. All costs associated with establishing, equipping, operating, maintaining, and demobilizing the specified field office(s).
- F. All costs for reproduction, photographs, fax transmissions, long distance telephone calls, data processing services, postage, express delivery charges, and on-site telephone service at the CMAR's field office.
- G. All temporary water, power, and fuel costs necessary for the work.
- H. All costs for removal of all generated non-hazardous substances, debris, and waste materials.
- I. Costs incurred by the CMAR due to any emergency affecting the safety of persons and/or property of the Project.
- J. All costs directly incurred in the performance of the work or in connection with the Project, and not included in the CMAR's Fee, which are reasonably inferable from the Contract Documents as necessary to produce the intended results.
- K. Only costs related to the CMAR's Safety Program's consumables. The CMAR Fee includes all other costs related to CMAR's Safety Program including any 3rd party safety consulting services.
- L. Costs for Builders Risk Insurance.
- M. Costs for all BIM modeling including any additional modeling for changes in work.

SECTION 10: CMAR'S FEE

NOTE: For additional information, refer to CMAR Fee Proposal Form, Exhibit B, Page 2 of 2.

10.1 ALLOWABLE EXPENSES UNDER CMAR'S FEE

10.1.1 The CMAR's Fee shall NOT include those expenses related to the General Conditions of the CMAR in Section 9. The CMAR's fee may include the following:

- A. Salaries and other mandatory or customary compensation of the CMAR's employees at its principal and branch offices, except employees assigned to the Project at the principal office. These positions/salaries include but are not limited to: Firm Principals; Executives; Project Executives; Firm Management; Project Accountants; Director of Operations, General Superintendence, 3rd party safety consultants, or any other general multi project personnel.
- B. General and administrative expenses of the CMAR's principal and branch offices other than the field office. Specifically excluded are materials and equipment utilized at the jobsite.
- C. CMAR's capital expenses, including interest on the CMAR's capital employed for the work.
- D. Transportation, travel, and hotel expenses for the CMAR's personnel incurred in connection with the work.
- E. Cost of insurance, bonding, profit, and overhead that would impact the total proposed cost related to construction of the Project.

SECTION 01001 – CONSTRUCTION PROCEDURES FOR EXISTING SCHOOL SITES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. All work activities under this contract shall be coordinated with the requirements of the Washoe County School District's (WCSD) Facilities Management Department. WCSD shall be contacted prior to any service shutdown and advised when such shutdown shall be commenced. All materials and equipment shall be stored in spaces assigned by WCSD. The Contractor will be required to maintain a neat and orderly operation and to limit or keep noise and nuisance to a minimum.
- B. WCSD reserves the right to remove any person from the property for the safety and security of the facility

1.2 GENERAL REQUIREMENTS FOR WORK INSIDE THE EXISTING PERIMETER AND EXISTING BUILDINGS

- A. It is a felony to transport any alcoholic beverages, drugs, weapons or ammunition of any kind on WCSD property
- B. Any contact or conversation with students is prohibited.
- C. Smoking is prohibited on all WCSD property.
- D. Working hours inside the existing perimeter and existing building will be coordinated with WCSD.
- E. Storage of materials inside the existing perimeter and buildings will be coordinated with WCSD Facilities Management Department.
- F. Construction operations shall be confined to the areas permitted under the contract. Areas beyond indicated work areas are not to be disturbed. Conform to site rules and regulations affecting the work.
- G. Keep driveways and entrances serving the premises clear and available at all times. Do not use these areas for parking or storage of materials.
- H. Passenger cars, trucks and motorized construction equipment, when parked and unattended, shall be locked and the ignition key removed. Do not leave any such vehicle with the motor running.
- I. Limitations on site usage, as well as specific requirements that impact site utilization are indicated on the drawings and any other contract documents. Allocate available space equitably among sub-contractors needing both access and space so as to produce the best overall efficiency. Schedule

deliveries to minimize space and time requirements for storage of materials and equipment.

J. All refuse will be removed daily.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01001

SECTION 01010 - SUMMARY OF WORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 PROJECT DESCRIPTION

- A. Project to entail work as described in scope of work.
- B. The project shall consist of all on and off-site improvements, as shown in the contract documents.

1.3 CONTRACTOR USE OF PREMISES

- A. General: During the construction period the Contractor shall have full use of the premises (construction area) for construction operations. The Contractor's use of the premises (construction area) is limited only by the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of project.
- B. Keep driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment site.

1.4 OWNER OCCUPANCY

- A. Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the building, prior to substantial completion provided that such occupancy does not interfere with completion of the work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total work.

1.5 OWNER FURNISHED ITEMS

- A. The Owner will provide certain pieces of equipment and accessories that are to be installed and connected by the Contractor.
 - 1. The Owner will arrange and pay for delivery of Owner furnished items in accordance with the Contractor's construction schedule, and will inspect deliveries for damage.

2. If Owner furnished items are damaged, defective or missing, the Owner will arrange for replacement. The Owner will also arrange for manufacturer's field services and the delivery of manufacturer's warranties and bonds to the Contractor.
3. The Contractor is responsible for designating the delivery dates of Owner furnished items in the Contractor's construction schedule and for receiving, unloading and handling Owner furnished items at the site. The Contractor is responsible for protecting Owner furnished items from damage, including damage from exposure to the elements, and to repair or replace items damaged as a result of the Contractor's operations.
4. Owner furnished and Contractor installed and connected equipment shall be as indicated in the contract documents.

END OF SECTION 01010

SECTION 01015 – SCHEDULE OF DRAWINGS

WASHOE COUNTY SCHOOL DISTRICT PERSONNEL SAFETY CHECK APPLICATION PROCESS

*The following items summarize
Section 01020 – Washoe County School District
Personnel Safety Check Application*

- All Personnel Safety Check Applications will be good for 12 months from date of approval.
- The following forms are required with your submittal:
 - **Attachment A** – Certification of Applicant & Company Regarding Personnel Safety Check Application (English or Spanish version)
 - **Attachment B** – Washoe County School District Personnel Safety Check Application (English or Spanish version)
 - **Photocopy of Government Issued Picture Identification Card** (ie: Driver's License, State Issued ID Card, etc) for each Employee/Applicant
- All submitted forms/photocopies must be submitted in pdf format via Email to cpbackground@washoeschools.net. The subject line must read "Background Information – Company Name". No hard copies will be accepted via hand delivery or mail.
- Until approval applicants will not be able to work on any WCSD property.

SECTION 01020 – WASHOE COUNTY SCHOOL DISTRICT
PERSONNEL SAFETY CHECK APPLICATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the work for all entities/individuals including, but not limited to, the following:
1. General Contractor
 2. Subcontractor
 3. Subcontractor of Subcontractor
 4. Quality Control Personnel
 5. Special Inspection Personnel
 6. Security Personnel
 7. Consultant Personnel
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals.

1.3 SUBMITTAL PROCEDURES

A. Required Submittals

1. Each company, engaged on a project, shall report to the Washoe County School District all required information for every employee who will be on a Washoe County School District site. This include all personnel whom he/she engages for work on the project site as defined in 1.2 (A). This information must be submitted within 21 calendar days prior to commencement of the project.

Such submittals required include Pages 01020-3 thru 01020-8 as noted below:

- a. **Attachment A** - Certification of Applicant & Company Regarding Personnel Safety Check Application (English or Spanish version)
- b. **Attachment B** - Washoe County School District Personnel Safety Check Application (English or Spanish version)
- c. **Photocopy of Government Issued Picture Identification Card** (ie: Drivers License, etc) for Each Employee/Applicant

2. All required forms and copies of Government Issued Picture Identification Cards for each employee/applicant must be submitted in pdf format via Email to cpbackground@washoeschools.net. The subject line must read "Background Information – Company Name". The Email will be opened and reviewed by Washoe County School District authorized personnel only. **Hand delivered or mailed applications will not be accepted.**

1.4 PERSONNEL SAFETY CHECK APPLICATION REPORTING FORMAT

- A. Complete the Personal Safety Check Application in the section recording the following information in the designated fields of the form.
1. Date
 2. Ethnic Code Identification
 3. Name – Full Legal Name

4. Alias/Maiden Names
 5. Gender
 6. Date of Birth
 7. Height
 8. Weight
 9. Eye Color
 10. Hair
 11. Government Issued Identification Card
 12. Last Four Digits of Social Security Number
 13. Scars/Tatoos
 14. State/Country of Birth
 15. Country of Citizenship
 16. Home Address
 17. Employer
 18. Occupation
 19. Work Address
 20. Phone
 - a. Home
 - b. Cell
 - c. Work
 21. Disclosure if you have ever been arrested, convicted, pled guilty, or pled nolo contendere no matter how much time has passed to:
 - a. A criminal offense, other than a minor traffic violation, this includes but is not limited to a felony, gross misdemeanor, DUI, etc.
 - b. A drug or sexually related offense or act of violence
 - c. Been reported for child abuse/sexual activities w/ a minor
 1. Include type(s) of offense(s), location(s), and date(s).
- B. Automatic Disqualification
1. Any applicant with any active Wants/Warrants, or is a Registered Sex Offender, on a Terrorist list or on Parole and Probation will be disqualified.

1.5 OWNER'S ACTION AND DISCLOSURES

- A. The owner will review each individual application, indicate action taken, and either acceptance or denial of application.
- B. No extension of contract time, overhead, or profit will be authorized because of failure to transmit applications and certifications to the owner sufficiently in advance of project work that requires personnel access and presence on Washoe County School District site(s).

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

ATTACHMENT A (ENGLISH)

CERTIFICATION BY APPLICANT REGARDING PERSONNEL SAFETY CHECK APPLICATION
This form should be accompanied with a copy of your Identification Card (ie: Drivers License, etc)

The undersigned applicant certifies that:

I certify the information provided on this application is true, complete, and correct to the best of my knowledge and belief and is provided in good faith. I understand that a knowing and willful false statement on this application can be an automatic disqualification. I hereby release, discharge, exonerate and hold harmless the Washoe County School District, its agents and representatives and persons furnishing information from any and all liability arising out of the disseminating and inspection of my records.

Company Name (Employer)

Employee Name (Print Full Legal Name)

Employee (Applicant) Signature

Date



CERTIFICATION OF COMPANY REGARDING PERSONNEL SAFETY CHECK APPLICATION

The undersigned authorized representative of the company listed below, certifies to the best of his/her knowledge and belief, that this Personnel Safety Check Application is a true and accurate statement.

Company Name

Name and Title of Authorized Representative

Signature of Authorized Representative

Date



ATTACHMENT B (ENGLISH) PERSONNEL SAFETY CHECK APPLICATION

(CONFIDENTIAL – Please Print)

I hereby release, discharge, exonerate and hold harmless the Washoe County School District, its agents and representatives and persons furnishing information from any and all liability arising out of the disseminating and inspection of my records.

Date: _____

Ethnic Code Identification: (Check the code that best represents your ethnic identity)

Alaskan/Indian _____ Asian/Pacific _____ African American _____ Hispanic _____ Caucasian _____

Name: _____
(Last) (First) (Middle)

Alias/Maiden Names: _____ **Gender:** F / M **Date of Birth:** _____

Height: _____ **Weight:** _____ **Eye Color:** _____ **Hair:** _____

Government Issued ID#: _____
(State) (ID Number)

Last four digits of your Social Security Number: _____
(Per NRS 603A.040)

Scars/Tattoo's: _____

State/Country of Birth: _____ **Country of Citizenship:** _____
(State) (Country)

Home Address: _____
(Street) (City & State) (Zip Code)

Employer: _____ **Occupation:** _____

Work Address: _____
(Street) (City & State) (Zip Code)

Phone: _____
(Home) (Cell) (Work)

It is a requirement that you must disclose if you have ever been arrested, convicted, pled guilty, or pled nolo contendere no matter how much time has passed to:

A criminal offense, other than a minor traffic violation, this includes, but is not limited to a felony, gross misdemeanor, DUI, etc...... Yes No

A drug or a sexually related offense or act of violence? Yes No

Been reported for child abuse/sexual activities with a minor? Yes No

ATTACHMENT B (ENGLISH) - CONTINUED

If "Yes," please explain the type(s) of Offense(s), Location(s) and Date(s) in the space below. Attach a sheet if necessary.

Note: Any applicant with any active Wants/Warrants, or is a Registered Sex Offender, on a Terrorist list or on Parole and Probation WILL BE DISQUALIFIED

I certify that I have not been arrested or convicted of any disqualifying offenses. The information provided on this application is true, complete, and correct to the best of my knowledge and belief and is provided in good faith. I understand that a knowing and willful false statement on this application can be an automatic disqualification.

Applicant Signature: _____ **Date:** _____

During the course of this safety check if any discrepancies are established or there is any conflicting information the applicant must be fingerprinted **at the cost of the applicant**. The required fee is \$55.

The WCSD reserves the right to require fingerprinting on any outside employee.

Fingerprinting Authorization Signature
(when required)

To Be Completed by WCSD Personnel

Date/Time: _____ **Picture ID Check:** _____ **(Copy of government issued ID must be attached)**

___ WANTS
___ DMV
___ NCJIS
___ TIB
___ MNS-ARMS
___ Sex Offender Check
___ TPO

Denied
 Approved

By: _____

Notes: _____

ATTACHMENT A (SPANISH)

CERTIFICACIÓN DEL SOLICITANTE CON RESPECTO AL PERSONAL DE SEGURIDAD CH ECK APLICACIÓN

Este formulario debe ir acompañado de una copia de su tarjeta de identificación (por ejemplo: licencia de conducir, etc.)

Certifico que la información proporcionada en esta solicitud es verdadera, completa y correcta según mi leal saber y entender, y se proporciona de buena fe. Entiendo que una declaración falsa intencional y deliberada en esta solicitud puede ser una descalificación automática. Yo por la presente libero, exonero y mantengo indemne al Distrito Escolar del Condado de Washoe, sus agentes y representantes y personas que dan información de cualquier y toda responsabilidad que surja de la diseminación y la inspección mis expedientes.

Nombre de la empresa (empleador)

Nombre del empleado (Imprimir Nombre legal)

Firma Empleado (Solicitante)

Fecha

CERTIFICACIÓN DE LA EMPRESA EN REFERENCIA A LA SOLICITUD DE VERIFICACIÓN DE SEGURIDAD

El representante firmante autorizado de la compañía se enumeran a continuación, certifica en lo mejor de su leal conocimiento y creencia: que esta solicitud de seguridad personal es una declaración verdadera y exacta.

Nombre de la Empresa

Nombre y título del Representante Autorizado

Firma del Representante autorizado
Signature of Authorized Representative

Fecha



ATTACHMENT B (SPANISH)
SOLICITUD PARA COMPROBAR LA SEGURIDAD PERSONAL
 (CONFIDENCIAL – Por favor imprima)

Por la presente libero, exonero y eximo al Distrito Escolar del Condado de Washoe, sus agentes y representantes y personas que dan información de cualquiera y toda responsabilidad que surja de la diseminación y la inspección de mis expedientes.

Fecha: _____

Código de identificación de su etnicidad: (Marque el código que mejor represente su etnicidad)

De Alaska/Indio _____ Asiático/del Pacífico _____ Afro-americano _____ Hispano _____ Caucásico _____

Nombre: _____
 (Apellido) (Nombre) (del Medio)

Alias/APELLIDO de soltera: _____ **Género:** F / M **Fecha de Nacimiento:** _____

Altura: _____ **Peso:** _____ **Color de ojos:** _____ **Pelo:** _____ **DL/ID#:** _____
 (Estado) (Número)

Los últimos cuatro números del Seguro Social: _____
 (Per NRS 603A.040)

Cicatrices/Tatuajes: _____

Estado/País de nacimiento: _____ **Ciudadano de qué país:** _____
 (Estado) (País)

Dirección: _____
 (Calle) (Ciudad & Estado) (Código Postal)

Empleador: _____ **Ocupación:** _____

Dirección del trabajo: _____
 (Calle) (Ciudad & Estado) (Código postal)

Teléfono: _____
 (Casa) (Cell) (Trabajo)

Es un requisito que debe revelar si alguna vez ha sido arrestado, condenado, se declaró culpable, o se declaró no lo contenderé no importa cuánto tiempo haya pasado.

Un delito que no sea una violación menor de tráfico, lo que incluye, pero no es limitado a un delito grave, delito menor, DUI, etc., etc. Sí No

Un delito relacionado a drogas, sexual o un acto de violencia? Sí No

Ha sido reportado/a por abuso de niños / actividades sexuales con un menor de edad? .. Sí No

ATTACHMENT B (SPANISH) - CONTINUED

Si respondió "Si", explique el tipo (s) de la Ofensa (s), ubicación (s) y fecha (s) en el espacio de abajo.
Adjunte una hoja si es necesario

Nota: Cualquier solicitante con cualquier *Wants / Warrants* activo, o es un delincuente sexual registrado, en una lista de terroristas o en Libertad Condicional SERÁ DESCALIFICADO(A)

Certifico que no he sido arrestado o condenado por cualquier delito que descalifican. La información proporcionada en esta solicitud es verdadera, completa y correcta según mi mejor conocimiento y creencia y es proporcionada de buena fe. Entiendo que una declaración falsa intencional y deliberada en esta solicitud puede ser una descalificación automática.

Firma del solicitante: _____ **Fecha:** _____

.....

Durante el transcurso de esta revisión de seguridad si se establecen las discrepancias o hay alguna información contradictoria, el solicitante deberá tomar las huellas digitales **a costa del solicitante**. El pago requerido es de \$ 55

El WCSD se reserva el derecho de exigir las huellas digitales a cualquier empleado de afuera.

Firma de Autorización de Huellas Digitales
(Cuando sea requerida)

To Be Completed by WCSD Personnel (A ser completado por el personal)

Date/Time: _____ **Picture ID Check:** _____ (Copy of government ID must be attached)

___ WANTS

___ Valid ID

___ NCJIS

___ TPO

___ Sex Offender Check

___ MNS-ARMS

___ Tiburon

Denied

Approved

By: _____

Notas: _____

SECTION 01027 – APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B. Related Sections: The following sections contain requirements that relate to this section.
 - 1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in SECTION 01300 - SUBMITTALS.

1.3 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule
 - b. Application for Payment forms, including continuation sheets
 - c. List of all tier Sub-Contractors
 - d. List of products
 - e. List of principal suppliers and fabricators
 - f. Schedule of Submittals
 - g. Schedule of Allowances
 - h. Schedule of Alternates
 - 2. Submit the Schedule of Values to the Architect at the earliest possible date but no later than seven (7) calendar days before the date scheduled for submittal of the initial Application for Payment.
 - 3. Sub-schedules: Where Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location
 - b. Name of the Architect
 - c. Project Number
 - d. Contractor's name and address
 - e. Date of submittal

2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division including general conditions broken down catagorically.
 - b. Description of Work
 - c. Name of Sub-Contractor
 - d. Name of manufacturer or fabricator
 - e. Generic Name of supplier
 - f. Change Orders (numbers) that affect value
 - g. Dollar value
 1. Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Application for Payment and progress reports. Coordinate with the Project Manual Table of Contents. Break principal subcontract amounts down into several line items. Include a line item for Force Accounts and unit price items, as applicable.

4. The total shall equal the Contract Sum.

5. For each part of the work where an Application for Payment may include materials or equipment, purchased or fabricated and stored on or off-site, provide separate line items on the Schedule of Values for cost of those materials.
 - a. If the Contractor is requesting payment for materials or equipment that are stored off-site, those materials must be stored in a bonded and insured third party warehouse, and they must be segregated from other stored materials and they shall be identified according to project name, material and/or equipment description, and quatity. These materials must be observed in their stored condition by either the Architect or the Owner's representative prior to approval of the Application for Payment. In lieu of bond for stored materials offsite the contractor/subcontractor may provide an appropriate insurance policy approved by the owner to provide for the full replacement cost coverage for all materials stored. Any coverage for materials or equipment stored off-site shall include Owner as loss payee with

- respect to its interests. These materials must be observed in their stored condition by either the Architect or the Owner's representatives prior to approval of the Application for Payment.
- b. All stored material payment requests shall include material supplier invoicing and shall not include labor or delivery costs.
6. Temporary facilities and other major cost items that are not direct cost of actual work-in-place shall be shown as separate line items in the Schedule of Values
 - a. General Conditions shall be broken down by major cost items and categories including breakout of labor and material.
 - b. General Conditions performed by subcontract work shall be broken down to individual categories on the schedule of values. No internal changes to subcontracts shall be allowed without formal Change Order Documentation and reflected on the schedule of values.
 7. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and Owner's representative and paid for by the Owner.
 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements
- B. Each application for payment shall include sufficient documentation to substantiate completed work including but not limited to: subcontractor invoicing, all tiers; general conditions cost breakdown, etc.
- C. Payment Application Times: The date for each progress payment is as indicated in the Contract. The period covered by each Application for Payment is the period indicated in the Contract.
- D. Payment Application Forms: Use Washoe County School District Certificate for Payment form only. This form is available in both hard copy format or electronic format.
- E. Application Preparation: Complete every entry on the form. The execution of this form shall be by a person authorized to sign legal documents on behalf of the Contractor. The Owner will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.

2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- F. Pre-Approval of Application: Percentages of completed work are to be verified by the Owner's Representative and Architect prior to transmittal to the Architect.
1. It shall be established at the Pre-Construction meeting the protocols that are acceptable to each party for the review of payment application percentages.
- G. Record Drawings and Record Specifications: Prior to transmittal of the Application for Payment, Record Drawings and Record Specifications must be reviewed and approved by the Owner's Representative and Architect.
1. It shall be established at the Pre-Construction meeting the protocols that are acceptable to each party for the review of Record Drawings and Specifications.
- H. Transmittal: Submit one (1) signed original copy of each Application for Payment to the Architect by a method ensuring receipt within twenty-four (24) hours. The submitted copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.
 2. Obtain Owner's Representative's initials as established during the Pre-Construction meeting and in sub-section 1.4, items E & F above.
- I. Waivers of Mechanic's Lien: With each Application for Payment, submit conditional waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the work covered by the payment.
1. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to the Owner.
- J. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
1. List of Sub-Contractors (all tiers)
 2. List of principal suppliers and fabricators

3. Schedule of Values
4. Contractor's Construction Schedule
5. Schedule of principal products
6. Submittal Schedule
7. List of Contractor's staff assignments
8. List of Contractor's principal consultants
9. Copies of Building Permits
10. Copies of authorizations and licenses from governing authorities for performance of the work
11. Initial Progress Report
12. Report of Pre-Construction meeting
13. Data needed to acquire the Owner's insurance
14. Initial settlement survey and damage report, if required, (existing facility condition)
15. Record Drawings *
16. Record Specifications*

* Record Drawings and Specifications must be reviewed and approved by the Owner's Representative prior to the Application for Payment.

K. Continuing Application for Payments: Administrative actions and submittals, that must precede or coincide with submittal of the Application for Payment, include the following:

1. Updated Contractor's Construction Schedule
2. Progress report
3. Record Drawings*
4. Record Specifications*

*Record Drawings and Specifications must be reviewed and approved by the Owner's Representative prior to the Application for Payment.

- L. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.
1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the work.
 2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals
 - b. Changeover information related to Owner's occupancy, use, operation, and maintenance
 - c. Final cleaning
 - d. Application for reduction of retainage and consent of surety
 - e. Advice on shifting insurance coverages
 - f. List of incomplete work, recognized as exceptions to Architect's Certificate of Substantial Completion
 - g. Record Drawings*
 - h. Record Specifications*
 - i. Meter Readings
 - j. Change of door locks to Owner's access

*Record Drawings and Specifications must be reviewed and approved by the Owner's Representative prior to the Application for Payment.

- M. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
1. Completion of project closeout requirements
 2. Completion of items specified for completion after Substantial Completion
 3. Ensure that unsettled claims will be settled
 4. Ensure that incomplete work is not accepted and will be completed without undue delay
 5. Completion and final reporting of all prevailing wage and apprentice utilization including unsettled prevailing wage and apprentice utilization claims
 6. Transmittal of required project construction records to the Owner
 7. Proof that taxes, fees, and similar obligations were paid
 8. Removal of temporary facilities and services
 9. Removal of surplus materials, rubbish, and similar elements

10. Certified property survey
11. Warranties (Guarantees) and Maintenance Agreements
12. Test/adjust/balance records
13. Operation and Maintenance Manuals
14. Startup performance reports
15. Final progress photographs

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01027

SECTION 01030 – ALTERNATES

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This section includes administrative and procedural requirements for Alternates.
- B. This section identifies each Alternate by number and describes the basic changes to be incorporated into the work when each Alternate is made a part of the work by specific provisions in the Agreement between the Owner and Contractor.
- C. The contract documents sections referenced within the respective Alternates describe the general requirements for the work under each Alternate.

1.02 DEFINITIONS

- A. An Alternate (or Alternate Bid) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the work, as described in this section, is accepted by the Owner.
- B. Refer to the contract documents for further information.

1.03 PROCEDURES

- A. Coordinate related work and modify surrounding work as required to integrate the various elements of the Alternates in the complete work. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated or specified as part of the Alternate.
- B. Immediately following award of the contract, notify in writing parties involved of the status of each Alternate. Indicate if Alternate has been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to Alternates, if any.
- C. Execute accepted Alternates under the same conditions as other work of the Contract.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.01 PREPARATION

- A. Base Bid shall include all site work, architectural, structural, mechanical, electrical, food service and all other work as required to render the facility complete and operable except for the Add Alterations as described in this section.

((COMPLETE THE FOLLOWING SCHEDULE AS REQUIRED FOR THE SPECIFIC WORK TO BE INCLUDED AS AN ALTERNATE))

3.02 SCHEDULE OF ALTERNATES

A. ALTERNATE NO. 1

1. General:

B. ALTERNATE NO. 2

1. General:

END OF SECTION 01030

SECTION 01035 - MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing contract modifications.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 1 SECTION 01300 – SUBMITTALS for requirements for the Contractor's Construction Schedule.
 - 2. Division 1 SECTION 01027 – APPLICATIONS FOR PAYMENT for administrative procedures governing Applications for Payment.
 - 3. Division 1 SECTION 01631 – SUBSTITUTIONS for administrative procedures for handling requests for substitutions made after award of the Contract.

1.3 MINOR CHANGES IN THE WORK

- A. The Architect will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the contract sum or contract time, as an Architect's Supplemental Instruction.

1.4 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the work that will require adjustment to the contract sum or contract time. If necessary, the description will include supplemental or revised drawings and specifications.
 - 1. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
 - 2. Within fourteen (14) working days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for the Owner's review.

- a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
 - c. Include a statement indicating the effect the proposed change in the work will have on the contract time.
 - d. Include all subcontractor and contractor overhead and profit per contract documents.
- B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
1. Include a statement outlining the reasons for the change and the effect of the change on the work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the contract sum and contract time.
 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Comply with requirements in SECTION 01631 – SUBSTITUTIONS if the proposed change requires substitution of one product or system for a product or system specified.
 5. Include a list of all associated cost that would be incurred, including subcontractor and contractor overhead and profit per contract documents.
- C. The Contractor shall prepare his response in accordance with the requirements set forth in the General Conditions.
- D. Proposal Request Form: Use AIA Document G709-2001 for Change Order Proposal Requests or Change Order Request Form (CP-F107).

1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Owner and Architect may issue a Construction Change Directive. The Construction Change Directive instructs the Contractor to proceed with a change in the work, for subsequent inclusion

in a Change Order. The Construction Change Directive will be approved upon email confirmation from the Owner.

1. The Construction Change Directive contains a complete description of the change in the work. It also designates the method to be followed to determine change in the contract sum or contract time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. Notification: Contractor shall notify Owner prior to any "Not to Exceed" items being over run. Additional Construction Change Directive may be required for over run work.

1.6 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form G701-2000/2001 or WCSD's Change Order Form (CP-F107).

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01035

ARCHITECT / OWNER
SAMPLE PRICE REQUEST

Date: _____ Price Request # _____

Contractor: _____

Bid/Quote #: _____

Project: _____

Please submit a Price Quotation for the following changes being considered. Quote the change within fourteen (14) calendar days - ADD or DEDUCT - in the Contract Sum and any change in the Contract Time. Also, please state how long the price quoted is effective before job conditions warrant an increase in price. This is NOT authorization to proceed with this work.

REFERENCE: _____

CHANGE: _____

REQUESTED BY: _____

REASON: _____

CONTRACTOR / OWNER
SAMPLE CHANGE ORDER REQUEST

Date: _____ Price Request # _____

Contractor: _____

Bid/Quote #: _____

Project: _____

Please submit a Price Quotation for the following changes being considered. Quote the change within five (14) calendar days - ADD or DEDUCT - in the Contract Sum and any change in the Contract Time. Also, please state how long the price quoted is effective before job conditions warrant an increase in price. This is NOT authorization to proceed with this work.

REFERENCE: _____

CHANGE: _____

REQUESTED BY: _____

REASON: _____

SAMPLE CLARIFICATION

DATE: _____

TO: _____

FROM: _____

SUBJECT: _____

REFERENCE: _____

CLARIFICATION: _____

THIS INFORMATION IS PROVIDED FOR CLARIFICATION ONLY AND DOES NOT INVOLVE ANY CHANGE IN CONTRACT PRICE OR TIME.

SIGNATURE: _____

TITLE: _____

DATE: _____ CLAR. NO.: _____

SAMPLE REQUEST FOR INFORMATION

DATE: _____

TO: _____

FROM: _____

SUBJECT: _____

REFERENCE:
Specification Section: _____ Paragraph: _____
Drawing Number: _____ Details: _____

INFORMATION REQUIRED: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

REPLY TO ABOVE RFI: _____

THIS INFORMATION IS PROVIDED FOR CLARIFICATION ONLY AND DOES NOT INVOLVE ANY CHANGE IN CONTRACT PRICE OR TIME.

SIGNATURE: _____

TITLE: _____

DATE: _____ CLAR. NO.: _____

SECTION 01040 – COORDINATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures
 - 2. Conservation
 - 3. Coordination Drawings
 - 4. Administrative and supervisory personnel
 - 5. Cleaning and protection
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 1 Section 01050 – FIELD ENGINEERING specifies procedures for field engineering services, including establishment of benchmarks and control points.
 - 2. Division 1 Section 01200 – PROJECT MEETING for progress meetings, coordination meetings, and pre-installation conferences.
 - 3. Division 1 Section 01300 – SUBMITTALS for preparing and submitting the Contractor's construction schedule.
 - 4. Division 1 Section 01600 – MATERIALS AND EQUIPMENT for coordinating general installation.
 - 5. Division 1 Section 01700 – CONTRACT CLOSEOUT for coordinating contract closeout.

1.3 COORDINATION

- A. Coordinate construction operations included in various sections of these Specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination, include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules
 - 2. Installation and removal of temporary facilities
 - 3. Delivery and processing of submittals
 - 4. Progress meetings
 - 5. Project closeout activities
- D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the work.
- E. Coordinate the installation of all motor starters. General Contractor is responsible for costs associated with supplying and installing all required motor starters.
- F. Dimensions: The Structural drawings are to be used in conjunction with the Architectural, Mechanical and Electrical drawings. Primary structural elements are dimensioned on the structural plans and details. Not all secondary dimensions are shown, such as exact door and window locations, wall configurations, slab slopes, depressions, curbs, etc. Coordination of the structure of the dimensions as shown on the drawings and architectural items to be embedded into, or attached to the structure, is the responsibility of the Contractor. Any dimensions discrepancies between the Architectural, Civil Structural, Mechanical and Electrical drawings shall be reported to the Owner's Representative and Architect before proceeding with the work.
- G. Intent of Drawings:
1. The work of the Contractor and subcontractor shall conform to the intent of the architectural and coordination drawings as reviewed by the Architect. Drawings are partly diagrammatic and do not intend to show in details all features of work. The Contractor shall carefully review the work to be performed by other trades, compare related drawings and shall thoroughly understand the building conditions affecting their work.
 2. All changes required in the work caused by failure to do so shall be at no expense to the Owner.
- H. Interfaces and Right-of-Way:
1. Make proper provisions to avoid interfaces.
 2. Where conflicts occur, architectural and structural has right-of-way over mechanical and electrical work; concealed mechanical work has right-of-way over concealed electrical work; exposed electrical fixtures have right-of-way over mechanical fixtures.
 3. Submit conflicts which cannot be resolved by right-of-way to the Owner for direction.
 4. Submit reflected ceiling coordination plans showing work by all applicable trades for review and approval by the Architect.

I. Masonry Wall Coordination Drawings:

1. Contractor shall be responsible for providing masonry wall coordination drawings for all concrete masonry unit walls. Drawings shall consist of wall elevations drawn to scale at not less than $\frac{1}{4}'' = 1'0''$.
2. Wall elevations shall include dimensioned sizes and locations for all door, window and mechanical openings and penetrations, beam and joist bearing pockets, ledger angles, embedded plate connections, and anchor bolts. All miscellaneous steel to be embedded in the masonry unit wall shall be referenced by show drawing mark number or structural detail number.
3. Masonry wall coordination drawings shall be reviewed and approved by interfacing trades prior to submittal to the Architect. Shop drawings for masonry reinforcement shall be an 'overlay' of the masonry wall coordination drawings. Detail, fabricate and place per ACI 315. Reinforcing shop drawings elevations shall show all vertical and horizontal reinforcing layouts; special reinforcement at lintels and jams at doors, windows, mechanical openings and as called out on Structural drawings.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space of efficient installation of different components.
1. Show the relationship of components shown on separate Shop drawings.
 2. Indicate required installation sequences.
 3. Comply with requirements contained in Section 01300 - SUBMITTALS.
- B. Staff Names: Within 15 days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the project site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.

1. Post copies of the list in the Project Meeting Room, the temporary field office and each temporary telephone.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 1. Excessive static or dynamic loading
 2. Excessive internal or external pressures
 3. Excessively high or low temperatures
 4. Thermal shock
 5. Excessively high or low humidity
 6. Air contamination or pollution
 7. Water or ice
 8. Solvents
 9. Chemicals
 10. Light

11. Radiation
12. Puncture
13. Abrasion
14. Heavy traffic
15. Soiling, staining and corrosion
16. Bacteria
17. Rodent and insect infestation
18. Combustion
19. Electrical current
20. High-speed operation
21. Improper lubrication
22. Unusual wear or other misuse
23. Contact between incompatible materials
24. Destructive testing
25. Misalignment
26. Excessive weathering
27. Unprotected storage
28. Improper shipping or handling
29. Theft
30. Vandalism

END OF SECTION 01040

SECTION 01041 – PROJECT MANAGEMENT SOFTWARE

1. SUMMARY

- a. Web based construction project management collaboration software to submit, track, distribute and collaborate on project documentation and action items.
- b. The intent of utilizing a web-based construction management application is to reduce cost and schedule risk, improve quality and safety, and maintain a healthy team dynamic by improving information flow, reducing non-productive activities, reducing rework and decreasing turnaround times.
- c. WCSD to work with Contractor to ensure directory for project is current and to be responsible for establishing and managing necessary permissions for users through duration of project.
- d. WCSD will hold a kickoff meeting with the Contractor and applicable consultants at the beginning of the project to discuss how the software will be used, routing & naming protocols, permissions & restrictions, roles & responsibilities, etc.

2. SOFTWARE CAPABILITIES (including but not limited to)

- a. Daily Log
 - i. Provides daily log entry from web and mobile with automatic capture of daily weather conditions.
 - ii. Provides ability to attach photographs to entries directly from mobile.
 - iii. Provides reporting capabilities to easily report on man-hours and activities for a certain time frame and contractor.
- b. Dashboards
 - i. Provides a dashboard that shows the status of all currently assigned items with drill down capability to see the subject, assignee and due date of each item.
- c. Deficiency Tracking
 - i. Provides a means for recording, assigning and confirming completion of any deficiency or observation noted during the course of construction.
- d. Directory
 - i. Provides a directory of all team member's contact information that is accessible from web and mobile.
- e. Documents
 - i. Provides a storage location for miscellaneous project documents with the ability to have a folder hierarchy and privacy settings on folders.

SECTION 01041 – PROJECT MANAGEMENT SOFTWARE

- ii. No storage limit.
 - iii. Provides download tracking.
- f. Drawings
 - i. Provides access to a system maintained current set of drawings on web and mobile, with access to all previous revisions as well.
 - ii. Provides automatic hyperlinking capability for detail callouts.
 - iii. Provides drawing markup capabilities on web and mobile.
 - iv. Provides ability to link RFIs, Submittals, Punchlist Items, Photos and Project Documents to the drawings.
 - v. Drawing Markups can be carried forward when new revisions are uploaded.
 - vi. Markups and linked documentation are able to be public or private.
- g. Financial Management
 - i. Provides ability to manage contracts, payment applications and change orders.
 - ii. Provides ability to view contracts and change orders from web and mobile.
- h. Inspections
 - i. Provides ability to create inspections from web and mobile.
 - ii. Provides ability to create a deficiency item from an inspection that can be assigned and tracked to completion.
- i. Meetings
 - i. Provides ability to create, edit and view meeting minutes from web and mobile.
 - ii. Provides ability to create action items with assignees and due dates from a meeting item.
- j. Mobile Accessibility
 - i. Provide native mobile applications for iOS and Android phones at a minimum that provide access to relevant project documentation, including as-built versions of Drawings and Specifications, even when there is no internet access.
- k. Photos
 - i. Provides ability to upload and view photos from web and mobile.
 - ii. Provides ability to markup photos from mobile to clarify anything important in the photo.
 - iii. Provides ability to link photos to specific locations on drawings.
- l. Punchlist
 - i. Provides ability to create punchlist items from web and mobile and link them to specific locations on the drawings.

SECTION 01041 – PROJECT MANAGEMENT SOFTWARE

- ii. Provides ability to distribute punchlist items to all contractors, for contractors to mark them as resolved with photographic proof of resolution via mobile, and for the items to be marked as complete via mobile or web.
- m. Requests for Information (RFIs)
 - i. Provides ability to create RFIs with assignees, due dates and attachments.
 - ii. Provides ability for assignees to respond to RFIs both via the software and by responding to the system generated email.
 - iii. Provides an auto-generated log of all RFIs.
- n. Schedule
 - i. Provides ability to display schedules from typical scheduling software.
- o. Specifications
 - i. Provides ability to upload project specifications and manage them at the individual specification level.
 - ii. Provides ability to view and search specifications on web and mobile.
 - iii. Provides ability to upload revisions to individual specifications and maintain all revision history.
 - iv. Provides an auto-generated current specification log that provides access to the current version of each specification.
 - v. Provides ability to link specifications to submittals and view the specification from the submittal.
- p. Submittals
 - i. Provides ability to upload a submittal register of all expected submittals.
 - ii. Provides ability to create multi-step approval workflows for submittals, with reminder notifications for the current assignee.
 - iii. Provides the ability to upload any file type without size restrictions.
 - iv. Provides an auto-generated submittal log.

3. TECHNOLOGY

- a. Fully web based with mobile apps for Windows, iOS and Android phones.
- b. Accessible without logging in through a virtual private network (VPN).
- c. Works on the current version of Internet Explorer, Google Chrome, Mozilla firefox and Apple Safari browsers.
- d. Can generate emails automatically, and all attachments are included in the emails via download links to avoid emails not being delivered due to size.

SECTION 01041 – PROJECT MANAGEMENT SOFTWARE

- e. PDF output of forms such as RFIs, Submittals, Meetings, Change Orders, etc. are available and customizable.

4. TRAINING AND SUPPORT

- a. Procore has learning portal certifications and support available online.

5. PROCEDURES

a. RFIs and Submittals

- i. The Contractor will be responsible for submitting all RFIs and Submittals through the software and assigning them to the appropriate parties.
- ii. WCSD / Architects / Engineers / Consultants etc. are responsible for posting all responses to these items via the software, including all relevant attachments.
- iii. The Contractor will distribute responses to all affected subcontractors and confirm agreement with the response by closing the item.

b. Construction Documentation

- i. The Contractor will manage Drawings, Specifications and Documents in the software to ensure that the current version of all applicable construction documentation is available to the entire team via web and mobile.
- ii. The Contractor will ensure that all RFIs which modify the current drawings are posted to the drawings and available via web and mobile within 24 hours of the RFI being responded to.

- c. Contractor will record and distribute action items via the software.

- d. Contractor will take daily site photos and make them publicly available.

e. Punchlist

- i. All punch list items will be managed through the software.
- ii. Punchlist items will be created by the Contractor while walking with the Owner and applicable consultants.

6. PRICING

- a. The cost of Procore Technologies services (software fee) has been paid in full by WCSD, but the contractor's bid shall include any costs the Contractor deems necessary to execute the use of Procore as identified above.

END OF SECTION 01041

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for cutting and patching.
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 1 SECTION 01040 - COORDINATION for procedures for coordinating cutting and patching with other construction activities.
 - 2. Division 2 SELECTIVE DEMOLITION for demolition of selected portions of the building for alterations.
 - 3. Refer to other sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.
 - a. Requirements of this section apply to mechanical and electrical installations. Refer to Division 15 and 16 sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Owner requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating

components as well as changes in the building's appearance and other significant visual elements.

3. List products to be used and firms or entities that will perform work.
4. Indicate dates when cutting and patching will be performed.
5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction
 - b. Bearing and retaining walls
 - c. Structural steel
 - d. Lintels
 - e. Miscellaneous structural metals
 - f. Piping, ductwork, vessels, and equipment

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Primary operational systems and equipment
 - b. Air or smoke barriers
 - c. Water, moisture or vapor barriers
 - d. Membranes and flashings
 - e. Fire protection systems
 - f. Noise and vibration control elements and systems

- g. Control systems
 - h. Communication systems
 - i. Electrical wiring systems
 - j. Operating systems of special construction in Division 13 sections
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.
- 1. If possible, retain the original installer or fabricator to cut and patch the exposed work. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.

1.5 WARRANTY

- A. Existing Warranties: Replace, patch and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties, required or existing.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill.
 - 4. Comply with requirements of applicable Division 2 sections where cutting and patching requires excavating and backfilling.

5. Where services are required to be removed, relocated or abandoned, bypass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
 4. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar items. Thoroughly clean piping, conduit and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

SECTION 01050 - FIELD ENGINEERING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. General: This section specifies administrative and procedural requirements for field engineering services including, but not limited to, the following:

- 1. Land survey work
- 2. Civil Engineering Services
- 3. Damage Surveys
- 4. Geotechnical Monitoring

- B. Related Sections: The following sections contain requirements that relate to this section:

- 1. Division 1 SECTION 01040 – COORDINATION for procedures for coordinating field engineering with other construction activities.
- 2. Division 1 SECTION 01300 – SUBMITTALS for submitting project record surveys.
- 3. Division 1 SECTION 01700 – CONTRACT CLOSEOUT for submitting final property survey with Project Record Documents and recording of Owner accepted deviations from indicated lines and levels.

1.3 SUBMITTALS

- A. Certificates: Submit a certificate signed by the land surveyor or professional engineer certifying the location and elevation of improvements upon completion of construction.

- B. Final Property Survey: Submit ten (10) copies of the final property survey.

- C. Project Record Documents: Submit a record of work performed and record survey data as required under provisions of SECTION 01300 – SUBMITTALS and SECTION 01700 – CONTRACT CLOSEOUT.

1.4 QUALITY ASSURANCE

- A. Surveyor Qualifications: Engage a land surveyor registered in the State of Nevada, to perform required land surveying services.
- B. Engineer Qualifications: Engage an engineer of the discipline required, licensed in the State of Nevada, to perform required engineering services.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Identification: The Owner will identify existing control points and property line corner stakes.
- B. Verify layout information shown on the drawings, in relation to the property survey and existing benchmarks, before proceeding to lay out the work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
 - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
 - 2. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.
- C. Establish and maintain a minimum of two (2) permanent benchmarks on the site, referenced to data established by survey control points.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- D. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other construction.

1. Prior to construction, verify the location and invert elevation at points of connection of all underground utility including but not limited to sanitary sewer, storm sewer, water service piping, electric conduits and gas service piping.

3.2 PERFORMANCE

- A. Work from lines and levels established by the property survey. Establish benchmarks and markers to set lines and levels at each stage/story of construction and elsewhere as needed to locate each element of the project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale drawings to determine dimensions.
 1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
 2. As construction proceeds, check every major element for line, level and plumb.
- B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.
 1. Record deviations from required lines and levels, and advise the Architect when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
 2. On completion of foundation walls, major site improvements and other work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles and elevations of construction and site work.
- C. Site Improvements: Locate and lay out site improvements, including but not limited to, pavements; stakes for grading; fill and topsoil placement; utility; slopes; invert elevations; etc.
- D. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels and control lines and levels required for mechanical and electrical work.
- E. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in or affected by construction. Coordinate with local Authorities Having Jurisdiction (AHJ).

- F. Final Property Survey: Prepare a final property survey showing significant features (real property) for the project. Include on the survey a certification, signed by the Surveyor, that principal metes, bounds, lines and levels of the project are accurately positioned as shown on the survey.
 - 1. Recording: At Substantial Completion, have the final property survey recorded by or with the AHJ as the official Property Survey.

END OF SECTION 01050

SECTION 01110 – PREVAILING WAGE AND APPRENTICESHIP UTILIZATION SPECIFICATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents, addendums and all NRS 338 Prevailing Wage and Apprenticeship Utilization Act requirements associated with this project shall apply to this section. Various forms and information can be found on the Office of the Labor Commissioner's website <https://labor.nv.gov/>

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for submittals required for performance of the work, including the following:
 - 1. Contractor/Subcontractor Notification
 - 2. Completion Notification
 - 3. Weekly Wage and Hour Report of Public Works Contractors.
 - 4. Weekly Wage and Hour Report submittal log.
 - 5. Certification of bidder regarding penalties for noncompliance
 - 6. Certification of bidder, proposed contractor or subcontractor regarding debarment, suspension, ineligibility of voluntary exclusion.
- B. Related Sections: The following section(s) may contain requirements that relate to this section if included:
 - 1. SECTION - 01027 APPLICATIONS FOR PAYMENT
 - 2. SECTION – 01300 SUBMITTALS

1.3 SUBMITTAL PROCEDURES

- A. Compensation:

1. No extension of contract time, overhead, or profit will be authorized because of failure to transmit any required submittals or payroll report submittals to the Owner sufficiently in advance of progress payment submittals.
2. No extension of contract time will be authorized because of failure to transmit or report of any forms.

B. Required Submittals

1. CONTRACTOR/SUBCONTRACTOR NOTIFICATION

- a. The Apparent Low Bidder is requested to submit the information on the Comprehensive Contractor/Subcontractor List for the Prime Bidder and all named (used) Subcontractors whom they engage for work within two (2) business days after Recommendation of Award, which will be supplied by the Purchasing Department.
- b. It shall be the Contractor's responsibility to comply and submit any required forms directly to the Office of the Labor Commissioner's as required by NRS 338.

2. COMPLETION NOTIFICATION

The contractor shall notify Washoe County School District when completion of all work performed under the contract is complete.

3. WEEKLY WAGE AND HOUR REPORTING OF PUBLIC WORKS CONTRACTORS

- a. The contractor and all subcontractors are required to submit Certified Weekly Wage and Hour Reports of Public Work Contractors for each weekly payroll to Washoe County School District through the use of LCP Tracker, a paperless online system for filling certified payroll. The first weekly report will begin on the Notice to Proceed date and conclude on the following Saturday. If the Notice to Proceed date falls on a Saturday, the first report will only include reporting for that day. All successive reports will begin on the following Sunday and conclude on the following Saturday. All subcontractor report numbers shall coincide with the General Contractors report numbers. If the contractor or subcontractors do not work during any weekly reporting period they still must submit a report

indicating no public work project hours were performed for that weekly period. When contract scope of work is completed including punch list work, the last report is to be clearly marked "FINAL REPORT."

- b. Weekly Wage and Hour Report of Public Works Contractors and Weekly Wage and Hour Report submittal log must be submitted into Washoe County School District LCP Tracker system within fifteen (15) calendar days following the end of the month being reported.
- c. The Prime contractor is required to designate an individual as Prime Approver for the project. The Prime Approver will oversee the reporting for all subcontractors of all tiers on the project. WCSD will set up the Prime Approver Account for the project. Thereafter, the Prime Approver will have the responsibility to use the Account to approve all payroll on the project.
- d. The prime contractor is required to assign subcontractors within the LCP Tracker system to the project and to ensure that all subcontractors are aware of the necessity to file payrolls electronically, are set up within the system and all required payrolls are filed by subcontractors of all tiers.

1.4 OWNER'S ACTION

- A. The owner will review each submittal, mark to indicate action taken, and provide review and acceptance.
 - 1. Compliance with submittal requirements is the Contractor's responsibility.

1.5 POSTINGS/SIGNAGE

- A. Each contractor engaged on a public work must post the applicable prevailing rate of wages for the project on the site of the public work in a generally visible place to workmen.
- B. Each contractor engaged in a public work must provide a sign with a white background and 6" black lettering stating, "Posted prevailing wages apply to this public works project". This sign must be posted on the site of the public work in a generally visible place to workmen. This will be maintained by the Contractor throughout the construction phase from the Notice to Proceed date through completion of the project.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01110

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WEEKLY WAGE AND HOUR REPORT OF PUBLIC WORK CONTRACTORS FOR THE PAYROLL PERIOD ENDING

Month and Day _____ Year _____

Pursuant to Chapter 338 of NRS and NAC, respectively, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing the name and the actual per diem, wages and benefits paid to each workman employed by him in connection with the public work. The contractor or subcontractor shall ensure that a copy of the record for each calendar month is received by the public body awarding the contract no later than 15 days after the end of the month.

Report # _____ Regular Weekly Report Final Report Bid/Project # _____ PWP- _____

Project Title _____ Public Body Awarding Contract **Washoe County School District**

Prime Contractor Name & Address _____ License # _____

Subcontractor Name & Address _____ License # _____

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week
		S	M	T	W	T	F	S			H & W	Pen.	Vac.	App. Trg	Other		
		S							0								
		O							0								
		S							0								
		O							0								

Report Hours For Above Referenced Public Works Project Only

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week	
			S	M	T	W	T	F			S	H & W	Pen.	Vac.	App. Trg			Other
			1/0	1/0	1/0	1/0	1/0	1/0			1/0							
		S							0									
		O							0									
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		O							0									

Report Hours For Above Referenced Public Works Project Only

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week	
			S	M	T	W	T	F			S	H & W	Pen.	Vac.	App. Trg			Other
			1/0	1/0	1/0	1/0	1/0	1/0			1/0							
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Report Hours For Above Referenced Public Works Project Only

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week	
			S	M	T	W	T	F			S	H & W	Pen.	Vac.	App. Trg			Other
			1/0	1/0	1/0	1/0	1/0	1/0			1/0							
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Report Hours For Above Referenced Public Works Project Only

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week	
			S	M	T	W	T	F			S	H & W	Pen.	Vac.	App. Trg			Other
			1/0	1/0	1/0	1/0	1/0	1/0			1/0							
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Report Hours For Above Referenced Public Works Project Only

Employee Name & State/Jurisdiction that Issued Identification	Work Classification	Hours Worked By Day							Total Hours For Week	Hourly Rate Of Pay including fringe	Hourly Fringe Benefit Contribution					Gross Amount Earned For Week	Net Wage Paid For Week	
			S	M	T	W	T	F			S	H & W	Pen.	Vac.	App. Trg			Other
			1/0	1/0	1/0	1/0	1/0	1/0			1/0							
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Report Hours For Above Referenced Public Works Project Only

STATE OF NEVADA
Office of the Labor Commissioner
STATEMENT OF COMPLIANCE

In compliance with the provisions of Chapters 338 of NRS and NAC, respectively, I, as an officer, owner or director of the undersigned contractor, hereby certify that this report is a true and accurate statement of worker's earnings employed on this Public Works contract by the undersigned contractor for the following payroll period:

_____ , _____ to _____ , _____
Month and Day Year Month and Day Year

I further certify:

1. That no deductions have been made from the wages earned by any person so listed other than those permissible or required by law.
2. That any apprentice listed herein is registered in a bona fide apprenticeship program.
3. Check all that apply:
 - The contractor is signatory to a collective bargaining agreement with some or all of its employees.
 - Each employee listed has been paid the required applicable wages plus the amount of fringe benefits listed in their contract.
 - Each employee listed has been paid the required applicable wages per hour with no fringe benefit contributions paid by the contractor.

 - Prime Contractor
 - Subcontractor

Contractor Name:	Address:
Telephone:	Fax:

_____ _____ _____
Printed Name / Title Signature Date

NRS 338.070:

4. The contractor and each subcontractor shall keep or cause to be kept an accurate record showing the name and the actual per diem, wages and benefits paid to each workman employed by him in connection with the public work.

5. The record must be open at all reasonable hours to the inspection of the public body awarding the contract, and its officers and agents. The contractor or subcontractor shall ensure that a copy of the record for each calendar month is received by the public body awarding the contract no later than 15 days after the end of the month. The copy must be open to public inspection as provided in NRS 239.010. The record in the possession of the public body awarding the contract may be discarded by the public body 2 years after final payment is made by the public body for the public work.

6. Any contractor or subcontractor, or agent or representative thereof, performing work for a public work who neglects to comply with the provisions of this section is guilty of a misdemeanor.



NON-PERFORMANCE PAYROLL REPORT FOR PUBLIC WORKS PROJECTS

Pursuant to Chapter 338 of NRS and NAC, respectively, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing the name and the actual per diem, wages and benefits paid to each workman employed by him in connection with the public work. The contractor or subcontractor shall ensure that a copy of the record for each calendar month is received by the public body awarding the contract no later than 15 days after the end of the month.

Report # Regular Weekly Report Final Report Bid/Project # PWP-

Project Title Public Body Awarding Contract **WASHOE COUNTY SCHOOL DISTRICT**

Prime Contractor Name & Address License #

Subcontractor Name & Address License #

Payroll period to
Month and Day Year Month and Day Year

I hereby certify that no employees or owner/operators were used on the construction of this Public Works project during the payroll period above.

Name & Title (please print) Signature Date

SECTION 01200 - PROJECT MEETINGS

PART 1- GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for project meetings including, but not limited, to the following:
 - 1. Pre-Construction Conference
 - 2. Pre-Installation Conferences
 - 3. Coordination Meetings
 - 4. Progress Meetings
 - 5. Start-up / Training
 - 6. Service, maintenance, warranty review.
- B. Construction Schedules are specified in Division 1 SECTION 01310-A – PROGRESS SCHEDULES.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. The Contractor shall schedule a pre-construction conference and organizational meeting at the project site or other convenient location no later than fifteen (15) days after execution of the Contract and prior to commencement of any construction activities. The Contractor shall conduct the meeting to review scope, responsibilities, personnel assignments, Permits, submittals, safety, emergency action plans, contacts, schedule, etc.
- B. Attendees: Owner; Architect, and their consultants; Contractor and their Superintendent and major sub-contractors; and manufacturers, suppliers and other concerned appropriate parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the work.

- C. Agenda: Discuss items of significance that could affect progress including such topics as:
1. Construction schedule
 2. Critical work sequencing
 3. Designation of responsible personnel
 4. Procedures for processing field decisions and change orders
 5. Procedures for processing Applications for Payment
 6. Submittal of Shop Drawings, product data and samples
 7. Preparation of Record Documents
 8. Use of the premises
 9. Office, work and storage areas
 10. Equipment deliveries and priorities
 11. Safety and Security, emergency procedures
 12. Housekeeping
 13. Working hours

1.4 PRE-INSTALLATION CONFERENCES

- A. Conduct a pre-installation conference at the site before each major construction activity that requires coordination with other construction. The installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination of integration with other materials and installations that have preceded or will follow, shall attend the meeting. The Contractor shall advise the Architect of scheduled meeting dates.
- B. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for:
1. Contract Documents
 2. Options
 3. Related Change Orders

4. Purchases
 5. Deliveries
 6. Shop Drawings, products data and quality control samples
 7. Possible conflicts
 8. Compatibility problems
 9. Time schedules
 10. Weather limitations
 11. Manufacturer's recommendations
 12. Compatibility of materials
 13. Acceptability of substrates
 14. Temporary facilities
 15. Space and access limitations
 16. Governing regulations
 17. Inspection and testing requirements
 18. Required performance results
 19. Recording requirements
 20. Protections
- C. Record significant discussions and agreements and disagreements of each conference, along with the approved schedule. Distribute the minutes of the meeting to everyone concerned, promptly, including the Owner and the Architect.
- D. Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and reconvene the conference at the earliest feasible date.

1.5 PROGRESS MEETINGS

- A. Conduct a weekly progress meetings at the project site at regularly

scheduled intervals. Coordinate with the Owner and the Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request, Change Order request, mock up reviews, etc.

- B. Attendees: In addition to representatives of the Owner, Architect, Construction Manager each sub-contractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future work shall be represented at these meetings by persons familiar with the project and authorized to conclude matters relating to progress.
- C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project.
 - 1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction that is behind schedule will be expedited; and secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the allotted contract time.
 - 2. Review the present and future needs of each entity present, including such items as:
 - a. Interface requirements
 - b. Time
 - c. Sequence
 - d. Deliveries
 - e. Off-site fabrication problems
 - f. Access
 - g. Site utilization
 - h. Temporary facilities
 - i. Hours of work
 - j. Hazards of work
 - k. Housekeeping
 - l. Quality and work standards
 - m. Change Orders
 - n. Documentation of information for payment requests
- D. Reporting: No later than three (3) days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

1. Schedule Updating: update the construction progress schedule after each progress meeting where modifications to the schedule have been made or recognized. Issue the updated schedule concurrently with the report of each meeting.

1.6 GUARANTEE/WARRANTIES; BONDS; AND SERVICE AND MAINTENANCE CONTRACTS REVIEW MEETING:

- A. Eleven (11) months following the date of Substantial Completion of the work, hold a meeting for the purpose of review of guarantees/warranties; bonds; and service and maintenance contracts for materials and equipment.
- B. Meeting location shall be at a mutually agreed upon site, as convenient as possible for all parties.
- C. Attending shall be representatives of the following:
 1. Owner
 2. Architect
 3. Owner's and Architect's Consultants, as appropriate to the agenda
 4. Construction Manager
 5. Commissioning Agent
 6. Contractor
 7. Sub-contractors, as appropriate to the agenda
 8. Suppliers, as appropriate to the agenda
 9. Others, as appropriate to the agenda
- D. Owner will prepare an agenda for the meeting and distribute it to the attendees a minimum of seven (7) calendar days in advance of the scheduled meeting date.
- E. The Contractor shall take action as appropriate to implement repair or replacement of defective items and to extend service and maintenance contracts.
- F. Owner or Owners Representative shall take meeting notes and distribute them to all attendees. Attendees taking exception to anything in the meeting notes shall state in writing to the Owner within five (5) working days, following receipt of meeting notes.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01200

SECTION 01300 – SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for submittals required for performance of the work, including the following:
 - 1. Submittal Schedule
 - 2. Daily Construction Reports
 - 3. Shop Drawings
 - 4. Product Data
 - 5. Samples
 - 6. Quality Assurance Submittals
 - 7. Record Drawings
 - 8. Record Specifications
- B. Administrative Submittals: Refer to other Division 1 Sections and other contract documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
 - 1. Permits
 - 2. Applications for Payment
 - 3. Performance and Labor & Material Bonds
 - 4. Insurance Certificates
 - 5. List of Sub-Contractors
- C. Related Sections: The following sections contain requirements that relate to this section:

1. Division 1 SECTION 01027 – APPLICATION FOR PAYMENT specifies requirements for submittal of the Schedule of Values.
2. Division 1 SECTION 01040 - COORDINATION specifies requirements governing preparation and submittal of required coordination drawings.
3. Division 1 SECTION 01200 – PROJECT MEETING specifies requirements for submittal and distribution of meeting and conference minutes.
4. Division 1 SECTION 01400 – QUALITY CONTROL specifies requirements for submittal of inspection and test reports.
5. Division 1 SECTION 01700 – CONTRACT CLOSEOUT specifies requirements for submittal of project Record Documents and warranties at project closeout.

1.3 DEFINITIONS

- A. Coordination drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
 1. Preparation of coordination drawings is specified in Division 1 SECTION 01040 - COORDINATION and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field samples are full size physical examples erected onsite to illustrate finishes, coatings or finish materials. Field samples are used to establish the standard by which the work will be judged.
- C. Mockups are full size assemblies for review of construction, coordination, testing or operation; they are not samples.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.

- a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow three (3) weeks for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals, or needs additional information to complete review.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow two (2) weeks for reprocessing each submittal.
 - d. No extension of contract time, overhead or profit will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the work to permit processing.
 - e. Allow four (4) weeks for initial review of any submittal requiring review by Authority Having Jurisdiction (AHJ). A listing of these known submittals is indicated on the contract drawings, but this is not necessarily exhaustive.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4" x 5" (100 x 125 mm) on the label or beside the title block on the Shop Drawings to record the Contractor's review and approval markings and the action taken.
 2. Include the following information on the label for processing and recording action taken:
 - a. Project Name
 - b. Date
 - c. Name and Address of the Architect
 - d. Name and Address of the Contractor
 - e. Name and Address of Sub-Contractor
 - f. Name and Address of Supplier
 - g. Name of the Manufacturer
 - h. Number and Title of appropriate specification section
 - i. Drawing Number and detail references, as appropriate
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from contract document requirements, including variations and limitations. Include Contractor's certification that information complies with contract document requirements.

2. Transmittal Form: Use AIA Document G810.

1.5 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's construction schedule, prepare a complete schedule of submittals. Submit the schedule within ten (10) days of the date required for submittal of the Contractor's construction schedule.

1. Coordinate submittal schedule with the list of sub-contracts, schedule of values and the list of products as well as the Contractor's construction schedule.

2. Prepare the schedule in chronological order. Provide the following information:

- a. Scheduled date for the first submittal
- b. Related section number
- c. Submittal category (Shop Drawings, Product Data or Samples)
- d. Name of the Sub-Contractor
- e. Description of the part of the work covered
- f. Scheduled date for resubmittal
- g. Scheduled date for the Architect's final release or approval

- B. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, Sub-Contractors and other appropriate parties required to comply with submittal dates indicated. Post copies in the project meeting room and field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.

- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.6 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report recording the following information concerning events at the site and submit duplicate copies to the Architect and Owner daily:

1. List of sub-contractors at the site
2. Exact count of personnel at the site from each contractor or sub-contractor
3. Time spent by each person working on site vs off the job site
4. High and low temperatures, general weather conditions
5. Accidents and unusual events
6. Meetings and significant decisions
7. Stoppages, delays, shortages and losses
8. Emergency procedures
9. Orders and requests of governing authorities
10. Change Orders received, implemented
11. Services connected, disconnected
12. Equipment or system tests and startups
13. Partial Completions, occupancies
14. Substantial Completions authorized
15. Record Drawing identified changes
16. Record Specification identified changes

1.7 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle or otherwise indicate deviations from the contract documents. Do not reproduce contract documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 1. Dimensions

2. Identification of products and materials included by sheet and detail number
3. Compliance with specified standards
4. Notation of coordination requirements
5. Notation of dimensions established by field measurement
6. Sheet Size: Except for templates, patterns and similar full size drawings, submit Shop Drawings on sheets at least 8½" x 11" but, no larger than 30" x 42".
7. Submit in the quantity the Contractor requires to be returned, together with four (4) additional copies each of brochures, catalog cuts and similar material for mechanical, electrical, hardware and elevator items; and three (3) additional copies for all others.
8. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

1.8 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing in diagrams and templates, standard wiring diagrams and performance curves.
 1. Mark each copy to show applicable choices and options. Where printed, Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations
 - b. Compliance with trade association standards
 - c. Compliance with recognized testing agency standards
 - d. Application of testing agency labels and seals
 - e. Notation of dimensions verified by field measurement
 - f. Notation of coordination requirements
 2. Do not submit Product Data until compliance with requirements of the contract documents has been confirmed.
 3. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.
 4. Submittals: Submit three (3) copies of each required submittal; submit four (4) copies where required for maintenance manuals. The

Architect will retain one and will return one (1) marked with action taken and corrections or modifications required. One (1) copy with review comments will be supplied to the Owner.

- a. Unless non-compliance with contract document provisions is observed, the submittal may serve as the final submittal.
5. Distribution: Furnish copies of final submittal to installers, sub-contractors, suppliers, manufacturers, fabricators and others required for performance of construction activities. Show distribution on transmittal forms.
- a. Do not proceed with installation until a copy of Product Data is in the installer's possession.
 - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.9 SAMPLES

- A. Submit full size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets and swatches showing color, texture and pattern.
1. Mount or display samples in the manner to facilitate review of qualities indicated. Prepare samples to match the Architect's sample. Include the following:
 - a. Specification section number and reference
 - b. Generic description of the sample
 - c. Sample source
 - d. Product name or name of the manufacturer
 - e. Compliance with recognized standards
 - f. Availability and delivery time
 2. Submit samples for review of size, kind, color, pattern, texture, and lead content testing for all paints and painted materials. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variation in color, pattern, texture or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.
 - b. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, details of

- assembly, connections, operation and similar construction characteristics.
- c. Refer to other sections for samples to be returned to the Contractor for incorporation in the work. Such samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.
 - d. Samples not incorporated into the work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
 - e. Samples that are tested by WCSD to have any lead content shall be rejected.
3. Preliminary Submittals: Submit a full set of choices where samples are submitted for selection of color, pattern, texture or similar characteristics from a range of standard choices.
 - a. The Architect will review and return preliminary submittals with the Architect's notation, indicating selection and other action.
 4. Submittals: Except for samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit three (3) sets. The Architect will return one set marked with the action taken.
 5. Maintain sets of samples, as returned, at the project site, for quality comparisons throughout the course of construction.
 - a. Unless non-compliance with contract document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to sub-contractors, manufacturers, fabricators, suppliers, installers and others as required for performance of the work. Show distribution on transmittal forms.
1. Field samples are full size examples erected on site to illustrate finishes, coatings or finish materials and to establish the project standard.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 QUALITY ASSURANCE SUBMITTALS

- A. Submit quality control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports and other quality control submittals as required under other sections of the specifications.

- B. Certifications: Where other sections of the specifications require certification that a product, material or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
 - 1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.
- C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 SECTION 01400 – QUALITY CONTROL.

1.11 ARCHITECT'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken and return promptly.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When the Architect marks a submittal "No Exceptions Taken," the work covered by the submittal may proceed provided it complies with requirements of the contract documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When the Architect marks a submittal "Implement Exception Noted," the work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the contract documents. Final payment depends on that compliance.
 - 3. Returned for Resubmittal: When the Architect marks a submittal "Not Approved, Revise and Resubmit," do not proceed with work covered by the submittal, including purchasing, fabrication, delivery or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Not Approved, Revise and Resubmit" at the project site or elsewhere where work is in progress.

- b. When the submittal review action stamp is marked "Rejected", do not proceed with that portion of the work covered by the submittal including, but not limited to, purchasing, fabrication, delivery or other activity. Make a new submittal in accordance with the review notations on the submittal and resubmit without delay in the same manner and number as for the original submittal. Resubmit as often as necessary as required to obtain an unrestricted or restricted release action. "Rejected" review action stamp notation shall not be construed by the Contractor as a valid reason for an increase in contract time.
- 4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal marked "Action Not Required."
- C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01310B – PROGRESS SCHEDULES

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. References
- B. Schedule Submittal Requirements
- C. Schedule Submittal Format
- D. CPM Schedule Structural Requirements
- E. Updating Schedules
- F. Schedule Revisions
- G. Time Extensions
- H. Three Week Look Ahead Schedule

1.2 RELATED SECTIONS

- A. SECTION 00100 – INSTRUCTIONS TO BIDDERS
- B. SECTION 00800 – SUPPLEMENTARY GENERAL CONDITIONS
- C. SECTION 01010 – SUMMARY OF WORK
- D. SECTION 01027 – APPLICATION FOR PAYMENT
- E. SECTION 01300 – SUBMITTALS

1.3 REFERENCES

- A. Reference: O'Brien, James J., and Fredric L Plotnick, "*CPM in Construction Management*", 7th Ed., McGraw-Hill, Inc., New York, 2010.

1.4 SCHEDULE SUBMITTAL REQUIREMENTS

- A. Preliminary Documents: Submit, in duplicate, as described in Part 1.5 A., to the Owner and Architect at the Pre-construction Conference the following Preliminary Documents defining planned operations:
 - 1. Preliminary Schedule (90 Day) (bar chart PDF and electronic P6 XER file)
 - 2. Submittal Schedule

- B. The Architect and Owner will review schedule submittals; such review shall not constitute an approval or acceptance of the Contractor's construction means, methods, sequencing, or its ability to complete the Work in a timely manner.
- C. The Preliminary Documents will illustrate, at a minimum, a detailed baseline schedule for those activities commencing within the first ninety (90) calendar days after the Notice to Proceed is issued by the Owner (Preliminary Schedule (90 Day)). Within seven (7) calendar days after the date of the Pre-construction Conference, the Contractor, including its primary superintendent, will participate in a Schedule Review meeting with the Owner and Architect. As part of the review meeting, the Contractor will be prepared to explain its approach to the scheduling, sequencing of the work, submittals, cash flow forecast, and its approach and inclusion of non-work and weather related days. Based on comments provided by the Owner and Architect, as well as agreed to changes by all parties, the Contractor will revise and resubmit the Preliminary Schedule (90 Day) and progress curve within seven (7) calendar days from the date of the Schedule Review meeting.
- D. Baseline Documents: The Contractor shall submit the completed Baseline Schedule to the Owner and Architect within thirty (30) calendar days from the Notice of Award. The schedules shall integrate the activities of the Preliminary Schedule (90 Day), and include all activities required for contract completion.
1. Within fourteen (14) calendar days after receipt of the complete Baseline Schedule, the Owner and Architect will communicate in writing, its comments and concerns to the Contractor. Within five (5) working days, Contractor shall adjust the Baseline Schedule and **Progress Curve** to incorporate comments from the Owner and Architect and re-submit.
 2. Upon Owner and Architect receipt and acknowledgment of revisions to the Baseline Schedule and **Progress Curve**, the Baseline Documents shall become part of the Contract Documents.
- E. The Contractor shall not submit a Baseline Schedule that indicates a contractual substantial completion date earlier than the Contractual Substantial Completion Date as defined in the Washoe County School District's issued Notice to Proceed letter. Any Baseline Schedule submission that indicates an early completion of the project shall be rejected. In any event, if the Contractor should plan to complete the work earlier than the Contractual Substantial Completion Date, the Owner shall not be liable to the Contractor for any costs or other damages if the Contractor is unable to complete the work before the Contractual Substantial Completion date.
- F. Should the Contractor fail to define an element of work, activity or logic and the Owner and / or Architect does not detect this omission during the review of the Baseline Schedule, the Contractor shall be required to correct this omission(s) when discovered by the Owner and / or Architect and / or Contractor. The correction(s) will be made before the next Monthly Schedule Update after the omission(s) is discovered. The inclusions of this correction(s) shall not be cause

for delay of the completion of the work within the specified contract time or any increase in cost.

- G. Include the submission and approval of the Baseline Schedule as a cost line item in the Schedule of Values. All Payments to the Contractor shall be withheld until such schedule, satisfactory in form and substance to the Owner and Architect, has been received and approved.
- H. After the Baseline Schedule has been approved, no change in logic and / or durations shall be made without first providing written notification to Owner and Architect for Contractor's need to change, and approval for these changes has been provided to the Contractor by the Owner and Architect. Consideration will be given for Contractor changes if they are determined to be reasonable by narrative explanation. Acceptance or rejection of any requested revisions is without liability to the Owner, Architect, or any of their representatives. Unreasonable logic or duration changes to simply accommodate a perception of being on schedule will not be accepted.
- I. Failure to provide the required schedule information at the required times will result in denial of progress payments, until such time that the schedule information is submitted in the correct format, at the sole discretion of the Owner.
- J. Re-Baseline Schedule: At the discretion of the Architect and / or Owner, when the most current Monthly Schedule Update no longer represents the planned sequence of construction as reflected in the approved Baseline Schedule, the Architect and / or Owner may require that a Re-Baseline Schedule be prepared. This Re-Baseline Schedule shall indicate the Contractors revised plan to complete the project within the Contractual Substantial Completion date.
- K. Recovery Schedule: When the most current Monthly Schedule Update indicates a delay based on the actual progress of the work of negative fifteen (-15) or less calendar days versus the planned progress in the approved Baseline Schedule, the Architect and / or Owner may require that a Recovery Schedule be prepared. This Recovery Schedule shall indicate the Contractors revised plan and methods that will be used to complete the project by the Contractual Substantial Completion date. The Recovery Schedule will be required within ten (10) calendar days of request by Architect and / or Owner. Failure to provide the required schedule information at the required times will result in denial of progress payments, until such time that the schedule information is submitted in the correct format, at the sole discretion of the Owner.

1.5 SCHEDULE SUBMITTAL FORMAT

- A. Follow the guidelines below when submitting a Baseline, Update or Look-ahead Schedule.
- B. Required Submittals:

1. Bar Chart: sheet size to be 8-1/2 x 11 inches minimum, organized by the WBS as prescribed herein.
2. The formatting of the hard-copy and electronic submissions of the Baseline Schedule, Schedule Updates and 3-Week Look-ahead Schedules shall include the following information in the order shown:
 - a. Activity ID Number
 - b. Activity Description
 - c. Calendar ID
 - d. Original Duration
 - e. Remaining Duration
 - f. Percent Complete
 - g. Total Float
 - h. Early Start Date
 - i. Early Finish Date
 - j. Primary Baseline Early Start (except on Baseline Schedule)
 - k. Primary Baseline Early finish (except on Baseline Schedule)
3. On all Update and Look-ahead Schedules, the approved Baseline Schedule shall be included as the Primary Baseline Schedule and be shown as the Primary Baseline Bar with Primary Baseline Early Start and Primary Baseline Early Finish dates. The format of the Title Block shall include (at a minimum) Contractor's name, school name, project number, file name, start date, finish date, data date and run date.
4. Required Electronic Media: Provide all Schedule files in PDF and XER format electronically on CD, DVD, or flash drive and via an attachment to an email to the Owner and Architect. The Contractor is to provide two (2) electronic copies of all Baseline and Schedule Updates including the 3-Week Look-ahead Schedules in the prescribed scheduling software format. Disks are to have the Contractor's name, school name, project number, schedule file name, and data date on the disk label. All Schedule data files must be created by excluding any necessity of user names and/or password requirements. 3-Week Lookahead files for the weeks preceding the month end Schedule Update may be placed on the same media.
5. The Contractor will be responsible for planning, scheduling, managing, and reporting the progress of the Work in accordance with this specification section.
6. All Contract required Construction Schedules shall be prepared by a competent scheduler, and used by the Contractor to plan, prosecute, and coordinate the Work in an orderly and expeditious manner. The approved Baseline Schedule will be used by the Owner and the Architect to evaluate progress and status of the required Update Schedules at the various stages of the Project and establish the basis for progress payments.

7. Required Critical Path Method (CPM) software, using compatible hardware, to be used for scheduling:
 - a. Oracle's Primavera P6, Version 15.1 or the most current version available for purchase.

1.6 CPM SCHEDULE STRUCTURAL REQUIREMENTS

The following requirements have been defined in an effort to create consistency across all project schedules for purpose of analysis.

A. File Naming Schemes For Schedules are to use the following italicized naming schemes with Brookman Elementary School as a sample:

1. Preliminary Schedule:
Brookman ES – Preliminary v1 <original submission>
Brookman ES – Preliminary v2 <resubmission>
2. Baseline Schedule:
Brookman ES – Baseline v1 <original submission>
Brookman ES – Baseline v2 <resubmission>
3. Monthly Schedule Update:
Brookman ES – Update #01 2016-07
4. Three-week Look-ahead Schedules provided at the weekly Project Meetings are to be a working schedule, each with a unique file name. The reason for this is to accommodate WCSD program-wide scheduling needs.
Brookman ES – Weekly #01 2016-07-02 <year, month, day>

B. Structure of Schedule:

1. No work activities in the Schedule shall have an Original Duration greater than fifteen (15) workdays, except for Submittals; Fabrication and Delivery of Materials and Equipment; and Level of Effort tasks, without prior approval of the Owner. For all required Submittal Activities, please refer to Project Manual Section 01300, Shop Drawings, for the allowed submission timeframe after the Pre-Construction conference. All Submittal activities must conform to this timeframe.
2. Dependencies between activities shall be indicated so that it may be established as to the effect the progress of any one activity would have on the Schedule. Dependencies shall make use of Finish-to-Start (FS), Start-to-Start (SS), and Finish-to-Finish (FF) logic relationships. All activities that have a successor Start-to-Start relationship shall also include a successor Finish-to-Start or Finish-to-Finish relationship. There shall not be any open-ended activities except as noted below. Use of Start-to-Finish (SF) logic ties shall not be allowed without written justification and acceptance

by the Owner and Architect prior to implementation. Leads or lags will not be used when the creation of an activity will perform the same function (e.g., concrete cure time). Dependencies shall not make use of negative lags. The use of any lead or lag shall require a written explanation by the Contractor in a narrative Report. All activities, except Notice to Proceed and Final Completion, are required to have at least one predecessor and one successor.

3. Date/time constraint(s), other than those required by the contract, will not be allowed unless the Contractor specifically asks in a narrative how they intend to use these constraints and they are accepted by the Owner and Architect. The only exception is that Zero-Free Float constraints may only be used to set individual Pre-Construction Meetings to within 5 days of the first time occurrence of each meeting.
4. Calendars: Define at least two (2) calendars for the schedule.
 - a. Calendar 1 shall be a five day week (work days) and is to reflect Saturdays, Sundays, and all Holidays as non-workdays.
 - b. Calendar 2 shall be seven day week (calendar days) and is to reflect Saturdays, Sundays, and Holidays as workdays.
 - c. When defining calendars, use "Total Work Hours/Day"; do not use "Detailed Work Hours/Day". The latter occasionally creates issues with start and finish times and dates.
 - d. The aforementioned two calendars and any others are to be "Project" calendars. Use of "Global" or "Resource" calendars are prohibited.
5. The schedule should be broken down into logical areas of work and any interim/internal or area substantial completions by use of a Work Breakdown Structure (WBS). In the WBS, minimally separate schedule activities by building or major areas, if within one building. Within each building separate the schedule activities by Building System per ASTM Uniformat II Classification for Building Elements (E1557) Level 2 Group Elements. At a minimum, the following areas shall be included:
 - a. Milestones
 - b. Level of Effort Summary
 - c. Prepare and Transmit Submittals
 - d. Review Submittals
 - e. Material Procurement & Delivery
 - f. On Site Work
 - g. Retaining Walls (if applicable)
 - h. Off Site Work
 - i. Building Foundation & SOG
 - j. Building Structure
 - k. Building Exterior Enclosure
 - l. Building Roofing
 - m. Building Interior Framing & Rough-in

- n. Building Interior Finishes & Trim
- o. Punchlist, Testing & Inspection
- p. Commissioning
- q. OFCI (Owner Furnished Contractor Installed)
- r. District Specific Systems (Audio, Video, CCTV, Clock Speaker, etc.)
- s. FFE (Fixtures Furnishings and Equipment)
- t. Moving, Move In, and occupancy

6. Activity Coding

- a. In addition to use of the Work Breakdown Structure, develop an Activity Code structure, and code all schedule activities to minimally the following activity codes:
 - 1) Area
 - 2) Subarea
 - 3) Responsibility

7. Activity Properties

- a. Schedule activities will have the following properties:
 - 1) Standard Activity ID naming
 - a) The Contractor shall submit a naming scheme for Activity ID numbers that shall be used throughout the project. Activity ID length shall not exceed eleven (11) characters. Once accepted, the naming scheme will be used for the duration of the project, and Activity IDs shall not change.
 - 2) Activity ID numbers should be formatted so as to provide an indication of where that work is located. We suggest that work in Area A be identified as AAxxxxx-01, etc. The “xxxxxx” following the area ID should be the CSI spec section for the work; and the -01 (-02, etc.) suffix is for multiple activities within the same area and CSI section.

Area	CSI Spec Section	Unique Identifier
↓	↓	↓
AAxxxxxx-01		
 - 3) Each activity shall have a narrative description consisting of a Verb or work function (e.g.; form, pour, excavate), an Object (e.g.; slab, footing, under-floor plumbing) and Area (e.g.: 3rd floor, northeast quadrant, basement). No two activities shall have the exact same description.
 - 4) No activity will represent the work of more than one party / entity.

- 8. Milestones: All Milestones required by the Contract are to be shown in the schedule, with proper logic ties to the work. All of these Milestones are to be sorted as a separate area in the schedule. The following Milestones

shall be included, as a minimum, in the Schedule. Milestone type is listed in parentheses.

- a. MS00815-01: Notice to Proceed (start milestone), use Calendar 2 (calendar days). This is to be the first activity in the schedule, and the only activity without a predecessor. The date of Notice to Proceed shall be "Day One" as defined in the WCS D issued Notice to Proceed. A successor to this milestone shall be MS00815-04: Contractual Substantial Completion with a FS (xxx) lag, where (xxx) is defined as the Contract Time per the WCS D issued NTP letter.
- b. MS00815-02: Off Site Notice to Proceed (start milestone), use Calendar 2 (calendar days). Predecessor is to be MS00815-01: Notice to Proceed with a FS (xx) relationship where the (xx) is the number of calendar days between Project NTP date and the NTP of the offsite work as specified in the Contract Documents. Successors shall be appropriate off-site work.
- c. MS00815-04: Contractual Substantial Completion (finish milestone), use Calendar 2 (calendar days). Use a Late Finish Constraint of (xxx) calendar days after NTP, where (xxx) is defined as the Contract Time per the WCS D issued NTP letter. The predecessor activities are to be the Contractors Punchlist activity for each area of the project with FS (0) relationships. The only successor is to be MS00815-05: Final Punchlist, with an FS 0 relationship.
- d. MS00815-05: Final Punchlist (finish milestone), use Calendar 2 (calendar days), duration of 45 days. The only successor is to be MS00815-06: Final Completion, with an FS 0 relationship.
- e. MS00815-06: Final Completion (finish milestone), use Calendar 2 (calendar days). This is to be the last activity in schedule, and the only activity without a successor.
- f. MS01010-01: Areas Ready to Receive Carpet (start milestone), use Calendar 2 (calendar days). The intent of this Milestone is that essentially all construction activities are completed prior to the carpet installation, in order to avoid damage to the carpet. Contractor is to provide predecessor logic that properly portrays this requirement. This activity shall have as a successor activity MS00815-04: Contractual Substantial Completion with a SS (xx) lag, where the (xx) represents the amount of time this milestone activity must occur prior-to the Contractual Substantial Completion per the requirements of the Contract Documents.
- g. MS01010-02: HVAC System Ready for Testing, Adjusting, and Balancing (start milestone), use Calendar 2 (calendar days). The intent of this Milestone is that the HVAC System must be complete and functioning and ready for the Testing, Adjusting, and Balance Work. Furthermore, the Commissioning process must be complete to the extent it will not interfere with the aforementioned Testing, Adjusting, and Balancing Work requirements inclusive of control point to point verification. Contractor is to provide predecessor logic that properly portrays this requirement. This activity shall have as

- a successor activity MS00815-04: Contractual Substantial Completion with a SS (xx) lag, where the (xx) represents the amount of time this milestone activity must occur prior-to the Contractual Substantial Completion per the requirements of the Contract Documents.
 - h. MS01010-03: Telephone Conduits & Pull Boxes Complete (start milestone), use Calendar 2 (calendar days). The intent of this Milestone is that essentially all telephone conduits and pull boxes are installed and ready for Owner cable pulling. Contractor is to provide predecessor logic that properly portrays this requirement. This activity shall have as a successor activity MS00815-04: Contractual Substantial Completion with a SS (xx) lag, where the (xx) represents the amount of time this milestone activity must occur prior-to the Contractual Substantial Completion per the requirements of the Contract Documents.
 - i. MS01010-04: Telephone/Data/Clock/Intercom/Security/Video/CCTV Systems Complete (start milestone), use Calendar 2 (calendar days). The intent of this Milestone is that essentially all telephone, data, clock, intercom, security, video, and CCTV systems are complete. Contractor is to provide predecessor logic that properly portrays this requirement. This activity shall have as a successor activity MS00815-04: Contractual Substantial Completion with a SS (xx) lag, where the (xx) represents the amount of time this milestone activity must occur prior-to the Contractual Substantial Completion per the requirements of the Contract Documents.
 - j. MS01010-05: Headend Rooms Ready (start milestone), use Calendar 2 (calendar days). The intent of this Milestone is essentially that the headend rooms and all Owner installed equipment are ready for Owner scope. Contractor is to provide predecessor logic that properly portrays this requirement. This activity shall have as a successor activity MS00815-04: Contractual Substantial Completion with a SS (xx) lag, where the (xx) represents the amount of time this milestone activity must occur prior-to the Contractual Substantial Completion per the requirements of the Contract Documents.
9. Summary (a.k.a. Level of Effort Activities):
- a. The Contractor shall include special activities that are a summary of a sequence of activities. The start of the activity will be the start date of the first activity in the sequence and the finish date will be the finish date of the last activity in the sequence. Use Calendar 2 (calendar days) for all Level of Effort activities.
 - b. Included in the Level of Effort area should be a Level of Effort activity designated as Contract Time. It should have Notice to Proceed as its predecessor, with a SS 0 relationship; and Contractual Substantial Completion as its successor, with an FF 0

relationship. The duration of this activity must not exceed the contract time.

- c. Other Level of Effort are to use predecessor logic of SS 0 with the first activities in the Area or major project category and successor logic of FF 0 with the Contractor's Punch List activity for the Area or major project category. Each Area or major project category must have a Contractor's Punch List activity that is properly tied to all work in the Area so that it is the last activity in the Area. The Activity ID numbers for activities designated at each Area as Contractor's Punch List are to conform to the numbering system used for all other activities in the schedule.
- d. The purpose of these Level of Effort activities is to provide monitoring of the contract time and Area or major project category progress. Level of Effort activities are to include at a minimum the following:

(Elementary School)

- 1) AH00815-01: Contract Time
- 2) AH00815-02: Building/Area A Duration
- 3) AH00815-03: Building/Area B Duration
- 4) AH00815-04: Building/Area C Duration
- 5) AH00815-05: Building/Area D Duration
- 6) AH00815-06: Building/Area E Duration
- 7) AH00815-07: Building/Area F Duration
- 8) AH00815-07: Building/Area G Duration
- 9) AH00815-08: On Site Duration
- 10) AH00815-09: Off Site Duration

(Middle School)

- 1) AH00815-01: Contract Time
- 2) AH00815-02: Building A Duration
- 3) AH00815-03: Building B Duration
- 4) AH00815-04: Building C Duration
- 5) AH00815-05: Building D Duration
- 6) AH00815-06: Building E Duration
- 7) AH00815-07: Building F Duration
- 8) AH00815-08: Building G Duration
- 9) AH00815-09: Central Plant Duration
- 10) AH00815-10: On Site Duration
- 11) AH00815-11: Off Site Duration

(High School)

- 1) AH00815-01: Contract Time
- 2) AH00815-02: Building 100 Duration
- 3) AH00815-03: Building 200 Duration
- 4) AH00815-04: Building 300 Duration
- 5) AH00815-05: Building 400 Duration

- 6) AH00815-06: Building 500 Duration
- 7) AH00815-07: Building 600 Duration
- 8) AH00815-08: Building 700 Duration
- 9) AH00815-09: Building 800 Duration
- 10) AH00815-10: Building 900 Duration
- 11) AH00815-11: Central Plant Duration
- 12) AH00815-12: On Site Duration
- 13) AH00815-13: Off Site Duration

- 10. Tasks related to the submittal and procurement of material and equipment shall be included as separate activities in the project schedule. Sequences for major material items, such as reinforcing steel, structural steel, and steel joists, etc. shall be shown as individual activities within the schedule. Major equipment items, such as HVAC equipment, electrical equipment, specialty items, and any long lead material or equipment items shall be shown as individual activities within the schedule. Examples of submittal/procurement activities include, but are not limited to:
 - a. Material/Equipment submittal preparation
 - b. Submittal and Approval of material/equipment
 - c. Material/equipment order
 - d. Fabrication and/or Delivery of Equipment and Specialty Materials:
 - 1) Separate Activities shall be required when durations will be greater or equal to 30 calendar days maximum for each delivery.
 - 2) Delivery Activities that are phased or partial deliveries shall require an Activity ID with logic relationship to installation and/or the related construction activities.
 - e. Delivery of extra parts/extra stock/special tools
 - f. Notification of Owner furnished materials / equipment delivery requirements
 - g. Delivery of O&M manuals
- 11. The approved Baseline schedule shall become the basis for all Weekly Look-ahead and Monthly Schedule Updates. The approved Baseline Schedule shall also be shown as the Primary Baseline Schedule in all Weekly Look-ahead and Monthly Schedule Updates.
- 12. Construction activities shall include at a minimum, but are not limited to:
 - a. Permit Requirements
 - b. Tasks corresponding to each specification section covered in the Specification Index in all individual Divisions
 - c. Tasks related to mobilization / demobilization
 - d. The installation of temporary or permanent work by tradesman
 - e. Testing and inspections of installed work by technicians, inspectors, or engineers
 - f. Required outside Agency inspections

- g. System utility outages and tie-ins
 - h. Start-up and testing of equipment, commissioning of building and related systems
 - i. Scheduling of specified manufacturer's representatives
 - j. Contractor's Punch list activity by area
 - k. Final clean-up
 - l. Training to be provided
 - m. Final Punch list
 - n. Maintenance period
 - o. Administrative tasks necessary to start, proceed with, accomplish, or finalize the contract
 - p. Monthly weather / non workday considerations
13. The following logic relationships will be required in any precedence diagram method used:
- a. All logical relationships shall be finish to start (FS) as much as practical. Start to start (SS) and finish to finish (FF) relationships may be used as follows:
 - 1) successors may be SS with a corresponding FF relationship
 - 2) at a milestone or at the conclusion of the network
 - 3) use in Level of Effort activities
 - b. Lag factor use should be limited. Lag factors shall not be used when the work could be identified as a functional activity (i.e., concrete curing).
 - c. Accepted Schedules shall only contain Contract Required Early Start and/or Early Finish Constraints. Additional constraints may be used if authorization from the Owner and / or Architect is received prior to their implementation.
 - d. The retained logic mode is required for schedule calculations.
 - e. Under Enterprise / Projects / Settings, "Define Critical Activities" shall be set to "Longest Path" (as opposed to "Total Float less than or equal to").
 - f. Any deviations / change from these logic specifications require written request to be reviewed for acceptance from the Architect and Owner prior-to implementation.

1.7 UPDATING SCHEDULES

- A. Monthly Schedule Updates shall accompany the monthly Application for Payment, reflecting progress since the previous month's submittal.
 - 1. Two (2) 8 ½ x 11 inch copies of the Bar Chart, along with two (2) electronic copies containing PDF and XER files, in the scheduling software format, containing the Monthly Schedule Update in addition to the Updated Cash Flow Progress Curve. The Bar Chart will be sorted as noted in Section 01310B-1.5. Email the PDF and XER file to the Owner.

- B. The Schedule Update shall show the actual status of all activities. All activities that have a percentage less than 100% shall have a remaining duration in whole one (1) day increments. In addition Activities having a remaining duration of zero cannot be claimed as less than 100% complete. Refer to Part 1.8 for revisions to the Schedule.
- C. Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in the CPM scheduling software system. Actual Start and Actual Finish dates on the CPM schedule shall match the dates of actual work accomplished in the field and not on projected completion dates.
- D. With each monthly update schedule submission, the Contractor shall submit a narrative report including descriptions of any problem areas, current or anticipated delays and their estimated schedule impacts, and the Contractor's plan to mitigate any of these noted delays. The Contractor shall provide explanation for any delay(s) shown in the schedule updates. If the Contractor should require the addition or deletion of any activity, require a revision(s) to the approved schedule logic, or any other change to the approved schedule, the Contractor shall include a narrative explaining why these revisions are necessary and the anticipated impact to the schedule and Contractual Substantial Completion Date.
- E. The Contractor shall provide a computer generated Log Report in digital format using Claim Digger, Schedule Analyzer Pro, or other recognized schedule comparison software, listing ALL changes made between the previously reviewed monthly schedule update and the current monthly schedule update. Identify the name of the Baseline Schedule, previous schedule and name of the current schedule being compared.

1.8 SCHEDULE REVISIONS

- A. Updating the schedule to reflect actual progress made up to the data date of a schedule update shall not be considered revisions to the Baseline Schedule.
- B. During the progression of the project, if it appears the Monthly Update Schedule no longer represents the actual prosecution of the work as reflected in the Baseline Schedule, the Architect or Owner may request a Revised Baseline Schedule from the Contractor. The revision shall address the Contractor's current construction plan for completing the work without impacting contract time and cost. Approved revisions to the Monthly Schedule Update shall then be incorporated into the previously approved Baseline Schedule. The Revised Baseline Schedule shall then be used as the Primary Baseline Schedule for all subsequent monthly schedule update submissions.
- C. The Contractor may also request revisions to the construction schedule logic and activities in the event the Contractor's planning for the work is revised. If the Contractor desires to make changes in the construction schedule to reflect revisions in its method of operating and scheduling of the work, the Contractor shall provide the Architect and Owner the reason(s) for the proposed revisions.

The request shall address the Contractor's current construction plan for completing the work without impacting contract time and cost. Accepted revisions to the schedule shall be incorporated into a Revised Baseline Schedule and the current construction schedule at the next Monthly Schedule Update submission.

- D. If the Architect or Owner recognizes at any time that the work has fallen sufficiently behind the scheduled Contractual Contract Completion Date, milestones, or phase dates, the Architect or Owner shall require the Contractor to submit a Recovery Schedule. The Contractor shall submit the Recovery Schedule within seven (7) calendar days of the Architect's/Owner's written request. The Contractor will include a narrative with the Recovery Schedule that will describe the Contractor's work plan, including all additional resources, materials, equipment, labor, and modifications of operations which will be provided so as to meet the Contractual Substantial Completion Date. The Contractor will provide all such additional resources and modifications of operations without additional cost to the Owner, Any additional costs incurred by the Owner for any Owner provided services such as; inspections, consulting, design and engineering, etc. will be the responsibility of the contractor. Such additional resources and modifications may include but not be limited to:

1. Required overtime for the Contractor's personnel.
2. Increased construction manpower in such quantities as will substantially eliminate the backlog of work and put the project back on schedule.
3. Increase numbers of shifts per working day, working days per week, or the amount of construction equipment, or any combination of the foregoing which will put the project back on schedule.
4. Reschedule activities to achieve the maximum practical concurrence of accomplishment of activities to put the project back on schedule.
5. Supplemental progress schedules detailing the specific operation changes instituted to regain the Contract Schedule.

The Contractor will implement the Recovery Schedule without additional cost to the Owner and provide for completion of the work in accordance with the remaining milestone dates without a time extension. Should the logic and/or durations of the Recovery Schedule not receive acceptance of the Architect and Owner, the Contractor is responsible to use concurrent operations, additional manpower, additional shifts, overtime, etc., including 24-hour production work day, seven (7) day work week operation, as required to put the Project back on schedule at no additional cost to the Owner.

- E. Use of float suppression techniques, such as:
1. Preferential sequencing (arranging critical path through activities Owner and/or Architect related activities) using:

- a. Special lead/lag logic restraints,
- b. Zero total or free float constraints except where otherwise noted,
- c. Imposing constraint dates other than as required by the contract,

shall be cause for rejection of the project schedule or its updates. The use of resource Leveling (or similar software features) used for the purpose of artificially adjusting activity durations to consume float and influence the critical path is expressly prohibited.

F. Definitions of Float or Slack

1. Free Float is the length of time the start of an activity can be delayed without delaying the start of a successor activity.
2. Total Float is the length of time along a given network path that the actual start and finish of activity(s) can be delayed without delaying the project completion date.
3. Positive Total Float is for the benefit of the Project and for the mutual use of the Owner and the Contractor.

G. Negative float will not be a basis for requesting time extensions. Any extension of time will be addressed in accordance with Section 01310B "Time Extensions".

1.9 TIME EXTENSIONS

- A. Extensions of time to the Contract may be granted only for delays to activities on the critical path that actually delay the Project completion beyond the Contractual Substantial Completion date or for delays to activities that transform that activity onto the critical path, and, as a result, delay completion beyond Contractual Substantial Completion date.
- B. For any period in which a delay to the contract specified Milestones and/or Contractual Substantial Completion is anticipated by the Contractor, a Time Impact Analysis (TIA) shall be submitted in accordance with Contract Documents to the Architect and Owner. Each TIA shall include a detailed Network Diagram demonstrating where the Contractor proposes to incorporate the delay in the most current approved Monthly Update Schedule. The TIA shall show all the current activities affected by the delay and the proposed activity logic relationships caused by the delay. The TIA network diagram shall have a minimum of one (1) current accepted Monthly Update Schedule predecessor and successor. The TIA shall demonstrate the time impact based on the date the delay is noticed by the Contractor or the date the delay began; the Project Status of all construction at that specific point in time; and the event time computation of all affected activities. The event times used in the TIA shall be substantiated by actual dates of occurrence. Included in the Contractor's TIA shall be a detailed

narrative report providing the rationale or basis of entitlement used in developing the TIA request. The preparation of the TIA is considered part of the construction process and will be performed at no additional cost to the Owner.

- C. Time Impact Analysis shall be used by the Owner in determining if a time extension or reduction to the contract milestone date(s) is justified. The Contractor may provide a TIA to the Owner for any contract change or as support for a Value Engineering Proposal.
1. The Contractor shall submit a TIA illustrating the influence of a change or delay to the Contractual Substantial Completion Date or milestones. All TIA's submitted shall utilize the most recently approved Monthly Schedule Update logic to demonstrate the impact(s) or delay(s) alleged to have affected the Contractual Substantial Completion date.
 2. Each TIA shall include a Fragmentary Network (Fragnet) demonstrating how the Contractor proposes to incorporate the impact into the Project Schedule. A Fragnet is defined as the sequence of new activities and/or activity revisions, logic relationships and resource changes that are proposed to be added to the most recently approved Monthly Construction Schedule Update at the time of the alleged impact to demonstrate the influence of impacts to the accepted schedule logic. The Fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. Include a narrative report describing the effects of new activities and relationships to interim and contract completion dates. The TIA shall include an electronic copy (both PDF and XER) of the TIA Network Diagram and Fragnet.
 3. If the TIA was submitted as support for a change order request, following the Contractor's receipt of an executed Change Order, the activity data and logic relationships in the TIA shall be incorporated into the most current Monthly Schedule Update.
- D. Each Time Impact Analysis shall demonstrate the estimated time impact based on the events of delay, the date the Change Order was given to the Contractor, the Actual Project status of construction at that point in time.
- E. Following the receipt of an executed Change Order, the activity data and logic relationships in the TIA shall also be incorporated into the current accepted Monthly Update Schedule. All TIA Activities shall be coded in a manner that they can be identified to the specific Change Order and TIA.
- F. Seasonal weather conditions and resulting impacts shall be included in the planning and scheduling of all work influenced by wind, cold or warm weather, smoke, snow, and/or precipitation to ensure completion of all work within the Contract time.

If all the work, or the portion(s) of the work which are the currently controlling operation(s), are suspended for weather so as not to prosecute the work, a time

extension at the Owners discretion, **may be awarded if the following conditions are satisfied**

- a. The weather shall actually be the delay to the Substantial Completion Date of the project and the delay must be beyond the control and without the fault or negligence of Contractor; weather will be evaluated based on the original baseline schedule without revision if revision is the result of contractor performance; **and**
- b. The weather recorded by NOAA / NWS (WS Form: F6) website: (www.weather.gov/climate/index), Reno location or Owner approved location of work during the Contract period shall be found to occur more frequently than the weather normally recorded by NOAA / NWS to be anticipated is documented more frequently occurring than 5 Year NOAA / NWS (WS Form: F6) Averages for all project locations; or
- c. Owner/Architect orders the stoppage or suspension of the work in the interest of public safety or health or due to specification requirements.

Weather is defined for the purposes of this Contract to be compared to current recorded National Oceanic and Atmospheric Administration (NOAA) / National Weather Service Preliminary Local Climatological Data (WS FORM: F-6) for Station: Reno, Nevada, or for Owner approved alternate project location, as follows:

- **PRECIPITATION** water equivalent of greater than or equal to 0.1 inch recorded for the 24-hour period, of the date, and /or
- **AVERAGE** wind speed of greater than or equal to 20 miles per hour recorded for the 24-hour period for the date of occurrence. **NOT** 2 Minute Sustained or Gusts as recorded in (WS FORM:F6).

The schedule of anticipated weather delays is based on current National Oceanic and Atmospheric Administration (NOAA) / National Weather Service (NWS) records kept as Preliminary Local Climatological Data (WS FORM: F-6) for Station: Reno, Nevada, (e.g. 5 Year NOAA / NWS (WS Form: F6) Averages) for all project locations **and will constitute the baseline for the total Contract Time weather delay evaluations.** Contractor's CPM schedule shall be understood to include as a minimum, the amount of weather delay days lost in all Contractors' weather dependent activities occurring during the activity.

Contractor, or their authorized representative, shall provide specific written notification with documented backup to both, Owner's designated Project Manager, Owners Consultants, and Architect designated Project Manager, on Company letterhead of the occurrence of qualifying weather and the resultant full day(s) impact to normally scheduled work days, within five (5) calendar days of each occurrence of qualifying weather, whereby preventing work on current critical activities for fifty (50) percent or more of Contractor's normal scheduled work day hours. The Contractor written notice will provide contemporaneously documented information concerning date, work Activities scheduled to be

worked, the hours worked for all employees and subcontractors, and time qualifying weather conditions occurred. A Time Extension may be granted when the number of actual weather days calculated from the Notice To Proceed date to the date Contractor asserts the request exceeds the total cumulative non-work weather days using the baseline schedule for the same calendar time period. If Contractor wishes to assert additional claim(s) for time adjustment at a later date(s), each succeeding claim must address the time period from NTP date to the date of the request. No compensation will be made for monetary damages including, but not limited to extended General Conditions, due to weather delay(s). All weather days shall be utilized as a bank of days for entire contract duration and will expire at substantial completion minus unused weather days. Substantial completion will be modified via deductive change order for all unused weather days.

The clear intent of this Contract Weather provision is to establish that the Contractor & Owner/Architect agree that a predetermined weather lost time has been accounted for in the Bid and accepted Baseline Schedule. Each Project has been determined to have a specific number of Contract Weather Days. Contractors are to make their own determination at time of bid and scheduling weather sensitive work activities as to incidental time for but not limited to (e.g. wet conditions, muddy site, etc.) time lost due to an accepted qualifying weather event as described above. The Contractor is responsible to provide a weatherized Project site at no additional cost or time to the Owner, including but not limited to, work and/or materials protected, temporary site drainage, and SWPP / Dust Control.

The Project's total Weather Days accounted for in Contractor's schedule is to be calculated using the schedule CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS. The mathematical calculation will take the actual NTP date of this Contract and prorate the remaining days of the beginning month as a percentage of the month. This percentage is then multiplied by the Non-Work Weather days from the Monthly Total - Non Work schedule, to arrive at a rounded whole number for that month, should the NTP not be on the 1st day of the month. The same pro-rata will be done for the Substantial Completion date of the Contract. All months in between use the Totals given in the Non-Work Weather Days schedule for the same calendar period of this Contract. A grand total of impact days lost would be the cumulative sum of each month starting with the NTP Date and running through the Project Substantial Completion Date.

This total number of impact / lost days will be agreed by all parties to be the "CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS", which has already been included and accounted for in this Contract. It is this specific number, that the Contractor and Owner / Architect will use as baseline weather day work impacts for the Project calendar period of time. Any Contractor claims for lost days of work due to weather events as defined herein shall be totaled for the entire project and subtracted from the "CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS." It is understood that the impact day(s) claimed by the Contractor must meet the requirements set forth in Section 1.9.G above. Until the Contract Weather Impact Days that have met the specification

requirements have been used by deducting each qualifying event from the overall Project Total Days, the Owner / Architect will not consider time extensions for weather impacts. This Contract is a calendar day contract with a specific Notice to Proceed date and a Project Substantial Completion date. The Contractor will choose to use whatever schedule work calendar they want as far as work days per calendar week (e.g. 5 day work week, 6 day work week) when a Baseline Schedule is submitted for acceptance. Should the Contractor choose to utilize a work calendar other than a 5 day per week work schedule, per the CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS will have to be re-calculated to match the actual working conditions planned. Any planned schedule requiring a re-calculation of the CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS, require Owner acceptance.

Only after the cumulative total "CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS" are exceeded by qualifying days previously accepted, the Owner / Architect may grant time extensions to the Contract Substantial Completion Date for additional qualifying Weather Impact Days accepted. CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS will be contemporaneously kept by Owner/Architect during the project duration as they are provided by Contractor for acceptance. Project Impact Days accepted to date, will be memorialized in regularly scheduled project meetings by the Owner PM / Architect PM. Contract Time Extensions granted by Owner will be in accordance with Section 01310, Article 1.9 of Project Manual. CPM Schedule changes can only be made with Owner approval.

The Contractor shall provide monthly activity in the schedule reflecting the "CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS" that is included as a result of a calculation from the above schedule for the overall Contract Time from the date of NTP to the date of Substantial Completion. This activity shall have a description of "CONTRACTOR'S NON-WORK DAYS BANK OF TIME." This activity shall be logically tied to the Contractual Substantial Completion as described in Section 1.6 Article B (a through e) along with Section 1.6 Article B (i) – (xiii) and shall be a BANK of time that the Contractor shall draw from as "CONTRACT INCLUDED MONTHLY TOTALS OF NON-WORK DAYS" are approved by Owner / Architect. Any remaining Non-Work weather day that was not utilized shall be reflected in a monthly schedule revision per section 1.8 above and included in subsequent months "Non Work Days Bank of Time" When a NON-WORK Weather Event as defined above is accepted, the Contractor shall at the discretion of the Owner PM / Architect PM, submit a Time Impact Analysis as follows and reduce the allowance with the corresponding amount of NON-WORK delay time granted. Upon acceptance of a Non-Work Weather Day by Owner PM / Architect PM, the Contractor shall utilize the P3 function of "suspend and resume" within the dates function on the Critical Activity determined to be affected and if the accepted weather occurrences happen more than once on a Critical Activity, the Contractor will have to add an Activity as "Non-Work Weather Delay" with each predecessor(s) and successors being the "Critical Activity" so that the Critical Path runs through the Actualized Non-Weather time period and back onto the Critical Path of the Work Activity.

1.10 THREE WEEK LOOK-AHEAD SCHEDULE

- A. The Contractor shall provide a P6 three-week look ahead and one-week look behind detailed short-interval schedule for each building or area of the Work, at regularly scheduled progress meetings. The one-week look behind shall reflect actual work performed the previous week. Any other format lookahead schedule must be approved by Owner and Architect and shall match/tie all activities including revisions to the P6 approved lookahead schedule. The format shall be satisfactory to the Owner and Architect. All schedules shall be based upon the most current Architect / Owner accepted Monthly Schedule Update and will indicate the actual progress achieved the previous week as well as the detailed activities scheduled for the next three weeks and will show anticipated durations, start and completion dates for activities.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01310B

SECTION 01400 – QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for quality control services.
- B. Quality control services include inspections, tests and related actions, including reports performed by the Contractor, by independent agencies and by governing authorities. They do not include contract enforcement activities performed by the Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with contract document requirements.
- D. Requirements of this section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality control requirements for individual construction activities are specified in the sections that specify those activities. Requirements in those sections may also cover production of standard products.
 - 2. Specified inspections, tests and related actions do not limit the Contractor's quality control procedures that facilitate compliance with contract document requirements.
 - 3. Requirements for the Contractor to provide quality control services required by the Architect, Owner or Authorities Having Jurisdiction (AHJ) are not limited by provisions of this section.
- E. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 1 SECTION 01045 – CUTTING AND PATCHING specifies requirements for repair and restoration of construction disturbed by inspection and testing activities.

2. Division 1 SECTION 01300 – SUBMITTALS specifies requirements for development of a schedule of required tests and inspections.

1.3 RESPONSIBILITIES

- A. Owners Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, the Owner or Owners representatives/agents, project managers, QA/QC inspectors, coordinators etc. shall provide inspections, tests and other quality control services specified elsewhere in the contract documents and required by AHJ.
 1. Where individual sections specifically indicate that certain inspections, tests and other quality control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality control services. Costs for these services are included in the contract sum.
 2. Where individual sections specifically indicate that certain inspections, tests and other quality control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
 - a. Where the Owner has engaged a testing agency for testing and inspecting part of the work and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.
- B. Retesting: The Contractor is responsible for retesting where results of inspections, tests or other quality control services prove unsatisfactory and indicate non-compliance with contract document requirements, regardless of whether the original test was the Contractor's responsibility.
 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated non-compliance with contract document requirements.
- C. Associated Services: Cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
 1. Provide access to the work.
 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.

3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
 4. Provide facilities for storage and curing of test samples.
 5. Deliver samples to testing laboratories.
 6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 7. Provide security and protection of samples and test equipment at the project site.
- D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling and testing of materials and construction specified in individual sections shall cooperate with the Architect and the Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
1. The agency shall notify the Architect and the Contractor promptly of irregularities or deficiencies observed in the work during performance of its services.
 2. The agency is not authorized to release, revoke, alter or enlarge requirements of the contract documents or approve or accept any portion of the work.
 3. The agency shall not perform any duties of the Contractor.
- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities. The Contractor will also be responsible for standby charges from the Owner's laboratory if they are due to a scheduling error by the Contractor.

1.4 SUBMITTALS

- A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test or similar service to the Architect. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test or similar service through the Contractor.
1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
 - a. Date of issue
 - b. Project title and number
 - c. Name, address and telephone number of testing agency
 - d. Dates and locations of samples and tests or inspections
 - e. Names of individuals making the inspection or test
 - f. Designation of the work and test method
 - g. Identification of product and specification section
 - h. Complete inspection or test data
 - i. Test results and an interpretation of test results
 - j. Ambient conditions at the time of sample taking and testing
 - k. Comments or professional opinion on whether inspected or tested work complies with the contract document requirements
 - l. Name and signature of laboratory inspector
 - m. Recommendations on retesting

1.5 QUALITY ASSURANCE

- A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are prequalified as complying with the American Council of Independent Laboratories' *Recommended Requirements for Independent Laboratory Qualification* and that specialize in the types of inspections and tests to be performed.
 1. Each independent inspection and testing agency engaged on the project shall be authorized by AHJ to operate in the State of Nevada.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with the contract document requirements for Division 1 SECTION 01045 – CUTTING AND PATCHING
- B. Protect construction exposed by or for quality control service activities and protect repaired construction.
- C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01400

SECTION 01420 – REFERENCES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section includes abbreviations and acronyms, additional definitions, and reference standards used in the contract documents.
- B. Refer to Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project for further information.

1.2 ABBREVIATIONS AND ACRONYMS

- A. The following abbreviations and acronyms may be used in the contract documents. Refer uncertainties to the Architect for a decision before proceeding.

AA	Aluminium Association
AAADM	American Association of Automatic Door Manufacturers
AAMA	Architectural Aluminum Manufacturers' Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
AFPA	American Forest and Paper Association
AIA	American Institute of Architects
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AMCA	American Movement and Control Association
ANSI	American National Standards Institute
APA	The Engineered Wood Association (formerly the American Plywood Association)
ARI	Air Conditioning and Refrigeration Institute
ASA	American Standards Association
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWWA	American Water Works Association
AWS	American Welding Society
BHMA	Builders Hardware Manufacturers' Association
BIA	Brick Institute of America
CAL/OSHA	State of California Construction Safety Orders

CALTRANS	State of California, Business and Transportation Agency, Department of Transportation, <i>Standard Specifications</i>
CCR	California Code of Regulations
CDA	Copper Development Association
CISCA	Ceilings and Interior Systems Construction Association
CFFA	Chemical Fabrics and Film Association, Inc.
CFMG	Cabinet and Fixture Manufacturers Guild
CLFMI	Chain Link Fence Manufacturers' Institute
CPA	Composite Panel Association (formerly the National Particleboard Association)
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CPSC	United States Consumer Products Safety Commission
CS	Commercial Standard, United States Department of Commerce
CSA	Canadian Standards Association
DASMA	Door and Access Systems Manufacturers Association International
EIMA	EIFS Industry Members Association
EPA	Environmental Protection Agency
ESO	Electrical Safety Orders
FAA	Federal Aviation Administration, United States Department of Transportation
FCC	Federal Communications Commission
FGMA	Flat Glass Marketing Association (now the GANA)
FM	Factory Mutual System, Factory Mutual Engineering Corporation
FS	Federal Specification Unit
GA	Gypsum Association
GANA	Glass Association of North America (formerly the Flat Glass Marketing Association and Glass Tempering Association)
GRI	Geosynthetic Research Institute
GTA	Glass Tempering Association (now the GANA)
HMA	Hardwood Manufacturers Association
HPMA	Hardwood Plywood Manufacturers Association
HPVA	Hardwood Plywood and Veneer Association
HUD	United States Department of Housing and Urban Development
IEEE	Institute of Electrical and Electronic Engineers
IGCC	Insulating Glass Certification Council
ITS-WH	Intertek Testing Service - Warnock Hersey
LSGA`	Laminator's Safety Glass Association

MIA	Marble Institute of America or the Masonry Institute of America
MIL	Military Standardization Document, United States Department of Defense
MIW	Masonry Institute of Washington
ML/SFA	Metal Lath/Steel Framing Association
MM	"Materials Manual", State of California, Business and Transportation Agency, Department of Transportation
NAAMM	National Association of Architectural Metal Manufacturers
NBGQA	National Building Granite Quarries Association, Inc.
NBS	National Bureau of Standards (now the NIST)
NCMA	National Concrete Masonry Association
NEC	National Electrical Code
NEMA	National Electric Manufacturers' Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association (now the AFPA)
NFRC	National Fenestration Rating Council
NHLA	National Hardwood Lumber Association
NIST	National Institute of Standards and Technology, United States Department of Commerce (formerly the National Bureau of Standards)
NOFMA	National Oak Flooring Manufacturers Association
NPDES	National Pollutant Discharge Elimination System
NRCA	National Roofing Contractors Association
NSF	NSF International (formerly National Sanitary Foundation)
NTMA	National Terrazzo and Mosaic Association
NWWDA	National Wood Window and Door Association (now WDMA)
OSA	Office of the State Architect, State of California
OSHPD	Office of Statewide Health Planning and Development, State of California
PCI	Precast / Prestressed Concrete Institute
PS	Product Standard, United States Department of Commerce
RCW	Revised Code of Washington, State of Washington
RIS	Redwood Inspection Service
SDI	Steel Deck Institute or the Steel Door Institute
SFM	Office of State Fire Marshal, State of California
SIGMA	Sealed Insulated Glass Manufacturer's Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Society for Protective Coatings (formerly the Steel Structures Painting Council)
SWI	Steel Window Institute
TCA	Tile Council of America

UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USPS	United States Postal Service
USS	United States Standard
WAC	Washington Administrative Code, State of Washington
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association (formerly the National Wood Window and Door Association)
WIC	Woodwork Institute of California
WLPDIA	Western Lath Plaster /Drywall Industries Association (now the WWCCA)
WSDOT	Washington State Department of Transportation
WWCCA	Western Wall & Ceiling Contractors Association
WWPA	Woven Wire Products Association or Western Wood Products Association

- B. Additional abbreviations, used only on the drawings, are listed and defined thereon.

USE SECTION 1.03 ONLY IF THESE DEFINITIONS ARE NOT INCLUDED IN THE GENERAL CONDITIONS FOR THE SPECIFIC CONTRACT.

1.03 ADDITIONAL DEFINITIONS

- A. In addition to the terms defined in the General Conditions, the following terms are used in the contract documents and are defined as follows:

Accepted Equal	As accepted by the Architect as being of equivalent quality, utility and appearance.
Addenda	Written or graphic instruments issued by the Owner/Architect prior to the execution of the Contract which modify or interpret the bidding documents by additions, deletions, clarifications or corrections.
By Owner	Work on this project that will be performed by the Owner or its agents, at the Owner's cost.
By Others	Work on this project that is outside the Scope of Work to be performed by the Contractor under this Contract, but that will be performed by the Owner, other contractors or other means.
Consultant	A consultant to the Architect
Directed	Directed by the Architect
Furnish	Supply only; do not install
Indicated	As shown and/or noted on the drawings
Install	Install or apply only; do not furnish
Owner-Furnished,	The Owner will furnish at their cost and the Contractor
Contractor-Installed	shall install under their contract for this work.

Project Manual	The Project Manual consists of two volumes: Volume 1 includes the bidding and contract requirements and Specifications; and Volume 2 includes the details and schedules. One volume which includes the bidding and contract requirements and specifications and the details and schedules.
Provide	Furnish and install
Site	Geographical location of the project
Specified	As written in the specifications

1.4 REFERENCE STANDARDS

- A. Specified standards of the construction industry shall have the same force and effect on the performance of the work as if bound or copied directly into the contract documents. Such standards are made a part of the contract documents by reference.
- B. Each entity or person engaged in the work shall be familiar with the industry standards applicable to its construction activity.
- C. Where compliance with two (2) or more standards is specified and the standards establish different or conflicting requirements for minimum qualities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Architect for a decision before proceeding.
- D. Copies of applicable standards are not bound with the contract documents. Where copies are required for proper performance of the work, obtain and pay for authorized copies directly from publication source and maintain at the site during submittals, planning and performance of work until final acceptance by the Owner. Make such copies of standards available to the Owner and Architect for review upon request.
- E. For products or quality of installation specified by association, trade, military, federal or other reference standards, comply with requirements of the standard, except when more rigid requirements are specified in the contract documents or are required by applicable codes and/or public Authorities Having Jurisdiction (AHJ).
 - 1. Except as otherwise indicated or specified, where compliance with a reference standard is required, comply with the standard in effect as of the date established for the receipt of bids. Where a reference standard has been revised and reissued after the date established for the receipt of bids and before performance of the work affected, notify the Architect in writing and request a decision on how to proceed. The Architect may issue a contract modification or an Architect's Supplemental Instruction (ASI) for proceeding in accordance with the updated standard.

2. The contractual relationship of the parties to the Contract shall not be altered from the contract documents by mention or inference otherwise in a reference standard. The provisions of the bidding requirements; contract documents including, but not limited to all issued addendums; and the Contract shall void the general, but not technical, provisions of a reference standard in conflict therewith.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01420

SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Ventilation
 - 5. Telephone service
 - 6. Sanitary facilities, including drinking water
 - 7. Storm and sanitary sewer
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds
 - 2. Temporary roads and paving
 - 3. Dewatering facilities and drains
 - 4. Temporary enclosures
 - 5. Hoists and temporary elevator use
 - 6. Temporary project identification signs and bulletin boards
 - 7. Waste disposal services
 - 8. Rodent and pest control

9. Construction aids and miscellaneous services and facilities
- D. Security and protection facilities include, but are not limited to, the following:
1. Temporary fire protection
 2. Barricades, warning signs, and lights
 3. Sidewalk bridge or enclosure fence for the site
 4. Environmental protection

1.3 SUBMITTALS

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within fifteen (15) days of the date established for commencement of the work, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
1. Building code requirements
 2. Health and safety regulations
 3. Utility company regulations
 4. Police, Fire Department, and rescue squad rules
 5. Environmental protection regulations
- B. Standards: Comply with NFPA "Standard for Safeguarding Construction, Alterations, and Demolition Operations"; ANSI A10 Series standards for "Safety Requirements for Construction and Demolition"; and NECA Electrical Design Library "Temporary Electrical Facilities".
1. Electrical Service: Comply with NEMA, NECA, UL Standards and regulations for temporary electric service. Install service in compliance with NFPA "National Electric Code".
- C. Permit and Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits, including all design and permit cost.

1.5 PROJECT CONDITIONS

- A. Temporary Facilities: Field Offices, utility, and support infrastructure shall be installed no later than 30 days from Notice To Proceed.
- B. Temporary Facilities and Utility: The Contractor is responsible for all design, permit, permit fee, installation, and use for all temporary facility, utility, power, gas, water, data, etc. used through the course of construction.
- C. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner change over from use of temporary service to use of permanent service.
- D. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- E. Project Identification and Signs: Provide within 30 days of NTP, and maintain for the life of the project, a project identification sign of the design, text and colors designated by the Architect, locate sign as approved by the Owner. Signs other than the specified sign will not be permitted, unless otherwise approved in advance by the Owner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section “Rough Carpentry.”
 - 1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 - 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thickness indicated.

3. For fences and vision barriers, provide minimum 3/8-inch (9.5-mm-) thick exterior plywood.
 4. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch - (16-mm-) thick exterior plywood.
- C. Gypsum Wallboard: Provide gypsum wallboard on interior walls of temporary offices.
- D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral - surfaced roll roofing on roofs on job-built temporary offices, shops, and sheds.
- E. Paint: Comply with requirements of Division 9 Section "Painting."
1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
 3. For interior walls of temporary offices, provide 2 coats interior latex-flat wall paint.
- F. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- G. Water: Provide potable water approved by local health authorities.
- H. Open-Mesh Fencing: Provide 1.120-inch- (3-mm-) thick , galvanized 2-inch (50-mm-) chain-link fabric fencing 6 feet (2 m) high and galvanized steel pip posts, 1-1/2 inches (38 mm) I.D. for line posts and 2-1/2 inches (64 mm) I.D. for corner posts.

2.2 EQUIPMENT

- A. General: Provide new equipment. If acceptable to the Architect, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch (19-mm-) heavy duty, abrasion-resistant, flexible rubber hoses 100 feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120- Volt plugs into higher voltage outlets.

Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
- G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading. A separate temporary office with its own utilities is to be provided for School District personnel.
- H. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for design, layout, and installation of temporary facilities. Locate facilities where they will serve the project adequately and result in minimum interference with performance of the work. Relocate and modify facilities as required. All temporary facility design, permit, permit fees, and use fees are the responsibility of the contractor.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer

needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the Owner's easement cannot be used for that purpose.
 - 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect. Neither the Owner nor Architect will accept cost or use charges as a basis of claims for Change Orders.
- B. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.
 - 1. Sterilization: Sterilize temporary water piping prior to use.
- C. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.
 - 1. Install electric power service underground, except where overhead service must be used.
 - 2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
- D. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching.

Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- E. Temporary Heat: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy
- F. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel-oil heaters with individual space thermostatic control.
1. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
- G. Temporary Data/Telephones: Provide temporary service throughout the construction period for all personnel engaged in construction activities. Install a separate line for each temporary office and first-aid station.
1. Provide one data line including WIFI Access for computer access to the Owner's computer network in Owner's Project Representative Field Office and pay costs for installation maintenance service and removal.
- H. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the project's needs.
1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.
- I. Drinking-Water Facilities: Provide containerized, tap-dispenser, bottled-water drinking-water units, including paper supply.
1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degree F (7 to 13 degree C).

- J. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 2. Connect temporary sewers to the municipal system, as directed by sewer department officials.
 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- K. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.
1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Provide incombustible construction for offices, shops, and sheds located within the construction area or within 30 feet (9 m) of building lines. Comply with requirements of NFPA 241.
- C. Field Offices: Provide insulated, weather tight temporary offices of sufficient size to accommodate required School District, Architect and Construction Coordinator office personnel at the project site. Keep the office clean and orderly for use of small progress meetings. Size, Furnish and equip offices as follow:
1. Provide two distinctly secured office spaces (minimum 120sf each) each with 6x6 L desk and task chair, 4' x 8' plan table, plan rack, one (1) 6 shelf bookcase, tack board and dry erase board.
 2. Provide 1 distinctly secured meeting space with conference table and chairs for minimum 12 personnel. Provide wall mounted 65" minimum size smart monitor with power and data as needed. Monitor to be turned over to owner at completion of project.

3. Equip with a water cooler and private toilet complete with water closet, lavatory, and medicine cabinet unit with a mirror.
 4. Contractor to pay for all power, phone, data, fax, installations, set up, take down and monthly usage charges.
 5. Sani-Hut to be placed by trailer.
- D. Storage and Fabrication Sheds: Install storage and fabrication sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on-site.
- E. Temporary Paving: Construct and maintain temporary roads and paving to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas, and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the Architect.
1. Paving: Comply with Division 2 Section "Hot-Mixed Asphalt Paving" for construction and maintenance of temporary paving.
 2. Coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of base and finish courses of permanent paving.
 3. Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.
 4. Delay installation of the final course of permanent asphalt concrete paving until immediately before Substantial Completion. Coordinate with weather conditions to avoid unsatisfactory results.
 5. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.
- F. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. (2.3 sq. m) or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 4. Where temporary wood or plywood enclosure exceeds 100 sq. ft. (9.2 sq. m) in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- H. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- I. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when work is being performed.
- J. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
- K. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- L. Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to

permanent facilities until Substantial Completion, or longer, as requested by the Architect.

- B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 “Standard for Portable Fire Extinguishers” and NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations.”
 - 1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one (1) extinguisher on each floor at or near each usable stairwell.
 - 2. Store combustible materials in containers in fire-safe locations.
 - 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 - 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- C. Permanent Fire Protection: At the earliest feasible date in each area of the project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
- D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- E. Enclosure Fence: Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.
 - 1. Provide open-mesh, chainlink fencing with post set in Masonry blocks.
- F. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- G. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the Architect request that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.
 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair

growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.

3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housing.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 01500

SECTION 01600 – MATERIALS AND EQUIPMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements governing the Contractor's selection of products for use in the project.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 1 SECTION 01420 - REFERENCES specifies the applicability of industry standards to products specified.
 - 2. Division 1 SECTION 01300 – SUBMITTALS specifies requirements for submittal of the Contractor's construction schedule and the submittal schedule.
 - 3. Division 1 SECTION 01631 – SUBSTITUTIONS specifies administrative procedures for handling requests for substitutions made after award of the contract.

1.3 DEFINITIONS

- A. Definitions used in this section are not intended to change the meaning of other terms used in the contract documents such as *Specialties*, *Systems*, *Structure*, *Finishes*, *Accessories* and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
 - 1. *Products* are items purchased for incorporation in the work, whether purchased for the project or taken from previously purchased stock. The term *Product* includes the terms *Material*, *Equipment*, *System* and terms of similar intent.
 - a. *Named Products* are items identified by the Manufacturer's product name, including make and model number or other designation, shown or listed in the Manufacturer's published product literature that is current as of the date of the contract documents.
 - b. *Foreign Products* as distinguished from domestic products are items substantially manufactured fifty percent [(50%) or more of value]

outside the United States and its possessions. Products produced or supplied by entities substantially owned [more than fifty percent (50%)] by persons who are not citizens of, nor living within, the United States and its possessions.

2. *Materials* are products substantially shaped, cut worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the work.
3. *Equipment* is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

- A. Product List: A list of products required is included at the end of this section. Prepare a schedule in tabular form showing each product listed. Include the Manufacturer's name and proprietary product names for each item listed.
1. Coordinate product list with the Contractor's construction schedule and the schedule of submittals.
 2. Form: Prepare product list with information on each item tabulated under the following column headings:
 - a. Related Specification Section Number
 - b. Generic name used in the contract documents
 - c. Proprietary Name, Model Number and similar designations
 - d. Manufacturer's Name and Address
 - e. Supplier's Name and Address
 - f. Installer's Name and Address
 - g. Projected Delivery Date or time span of delivery period
 3. Initial Submittal: Within thirty (30) days after date of commencement of the work, submit three (3) copies of an initial product list. Provide a written explanation for omissions of data and for known variations from the contract requirements.
 - a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the contract period.
 4. Completed List: Within sixty (60) days after date of commencement of work, submit three (3) copies of the completed product list. Provide a written explanation for omissions of data and for known variations from the contract requirements.
 5. Architect's Action: The Architect will respond in writing to Contractor within two (2) weeks of receipt of the completed product list. No response

within this period constitutes no objection to listed manufacturers or products but does not constitute a waiver of the requirement that products comply with the contract documents. The Architect's response will include a list of unacceptable product selections containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the Architect to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability or compatibility. When a determination has been made select products from sources producing products that possess these qualities to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two (2) or more products for use on the project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. Each Prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate contractors.
 2. If a dispute arises between Prime Contractors over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the work:
1. No available domestic product complies with the contract documents.
 2. Domestic products that comply with the contract documents are available only at prices or terms substantially higher than foreign products that comply with the contract documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturers or producer's nameplate or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on concealed surfaces, or where required for observation after installation, on accessible surfaces that are not conspicuous.
2. Equipment Nameplates: Provide a permanent nameplate on each item of service connected or power operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
 - a. Name of Product and Manufacturer
 - b. Model and Serial Number
 - c. Capacity
 - d. Speed
 - e. Ratings

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle products according to the Manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
 1. Schedule delivery to minimize long term storage at the site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged or sensitive to deterioration, theft and other losses.
 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
 4. Inspect products upon delivery to ensure compliance with the contract documents and to ensure that products are undamaged and properly protected.
 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 6. Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.
 7. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 – PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the contract documents that are undamaged and, unless otherwise indicated, new at the time of installation.
1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The contract documents and governing regulations govern product selection. Procedures governing product selection include the following:
1. Proprietary Specification Requirements: Where specifications name only a single product or manufacturer, provide the product indicated. No substitutions will be permitted.
 2. Semi Proprietary Specification Requirements: Where specifications name two (2) or more products or manufacturers, provide one (1) of the products indicated. No substitutions will be permitted.
 - a. Where specifications specify products or manufactures by name, accompanied by the term “or equal” or “or approved equal.” Comply with the contract document provisions concerning *Substitutions* to obtain approval for use of an unnamed product.
 3. Non-Proprietary Specifications: When specifications list products or manufacturers that are available and may be incorporated in the work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with contract requirements. Comply with contract document provisions concerning *Substitutions* to obtain approval for use of an unnamed product.
 4. Descriptive Specification Requirements: Where specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with contract requirements.
 5. Performance Specification Requirements: Where specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.

- a. Manufacturer's recommendations may be contained in published product literature or by the Manufacturer's Certification of Performance.
6. Compliance with Standards, Codes, and Regulations: Where specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
 7. Visual Matching: Where specifications require matching an established sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.
 - a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the contract documents concerning *Substitutions* for selection of a matching product in another product category.
 8. Visual Selection: Where specified product requirements include the phrase "...as selected from Manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and Manufacturer that comply with other specified requirements. The Architect will select the color, pattern and texture from the product line selected.
 9. Allowances: Refer to individual specification sections and *Allowance* provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

PART 3 – EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with Manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work.
 1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

SECTION 01631 - SUBSTITUTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 1 SECTION 01420 - REFERENCES specifies the applicability of industry standards to products specified.
 - 2. Division 1 SECTION 01300 - SUBMITTALS specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.

1.3 DEFINITIONS

- A. Definitions in this article do not change or modify the meaning of other terms used in the contract documents.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction required by the contract documents proposed by the Contractor after award of the Contract are considered to be requests for substitutions. The following are not considered to be requests for substitutions:
 - 1. Substitutions requested during the bidding period, and accepted by addendum prior to award of the Contract, are included in the contract documents and are not subject to requirements specified in this section for substitutions.
 - 2. Revisions to the Contract Documents requested by the Owner or Architect.
 - 3. Specified options of products and construction methods included in the contract documents.
 - 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: The Architect will consider requests for substitution if received within sixty (60) days after commencement of the work. Requests received more than sixty (60) days after commencement of the work may be considered or rejected at the discretion of the Architect.
1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form and according to procedures required for change-order proposals and include the Product Evaluation Questionnaire (CP-F116) found within these bid documents.
 2. Identify the product or the fabrication or installation method to be replaced in each request. Include related specification section and drawing numbers.
 3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction performed by the Owner and separate contractors, that will be necessary to accommodate the proposed substitution.
 - b. A detailed comparison of significant qualities of the proposed substitution with those of the work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
 - c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
 - g. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.

- h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
4. Architect's Action: If necessary, the Architect will request additional information or documentation for evaluation within one (1) week of receipt of a request for substitution. The Architect will notify the Contractor of acceptance or rejection of the substitution within three (3) weeks of receipt of the request, or two (2) weeks of receipt of additional information or documentation, whichever is later. Acceptance will be in the form of a change order.
- a. Use the product specified if the Architect cannot make a decision on the use of a proposed substitute within the time allocated.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Architect will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Architect. If the following conditions are not satisfied, the Architect will return the requests without action except to record noncompliance with these requirements.
1. Extensive revisions to the contract documents are not required.
 2. Proposed changes are in keeping with the general intent of the contract documents.
 3. The request is timely, fully documented, and properly submitted.
 4. The specified product or method of construction cannot be provided within the Contract Time. The Architect will not consider the request if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
 5. The request is directly related to an "or-equal" clause or similar language in the contract documents.
 6. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner, and similar considerations.

7. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the Contractor certifies that the substitution will overcome the incompatibility.
 9. The specified product or method of construction cannot be coordinated with other materials and where the Contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the contract documents and where the Contractor certifies that the proposed substitution provides the required warranty.
- B. The Contractor's submittal and the Architect's acceptance of shop drawings, product data, or samples for construction activities not complying with the contract documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01631

PRODUCT EVALUATION QUESTIONNAIRE

When proposing to substitute products for those specified or proposing a product to meet a specified performance standard, please furnish the following information to assist the Owner and Architect in evaluating the proposed product.

Bid/Quote #: _____

Project: _____

Specification Section: _____

Division: _____

Article #: _____

Name of Product: _____

Manufacturer's Name and Address: _____

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1. Attach manufacturer's complete technical data and all information relating to limitations of the product information requiring further testing be deemed necessary by the Architect, the cost of the prescribed test shall be borne by the Contractor. Contractor shall send product samples upon request.
 2. Attach a list of projects where comparable use has been made of this product. List the name and location of the project, name of Owner or Architect, Engineer, General Contractor, and Subcontractor (if applicable), and the year installed.
 3. List any problems encountered with this product on projects where it has been used. What corrective measures were required?
 4. Provide a detailed comparison of the proposed substitute product with that of the specified product. Differences are to be highlighted and called out.
 5. Submit a detailed specification, conforming to the format of the technical specifications herein contained, tailored to this project for installation of this product.
 6. Will the services of an expert field representative be furnished to supervise the installation of this product?

7. Describe maintenance requirements for this product and availability of expert repair service, if needed.
8. Will the proposed substitution result in a change in Contract price or time of completion? If so, submit itemization of price change and explain effect on time of completion.
9. Will the use of the proposed product necessitate a change in the contract drawings or specifications?
10. Will the use of this product necessitate the payment of any license fees or royalties?
11. Furnish information establishing financial responsibility of the manufacturer. (Number of years in business, volume of business, Dunn & Bradstreet rating, etc.)
12. The Contractor certifies that he or she understands the conditions of use to which this product will be put and he/she warrants this product as stipulated in the General Conditions.

Name of Contractor

Signature of Officer, Owner or Partner

Date

SECTION 01650 - CONTRACTOR MOVING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and supervisory requirements necessary for coordinating construction contractor moving requirements including, but not necessarily limited to, the following:

1. General Project Coordination Procedures
2. Conservation
3. Coordination Drawings
4. Administrative and Supervisory Personnel
5. Cleaning and Protection

- B. Related Sections: The following sections contain requirements that relate to this section:

1. Division 1 SECTION 01200 – PROJECT MEETINGS for progress meetings and coordination meetings.
2. Division 1 SECTION 01300 - SUBMITTALS for preparing and submitting the Contractor's construction schedule.

1.3 OWNER RESPONSIBILITIES

- A. The Owner shall complete all of the preparatory work required for the moving of furnishings, equipment, files, etc. as listed below:

1. Supply boxes, tape and box labels.
2. All personal property is the responsibility of WCSD.
3. All WCSD property that will fit in the WCSD provided boxes are to be boxed.

4. All file cabinets, desks, shelves and closets are to be emptied.
5. All loose trash shall be picked up and disposed of.
6. Inform school of time frames and schedules.
7. Coordinate staging area for temporary storage containers with site, as required.
8. All items will be ready to move based upon the Contractor's approved schedule.

1.4 CONTRACTOR RESPONSIBILITIES

- A. The Contractor shall be responsible for moving all furnishings, equipment, files, etc. as directed by the Owner and listed above and all of the items as listed:
 1. Hire movers and manage all aspects of the move.
 2. Supply all required moving tools, dollies, hand trucks, carts, etc.
 3. Supply steel lockable temporary storage containers, if required.
 4. Photograph the space prior to moving out.
 5. Replace all items in space as indicated on photographs.
 6. Repair or replace any WCSD owned property damaged by the Contractor.
 7. Disconnect and reconnect, as needed, any computer, audio, copy and print equipment, etc.

1.5 COORDINATION

- A. Coordinate the construction operations included in various sections of these specifications to assure efficient and orderly installation of each part of the work. Coordinate the construction operations included under different sections that depend on each other for proper installation, connection and operation.
 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

3. Make provisions to accommodate items scheduled for later installation.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination, include such items as required such as, notices, reports and attendance at meetings.
1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
1. Preparation of schedules
 2. Installation and removal of temporary facilities
 3. Delivery and processing of submittals
 4. Progress meetings
 5. Project closeout activities
- D. Conservation: Coordinate moving operations to assure that operations are carried out with consideration given to conservation of energy, water and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the work.
- E. Intent of Drawings:
1. The work of the Contractor and any applicable sub-contractors shall conform to the intent of the architectural and moving coordination work as reviewed by the Architect. Drawings are partly diagrammatic and do not intend to show in detail all features of the work. The Contractor shall carefully review the work to be performed by other trades, compare related drawings and shall thoroughly understand the moving responsibilities affecting their work.
 2. All changes required in the work caused by failure to do so shall be at no expense to the Owner.
- F. Moving Coordination Drawings:

1. Floor Plans and Wall Elevations shall include dimensioned sizes and locations for all door and window openings.

1.6 SUBMITTALS

- A. Coordination Drawings: Prepare moving coordination drawings where careful coordination is needed for installation of products, materials and equipment to be relocated and stored.
 1. Show the relationship of components shown on separate Shop Drawings.
 2. Indicate required installation sequences. Acknowledge the Contractor's responsibilities in written fashion.
 3. Comply with requirements contained in Division 1 SECTION 01300 - SUBMITTALS.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the mover of each component to inspect the conditions under which the work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 CLEANING AND PROTECTION

- A. Clean and protect material and equipment during handling and installation. Apply protective covering, where required, to assure protection from damage or deterioration at the time of Substantial Completion.
- B. Clean and provide maintenance on moved and stored work as frequently as necessary through the remainder of the construction period.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the relocated work completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 1. Excessive static or dynamic loading

2. Excessive internal or external pressures
3. Excessively high or low temperatures
4. Thermal shock
5. Excessively high or low humidity
6. Air contamination or pollution
7. Water or ice
8. Solvents
9. Chemicals
10. Light
11. Radiation
12. Puncture
13. Abrasion
14. Heavy traffic
15. Soiling, staining and corrosion
16. Bacteria
17. Rodent and insect infestation
18. Combustion
19. Electrical current
20. High speed operation
21. Improper lubrication
22. Unusual wear or other misuse
23. Contact between incompatible materials
24. Destructive testing

25. Misalignment
26. Excessive weathering
27. Unprotected storage
28. Improper shipping or handling
29. Theft
30. Vandalism

END OF SECTION 01650

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all bid documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for Contract closeout including, but not limited to, the following:

1. Inspection Procedures
2. Submittal of Project Record Document
3. Submittal of Operation and Maintenance Manual
4. Submittal of Warranties
5. Final Cleaning
6. Submittal of Regulated Systems [ACBM (Asbestos Containing Building Materials) & Lead] Closeout Documents
7. Submittal of any Final Prevailing Wage Reports

- B. Closeout requirements for specific construction activities are included in the appropriate sections in Divisions 2 through 16.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show one hundred percent (100%) completion for the portion of the work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the contract sum.

- b. If one hundred percent (100%) completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the work is not complete.
 - c. Provide a list of all warranties, provide warranty duration, complete contract information of firm, and name of individual who will be performing work – post one (1) year.
 2. Advise the Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 4. Obtain and submit releases enabling the Owner unrestricted use of the work and access to services and utilities.
 5. Include occupancy permits, operating certificates, and similar releases.
 6. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.
 7. Submit all required training meeting minutes and video recordings of all trainings.
 8. Deliver tools, spare parts, extra stock, and similar items.
 9. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 10. Complete startup testing of systems and videoed training instruction of/for the Owner's Operation and Maintenance personnel.
 11. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 12. Complete final clean-up requirements, including touch up painting.
 13. Touch-up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
 1. The Architect will repeat inspection when requested and assured that the work is substantially complete.

2. Results of the completed inspection will form the basis of requirements for final acceptance.
3. The cost for any Architectural services for reinspection is the Contractor's sole responsibility.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the WCSD's, Architect's & Engineer's final inspection lists of items to be completed or corrected, endorsed, and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
 4. Submit consent of surety to final payment.
 5. Submit a final liquidated damages settlement statement.
 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 7. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the work.
- B. Reinspection Procedure: The Architect will reinspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.
1. Upon completion of reinspection, the Architect will prepare a Certificate of Final Acceptance. If the work is incomplete, the Architect will advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 2. If necessary, reinspection will be repeated.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire resistant location. Provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set black line white prints of Contract Drawings and Shop Drawings or continuous live electronic as built drawings with appropriate mark ups. Mark the set to show the actual installation where the installation varies from the work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. At the conclusion of the project, this record set of prints shall be submitted to the Architect for his/her review and comment. If the record set of prints is found to be complete and accurate, the prints shall be returned to the Contractor for submittal to the Owner with other closeout documents.

Record drawings must be reviewed and approved prior to each pay request by the Owner's representative. The drawings should reflect the work that has been accomplished during the time period of the pay request. Lack of record drawings approval at the time of submittal of a pay request will result in a potential delay in the processing of the pay request.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the work.
 2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
 3. Note related change order numbers where applicable.
 4. Organize record drawing sheets into manageable sets. Bind sets with durable paper cover sheets; print suitable titles, dates and other identification on the cover of each set.
 5. Provide record drawings using electronic media, Auto Cad compatible. Original media will be provided for Contractor to make required record drawing notations.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual, one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.

Record specifications must be reviewed and approved prior to each pay request by the Owner's representative. The specifications should reflect the work that has been accomplished during the time period of the pay request. Lack of record specification approval at the time of submittal of a pay request will result in a potential delay in the processing of the pay request.

1. Mark these documents to show substantial variations in actual work performed in comparison with the text of the specifications and modifications.
 2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 3. Note related record drawing information and product data.
 4. Upon completion of the work, submit an electronic record specifications to the Architect for the Owner's records.
- D. Record Product Data: Maintain one (1) copy of each Product Data submittal. Note related Change Orders and markup of record drawings and specifications.
1. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
 2. Give particular attention to concealed products and portions of the work that cannot otherwise be readily discerned later by direct observation.
 3. Upon completion of markup, submit complete set of record Product Data to the Architect for the Owner's records.
- E. Record Sample Submitted: Immediately prior to Substantial Completion, the Contractor shall meet with the Architect and the Owner's personnel at the project site to determine which samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's sample storage area.
- F. Miscellaneous Record Submittals: Refer to other specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or electronic file, ready for continued use and reference. Submit to the Architect for the Owner's records.

G. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind 2 copies (1 hard copy / 1 electronic) properly indexed data in individual, heavy duty, 2-inch, 3-ring, vinyl covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

1. Emergency instructions
2. Spare parts list
3. Copies of warranties
4. Wiring diagrams
5. Recommended turn around cycles
6. Inspection procedures
7. Shop Drawings and Product Data
8. Fixture lamping schedule
9. Any other applicable information

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operation and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Film Document each training and demonstration. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:

1. Maintenance manuals
2. Record documents
3. Spare parts and materials
4. Tools
5. Lubricants

6. Fuels
 7. Identification systems
 8. Control sequences
 9. Hazards
 10. Cleaning
 11. Warranties and bonds
 12. Maintenance agreements and similar continuing commitments
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Start-up
 2. Shut down
 3. Emergency operations
 4. Noise and vibration adjustments
 5. Safety procedures
 6. Economy and efficiency adjustments
 7. Effective energy utilization

END OF SECTION 01700

SECTION 01710 - FINAL CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including all contract documents and addendums associated with this project shall apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for final cleaning at Substantial Completion.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 1 SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS specifies general cleanup and waste removal requirements.
 - 2. Division 1 SECTION 1700 – CONTRACT CLOSEOUT specifies general contract closeout requirements.
 - 3. Special cleaning requirements for specific construction elements are included in appropriate sections of Divisions 2 through 16.
- C. Multiple Prime Contracts: Each Prime Contractor is responsible for final cleaning their own work. The Contractor for General Construction is responsible for coordinating final cleaning of an area or piece of equipment where more than one (1) Prime Contractor is involved.
- D. Environmental Requirements: Conduct cleaning and waste disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and antipollution regulations.
 - 1. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
 - 2. Burning or burying of debris, rubbish, or other waste material on the premises is not permitted.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final-cleaning operations to all work spaces and any adjacent spaces affected by the work performed. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.
 1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
 2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 3. Remove petrochemical spills, stains, and other foreign deposits.
 4. Remove tools, construction equipment, machinery, and surplus material from the site.
 5. Remove snow and ice to provide safe access to the building.
 6. Clean exposed exterior and interior hard surfaced finishes to a dirt free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition. Wax any required flooring to the District standard.
 7. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 8. Broom clean concrete floors in unoccupied spaces.
 9. Vacuum clean carpet and similar soft surfaces, removing debris and excess nap. Shampoo, if required.

10. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 11. Remove labels that are not permanent labels.
 12. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 13. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 14. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 15. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 16. Clean ducts, blowers, and coils if units were operated without filters during construction.
 17. Clean food-service equipment to a sanitary condition, ready and acceptable for its intended use.
 18. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs and defective and noisy starters in fluorescent and mercury vapor fixtures.
 19. Leave the Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests. Comply with regulations of local authorities. This section is only applicable for a new facility or an addition to an existing facility.
- D. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
- E. Compliances: Comply with regulations of Authorities Having Jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile,

harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION 01710

SECTION 01 9113 – GENERAL COMMISSIONING REQUIREMENTS

PART 1 – GENERAL

1.1 RELATED WORK

- A. All other sections in Division 21, 22, and 23.
- B. Specification Section 220800 – “General Commissioning Requirements”
- C. Specification Section 260800 – “Electrical Systems Commissioning
- D. Specification Section 230800 – “Mechanical Systems Commissioning”

1.2 RELATED DOCUMENTS

- A. Owners Project Requirements (OPR)
- B. Basis of Design (BOD)

1.3 COMMISSIONING AGENT OF RECORD

- A. Company: The Commissioning Agent contracted directly with Washoe County School district will be Utah New Vision Construction LLC. The contractors or any of their sub-contractors are not responsible to hire the commissioning agent for this project.
- B. Project Manager: Brooke Locklin shall be the Project Manager throughout the entire commissioning process.

1.4 DESCRIPTION

- A. The purpose of the commissioning process is to provide the Owner/operator of the facility with a high level of assurance that the mechanical, Plumbing and associated electrical Systems have been installed in the prescribed manner, and operate within the performance guidelines set in the design intent. The Commissioning Authority shall provide the Owner with an unbiased, objective view of the systems installation, operation, and performance. This process is not to take away or reduce the responsibility of the design professionals or installing contractors to provide a finished product. Commissioning is intended to enhance the quality of system start-up and aid in the orderly transfer of systems to beneficial use by the owner. The Commissioning Authority will be a member of the construction team, cooperating and coordinating all commissioning activities with the design professionals, construction manager, contractors, subcontractors, manufacturers and equipment suppliers.

1.5 SCOPE

- A. The General systems commissioning shall include a demonstration by the Contractor with the assistance of the Commissioning Authority (CxA) of each piece of equipment to comply with the Construction Documents (CD). The commissioning process shall demonstrate that each piece of equipment is performing and operating to the CDs.
- B. Participants in General Systems Commissioning: Commissioning systems shall be conducted with representatives from the following entities as needed.
 - 1. General Contractor
 - 2. Mechanical Contractor
 - 3. BMS or ATC Contractor
 - 4. Factory Authorized Service Personnel for all major pieces of equipment. This is not a sales representative but an authorized technician certified to work on the piece of equipment.
 - 5. Water Treatment Contractor
 - 6. Electrical Contractor
 - 7. Test and Balance Contractor
 - 8. Owner's Representative
 - 9. Electrical Engineer
 - 10. Mechanical Engineer
 - 11. Architectural Team
- C. Kickoff, Coordination and MEP Meetings
 - 1. The CxA will attend the contractors sub meeting. Contractor shall schedule time at meetings for review of Issues log, upcoming installations, schedule, submittals, and commissioning plan review.
 - 2. Other meetings such as the Commissioning Kick-Off Meeting, Update Meetings, and other Coordination Meetings shall be attended by those participants as indicated in the "Participants in General Systems Commissioning"

D. Submittal Reviews and Meetings

1. The CxA shall review each submittal in Division 22, 23, 26, and provide comment and review to the design team prior to return of submittal to contractor.
2. Submittal reviews are NOT an approval but a courtesy review to help validate products submitted is in general compliance with the construction documents.

E. Issues Log

1. An issues log shall be kept by the CxA. These issues will identify issues, defects, improper installations, and deficiencies of the installation and design. The issues log will have the issue, a potential resolution, the sub-contractor responsible, the date of the issue found and the CxA who found the issue.
2. The issues log shall be addressed weekly by the contractor; any unresolved items shall be included in the contractor punch list for completion.
3. When an item is completed and addressed by the contractor or sub-contractor responsible, the party responsible shall sign off and deliver to the CxA for review. The sign off shall include how the contractor addressed the issue and the date in which the contractor addressed the issue

F. Construction Checklist, Pre and Final Functional Testing Checklist, and Startup Checklist

1. The CxA shall develop construction checklist that will be executed by the CxA. The contractors and sub-contractors shall review the checklist for compliance with the ability of their individual systems. If the contractor or sub-contractors do not provide comments to the CxA then the CxA shall assume their procedures shall not harm nor deteriorate the individual systems. If a problem occurs during testing that causes a piece of equipment of system to malfunction, damage, or any other failure and the contractor or sub-contractor has not in writing opposed such test then the contractor or sub-contractor shall be liable for any damages and delays.
2. The contractor shall fill out checklist called Contractor Readiness checklist. These shall be delivered in the commissioning plan and shall be used to show the CxA that the contractor is ready for Final Function Testing.

3. Startup Sheets shall be delivered to the CxA. The contractor responsible for the piece of equipment is also responsible for delivering those startup sheets to the CxA.
4. Functional Testing shall be attended by the members as defined in "Participants in General Systems Commissioning."
5. Should any of the aforementioned requirements not be met on the date that the commissioning process commences and or if deficiencies are observed during the commissioning process the commissioning will be considered a failure and the deficiencies will be required to be remedied and then addressed in writing prior to requesting a date for re-commissioning. There will be no additional costs allowed to the Contractor for re-commissioning sessions as may be required to address issues that are found to be in non-compliance with the requirements of this specification.

G. Current Facility Requirements Document

1. The CxA shall prepare a document that contains the following pieces of information. This document shall include the following:
 - a. a sequence of operations for the building
 - b. the building occupancy schedule
 - c. equipment run-time schedules
 - d. set points for all General equipment
 - e. set lighting levels throughout the building
 - f. minimum outside air requirements
 - g. any changes in schedules or set points for different seasons, days of the week, and times of day
 - h. a systems narrative describing the mechanical systems and equipment
 - i. a preventative maintenance plan for building equipment described in the systems narrative
2. The document shall be delivered to the Owner by the CxA in a Microsoft Word (.doc or .docx) format (Document for WCSD at end of project that UNVC will deliver.)

H. Systems Manual

1. The CxA shall prepare a document that contains the following pieces of information. This document shall include the following:
 - a. As-built sequence of operation
 - b. Original set points for all systems commissioned

- c. Recommended schedule for sensor recalibration
- d. Equipment operations and maintenance manuals
- e. Equipment preventive maintenance schedules
- f. Confirmation of completed training for the owner and occupants
(Document for WCSD at end of project that UNVC will deliver.)

1.6 SYSTEMS TO BE COMMISSIONED

A. This list is not intended to be exhaustive. All division 22, 23, and 26 and any equipment, piping, balancing, controls, etc. that are defined in the entire cumulative sections of division 22, 23, and 26 will go through commissioning. The below list is a representative sample of items that are typically commissioned.

1. All electrical systems including power (emergency and normal), lighting controls, fire alarm, security, and audio/visual.
2. All building HVAC systems and controls
3. All building plumbing systems

1.7 COORDINATION

A. The Commissioning authority shall receive a copy of all construction documents, addenda, change orders, and appropriate approved submittals and shop drawings directly from the Contractor. We only use this documentation for our review, but not as a method of approval.

B. The Commissioning Authority shall disseminate written information and documents to all responsible parties relative to the nature and extent of the communication.

C. The Commissioning Authority is primarily responsible to the Owner, and as such, shall regularly appraise the Architect, the Contractor, and the Owner of progress, pending problems and/or disputes, and shall provide regular status reports on progress with each system. Any potential change in the contractual and/or financial obligations of the owner (credits, change orders, schedule changes, etc.) shall be identified and quantified as soon as possible.

D. The Commissioning Authority shall coordinate the schedule of commissioning activities with the construction schedule. It is possible that some procedures will be completed before the entire Mechanical system is completed.

1.8 SCHEDULE

- A. Final Commissioning shall not commence on the individual pieces of equipment, Test and Balance, Controls, and other mechanical systems until the Contractor Readiness Forms are delivered to the CxA.
- B. Pre-Functional Commissioning shall commence during the progress of the project. Contractor Readiness checklist do not typically have to be filled out for the CxA to check out these systems. However, the contractor is responsible to inform and schedule the CxA to do Pre-Functional Checks.
- C. Contractor schedules and scheduling is the responsibility of the Contractor. The Commissioning Authority shall provide commissioning scheduling information to the contractor for review and planning activities.
- D. Individual dates are defined in the individual commissioning specifications for each spec section as defined in the other commissioning specifications.

1.9 MISCELLANEOUS CONTRACTOR RESPONSIBILITIES

- A. Means and Methods: The contractor is solely responsible for the means and methods of construction. While the CxA shall assist in construction the final responsibility rest solely on the General and Installation Contractor.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 COMMISSIONING KICKOFF MEETING

- A. The CxA shall facilitate a Commissioning Kickoff Meeting after all Mechanical, Electrical, and General subcontractors are under contract with the General Contractor. The CxA shall invite the Architect, Engineers, and Owners Representatives to the meeting.
- B. The General Contractor shall ensure that the following individuals are in attendance:
 - 1. The Mechanical Foreman and Project Manager
 - 2. The General Foreman and Project Manager
 - 3. The Controls Foreman and Project Manager

4. The Test and Balance Project Manager
5. The Electrical Foreman and Project Manager
6. The Fire Protection Foreman and Project Manager
7. The General Contractor Project Engineer, Superintendent, and Project Manager

C. The CxA shall keep meeting minutes and distribute to the individuals present.

3.2 DISTRIBUTION LIST

A. The distribution list shall be developed during the Commissioning Kickoff Meeting. This distribution list shall be used for all distribution of commissioning activities. While every effort shall be made to distribute all pertinent information to the sub contractors by the CxA, the sole responsibility for sub-contractors to receive information rest on the General Contractor.

3.3 COMMISSIONING PLAN

A. The Commissioning Plan shall be developed by the CxA and delivered at the conclusion of the submittal process.

B. The Commissioning Plan will have the CxA Procedural Standards for testing, the PFAT checklist, the FAT checklist and the Contractor Readiness checklist.

C. The sub-contractors and contractors are responsible for reviewing the above checklist and provide comments to the CxA within 30 calendar days of receiving the commissioning plan. During this comment period, the comments must be received in writing and the CxA will work with the individual contractors and sub-contractors to ensure the safety of systems. After the thirty (30) day period for comment any additional comments received shall be reviewed by the CxA, however; the subcontractor shall be liable for any cost associated with this review and any delays.

3.4 SUBMITTAL REVIEWS AND SUBMITTAL MEETINGS

A. The CxA shall review all mechanical submittals. It is the responsibility of the Architect to ensure the contractor receives the CxA reviews. The Architect is responsible for delivering the submittals to the CxA, and to receive and incorporate comments prior to submittal return to contractor.

- B. The subcontractor, supplier and manufacturer are responsible to submit with initial submittals a line by line submittal compliance document. The compliance document will follow the specification that the submittal is in reference too. The compliance document will have one of the following for each paragraph of the specification: Comply, Exception, or Unable to Comply. With each Exception and Unable to comply, the compliance document will have a detailed explanation.

3.5 BUILDING INFORMATION MODELING (BIM) REVIEWS

- A. The CxA shall review the BIM models at 90% completion for access issues. The file shall be delivered to the CxA in a NavisWorks format (.nwd).
- B. The contractor may split the review up by floors or buildings. Partial models shall not be reviewed by the CxA until the entire floor is completed to 90%.
- C. The CxA shall deliver a floor plan with markups on areas of access concern.
- D. BIM Model shall include the following:
 - 1. All duct work and air handling equipment. Ductwork shall show flanges. Model shall show insulation around duct work.
 - 2. All mechanical equipment.
 - 3. All hangers including unistrut, clevis, all-thread and strap material.
 - 4. Duct fittings including HETO and flex and diffusers/grilles.
 - 5. Electrical work and controls conduit cumulating 1.5" or larger.
 - 6. Mechanical access zones
 - 7. Fire/Smoke or fire dampers including access zones.
 - 8. Mechanical piping larger than ¾".
 - 9. Refrigerant lines, no matter the size.
 - 10. Cable tray
 - 11. Electrical Equipment
 - 12. All hangers and supports for electrical equipment.

13. All light fixtures
14. All power feeds including conduit or bus bars.
15. Outlets and switches where location is a priority for architectural.
16. Electrical equipment access zones.
17. All occupancy sensors, daylight sensors, exit signs, fire alarm strobes and horns, cameras, speakers, and AV equipment located in ceiling grid.
18. Natural gas lines larger than ½"
19. Plumbing lines larger than ½"
20. Insulation shall be shown with the correct sizing on plumbing lines.
21. All plumbing valves and cleanouts.
22. Access zones to plumbing valves and cleanouts.
23. Fire protection piping no matter the size.
24. Fire protection drops
25. Fire protection equipment
26. The entire steel structure including beams, columns, supports, braces, bent plate, supports or secondary supports.
27. All catwalks and their support systems.
28. All concrete structures include walls, columns or beams.
29. All access doors in the architectural ceiling for access to all electrical, plumbing and mechanical systems.
30. Ceiling grid
31. All walls windows and doors.
32. Lab hoods
33. Soda Machine Lines

34. Kitchen equipment and hoods

3.6 COORDINATION MEETINGS (MEP MEETINGS)

- A. The CxA will attend the contractors MEP meeting at a minimum every other week.
- B. The purpose of these meetings for UNVC to attend is to assist with coordination of installation, commissioning, and testing activities. These meetings will be conducted by the contractor.

3.7 CONSTRUCTION OBSERVATION AND FIRST INSTALLS

- A. The CxA shall observe construction activities throughout the construction of the project. The contractors shall be available during these observations for information as needed. An issues log as outlined in Part 1 shall be kept by the CxA.
- B. Mockups or first installations of individual pieces of equipment need to be installed in their location where applicable. First Installs will be required of the contractor and sub-contractor as defined in the individual commissioning specifications.
- C. Contractor shall coordinate and not prohibit observations and first installs. Sub-contractors, owner's representatives and engineers shall review the first installs for compliance.

3.8 CONTRACTOR READINESS CHECKLIST

- A. Contractor Readiness Checklist (CRC) shall be delivered by the CxA to the contracting team for the contracting team to fill out. The purpose of the CRCs to inform the CxA of the readiness of the contractor to begin Functional Testing on the mechanical system.
- B. The CxA shall not begin Functional Testing of the system or any equipment until the CRC are received. While some systems can be tested without a complete system the CxA shall have the final say on which can and cannot begin functional testing based on the completeness of the project. A single CRC can be completed per type of equipment. (i.e. if there are 80 Heat Pumps and all of them are ready then a single sheet can be filled out for all 80 Heat Pumps)
- C. If the contractor delivers the CRC and the CxA finds, the system is not functional then the contractor shall be liable for cost incurred by the CxA.

3.9 PRE FUNCTIONAL CHECKLIST

- A. The Pre Functional Checklist shall be developed by the CxA and delivered in the commissioning plan.
- B. The Pre Functional Checklist shall be reviewed by the contractors and subcontractors and shall be executed by the CxA.
- C. The CxA shall review 100% of all General systems installations.

3.10 FUNCTIONAL PERFORMANCE CHECKLIST

- A. The CxA shall execute Functional Performance Checks. Suppliers, BMS or ATC Contractor, Mechanical Contractors, Electrical Contractors, Test and Balance Contractor, and General Contractors shall be available at the request of the CxA.
- B. Commissioning Authority shall develop and document the commissioning procedures to be used this will be delivered to the contractor in the commissioning plan and is called the Procedural Standards. Include a performance checklist and performance test data sheets for each system based on actual system configuration. These procedures shall be reviewed by the appropriate contractors and sub-contractors for technical depth, clarity of documentation and completeness. Emphasis shall be placed on testing procedures that shall determine actual system performance and compliance with the design intent.
- C. The Commissioning Authority shall determine the acceptance procedures for each system within General divisions as required. The acceptance procedures shall incorporate the commissioning standards and successful testing results as referred to throughout General specifications.
- D. The appropriate contractor and vendor(s) shall be informed of what tests are to be performed and the expected results. Whereas some test results and interpretations may not become evident until the actual tests are performed, all parties shall have a reasonable understanding of the requirements. The Commissioning Plan shall address those requirements and be distributed to all parties involved with that particular system.
- E. Acceptance procedures shall confirm the performance of systems to the extent of the design intent. When a system is accepted, the Owner shall be assured that the system is complete, works as intended, is correctly documented, and operator training has been performed.

- F. During the functional performance testing, the BMS or ATC contractor shall be in attendance to setup the CxA on the controls system and be in attendance throughout the Sequence of Operation checks.
- G. The CxA shall review 100% and test 100% of all mechanical, electrical and plumbing systems.

3.11 TRENDDING

- A. Trending points will be outlined in the Procedural Standards as delivered by the CxA in the commissioning plan.
- B. Following substantial completion and starting with normal building occupancy and use, a minimum Four (4) weeks of "Clean" trending (no mechanical, software, control loop or Building Management System "BMS" failures) shall be provided on "Any" or "All" BMS systems & points as directed by the CxA. Trends shall be coincident at 15 minute intervals with a cache able to handle four (4) weeks of trending on a rollover basis. The trending shall also be setup to a COV in conjunction with the 15 minute requirement if possible.
- C. The CxA will review the trends after the four weeks of clean trending.

3.12 OPERATION AND MAINTENANCE MANUALS

- A. The contractor responsible for Mechanical O&Ms shall deliver electronic copies of those O&M to the CxA at 75% billable completion of installed mechanical systems. The O&M manuals shall include installation requirements and maintenance requirements.
- B. The final O&M Manual shall be reviewed by the CxA before delivery to the Owner. Any deficiencies shall be noted and the contractor shall remedy before final delivery.
- C. The final O&M must be delivered to the Owner before training shall commence.

3.13 CURRENT FACILITY REQUIREMENTS AND OPERATION AND MAINTENANCE PLAN

- A. The contractors shall support the CxA when they are gathering information for the following.

1. Sequences of operation for the building
2. Building occupancy schedule
3. Equipment run-time schedules
4. Set points for all General equipment
5. Lighting levels throughout the building
6. Minimum outside air requirements
7. Changes in schedules or set points for different seasons, days of the week, and times of day
8. Systems narrative describing the mechanical and electrical systems and equipment
9. Preventive maintenance plan for building equipment described in the systems narrative
10. CxA program that includes periodic CxA requirements, ongoing CxA tasks, and continuous tasks for critical facilities (UNVC will make this document, but it requires the contractor to aid in getting us any information as needed)

3.14 SYSTEMS MANUAL

- A. The contractors shall provide the following in an editable Microsoft Word Format. (.doc or .docx) in a narrative format for use by the CxA to provide the final Systems Manual. The submittals shall be compiled by section in a .pdf format
 1. Construction record documents and specifications
 2. Approved submittals
 3. As-built drawings
 4. As-built sequence of operation
 5. Equipment operations and maintenance manuals
 6. Equipment preventive maintenance schedules

7. Confirmation of completed training for the owner and occupants

3.15 TRAINING

- A. The CxA shall be invited to all General training sessions by the General Contractor.
- B. The training shall not commence until the system has been commissioned and proven ready for training.
- C. The contractor shall schedule and coordinate training sessions for the Owner's staff for each system. Training may be in a classroom setting with the appropriate schematics, handouts, and visual/audio training aids on-site with equipment.
- D. The Commissioning Authority shall review agendas and training schedules, which shall be submitted four weeks before training.
- E. The agenda shall include but not limited to operational set points, runtime schedules, general operation and maintenance requirements, time and location for the training.
- F. The training program shall include the following:
 - 1. Emergency instructions and procedures
 - 2. Operation instructions and procedures
 - 3. Troubleshooting procedures
 - 4. Maintenance and inspection procedures
 - 5. Repair procedures
 - 6. Upkeep of the systems manual and associated maintenance documentation logs
- G. Evaluations shall be done of the training system by the attendees. The evaluations shall reflect ASHRAE 0-2013-Appenix P Evaluation Form.
 - 1. If the Evaluations from the training average rises above 2 (based on 1 being very well trained and 5 not at all trained) then the training shall recommence. All cost for the re-training shall be solely born by the contractor training. Including any reimbursement to the Owner for the CxA,

the Owners Operational Staff, and any other cost born by the owner for failure to comply with requirements.

- H. The contractor shall provide a schedule for training times and dates. The schedule shall include location, who is training, trainer's contact information,
- I. The appropriate installing contractors shall provide training on all the major systems per specifications, including peculiarities specific to this project.
- J. The equipment vendors shall provide training on the specifics of each major equipment item including philosophy, troubleshooting, and repair techniques.
- K. The automatic control vendor shall provide training on the control system per their specification section.
- L. The contractor shall furnish a final video DVD set, above the owner's requirements as defined elsewhere, to the CxA for their use and ownership and review. Included in those DVDs shall be the sign-in sheet for each training.

3.16 RECORD DRAWINGS OR REDLINES

- A. The CxA shall review the "Redlines" or "Record Drawings" on a bi-weekly basis.
- B. Record Drawings or Redlines shall be kept in a printed format beyond any BIM modeling. If record drawings are being kept on BIM a printed out version on a typical 2D flat sheet of paper large enough to read shall be kept as well in the General Contractors trailer.
- C. The following requirements shall be met for Redlines or Record Drawings:
 - 1. Underground: All underground piping no matter the size shall be shown with dimensions from walls (not gridlines) and elevations of the pipe at every ninety or y fitting and marked at every 20 feet on the drawings.
 - 2. Above Ground Concealed: All above ground piping no matter the size concealed in hard lid or behind walls shall be dimensioned from walls.
 - 3. Above Ground Accessible or Unconcealed: All above ground piping, no matter the size, shall be documented in the redlines. General location shall be sufficient as long as the general location is in the same area not separated by walls.

- D. The final redlines shall be reviewed by the CxA before delivery to the Architect.

3.17 WARRANTY PERIOD AND CONTINUOUS COMMISSIONING

- A. The CxA shall provide Continuous Commissioning during the One Year Warranty Period after substantial completion. During this time, the CxA shall adjust settings on the BMS for optimization of the system, shall find issues with the system, and shall report issues to the contractors.
- B. The contractor and sub-contractors shall resolve issues immediately.

3.18 REPEATED WORK, TESTING, AND REVIEWS

- A. Contractor shall, at no additional cost to the Owner, repeat the complete verification test procedure for each test for which acceptable results are not achieved. Repeat tests until acceptable results are achieved.
- B. Contractor shall compensate the Owner for costs incurred as the result of tests review or inspection repeated. This includes the costs for the Commissioning Authority, Design Architect, Design Engineers, and Owner--s personnel for billed costs (including travel expenses) for the extraordinary participation of the Owners Representative, Architect, Commissioning Authority or owner's staff.

END OF SECTION 01 91 13