

Technical Specifications For:

# GYM CLERESTORY WINDOW REPLACEMENT

Oceanside High School

Client:  
Oceanside Unified School District  
2111 Mission Avenue  
Oceanside, CA 92058

Architect:  
AlphaStudio Design Group  
6152 Innovation Way  
Carlsbad, CA 92009  
760-431-2444



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**SECTION 01010**

**SUMMARY OF THE WORK**

PART 1 - GENERAL

1. SUMMARY

A. This Section provides a general description of the Work, contract(s) scope, and phasing, if applicable.

B. Project description:

Project: Replacement of:

Clerestory windows at the Gymnasium Building  
Oceanside High School  
Oceanside Unified School District, Oceanside, CA 92058

C. Scope of the contract(s) work:

The Project scope consists of the removal of the existing clerestory glazing at the sawtooth roofs and replacement with aluminum framed window systems attached to the existing steel framing at the Gymnasium Building.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

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**SECTION 01027**

**APPLICATIONS FOR PAYMENT**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Comply with procedures described in this Section when applying for progress payment and final payment under the Contract.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and other Sections in Division 1 of these Specifications.
  - 2. The Contract Sum and the schedule for payments are described in other Documents of the Contract.

**1.2 QUALITY CONTROL**

- A. Prior to start of construction, secure, via the Construction Manager, acceptance of the schedule of values (Section 01370) for the Contract.
- B. During progress of the Work, modify the schedule of values, as approved by the Construction Manager, to reflect changes in the Contract Sum due to Change Orders and/or other modifications of the Contract.
- C. Base requests for payment on the approved schedule of values and completed work.

**1.3 PAYMENT, GENERAL**

- A. Progress payments:
  - 1. In consideration of the faithful performance of the Work performed in accordance with the provisions of these Documents, the District will pay the Contractor for all such work installed in place per General Conditions Article 47. Payments are to be based on the percentage of completion.
  - 2. Amounts earned will be based on the schedule of values and cost breakdown acceptable to the Construction Manager. Allowable billing amounts for each progress schedule activity will be the activity's budgeted cost amount times the updated percent complete.
  - 3. Payments will be made by the District to the Contractor on percentage of completion estimates as agreed to by the Project Inspectors, and Architect and recommended by the Construction Manager, based on equipment installed and tested, and labor and materials incorporated into the permanent Work.

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4. The submission and acceptance of progress updates and the reports calculating the value of work done for any given pay period for each activity, based on the percentage complete for that activity less the amount previously paid for past percentages complete and percent of retainage, shall be an integral part and basic element of payment application upon which Progress Payments shall be made, pursuant to the provisions of the General Conditions.
5. The monthly updating of the Construction Schedule shall be an integral part and basic element of the estimate upon which progress payments will be made. If, in the judgment of the Construction Manager, the Contractor fails or refuses to provide information required to accomplish a complete Construction Schedule Update or revision as specified hereinafter, the Contractor shall be deemed to have not provided the required estimate upon which progress payments may be made, and shall not be entitled to progress payments until it has furnished the information necessary for a complete Schedule Update to the satisfaction of the Construction Manager.
6. No payments will be made for temporary construction.
7. Monthly payments will be based on work estimated to be incorporated into said permanent Work by the 30th of each month, or the closest work day thereto.

### **B. Stored Materials and Equipment:**

1. The Construction Manager, may recommend partial payment for stored materials and equipment, both on-site and off site, if the Contractor provides the District with title to the stored materials and equipment and if the materials and equipment are stored in a bonded warehouse at the Contractor's expense.
2. The Contractor shall provide paid invoices and unconditional waivers and releases from suppliers before progress payments for stored materials and equipment are accepted.

Payment for materials and equipment shall not release the Contractor from his responsibility for proper storage, security, and warehousing practices as recommended by the manufacturer.

### **C. Payments withheld:**

1. The District, may decline payment and may withhold any payment in whole or in part.
2. If the Contractor and the District cannot agree on a revised amount, the Construction Manager will promptly process an Application for Payment for the amount for which the District Representatives recommend to the District.

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3. The District may also decline payment or, because of subsequently discovered evidence or subsequent observations, the District may nullify all or any part of any Application for Payment previously issued to such extent as may be necessary, to protect the District from loss because of:
  - a. Defective Work;
  - b. Third party Claims, or reasonable evidence indicating probable filing of such Claims;
  - c. Failure of the Contractor to make timely and proper payments to subcontractors, or for labor, materials, and equipment;
  - d. Evidence that the Work, including remedial Work, cannot be completed for the unpaid balance of the Contract Sum;
  - e. Damage to the District or to another District contractor;
  - f. Evidence that the Work will not be completed within the Contract Time, such as failure of the Contractor to keep his work progressing in accordance with the schedule or specific prescribed deadlines.
  - g. Failure to carry out the Work in accordance with the Contract Documents, such as:
    - (1) Failure to maintain current Project Record Documents;
    - (2) Failure of the Contractor to make proper submissions, as required for plans, reports, registers, manuals, submittals, payrolls, applications, cost proposals, and the like;
    - (3) Failure to submit, revise, update, resubmit, or otherwise conform to the requirements for construction scheduling and progress schedules, Section 01310;
    - (4) Failure to maintain a clean, healthy, and safe work place in accordance with Section 01545.
4. When the cause of withheld payments has been remedied, payment shall be made for amounts withheld.

### **D. Discretionary payments:**

1. The District, in its discretion, and upon 48 hours notice to the Contractor, may apply any payments withheld towards the payment for work performed by others due to failure of the Contractor to perform such work.

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2. In so doing, the District shall be deemed the agent of the Contractor, and any payment so made by the District shall be considered as a payment made under the Contract by the District, on behalf of the Contractor, and the District shall not be liable to the Contractor for such payment made in good faith.
3. The District will render to the Contractor a proper accounting of such funds disbursed on behalf of the Contractor, and the Construction Manager, Architect, and Project Inspector may be compensated on a cost reimbursable basis plus a 15% markup for work necessitated by the Contractor's failure to adequately perform contractual requirements in a timely and proper manner.

### 1.4 PROCEDURES

#### A. Informal application:

1. Make an informal application to the Construction Manager of request for payment on a copy of the Application and Certificate for Payment by the 25<sup>th</sup> of the month.
2. The Construction Manager, in conjunction with the Architect, Project Inspector, and the Contractor will review the request for payment and seek to reach agreement on the amount of work satisfactorily completed.
3. If the review and correction process becomes too lengthy in duration and exceeds the 28th calendar day of the month, the Construction Manager will instruct the Contractor to void the billing in question. The Contractor shall resubmit the corrected pay application in the next pay cycle the following month.
4. The Contractor will not be entitled to compensation for damages arising from incomplete or voided pay applications.

#### B. Formal application:

1. No formal application shall be submitted after the 5th calendar day of the following month.
2. Make formal application of request for payment on the Application and Certificate for Payment form.
3. Sign the Application and Certificate for Payment.
4. Submit the original of the Application and Certificate for Payment to the Construction Manager.
5. The Construction Manager will compare the formal application with the approved informal application and, if acceptable, will obtain the signature of the Project inspector, sign the application recommending approval by the Architect and the District, and, when approved, will distribute:



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- a. One copy to Contractor;
  - b. Original and one copy to District;
  - c. One copy to the Architect.
6. District will disburse directly to the Contractor within 30 calendar days of the District's approval.
- C. Retention:
1. The amount of retention to be withheld from the monthly pay application will be 10% of the approved payment application amount.
  2. The maximum retention will not exceed 10% of the Contract Price except in the case of:
    - a. Defective work;
    - b. Stop Notices;
    - c. Mechanics' Liens;
    - d. Labor wage disputes;
    - e. Claims
    - f. Unsolicited cost proposals.
  3. The estimated cost for rework will be retained by the District.
- D. Forms:
1. The Contractor shall submit the payment request on required forms in such content and format as acceptable to the Construction Manager, Architect and all governmental agencies involved. The Contractor may request, from the Construction Manager, an electronic copy of the Application and Certificate for Payment.
    - a. Waivers and Releases shall be submitted with each progress billing on approved forms only. This applies to the Contractor, his suppliers, and his subcontractors.
  2. Provide Conditional Waiver and Release Upon Progress Payment for Work completed in current progress period.
  3. Provide an Unconditional Waiver and Release Upon Progress Payment for Work completed in the previous progress period.
  4. Provide a Conditional Waiver and Release Upon Final Payment with the final application for payment.
  5. Within fourteen (14) days of receiving final payment from the District, provide an Unconditional Waiver and Release.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

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END OF SECTION

Form immediately following this page:  
Application and Certificate for Payment  
Application and Certificate for Payment Continuation Sheet

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**SECTION 01028**

**CHANGE ORDER PROCEDURE**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section covers changes in the Work, in the Contract Sum, in the Contract Time, or any combination thereof, as are described in written Change Orders and Directives issued after execution of the Contract, in accordance with General Conditions Article 49. Changes and Extra Work .
  
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and other Sections in Division 1 of these Specifications.
  
- C. Definitions:
  - 1. The term "Proposal Request," (PR) as used in this Section, means the request by the District for a proposal to be submitted by the Contractor , for prospective changes in the Contract Sum and/or Contract Time related to proposed modifications to the Contract Documents.
  
  - 2. The term "Change Request" (CR) as used in this Section, means the request by the Contractor for an adjustment in the Contract Drawings, Specifications, Sum, Time, or other conditions or requirements.
  
  - 3. The term "Construction Change Directive" (CCD), as used in this Section, means a directive from the District to the Contractor, directing the Contractor to proceed with work that constitutes a change to the Contract Documents. The Construction Change Directive may include specific Contract adjustments to Sum and Time, or provide for alternates methods of determination.
  
  - 4. The term "Architect's Supplemental Instruction" (ASI) as used in this Section, means an instruction issued by the Architect for the clarification of, interpretation of, or provision of more detail for work described in the Contract Documents. The instructions provided will have no impact on, or be the cause for, any change in the Contract Sum, Time, or other Terms and Conditions.
  
  - 5. The term " Change Order" (CO)as used in this Section, means the document that records the mutual agreement between the District and the Contractor with respect to modifications to the Contract.

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### 1.2 CHANGES IN THE WORK

- A. The District may, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions.
  - 1. The Contract Sum and Contract Time shall be adjusted accordingly by Change Order.
  - 2. The Contractor shall provide a cost and time proposal in response to the Construction Manager's request and within seven days of receipt of a written Proposal Request (PR).
- B. A District approved "Change Order" form will be prepared by the Construction Manager for approval by the Architect, the District and Contractor, stating their agreement to changes in conditions of the Contract.
- C. All changes to approved drawings and specifications shall be made by either a Construction Change Directive, an approved Change Request, or approved Proposal Request. All changes initiated and agreed in this manner shall be processed as a Change Order to be approved by the Architect and the District's Governing Board and as required the Division of State Architect.

### 1.3 DIRECTIVES

- A. The District may issue a Construction Change Directive when an entitlement to a contractual adjustment is disputed and in the absence of total agreement on the terms associated with changes in the work and/or Contract Sum or Time.
  - 1. If the Contractor and the District have not reached an agreement on quantum for proposed changes to the Work, the District may, at its discretion, issue a Construction Change Directive with changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions.
  - 2. If the Contractor is not in agreement with direction received from the District, the Contractor shall not withdraw personnel, materials or equipment, or cause work to be performed inefficiently, or stop work but shall proceed diligently with the Work, and the proposed changes in the Work, in accordance with the Construction Change Directive.
  - 3. In the event entitlement is disputed, or an adjustment in the Contract Sum and/or Contract Time for changes in the Work is not agreed upon, and in order that a proper accounting of the disputed work or changes in the Work may be made by the District of the net cost of labor, materials and equipment entering into the changed Work, the Contractor shall:
    - a. Furnish daily an itemized statement of labor, materials and equipment supplied, together with the cost of such material, equipment and

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wages paid; and

- b. Furnish vouchers for quantities and prices of such labor, material, equipment and other work provided by subcontractors and suppliers; and
  - c. Provide additional information, itemized and supported by sufficient substantiating data to permit evaluation by the Construction Manager, and other District representatives.
  - d. On a daily basis, obtain verification, from the Construction Manager of the work hours, equipment hours and materials expended pertaining to the disputed or changed work.
  - e. Provide separate accounting and substantiation for each change.
4. In the event the Contractor fails to comply with the above provisions, he shall have no Claim for compensation for the work addressed by the Construction Change Directive.

### **1.4 COST BREAKDOWN AND SUBSTANTIATION**

- A. The Contractor's proposal in response to a Proposal Request (PR) or a Construction Change Directive shall contain a price breakdown, itemized as required by the Construction Manager.
1. The breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract, overhead costs, profit, and shall cover all work involved, whether such work was deleted, -added, or changed, and shall be submitted on forms as may be provided by the Construction Manager.
  2. Any amount claimed for subcontracts shall be supported by a similar price breakdown.
  3. In addition, if the proposal includes a request for a time extension, a justification therefore shall be furnished.
  4. The proposal, together with the price break down and time extension justification, shall be furnished within the time specified by the Construction Manager's Proposal Request.
  5. Price breakdown for labor, material, and equipment rental shall not exceed any pre-existing rates that may have been established and agreed upon in this Contract.

### **1.5 CLAIMS FOR ADDITIONAL COST AND ADDITIONAL TIME**

If the Contractor wishes to make Claim for a change in the contract Sum or a change in the Contract Time, the Contractor shall immediately provide written notice using a

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Change Request before proceeding to execute the Work unless a Construction Change Directive has been issued. All Claims by the Contractor for additional consideration will be administered in accordance with General Conditions Articles 49 and 78 as applicable to the particular situation.

- A. The District will not have any obligation to consider any time extension request unless the requirements of Division 1, Section 01310 are complied with. The schedule critical path will be evaluated to determine the time impact of changes.
- B. The Contractor may be entitled to an equitable adjustment in Contract Time, without an adjustment in the Contract Sum, if the delay in completing the Work arises from unpredictable causes beyond the control and without the fault or negligence of the Contractor or the District, such as:
  - 1. Acts of God or of the public enemy;
  - 2. Acts of the Government in its sovereign capacity;
  - 3. Fires, or floods;
  - 4. Epidemics, or quarantine restrictions;
  - 5. Strikes;
  - 6. Freight embargoes;
  - 7. Unusually severe weather, or
  - 8. Delays of subcontractors or suppliers at any tier arising from unpredictable causes beyond the control and without the fault or negligence of the Contractor, his subcontractors or suppliers.

### **1.6 NEGOTIATION**

- A. Negotiations associated with Change Requests, Construction Change Directives, Change Orders, and Claims will be performed for the purpose of obtaining a mutually agreeable resolution of all concerns related to a given issue.
- B. In order to facilitate settlement during negotiations, the parties shall abide by the following rules:
  - 1. The Contractor shall provide all vital cost, schedule, and other required information prior to the scheduling of negotiations.
  - 2. Representatives shall be fully prepared to negotiate intelligently and effectively.
  - 3. Agreement on a majority of specific items does not constitute an agreement to the entire issue.
  - 4. Contractor shall have a representative present at the negotiations who has the full authority to commit the company and make the final decision to settle the issues.

## **PART 2 – PRODUCT**

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PART 3 – EXECUTION

END OF SECTION

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**SECTION 01040**

**COORDINATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Contract General Conditions.

**1.2 DESCRIPTION**

- A. Section includes requirements for the coordination of the work of the various trades, in instances in which the work is being performed by subcontractors and prime trades contractors.

**1.3 RELATED SECTIONS**

- A. Section 01300, Submittals

**1.4 SHOP DRAWINGS COORDINATION**

- A. If multiple prime trades contractors are performing the work for the project, all approved contractors' shop drawings, will be provided to all other contractors for coordination review.
- B. If there are apparent conflicts between/among the approved shop drawings, the contractors will notify the Construction Manager, who will facilitate a resolution of any conflicts.
- C. In making adjustments to achieve resolution of spatial conflicts, generally large rigid conduits/ducts will take precedence over smaller flexible installations, gravity flow piping will take precedence over pressure piping, etc.

**PART 2 – PRODUCT (Not Used)**

**PART 3 – EXECUTION**

**3.1 WORK COORDINATION**

The Contractor(s) shall be responsible for coordinating the Work in compliance with the following:

- A. Coordinate the work; do not delegate responsibility for coordination to any subcontractor.
- B. Coordinate the work of subcontractors and material suppliers, so that their work is performed in a manner to minimize interference with, and to facilitate the, progress of the work.



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- C. Be responsible for providing anchorage, blocking, joining and other detailing as required to provide complete project.
- D. Do not obstruct spaces required by Code in front of electrical equipment, access doors, etc.
- E. Do not cover any piping, wiring, ducts, etc., until properly inspected and approved and until proper certificates have been issued.
- F. Remove and replace any and all work under any section, which is not in accordance with the Contract Documents, with other materials and work which is in conformance with the Contract Documents. Repair or replace all other work damaged by these operations.
- G. Coordinate work of this Contract with other contracts and contractors as appropriate, and in a manner that will insure that all work will be accomplished as rapidly as the progress of the project will permit and so that no work will be delayed for want of associated work.

END OF SECTION

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**SECTION 01045**

**CUTTING AND PATCHING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section establishes general requirements pertaining to cutting (including excavating, and saw cutting concrete), fitting, patching, and backfill.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions Article 64. Cutting and Patching, Supplementary Conditions, Special Conditions and other Sections in Division 1 of these Specifications.

**1.2 SUBMITTALS**

- A. Request for Consent:
  - 1. Prior to cutting, submit written request to the Construction Manager for obtaining permission to proceed with cutting.
    - a. The Construction Manager will submit such requests to the Architect/ Engineer for review and recommendation.
    - b. In scheduling, allow at least two weeks for Architect/ Engineer's review and recommendation following receipt by the Architect/ Engineer of request for consent.
  - 2. Should conditions of the Work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Construction Manager and secure written permission of the Architect prior to proceeding.

**1.3 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. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary criteria and completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

**PART 2 - PRODUCTS**

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### 2.1 MATERIALS, GENERAL

- A. For replacement of items removed, use materials complying with pertinent Sections of these Specifications. 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 EXISTING CONDITIONS

- A. Inspection:
  - 1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.
- B. Discrepancies:
  - 1. If uncovered conditions are not as anticipated, immediately notify the Construction Manager.
  - 2. Do not proceed until any unsatisfactory conditions exposed are corrected.

### 3.2 PREPARATION PRIOR TO CUTTING

- A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain required levels of safety, and the structural integrity of the Work, as well as protection of adjacent surfaces/features.

### 3.3 PERFORMANCE

- A. Perform required excavating and backfilling as required under pertinent Sections of these Specifications.
- B. Perform cutting and demolition by methods that will prevent damage to other portions of the Work and provide proper surfaces to receive installation of repair and new work.
- C. Perform fitting and adjusting of products to provide finished installation complying with the specified tolerances and finishes.
- D. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
- E. Where services are required to be removed, relocated, or abandoned, by-pass 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

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portion of the pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

- F. 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. 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.
- G. Do not cut or alter work performed under separate contracts without the Architect's written permission.

### 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

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**SECTION 01050**

**FIELD ENGINEERING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:
  - 1. Establishing and maintaining lines and levels;
  - 2. Structural design of shores, forms, structural bracing, outriggers, and similar items provided by the Contractor as part of his means and methods of construction;
  
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions Article 62. Layout and Field Engineering., Supplementary Conditions, and other Sections in Division 1 of these Specifications.

**1.2 SUBMITTALS**

- A. Comply with pertinent provisions of Section 01340.
  
- B. Submit to the Construction Manager for review by the Architect/Engineer:
  - 1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
  - 2. Documentation verifying accuracy of field engineering work.
  - 3. Certification for each definable feature of work, signed by the Contractor's licensed land surveyor or registered Professional Engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

**1.3 QUALITY CONTROL**

- A. Where engineering design, engineering calculations, or both, are required to be submitted by provisions of these Specifications or governmental agencies having jurisdiction.

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1. Have such design, calculations, and other items prepared by engineers properly qualified and licensed by the State of California to perform the required duties.
2. Demonstrate to the approval of the Architect that the proposed engineers are properly insured to guarantee the accuracy and safety of the design.

### **1.4 PROCEDURES**

- A. In addition to procedures directed by the Contractor for proper performance of the Contractor's responsibilities:
  1. Locate and protect control points before starting work on the site.
  2. Preserve permanent reference points during progress of the Work.
  3. Do not change or relocate reference points or items of the Work without specific approval by the Architect or Engineer of Record.
  4. Promptly advise the Construction Manager when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.
    - a. Upon direction of the Architect or Engineer of Record, the Construction Manager shall require the field engineer to replace reference stakes or markers.
    - b. Locate such replacements according to the original survey control.
- B. Coordination:
  1. Carefully coordinate with the Drawings, Specifications, and other Contract Documents.
  2. Assure that work performed under the provisions of this Section properly matches the quality and function of that portion of the Project of which such work is intended to become a part.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

**END OF SECTION**

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**SECTION 01070**

**ABBREVIATIONS AND SYMBOLS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION:**

A. This Section lists the abbreviations and symbols used in these Specifications.

**1.2 ABBREVIATIONS/SYMBOLS:**

ac	Alternating current
BTU	British thermal unit
cfh	Cubic feet per hour
cfm	Cubic feet per minute
cm	centimeter
Co.	Company
COP	Coefficient of performance
Corp.	Corporation
d.	Penny
db.	Decibel
DB	Dry bulb
dc	Direct current
EER	Energy efficiency ratio
F	Degrees Fahrenheit
fpm	Feet per minute
gph	Gallons per hour
gpm	Gallons per minute
HP	Horsepower
HVAC	Heating, ventilating and air conditioning
Hz	Hertz
Inc.	incorporated
KHz	Kilohertz
LB	Pound
LED	Light emitting diode
MBH	1000 BTUs per hour
MHz	Mega hertz
mil	Thousandth of an inch
mm	Millimeter
mph	Miles per hour
OZ.	Ounce
pH	Acidity-alkalinity balance
psf	Pounds per square foot
pal	Pounds per square inch
psig	Pounds per square inch, gauge
RF	Radio frequency

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rpm	Revolutions per minute
V	Volt
WB	Wet bulb
#	Number
'	Foot/Feet
"	Inch(es)
%	Percent

END OF SECTION



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**SECTION 01095**

**REFERENCE DEFINITIONS AND STANDARDS**

**PART 1 - GENERAL**

**1.1 DEFINITIONS**

- A. The term "experienced" when used with the term "Installer" means having a minimum of five previous projects similar in size and scope to this project, being familiar with the special requirements indicated, and having complied with requirements of the authority having jurisdiction.
- B. Trades: Using terms such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as carpenter. It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.
- C. Assigning Specialists: Certain sections of the specifications require that specific construction activities be performed by specialists who are recognized experts in those operations. Specialists must be engaged for those activities, and their assignments are requirements over which Contractor has no choice or option. However, the ultimate responsibility for fulfilling Contract requirements remains with Contractor. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

**1.2 SPECIFICATION FORMAT AND CONTENT EXPLANATION**

- A. Specification Format: These specifications are organized into Divisions and Sections based on the Construction Specifications Institute's "16-Division" format and generally complies with the MASTERFORMAT numbering system.
- B. Specification Content: This specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases, when used in particular situations or circumstances. These conventions are explained as follows:
  - 1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings are interpreted as appropriate. Words implied but not stated, are to be interpolated as the sense requires. Singular words are interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
    - a. Imperative and streamlined language is used generally in the specifications. Requirements expressed in the imperative mood are to be performed by Contractor. At certain locations in the text, subjective language is used for

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clarity to describe responsibilities that must be fulfilled indirectly by Contractor, or by others when so noted. The words "shall be" are implied wherever a colon (:) is used within a sentence or phrase.

### **1.3 INDUSTRY STANDARDS**

- A. **Applicability of Standards:** Except where Contract Documents include specific standards or more stringent requirements, applicable construction industry standards shall be deemed to establish the standard of quality.
- B. **Publication Dates:** Comply with the Construction Industry standards in effect as of the date of Contract Documents.
- C. **Conflicting Requirements:** Where compliance with two or more standards is specified and where standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different, but apparently equal, and uncertainties to the Construction Manager for an interpretation by the architect before proceeding:
- D. **Copies of Standards:** Each entity engaged in construction on the project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents: Where copies of standards are needed to perform a required construction activity, Contractor shall obtain copies directly from the publication source.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

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**SECTION 01170**

**REQUESTS FOR INFORMATION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section describes procedures for requesting information other than that shown in the Contract Documents, or clarification of information, and discusses conditions under which such requests will be considered.
- B. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and other Sections in Division 1 of these Specifications.

**1.2 REQUESTS FOR INFORMATION**

- A. Instructions to Bidders for this Work state that bidders become thoroughly familiar with the proposed Contract Documents and that they request and secure clarification of all matters on which there may be any question as to design intent prior to bidding.
- B. The District recognizes that data may inadvertently have been omitted from the Contract Documents or require clarification and the following procedures are established for requesting such data.
- C. Procedures:
  - 1. Prior to requesting information, conduct a thorough search of the Contract Documents and determine that the information is actually missing from the Contract Documents.
  - 2. Fill out a "Request For Information (RFI)," form which follows this Section, and deliver it to the Construction Manager.
  - 3. The Construction Manager will review the RFI.
    - a. The Construction Manager will reject the RFI if it is unclear or frivolous.
    - b. The Construction Manager will obtain the appropriate response from the Architect or other party.
  - 4. Within **seven (7) calendar days** after receipt of the RFI from the contractor the Construction Manager will forward the response to the Contractor.

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5. Field "fixes," "work-arounds," replacements, and repairs shall be addressed by implementing the request for information procedures.
  6. Requests for Information should identify the Contractor's understanding, or basis of assumption, on which it's bid was based for the item in question, and should also provide Contractor's suggestion for resolution of the question.
- D. Responses to Requests for Information shall not be construed as an implied changes to the contract Work, Sum, Time, terms, or conditions.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

Forms immediately following this page are:

"Request For Information"

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**SECTION 01200**

**PROJECT MEETINGS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. A Pre-Construction Conference will be held, and conducted by the Construction Manager, prior to any contract work being started. The Pre-Construction meeting will be attended by Contractor's Project Manager and Superintendent. The other District representatives attending this meeting will include the Architect, a Maintenance & Operations staff member, a representative of the school/site administration, the Project Inspector and other staff members and consultants as may be invited by the District. This meeting will include discussion of site operating requirements, parameters and constraints under which the Work shall be accomplished, review contract management and interfaces' processes and procedures, clarify responsibilities and authorities, and identify and other information and clarification needed by any project participant.
  
- B. To enable orderly review during progress of the Work, and to provide for systematic discussion of issues, the Construction Manager will conduct periodic project coordination meetings throughout the construction period.
  - 1. Except as otherwise approved by the Construction Manager, each contractor's Project Manager and Superintendent with work starting in the next period, or with work in progress, will be required to attend.
  
  - 2. Objectives of the meetings are to:
    - a. Discuss progress of current week and progress proposed for next period;
  
    - b. Review and update the scheduled activities of the ongoing construction;
  
    - c. Identify present and/or potential conflicts from a construction viewpoint, and ascertain solutions.
  
- C. Other special meetings will be scheduled and conducted by the Construction Manager during the period of the contract as may be needed to resolve issues, coordinate the commencement of the various phases of the Work, and/or as needed to facilitate interfaces with other work or contractors operations. The Contractor's Project Manager and other staff, as needed, will be required to attend.

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### D. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, Special Conditions and other Sections in Division 1 of these Specifications.

## 1.2 DOCUMENTATION

A. Agenda items: To the maximum extent practicable, advise the Construction Manager at least 24 hours in advance of Agenda items to be included in the coordination meetings.

### B. Minutes:

1. The Construction Manager will compile minutes of each coordination meeting, and will furnish one copy to the Contractor and required copies to the District, the Architect, and other representation.
2. Recipients of copies may make and distribute such other copies as desired.

## 1.3 QUALITY CONTROL

A. Persons designated by the Contractor to attend and participate in coordination meetings, should have the authority to commit the Contractor to solutions agreed upon in the coordination meetings.

## PART 2 - PRODUCTS

(No products are required in this Section)

## PART 3 - EXECUTION

### 3.1 MEETING SCHEDULE AND LOCATION

- A. Regular Project coordination meetings will generally be held weekly, at a time and location to be determined by the Construction Manager. Other frequency will may be determined by the Construction Manager.
- B. When so determined by the Construction Manager, other project meetings will be held to plan specific activities only pertinent to specific elements of work or participants.

### 3.2 MEETING CONTENT

#### A. Minimum agenda:

1. Review, revise as necessary, and approve minutes of previous meetings.

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2. Review progress of the Work since last meeting, including status of submittals for approval.
  3. Identify situations which may impact planned progress.
  4. Develop corrective measures and procedures to regain planned schedule.
  5. Complete other current business.
- B. Contractors will be expected to announce proposed plans for work activities and movement of equipment on the site for the forthcoming period.
1. All contractors represented at the meeting will be expected to plan their work accordingly and to identify any conflicts envisioned.
- C. Project Coordination
1. Coordinate the Work with other contractors.
  2. Resolve differences or conflicts between contractors and subcontractors concerning coordination, interference, or extent of work.
  3. Direct removal and replacement of all Work which does not comply with the Contract Documents. Repair or replace any other Work or property damaged by construction operations.
  4. In the interest of coordination and expediting the Work of critical areas, prepare and submit Coordination Drawings showing a composite of different portions and elements of the work together.

### 3.3 REVISIONS TO MINUTES

- A. Unless published minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
- B. Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
- C. Challenge to minutes shall be settled as priority portions of "old business" at the next regularly scheduled meeting.

END OF SECTION

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**SECTION 01210**

**PROTECTION FACILITIES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section describes the requirements for Contractor's provision and use of installations, facilities, equipment, etc., for the protection of existing property and improvements and the Work to be accomplished by the contract.

**1.2 CONTRACTOR'S BARRICADE**

- A. Provide construction canopies, barricades, fences, guards, railings, lights, and warning signs necessary and required by law, and take necessary precautions required to avoid injury or damage to any and all persons and property including existing trees to remain where, within drip lines, parking storage and work activities will be prohibited.
- B. Contractor shall erect the temporary security barricade and relocate and erect site fencing as shown on the plans and as required for protection of the Work.
- C. At the completion of the work, remove all barricades and concrete post footings including those installed for fence footing holes. Existing surface paving that is cut into or removed shall be patched and sealed to match the surrounding areas.
- D. Unless otherwise indicated or specified, barricade shall be constructed of 8'-0" high chain link fencing. Space posts not to exceed 10 feet on centers. Posts shall be of the following nominal pipe dimensions: Terminal, corner, and gate posts 2-1/2", line posts 2". Chain link fabric shall be not less than 13 gauge, 2" mesh, and in one width. Posts, fabric and accessories shall be galvanized. If indicated on the drawings, the chain link fence will have 3/8" plywood installed in lieu of fabric.:
  - 1. All terminal, corner, gate, and every fifth intermediate line post shall be set in concrete footing. Posts set in concrete shall be full depth of footing. Posts set in earth shall be set to a depth of 30" with the soil firmly compacted around the post.
  - 2. Fabric shall be attached to all posts with 14 gauge tie wire at 16" centers. A 6 gauge steel tension wire with turnbuckles shall be installed at top and bottom of all barricade fencing. Wire tie fabric to tension wires at 18" centers.
- E. Chain link fencing shall be free from barbs, icicles or other projections resulting from galvanizing process. Fence fabric having such defects will be rejected even though it has been erected.



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- F. Gates shall be fabricated of steel pipe with welded corners, and bracing as required. Fabric to be attached to the frame at 12” centers. Provide all gate hardware of a strength and quality to perform satisfactorily until the barricade is removed upon completion of the work.

### **1.3 BARRICADES**

- A. Provide all barricades, night lanterns, guardrails and other safety measures at excavations and other points of danger from unauthorized access during construction.
- B. Provide adequate vehicular and pedestrian cross-overs at excavations, as required to maintain traffic and emergency vehicle access.

### **1.4 PROTECTION OF WORK AND FACILITIES**

- A. Protect all adjacent property, roads, streets, curbs, shrubbery, lawns, erosion control materials and planting during construction operations. Replace all damaged material and/or repair at expense of Contractor.
- B. It is the intention that upon completion, the entire work shall be delivered to the District in proper, whole and unblemished condition parts of work in place that are subject to injury because of operations being carried on adjacent thereto, shall be covered, boarded up, or substantially enclosed with adequate protection.
- C. Prevent overloading of any part of the facilities beyond their safe calculated carrying capacity by placing of materials and/or equipment, tools, machinery, or any other items thereon.
- D. Particular attention must be given to protecting the interiors of buildings during all phases of construction, including the removal of existing roofing material, the installation of new roofing material, and during the period in between. Temporary waterproof coverings must be provided as necessary to protect buildings interiors from debris, water , and any damage.

### **1.5 FIRE PROTECTION**

- A. Take all precautions to guard against and eliminate possible fire hazards at the site, and to prevent damage to construction work, building materials, equipment, temporary field offices, storage sheds, public and private property, including but not limited to providing, maintaining and enforcing the following requirements:
  - 1. Remove all combustible debris from the site and storage areas on a daily basis.
  - 2. Restrict bitumen heating kettles to grade level exterior areas, no closer than 50 feet of building walls.

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3. All tarpaulin covers for stored materials, openings in roofs and walls, etc., shall be flameproof.
  4. Store paints, gasoline, thinners or other highly flammable materials in well-ventilated areas only, and restrict all mixing and preparation to such areas; handle all such materials in accordance with safe practice and requirements of authorities having jurisdiction.
  5. No open fires on the site.
- B. Provide suitable type fire extinguishers in temporary office, storage facilities, and toilet facilities.
  - C. Provide and maintain fire extinguisher stations. Locate each station to be easily accessible while providing minimum interference with operations, and containing not less than one fire extinguisher for each 5000 sq. ft. of floor area or less, but not less than 4 extinguishers. Provide minimum 10-pound ABC type extinguisher. Check units frequently to maintain in serviceable condition. Provide extinguishers meeting UL requirements.
  - D. No oil, coke or coal burning salamanders will be allowed.
  - E. Welding and flame cutting will be allowed only upon prior written authorization of Construction Manager. The use of gasoline torches or burners is prohibited. While such operations are underway, a special fire-watcher shall be continuously in attendance, with portable fire extinguishers of suitable type.
- 1.6 MISCELLANEOUS
- A. Provide protection for all areas of traffic over the finished roof, around curbed openings during installation of fans, air intakes, or other similar roof mounted units, as well as all finish work.
  - B. Close up openings in roofs and walls whenever the work is closed down for any period due to inclement weather, or other causes beyond the control of Contractor, except as may be required for ventilation.
- 1.7 TRENCHING AND EXCAVATION OPERATIONS
- A. Pursuant to Title 8 CCR, Contractor shall provide adequate sheeting, shoring, bracing, or equivalent method for the protection of life or limb, which shall conform to applicable Federal and State Safety Orders.
  - B. All excavation work shall be accomplished per Title 8 CCR guidance. The Contractor is responsible for providing certified personnel as referenced in Title 8 CCR.
  - C. Neither the review nor approval of any plan showing the design of shoring, bracing, sloping, or other provisions of worker protection, shall relieve Contractor

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from his obligation to comply with Construction Safety Order Standards and Title 8 CCR for the design and construction of such protective work.

#### 1.8 ENCLOSURE OF BUILDING - ROOF OPENINGS

- A. Provide closures for roof openings immediately following installation of roofing and flashings, or earlier if required to protect operations within the building.
- B. Solidly construct closures and design to provide exhaust of air when necessary to prevent build-up of temperature and humidity and to preclude entry of rain, or wind.
- C. Provide flameproof tarpaulins or covers for closure panels, to ensure weathertight conditions.

#### 1.9 EXTERIOR WALL CLOSURES

- A. Provide flameproof tarpaulin or other acceptable weatherproof closures for wall openings, as necessary to protect operations within the building at all times.
- B. Provide weatherproof closures at all times; in periods of inclement weather or in areas where temperature or humidity control is of major importance, adequately seal against air infiltration.
- C. Provide lockable doors on openings where entry of materials or personnel is required.

#### 1.10 INTERIOR CLOSURES

- A. Provide temporary closures around areas where finished trade operations (plastering, drywall, painting, etc.), are being carried on whenever necessary to protect same from the elements or to ensure that proper temperature levels are maintained.

#### 1.11 SPECIAL CONTROLS

- A. Use of Explosives: Blasting will not be permitted unless approved in writing by the District.
- B. Water Control: Surface or subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved by the Construction Manager.
- C. Removal of Temporary Construction: Remove temporary office facilities, toilets, storage sheds, fences, and other construction of temporary nature from site as soon as progress of work permits. Recondition and restore portions of site occupied by same to a condition acceptable to the District.

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PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

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**SECTION 01300**

**SUBMITTALS**

**PART 1 - GENERAL**

**1.1. SUMMARY**

**A. Section Includes**

1. Submittal Descriptions
2. Submittal General Requirements
3. Submittal Procedures and Processing
4. Submittal Scheduling and Tracking
5. Specific Guidelines for Shop Drawings, Product Data and Samples

**B. Related Sections and Documents:**

1. General Conditions, Article 44 Shop Drawings, and Article 45 Submittals.
2. Section 01050 - Field Engineering

**1.2 SUBMITTAL DESCRIPTIONS**

**A. Product Data:** Data composed of catalogue cuts, brochures, fly sheets, circulars, specifications, and other data which provide calculations, descriptions, analysis, agency listings, or other printed information and documentation regarding the Work. Product Data shall be in sufficient detail and scope to verify compliance with the contract documents.

1. Include data regarding compliance with recognized test standards.
2. Mix designs shall be considered product data.

**B. Installation Instructions:** Preprinted material describing manufacturer's recommended installation procedures of a product, system, or material. Instructions shall including site or surface preparation; required working conditions; sequences of work; required drying or setting time, if any; required materials, tools, equipment, etc.

1. Include special notices and Material Safety Data Sheets, if any, concerning impedances, hazards, and safety precautions.

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- C. Schedules: A tabular list of data including locations, features, dates, sequences, quantities, or other pertinent information regarding products, materials, equipment, labor, or components to be used in the Work.
- D. Calculations: Design calculations for a product, system, or material that shows compliance with the required design criteria.
  - 1. Calculations shall be dated, stamped and signed by a California registered Engineer or Architect having a current registration.
  - 2. Where required, submittal of calculations shall be to the agency having jurisdiction over the Work.
- E. Statements: A document, required of the Contractor, or through the Contractor by way of a supplier, installer, manufacturer, or other lower tier contractor, that describes procedures, acceptability of methods or personnel, qualifications, or other verification of quality.
- F. Test Reports, Factory Test Reports: A report signed by an authorized official or engineer of a testing laboratory that a material, product, or system identical to that provided has been tested in accordance with the specified requirements. Include the test method, date(s), a statement that the test was performed in accordance with the test requirements, and the results. Testing done three or more years before the date of the award of contract shall not be valid.
- G. Field Test Reports: A written report which includes the findings of a test made at the jobsite, or on a sample taken from the jobsite, on a portion of the Work, during or after installation. The report shall be signed by an authorized official or engineer of a testing laboratory that a material, product, or system identical to that provided has been tested in accordance with the specified requirements. Include the test method, date(s), a statement that the test was performed in accordance with the test requirements, and the results.
- H. Certificates: Statements signed by a responsible official of a manufactured product, system, or material attesting that it will meet the specified requirements. Statements shall include the name of the project, a list of the specific requirements being attested to, and shall be dated after the award of the contract.
- I. Shop Drawings: Submittals which graphically show the relationship of various components of the Work, schematic diagrams of systems, details of fabrications, layout, connections, and other spatial relational aspects of the Work. Include size, type, material, and spacing of fasteners. Show interface and attachment to adjacent materials. Shop drawings shall be to scale, with the scale shown graphically, and provided with complete dimensions.
- J. Color Charts: Manufacturer's preprinted color charts displaying choices of colors and finishes for a product or material. Include standard, custom, and premium colors as requested. At least three full color charts shall be submitted; the remainder of required copies may be black and white copies.

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- K. Samples: Actual material color selection samples, including both fabricated and unfabricated physical examples of materials and products. Provide complete units of Work. Provide samples for all colors, patterns, textures, sizes, and finishes, presented over substrates identical to that for the proposed Work.
- L. Sample Panels. Mock-ups: An assembly constructed at the project site, in a location acceptable to the Architect, using materials and methods to be used in the Work. Sample panels shall be completely finished. Make as many sample panels as required until found acceptable as part of the work. The acceptable sample panel shall be used as a basis for accepting or rejecting future Work, and shall be maintained during construction. Sample panels shall be removed from the jobsite after completion of the Work.
- M. Sample Installation: A sample panel or mock-up constructed and if found acceptable, retained as part of the Work.
- N. Records: Documentation to insure compliance with an administrative requirement, or to establish an administrative mechanism.
- O. Operations and Maintenance manuals: Comply with Section 01730.
- P. Warranty: Manufacturer's written warranty or Contractor's written warranty. Include aspects of Work to be covered under the warranty, type of corrections and replacements to be provided in the event of failure of the product, material, or system, complete terms and conditions, and duration of warranty.
  - 1. Term of warranty begins on date of final completion. This date shall be included on all warranty documentation.
- Q. Guarantee: A written statement signed by a Contractor, guaranteeing certain portions of Work. Guarantee shall include aspects of Work to be covered under the guarantee, type of corrections and replacements to be provided in the event of failure of the product, material, or system guaranteed, complete terms and conditions, and duration.
  - 1. Term of guarantee begins on date of final completion. This date shall be included on all warranty documentation.

### 1.3 SUBMITTAL GENERAL REQUIREMENTS

- A. Comply with pertinent provisions of pertinent Sections of these Specifications.
  - 1. Provide additional submittals as required by the Architect due to changes occurring in the field or in the scope of work.
  - 2. Provide additional submittals to the Architect when requested in writing by the Architect.
- B. All submittals shall be submitted with a Submittal Transmittal Form from the Contractor, including the date, project title and location.

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1. Include the section of the specifications by which the submittal is required.
  2. Supplier name, address and telephone number shall accompany each
- C. The contractor shall, prior to submittal to Architect, review all submittals, thereby representing that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each submittal with the requirements of the work and of the Contract Documents.
- D. The Contractor's signature and stamp certifying that review, verification of products required, field dimension, and coordination of information required related to the submittal has been provided, SHALL APPEAR ON ALL SUBMITTALS. Signed transmittals shall not be considered as complying with this section.
- E. The contractor is responsible for the content of the submittals, not the architect. Any errors or omissions in the submittals are the contractor's responsibility.
- F. Any errors, omissions, or discrepancies contained in the Submittals are the responsibility of the Contractor. Review of submittals does not make the architect responsible for their content. Any resulting costs or delays due to errors, omissions, or discrepancies contained in the submittals shall be the responsibility of the Contractor. Architect shall not be responsible for verifying quantities, measurements, or dimensions contained in the submittals, nor is the architect responsible for reviewing submittals for code compliance.
- G. Materials, equipment, or furnishings ordered and/or installed, that are incorrect or installed improperly due to errors on the Shop Drawings, shall be replaced by the Contractor at no cost to the Owner or Architect. Any resulting delays shall be the responsibility of the Contractor.
- H. Contractor shall identify and bring to the attention of the Architect, in writing, any variations from the contract documents, products or systems which are being submitted. Products, materials and systems not in compliance with the specified requirements of the contract documents may be rejected by the Architect at any time. Submittals stamped "no exceptions taken" by the Architect does not relieve the Contractor of his responsibilities under the Contract.
- I. Submittals shall be complete for each definable feature of the Work; components and related features shall be submitted at the same time. Incomplete submittals shall be returned to the Contractor without review.
- J. Any costs or delays resulting from the Contractor's failure to provide complete submittals, and said submittals are reviewed in a timely



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manner by the Architect, the costs and delays shall be the responsibility of the Contractor.

### 1.4 SUBMITTALS PROCEDURES AND PROCESSING

#### A. Submittal Procedures:

1. Provide submittals to the Construction Manager as required in individual Specification Sections, as otherwise required by the Architect, and as summarized herein.
2. Submittals not required will be reviewed only at the option of the Construction Manager and/or Architect/Engineer.
3. Make submittals promptly in accordance with the approved submittal schedule, and in such sequence as to cause no delay in the work or in the work of any contractor.
4. Number submittals sequentially, using alphabetic suffixes on resubmittals.
5. Each submittal shall contain data representing only one specification section.
6. Unless otherwise specified, submit one original and four copies of each submittal plus the number of copies to be returned for the Contractor's use. Submittals shall be organized in identical order in all copies. The submittal documents shall be forwarded to the Construction Manager with a cover Transmittal Form, attached at the end of this Section.
7. The Construction Manager will arrange for the review by the Architect/Engineer and return submittals within 14 calendar days after receipt thereof, or within 14 calendar days after receipt of all information necessary for such review, whichever is later. Submittals will be returned by overnight delivery if the Contractor's account number is provided.
  - a. The returned submittals will be marked "No Exception Taken", "Make Corrections Noted", "Revise and Resubmit", "Rejected", or "Not Reviewed".
  - b. The Contractor shall revise and resubmit, within 14 calendar days of return, submittals marked "Revise and Resubmit" or "Rejected".
8. The Contractor may not begin work covered by a submittal unless the submittal for the Work has been marked "No Exception Taken" or "Make Corrections Noted". Work shall proceed in accordance with review notes and comments.
9. Where any item or work is required by the Contract to be delivered, stored, assembled, installed, started-up, adjusted, or finished in accordance with the

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manufacturer's instructions, submit manufacturer's printed instructions in quantities as specified for product data.

10. Identify conflicts between manufacturer's instructions and the Contract. Report conflicts to Construction Manager.

### **1.5 SUBMITTAL SCHEDULING AND TRACKING**

- A. Coordinate scheduling, sequencing, preparing, and processing of submittals so that work will not be delayed by submittal process. Architect shall have a minimum of ten calendar days from receipt of submittal to review and respond to all submittals. The period of review for each resubmittal shall be the same as for the initial submittal. The contract completion date will not be extended due to Contractor's non-compliance with submittal requirements.
- B. Comply with each section for submittal deadlines.
- C. The Architect will prepare, and the Contractor will be provided a listing of the required submittals by specification Section. The listing will be included on a Submittal Log form used for scheduling and tracking the processing of submittals.
- D. The Contractor will insert the target submission dates in the Submittal Log for each required submittal. These target submission dates must be consistent with the accepted Construction Schedule, and cross referenced to the first Construction Schedule activity that is dependent upon the approval of the submittal.
- E. The Contractor, along with the Construction Manager shall track the status of the submittal using the Submittal Log, and be prepared to provide an up-to-date status at each periodic Project Progress meeting.

### **1.6 SPECIFIC GUIDELINES**

#### **A. SHOP DRAWINGS**

1. Submit newly prepared information, drawn to accurate 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 considered Shop Drawings.
2. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - a. Dimensions
  - b. Identification of products and materials included
  - c. Compliance with specified standards

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- d. Notation of coordination requirements
  - e. Notation of dimensions established by field measurement.
3. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42".
  4. Submittals: Submit one correctable translucent reproducible print and four (4) blue- or black-line prints plus the number of copies to be returned to the Contractor to the Construction Manager. The reproducible and appropriate number of prints will be returned to the Contractor. Shop Drawings should not be used for fabrication without appropriate approval.

### **B. PRODUCT DATA**

1. Collect Product Data into a single submittal for each element of construction or system within a Specification Section. 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. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings". Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information
  - a. Manufacturer's printed recommendations
  - b. Compliance with recognized 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

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

2. Submittals: Submit a minimum of five (5) copies of each required submittal plus the required number of copies to be returned to the Contractor. The Construction Manager will return two sets marked with action taken and corrections or modifications required.
3. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities:

## **GYM CLERESTORY WINDOW REPLACEMENT**

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- a. Do not proceed with installation until a copy of the applicable accepted Product Data is in the installer's possession.
- b. Do not permit use of unmarked copies of Product Data in connection with construction.

### **C. SAMPLES**

1. 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:
  - a. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to include the following:
    - 1) Generic description of the Sample
    - 2) Sample source
    - 3) Product name or name of manufacturer
    - 4) Compliance with recognized standards
    - 5) Availability and delivery time
  - b. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
2. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product:
  - a. Preliminary submittals will be reviewed and returned with the Architect's mark indicating selection and other action.
3. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 5 sets; one will be returned marked with the action taken:
  - a. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.
4. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work:

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- a. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

PART 2 - PRODUCT (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

# GYM CLERESTORY WINDOW REPLACEMENT

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## SECTION 01310

### PROGRESS SCHEDULES

#### PART 1 - GENERAL

##### 1.1 GENERAL SCHEDULING REQUIREMENTS

- A. The Contractor shall develop and maintain the Construction Schedule for the Work per General Conditions Article 8. Progress Schedule. The purpose of The Construction Schedule shall be to:
1. Assure adequate planning, scheduling, and reporting during execution of the construction and related activities so they may be prosecuted in an orderly and timely manner, within the Contract Time and in accordance with the Milestones stipulated by the Contract;
  2. Assure coordination of the work of the Contractor and the various subcontractors and suppliers at all tiers;
  3. Assist in the preparation and evaluation of the Contractor's monthly progress payments;
  4. Assist in monitoring the progress of the work and evaluating proposed changes to the Contract and the Construction Schedule; and,
  5. Assist in detecting problems for the purpose of taking corrective action and to provide a mechanism or tool for determining and monitoring such corrective actions.
- B. The work under this Contract will be planned, scheduled, executed and reported using the Precedence Diagramming Technique of the Critical Path Method (hereinafter referred to as CPM). The Contractor shall use scheduling software compatible with Primavera P3 or Suretrak scheduling software.
- C. The Contractor shall employ the services of at least one person fully qualified in critical path scheduling on projects of similar size and scope for the duration of the Contract.
- D. Any and all milestones listed in these Specifications, or elsewhere in the Contract Documents, represent only the major items of construction work. The milestones indicated are considered essential to the satisfactory performance of this Contract and to the coordination of all work on the project. Planned completion dates may be established by the Contractor subject to approval by the Construction Manager.

##### 1.2 SCHEDULE SUBMITTALS

- A. The Contractor should assume that the Work will need to be coordinated with other Contractors that may be on-site, in a manner that may be inefficient for the Contractor in order to benefit the overall project. The Contractor should assume that its work will not always be given top priority. The Contractor should assume

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that there will be breaks in their work flow in order to accommodate other Contractors on the site.

### B. Detailed Construction Schedule:

1. Within 14 calendar days following effective date of the Notice to Proceed, Contractor shall submit to the Construction Manager a detailed Construction CPM Schedule in precedence format for the Contractor's construction work scope.
2. The detailed Construction Schedule shall conform with the requirements outlined in the "Technical Requirements for Contractor-Submitted Schedules" in this Specification Section.
3. The Construction Schedule shall be reviewed in the following manner:
  - a. Within 14 calendar days after receipt by the Construction Manager of the detailed Construction Schedule, the Construction Manager will notify the Contractor of any concerns the District or its representatives may have in regard to the detailed Construction Schedule.
  - b. If the Contractor's proposed activities, logic, duration's, manpower, or cost loading are questions the Contractor shall, within 3 calendar days after receipt of the Construction Manager's request, provide a satisfactory revision to, or adequate justification for, these activities, logic, duration's, manpower, or cost loading to the satisfaction of the source of the question.
  - c. In the event the Contractor fails to define any element of work, activity or logic and the District review does not detect this omission or error, such omission or error, when discovered by the Contractor or Construction Manager, shall be corrected by the Contractor at the next monthly Schedule Update (discussed hereinafter) and shall not affect the Contract Time.
  - d. Acceptance of Contractor's Construction Schedule
    - 1) Upon the acceptance of the changes to the Construction Schedule the Contractor and Construction Manager shall sign on the face of the Construction Schedule CPM Network, which shall then indicate the acceptance of the Construction Schedule as the Schedule of Record.
    - 2) Acceptance of the Contractor's Construction Schedule will be a condition precedent to the making of any progress payments under the Contract after the first 60 calendar days of the Contract.
    - 3) Upon acceptance of the Construction Schedule the cost-loaded values of the Construction Schedule will be used as a basis for determining progress payments. Monthly Applications for Payment shall be based upon information developed by the monthly Schedule Update. The computer-produced Cost Report will be utilized by the Construction Manager for verification of the Application for Payment submitted by the Contractor.

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4) Acceptance of the Contractor's Construction Schedule does not relieve the Contractor of any of Contractor's responsibility whatsoever for the accuracy or feasibility of the Construction Schedule, or of the Contractor's ability to meet the Contract completion date or milestone dates, nor does such acceptance acknowledge or admit the reasonableness of the activities, logic, duration, manpower, or cost loading of the Contractor's Construction Schedule.

e. The Construction Manager reserves the right to adjust schedule activity duration, logic, etc. submitted by any Trade Contractor in order to fit all work within the Contract time frame or for the benefit of the overall project.

### 1.3 TECHNICAL REQUIREMENTS FOR CONTRACTOR SUBMITTED SCHEDULE

A. The Contractor will consider the following guidelines in the development of the Construction schedule:

1. Milestone dates must be adhered to and shall be clearly identified on the Schedule. Milestone dates may not be changed without the written consent of the Construction Manager.
2. The Schedule shall clearly identify the activities and illustrate accomplishment of the work within the time(s) for completion of the Project set forth in the Contract
3. The Contractor shall be responsible for assuring that subcontractor work at all tiers, as well as Contractor's own work, is included in the Schedule.
4. The Schedule as developed shall show the sequence and interdependence of activities required for complete performance of the work. The Contractor shall be responsible for assuring all work sequences are logical and the Schedule shows a coordinated plan of the work. If there are work activities performed by another Contractor that either need to precede or follow one of the Contractor's activities, those activities should also be included on the Contractor's schedule so that all ties between the Contractors activities are included in the overall Project Construction Schedule.
5. The level of detail of the Contractor's Schedule shall be a function of the complexity of the work involved. The total number of activities shall be subject to acceptance by the Construction Manager. No construction activity shall have a duration of longer than ten calendar days nor have a value of over \$20,000.00, without prior acceptance of the Construction Manager. Non-construction activities (such as procurement, fabrication, etc.) may have duration in excess of 10 calendar days, but no longer than 30 calendar days.
6. Normal weather conditions shall be considered and included in the planning and scheduling of all work influenced by high or low ambient temperatures and/or precipitation to ensure completion of all work within the Contract Time.

B. Schedule activities shall meet the following criteria:



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1. Activity descriptions shall be clear and concise. All activities shall be tied into the schedule by logical constraints/restraints.
  2. Proposed duration assigned to each activity shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity.
  3. Responsibility for each activity shall be identified with a single performing organization, typically the Subcontractor name. Each activity shall have as a minimum, codes identifying Phase, Building, and/or Floor.
  4. Schedule activities shall be cost-loaded and the assigned dollar value of each activity of the Network shall cumulatively equal *the* total Contract Amount. Bond costs may be shown separately; however, other General Requirements costs, mobilization, overhead, profit, etc., shall be prorated throughout all activities. Items accepted as stored materials, approved in advance by the Construction Manager need to be shown as separate "material procurement" activities in the schedule and the material dollars only allocated to these activities.
- C. Contractor shall assign manpower-loading for each activity of the Network. Additionally, the Contractor shall prepare and submit a separate manpower summary analysis in graphic format depicting manpower by subcontractor and aggregate. The graph(s) shall show the number of man-days of effort over the duration of the Construction Schedule.
- D. For all major equipment and materials fabricated or supplied for this project, the network shall show a sequence of activities including:
1. Preparation of shop drawings and sample submissions.
  2. Review and approval of shop drawings and samples (allow 14 calendar days for review of submittals).
  3. Shop fabrication and delivery.
  4. Erection or installation.
  5. Testing of equipment and materials.
- E. If requested by the Construction Manager, the Contractor shall furnish a written narrative of the Contractor's determination of duration for critical activities. Such explanation shall include the number of crews, crew composition, number of shifts per day, number of hours in a shift and the number of work days per week. The Contractor shall provide a list of the major items of construction equipment intended for use on this Contract's operations, including types, number of units, unit capacities and the proposed time each piece of equipment will be on the job, keyed to the activities on which the equipment will be used.
- F. For the detailed Construction Schedule, Schedule Updates, and required narrative reports the Contractor shall submit the number of copies requested by the Construction Manager along with a 3 1/2" MS-DOS formatted computer diskette of the Contractor's Schedule to the Construction Manager.

### 1.4 REQUIRED REPORTS

## **GYM CLERESTORY WINDOW REPLACEMENT**

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- A. As a part of the detailed Construction Schedule submittals, as well as for each Schedule Update, the Contractor shall submit a Narrative Schedule Report. This Narrative Schedule Report shall include the following:
1. Description of the actual work accomplished during the reporting period.
  2. Description of any problem areas
  3. Description of current and anticipated delays with recommended corrective actions to mitigate such delays.
  4. A list of major construction equipment used on the work during the reporting period and any construction equipment idle during the reporting period.
  5. A total number of men by craft actually engaged on the work during the reporting period, with such total stated separately as to office, supervisory, and direct labor.
  6. A list of Contractor-supplied permanent plant materials, long lead items and equipment indicating current availability and anticipated job site delivery date.
  7. A list of proposed modifications, additions, deletions, and changes in logic to the approved construction schedule.

#### 1.5 FLOAT TIME

- A. Float time is not for the exclusive use or benefit of either the Contractor or the District. Float time is contractually defined as "Project Float" and will be apportioned by the Construction Manager according to the needs of the Project. The Contractor acknowledges and agrees that actual delays, that do not exceed available total float time, will not have any effect upon Contract completion times and Contractor will take all actions necessary to maintain the overall schedule.
- B. Pursuant to the Project Float sharing requirements as set forth in the above paragraph, use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity duration, or constrained dates shall be cause for rejection of the Contractor's Construction Schedule and any revisions or updates.

#### 1.6 SCHEDULE MEETINGS

- A. Pre-construction Schedule Conference:
1. The Construction Manager will arrange and conduct a pre-construction schedule conference. Contractor shall be prepared to review and discuss the schedule and sequence of operations plus cost and manpower loading methodology. The conference shall be attended by:
    - a. Contractor's Project Manager, Superintendent, and Scheduler.
    - b. Any other Contractor's key personnel, Subcontractor's representatives, and major supplier's representatives that the Contractor deems advisable to attend.

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- c. Representatives from the District and other agencies will also be invited to attend.
  - d. The architect
2. Procedures will be reviewed for the following:
- a. Development of the detailed Construction Schedule by the Contractor.
  - b. Periodic updating of schedule activities and method of determining schedule percent complete.
  - c. Cost loading of activities.
  - d. Manpower loading of activities.
  - e. Procedures for making modifications to the schedule.
  - f. Procedures for assessing schedule impacts and schedule delays
  - g. Development of recovery schedules.
  - h. Data exchange and communications.
- B. Short Interval Schedule Meetings:
- 1. Once each week, on a day mutually agreed to by the Construction Manager and the Contractor, a schedule meeting will be held to assess the progress achieved by the Contractor during previous work week. The Contractor shall submit a progress schedule listing the activities completed and in progress for the previous week and the activities scheduled for the succeeding 2 weeks. A bar chart directly derived from the detailed Construction Schedule shall be used to generate the three week activity schedule. All activities shown in this short interval schedule will be identified by the same activity numbers and descriptions as shown in the detailed Construction Schedule. The Contractor may add further details to monitor this short interval Schedule.

### 1.7 SCHEDULE UPDATING

The term "updated schedule" means dates have been changed without change to the logic sequence.

- A. Schedule updating:
- 1. On a monthly basis, the Contractor shall meet with the Construction Manager for the purpose of updating the Schedule. The updating process will be performed by the Construction Manager and Contractor making an assessment of schedule activity progress. Use of a Schedule Update Report to log this activity progress is recommended. Information to be recorded consists of activity actual start and finish dates, activities' percent complete, and (if applicable) dollar amounts earned for each activity.
  - 2. Once this information has been recorded on 3-1/2" computer diskette by the Contractor, the Contractor shall submit the diskette to the Construction Manager, this data shall be processed by the Construction Manager, and shall be used as the basis for the Contractor's monthly Application for Payment.

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3. Upon finalization of the computerized schedule update, the Contractor shall submit the required schedule reports as detailed in the "Required Reports" section of this Specification
4. In addition to these monthly updates, interim updates may be performed on the Construction Schedule at the discretion of the Construction Manager. Contractors will be expected to contribute update data to the Construction Manager as required to complete these updates.

### 1.8 SCHEDULE MODIFICATIONS

The term "revised schedule" means logic has been changed from the immediately previous schedule.

- A. Updating the Construction Schedule to reflect actual progress made up to the date of a Schedule Update shall not be considered revisions to the Construction Schedule.
- B. If, as a result of the monthly Schedule Update, it appears the Construction Schedule no longer represents the actual performance and progress of the work, the Construction Manager will require the Contractor to submit a revision to the Construction Schedule. Such revisions to the Schedule shall not alter any of the Project Milestone dates.
- C. The Contractor may also request revisions to the Construction Schedule 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 the method of operating and scheduling of the work, the Contractor shall notify the Construction Manager in writing, stating the reason for the proposed revision as well as proposed changes. All reasonable requests by the Contractor for revisions will be accepted by the Construction Manager, provided there is no impact to other contractors or the Project Completion.
- D. If revision to the Construction Schedule is contemplated, the Contractor shall advise the Construction Manager in writing at least 14 calendar days prior to the next Schedule Update meeting, describing the revision and setting forth the reasons thereof. The Contractor shall submit copies of the proposed changes along with a written narrative of the proposed changes. If accepted by the Construction Manager, those revisions may be incorporated into the Construction Schedule.
- E. Construction Manager-suggested revisions to the Construction Schedule will not be incorporated into the Construction Schedule without written notice to the Contractor, who shall respond in writing within 14 calendar days, either agreeing with the Construction Manager's proposed revision, or setting forth justification why it can not be accomplished. If the Contractor's justification for not accomplishing the revision is reasonable, such revision will not be incorporated into the Construction Schedule. If the Contractor's justification is not accepted, the Construction Manager-directed revisions shall be incorporated into the Construction Schedule. The Contractor's failure to respond in writing within 14 calendar days will be deemed to be an acceptance of the Construction Manager-

## **GYM CLERESTORY WINDOW REPLACEMENT**

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suggested revisions, and such revisions will be incorporated into the Construction Schedule.

- F. Requests for revisions of activity manpower, activity costs, or redistribution of activity costs shall be made in accordance with the requirements of this section.

### 1.9 SCHEDULE IMPACTS and SCHEDULE DELAYS

- A. During the course of the Project, it may be appropriate to revise the Schedule to reflect delays. If the Contractor feels he has encountered delays he shall present an Impacted Schedule to the Construction Manager approximately two weeks prior to the monthly schedule update.
- B. The procedure for incorporating delay impacts into the schedule is as follows:
  - 1. Create a schedule activity (or activities) that represent the scope of the change or delay.
  - 2. Assign duration and cost/manpower resources to these new activities.
  - 3. Determine appropriate logic ties for these new activities. Assign predecessors and successors so that these activities can tie into the existing schedule activities.
  - 4. These impact activities should be loaded into a separate copy of the updated schedule that immediately precedes the time frame of the alleged impact.
  - 5. After the Schedule is recalculated with these impact activities in place, the schedule will be evaluated to determine their effect on the Project Milestones.
- C. The Impacted Schedule, along with the backup data describing the new schedule activities and logic ties which comprise the impact/delay issues, will be submitted to the Construction Manager for review. If accepted, these impact/delay adjustments will become permanent part of the Project Schedule. The Contractor shall not unilaterally makes changes to the Project Schedule for schedule impacts without the approval of the Construction Manager.
- D. Contract Time or Milestones adjustments will be considered only to the extent the equitable time adjustments to the activity or activities affected by the impact or delay exceeds the total (positive or zero) float of a critical activity (or path).

### 1.10 RECOVERY SCHEDULE

- A. The Contractor shall furnish such manpower, materials, facilities and equipment and shall work such hours, including shift work and overtime, as may be necessary to insure the progress and completion of the work in accordance with the approved and currently updated Construction Schedule. If work falls behind schedule to the extent that any of the Milestone dates or completion dates may not be met, the Contractor will take actions as required to substantially eliminate, in the judgment of the Construction Manager, the work progress deficiency.

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- B. The Contractor shall also submit to the Construction Manager a Supplementary Recovery Schedule in a form and detail appropriate to the need to explain and display how the Contractor intends to reschedule those activities to regain compliance with the detailed Construction Schedule.

### **1.11 FAILURE TO PERFORM SCHEDULING TASKS**

If Contractor fails to substantially comply with the scheduling requirements of the Contract Documents, the Contractor hereby agrees, in such instance, to comply with such schedules as the Construction Manager develops, or directs, and activity sequences and duration as the Construction Manager may reasonably require. The Contractor shall cooperate with the Construction Manager in supplying data and requested information necessary for all stages of schedule development, modifications, and updating.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01370**

**SCHEDULE OF VALUES**

**PART 1 - GENERAL**

**1.1 REFERENCE GENERAL CONDITIONS**

- A. The requirements outlined hereinafter amplify the requirements of Article 46 "Cost Breakdown and Periodical Estimates" of the "Contract General Conditions".

**1.2 SUBMITTALS**

- A. Within 10 calendar days after the effective date of Notice to Proceed, submit to the Construction Manager a schedule of values allocated to the various portions of the work, prepared in such form and supported by such data to substantiate its accuracy as Construction Manager may require. Use this schedule as a basis for the Contractor's Applications for Payment.
- B. Submit three (3) copies, typewritten.
- C. Type schedule on 8-1/2" x 11" white paper; or form approved by Construction Manager; or contractor's standard forms and automated printout will be considered for approval by Construction Manager upon Contractor's request. Mark the Schedule of Values with:
  - 1. Title of Project and Location
  - 2. Project Number
  - 3. Name and Address of Contractor
  - 4. Contract Designation
  - 5. Date of Submission
- D. List the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- E. Use the table of contents of this Project Manual as the format for listing component items, Divisions 2 thru 16. Identify each line item with the number and title of the respective major section of the specifications.
- F. For each major line item list sub-values of major products or operations under the item; maximum sub-value item not over \$20,000.00, unless approved by the District.

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- G. Provide a separate listing of General Requirements items, such as Performance Bond, Labor and Material Payment Bonds, permits, and job mobilization, and any Allowances included in the Bid and Contract Value.
- H. For the various portions of the work:
  - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
  - 2. For items on which progress payments will be requested for stored materials, break down the value into:
    - a. The cost of the materials, delivered and unloaded, with taxes paid.
    - b. The labor and equipment to install materials.
    - c. Contractor's overhead and profit
- I. The sum of all values listed in schedule shall equal the Contract Amount.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION



**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01400**

**CONSTRUCTION QUALITY CONTROL**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section establishes general requirements pertaining to the Contractor's control of the quality of work being performed to meet the Contractor's obligations under the terms of the Contract.
  
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and other Sections in Division 1 of these Specifications.
  - 2. Section 01415: Testing and Inspecting.
  
- C. Definitions:
  - 1. The term "Quality Control," as used in this Section, means the successful execution of a realistic plan to certify that the required standards of quality construction are met, and to preclude problems resulting from substandard quality. In Quality Control, the Contractor defines procedures to manage and control his equipment, materials, and personnel so that the completed Project will comply with Contract requirements.
  
  - 2. The term "Quality Assurance," as used in this Section, involves the means by which the Owner protects its interests. Through reviews, inspections, and tests, the Owner monitors the Contractor's Quality Control to see that the end product complies with the standard of quality established by the Contract. If Quality Control is not followed by the Contractor it will be the Contractor's responsibility to make any repairs, adjustments or replacement at no cost to the District.

**1.2 SUBMITTALS**

- A. Comply with pertinent provisions of Section 01300.

**PART 2 – PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.1 QUALITY CONTROL**

## **GYM CLERESTORY WINDOW REPLACEMENT**

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- A. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work.
- B. Preparatory inspection:
  - 1. Perform prior to commencement of any work on each definable feature of work (a "definable feature" may be a Specifications Section or specific trade task).
  - 2. Include:
    - a. A review of Contract requirements as shown by the pertinent Drawings, Specifications, or other Contract Documents;
    - b. A check to assure that all materials and/or equipment have been tested, submitted, and approved;
    - c. A check to assure that provisions have been made to provide required control testing;
    - d. Examination of the work area to ascertain that all preliminary work has been completed;
    - e. A physical examination of materials and equipment to assure that they conform to approved Shop Drawings or submittal data, and that all necessary materials and/or equipment are on hand.
    - f. A review of schedule, workforce, and coordination requirements.
  - 3. Repeat preparatory inspection when there is a change in the supervision of the Work.
  - 4. Submit record of preparatory inspection with quality control daily report.
- C. Initial inspection:
  - 1. Perform when initial work commences on a definable feature under this Contract.
  - 2. Include an examination of the quality of workmanship as well as a review of control testing and inspecting for compliance with Contract requirements.
  - 3. Repeat initial inspection when there is a change in the supervision or skilled workmen performing the definable feature of work.
  - 4. Submit record of initial inspection with quality control daily report.
- D. Follow-up inspections:
  - 1. Perform inspection and submit quality control report daily until completion of the definable feature of work.
  - 2. Assure continuing compliance with Contract requirements, including control testing, until completion of the definable feature of the work.

## **GYM CLERESTORY WINDOW REPLACEMENT**

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- E. Quality assurance:
  - 1. The Construction Manager may require joint inspections including the Architect with the Contractor at any time and on a periodic basis to evaluate the quality control program's effectiveness.
  - 2. Cooperate with the Owner's testing and inspecting agency in their performance of inspections and tests ordered by the Owner and the Architect or DSA.

### **3.2 REPORTING**

- A. Make reports to the Construction Manager at the intervals or milestones shown in the Construction Progress Schedule and as Testing and Inspections are performed.
  - 1. Conduct and record the minutes of all preliminary inspection and initial inspection meetings, and submit minutes.
  - 2. Make reports on the approved form or in the approved format.
  - 3. Include copies of such quality control and/or testing reports as are received by the Contractor during the Period immediately preceding the report to the Construction Manager.
  - 4. Maintain a complete chronological file at the job site, including copies of all reports made to the Construction Manager and all pertinent back-up data. Make the file available to the Construction Manager, Architect, and Project Inspector for review at their request.

### **3.3 COMPLIANCE**

- A. If the Contractor's program fails to produce acceptable results, the Construction Manager may direct such changes or take such other actions, at the Contractor's expense, as are necessary to assure Contract compliance.
- B. Requirements stated in the Section do not preclude nor restrict inspection and testing which may be performed under the Owner's Quality Assurance Program and, conversely, inspection and testing by the Owner does not relieve the Contractor of his responsibilities unless specifically so stated in the Contract.

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01415**

**TESTING AND INSPECTING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes Testing and Inspection Definitions, General Requirements for Testing and Inspection, Testing and Inspection coordination, sampling, and procedures for accomplishment.

**1.2 RELATED REQUIREMENTS**

- A. General Conditions, Article 69.
- B. Testing of Materials specified to be Tested by other Agencies under other Sections in this Division 1.

**1.3 DEFINITIONS**

- A. Testing Laboratory or Agency: Licensed testing laboratory or agency certified as meeting requirements of ASTM D3666, E329, E543 and E548 as applicable to tests and inspections performed; employed and paid by the District, unless otherwise specified, and referred to hereafter as Testing Laboratory.
- B. Project Inspector: The individual who has the responsibility to the Architect and the District for monitoring the execution of the Work for compliance with Title 24.
- C. Disqualified Material: Any material shipped or delivered to site by Contractor from source of supply before having satisfactorily passed required tests and inspections, or before receipt of a notice from Construction Manager that such test and inspection will not be required, shall not be incorporated in the work.

**1.4 GENERAL QUALITY CONTROL REQUIREMENTS**

- A. Materials to be furnished under the Contract are subject to test and inspection for compliance with Contract Document requirements.
- B. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, adjusted, and conditioned as directed by manufacturer, unless more restrictive or stringent requirements are specified herein. Furnish Construction Manager two (2) copies and Project Inspector one (1) copy of such printed instructions prior to introduction of such items, when specified.
- C. Certificates:
  - 1. Furnish Construction Manager two (2) signed certificates from suppliers of materials, equipment and manufactured items stating that such materials, equipment, and manufactured items meet or exceed standards specified.

## **GYM CLERESTORY WINDOW REPLACEMENT**

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2. In lieu of such certification, Contractor may submit reports of current tests made and attested by a reputable and recognized testing laboratory.

D. Testing Laboratory and Geotechnical Engineer are not authorized to accept or reject any work, to modify any Contract Document requirement, to advise or instruct Contractor or his employees as to execution of work, or to perform any duty or service for Contractor. Inspection of work will not relieve Contractor of his obligation to fulfill all requirements of Contract Documents.

### 1.5 COORDINATION OF TESTS AND INSPECTIONS

The Contractor shall:

- A. Schedule, initiate, and coordinate Agency tests and inspections required by Contract Documents and public authorities having jurisdiction over work.
- B. Notify Inspector in writing, 24 hours in advance of manufacture of materials to be supplied, which by requirements of Contract Documents must be tested at source of supply so that Laboratory may arrange for testing. Proceed in same manner for tests to be performed at site.
- C. Coordinate with the Project Inspector and Construction Manager, the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests. The Contractor is responsible for communicating to the Project Inspector the scheduling times and schedule for inspections, tests, taking samples, reports, and similar activities.

### 1.6 TEST SAMPLES AND PROCEDURES

- A. Test Samples: Furnish and deliver samples of materials to be tested at no extra cost to the District. Test samples will be selected by Testing Laboratory, not by Contractor.
- B. Test Procedures:
  - 1. Testing Laboratory will perform tests according to specified methods.
  - 2. If no procedure or test method is specified, testing shall conform to material specification referenced, unless otherwise directed by Architect.
  - 3. Testing Laboratory will tag, seal, label, record or otherwise suitably identify materials for testing. No such materials shall be used in the work until test result reports are submitted and approved, excepting only the materials specified to be placed or installed prior to testing.
- C. Retesting: Repeat applicable tests at specified intervals, whenever source of supply is changed, or whenever characteristics of materials change or vary during course of construction.

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## 1.7 COSTS

- A. The District will engage and pay for the services of an independent agency to perform inspections and tests specified as the Districts responsibility:
  - 1. Where the District has engaged a testing agency or other entity for testing and inspection of a 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 District.
  
- B. Contractor shall reimburse the District all or any part, as the District may deem just and proper, of test inspection costs incurred by the District due to the following:
  - 1. Retesting costs caused by failure of materials to pass initial tests.
  - 2. Covering work before required inspections or tests have been performed.
  - 3. Additional inspections required for Contractor's correction of defective work.
  - 4. Testing costs incurred without the District's approval for acceleration of work done for Contractor's convenience.

## 1.8 TEST REPORTS

- A. Copies of each test result, for tests required of the Contractor, signed and certified by Testing Laboratory Licensed Engineer will be distributed as follows:

	<u>Copies</u>
District	1
Construction Manager	2
Architect	2
Project Inspector	1
	(To be same for Inspection Reports)

## 1.9 CONTINUOUS AND SPECIAL INSPECTIONS

- A. General: All construction work shall be subject to inspection by the Oceanside Unified School District (hereinafter referred to as the District) and the Construction Manager, Architect, and Project Inspector and all such construction or work shall remain accessible and exposed for inspection purposes until accepted.
  - 1. The District will provide project personnel, including inspectors, to be available at the project site.
  - 2. Acceptance as a result of an inspection shall not be construed to be an approval of a violation of the provisions of the building code or of other ordinances of the jurisdiction, including plans and specifications. Inspections presuming to give

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authority to violate or cancel the provisions of code, or of plans and specifications shall not be valid.

- B. Inspection Requests: It shall be the duty of the contractor doing the work to notify the Inspector that such work is ready for inspection. The District requires that every request for inspection be filed at least two working days (48 hours) before such inspection is desired. Such requests shall be in writing.
- C. Approval Required: Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the Inspector. The Inspector, upon notification, shall make the requested inspections and shall either indicate in writing that portion of the construction is satisfactory as completed, or shall notify the Contractor that same fails to comply with plans and specifications. Any portions which do not comply shall be corrected by the Contractor and such portion shall not be covered or concealed until authorized by the Inspector.
- D. Inspection Coordination: Contractor shall provide, on a weekly basis, an anticipated Inspection Requirements Schedule, coordinated with the three-week look ahead schedule, showing the anticipated inspection needs for the following three weeks to facilitate appropriate coordination and interface as well as mobilization of required inspection staffing.

#### 1.10 OTHER APPROVALS

- A. If laws, ordinances, rules, regulations or orders of public agency having jurisdiction require work to be inspected, tested or approved by some authority other than Testing Laboratory or Contractor, Contractor shall give required notices, make arrangements to deliver to Construction Manager certificates of inspection, test, or approval of such public agency, and pay costs therefor unless otherwise provided in Contract Documents.

#### 1.11 CONTRACTOR'S ASSISTANCE

- A. Provide access, facilities and labor necessary for duties to be performed at site by Testing Laboratory, including furnishing ladders, hoist, lighting, water supply and like services.

#### 1.12 VERIFICATION OF CONDITIONS

- A. Prior to installation of any product, Contractor shall inspect existing conditions to receive work to be installed and arrange for correction of defects in existing workmanship, material, or conditions that may adversely affect work to be installed.
- B. Installation of materials constitutes acceptance of existing conditions as being in proper condition to receive materials to be applied and waiver of claim that existing conditions are defective as pertains to warranty requirements, excluding unascertainable or concealed conditions.

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- C. Where Specifications require a material to be installed under the supervision or inspection of material manufacturer or his representative, manufacturer or his representative shall also inspect work in place and issue a letter of approval to District.

PART 2 – PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION



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**SECTION 01450**

**ENVIRONMENT PROTECTION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. This Section establishes general requirements pertaining to abatement and control of environmental pollution arising from activities of the Contractor and his subcontractor or subcontractors in performance of the Work of the Contract.

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and other Sections in Division 1 of these Specifications.
2. Additional requirements may be stated in various other Sections of the Specifications.

C. Definitions:

1. The term "environmental pollution," as used in this Section, means:
  - a. The presence of chemical, physical, or biological elements or agents which:
    - (1) Adversely affect human health and/or welfare;
    - (2) Unfavorably alter ecological balances that are of importance to human life;
    - (3) Affect other species of importance to man;
    - (4) Degrade the utility of the environment for aesthetic and/or recreational purposes;
  - b. The control of environmental pollution requires consideration of air, water and land, and involves noise, solid waste-management, and management of radiant energy and radioactive materials, as well as other pollutants.
2. Contaminants:
  - a. "Sediment" means soil and other debris that have been eroded and transported by runoff water.
  - b. "Solid waste" means rubbish, debris, garbage, and other discarded solid materials resulting from construction activities, including a variety of combustible and noncombustible wastes such as ashes, waste materials resulting from construction or maintenance and repair work, leaves, and tree trimmings.
  - c. "Chemical waste" includes petroleum products, bituminous materials,

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salts, acids, alkalis, herbicides, pesticides, disinfectants, organic chemicals, and inorganic wastes; some of which may be classified as "hazardous."

d. "Sanitary wastes":

- (1) "Sewage" means that which is considered as domestic sanitary sewage;
- (2) "Garbage" means refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

e. "Hazardous materials" means such materials as are so defined by applicable laws and regulations.

### 1.2 SUBMITTALS

A. Comply with pertinent provisions of Section 01300.

B. Prior to commencement of the Work of this Contract:

1. Compile and submit to the Construction Manager a written environmental protection program proposed by the Contractor for compliance with the requirements of this Section.
2. Meet with the Construction Manager to review the proposed environmental protection program and to make any changes in the plan, as required by the Construction Manager, prior to commencement of the Work.
3. Prior to commencement of the Work, secure the Construction Manager's approval of the written environmental protection program.
4. Obtain all necessary Federal and State approvals.

### 1.3 QUALITY CONTROL

A. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

B. Comply with all pertinent Federal, State, and local regulations pertaining to water, air, solid waste, and noise pollution.

C. Require subcontractors to comply with the provisions of this Section.

## PART 2 - PRODUCTS

### 2.1 MATERIALS (Not Used)

## PART 3 - EXECUTION

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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 which produce harmful noise over 90 decibels.

#### 3.1 PROTECTION OF NATURAL RESOURCES

- A. It is intended that the land resources within boundaries of the Project, but outside the limits of permanent Work performed under this Contract, shall be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the Project.
- B. Insofar as possible, Contractor shall confine activities to pertinent areas defined on the Drawings or elsewhere in the Contract Documents.
  - 1. Return construction areas to their pre-construction elevations except where surface elevations are otherwise noted to be changed.
  - 2. Maintain natural drainage patterns.
  - 3. Conduct construction activities in such a manner that pooling of stagnant water will not occur at any time.
- C. Land resources:
  - 1. Do not remove, cut, deface, injure, or destroy trees or other vegetation outside the limits of the Work.
  - 2. Do not remove, cut, deface, injure, or destroy trees or other vegetation inside the work area limits except as allowed in writing by the Construction Manager.
  - 3. Land resources damaged by the Contractor shall be promptly replaced or repaired to the approval of the District and at the Contractor's expense.
- D. Tree trimming:
  - 1. In accordance with recognized standards for such work, trim and seal tree limbs overhanging the line of the Work and in danger of being damaged by the Contractor's operations.
  - 2. Remove other tree limbs as directed by the Construction Manager so the tree will present a balanced appearance.
  - 3. Roots:
    - a. Do not cut roots unnecessarily during excavating or trenching operations.
    - b. Expose roots 3" in diameter or larger, encountered in the course of excavation, and do not sever but wrap them in burlap as a protective measure while exposed.
    - c. At the edge of the excavation or trench, neatly trim all roots 1" in diameter or larger that are severed in the course of excavation and paint them with a heavy coat of tree seal approved by the District.

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- E. Do not allow the depositing of mud and debris from construction vehicles onto public streets; sweep turning areas and pavement entrances as needed to remove any and all spills or material tracked onto the public street.
- F. Water resources:
1. Reference General Conditions Article 77. Compliance with State Storm Water permit for Construction Prevent oily or other hazardous substances from entering the ground, drainage areas, or other bodies of water in such quantities as to affect aesthetics or normal use or to produce a measurable impact upon the area.
  2. In accordance with applicable regulations, gather and dispose of soil or water which is contaminated with oily substance due to the Contractor's operations.
  3. De-chlorinate chlorinated water prior to discharge, and do not permit chlorinated water to enter the ground or surface waters.
  4. Do not pump ground water into natural surface water channels or in any other manner permit ground water to enter natural surface water.
- G. Noise control:
1. Do not permit noise levels exceeding the following:
    - a. Trenchers, pavers, graders, and trucks: 90 dba at 50 feet as measured under the noisiest operating conditions;
    - b. All other equipment: 85 dba at 50 feet.
    - c. Use "whisperized" type generators as approved by the Construction Manager.
  2. Jack hammers:
    - a. Equip with exhaust mufflers and steel muffling sleeves;
    - b. Use "whisperized" type air compressors as approved by the Construction Manager.
  3. Operations:
    - a. Keep noisy equipment as far as possible from noise-sensitive site boundaries;
    - b. Do not leave machines idling;
    - c. Use electric power in lieu of internal combustion engine power when practicable;
    - d. Do not leave equipment on when unattended.
    - e. Maintain equipment in a manner to reduce noise from excessive vibration, faulty mufflers, and similar sources;
    - f. Provide mufflers on *all* engines;
    - g. Schedule operations to minimize their duration at any given location.
  4. Monitoring:

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- a. As needed, provide portable sound metering devices meeting requirements of ANSI S1.4 for Type 2 sound level meters.
  - b. Promptly locate and correct non-complying noise levels.
5. **Noise must be kept to an absolute minimum during periods of student testing. The Construction Manager will provide student testing schedules for the Contractor's use in complying with this requirement. Restrict use of noise making tools and equipment to hours that will minimize noise during finals test periods.**

### 3.2 ARCHAEOLOGICAL FINDINGS DURING CONSTRUCTION

- A. There are no known archaeological remains at the Project site.
- B. Should skeletons, artifacts, or other archaeological remains be uncovered:
  1. Suspend operations of this Contract at the site of discovery;
  2. Continue operations in other areas;
  3. Notify the Construction Manager immediately of the finding.
- C. The Construction Manager will provide directions regarding resuming the work after archaeological investigations/evaluations are completed.

### 3.3 BURNING RUBBISH AND DEBRIS

- A. Open burning of rubbish, debris, and/or other combustibles will not be permitted on the site.

### 3.4 DUST CONTROL

- A. Provide within the proposed plan for environment protection an acceptable program to prevent generation of dust due to operation under this Contract. This includes dust in the buildings.

### 3.5 COMPLIANCE

- A. The Construction Manager will notify the Contractor in writing of any noncompliance with the provisions of this Section, and will describe actions to be taken.
  1. Such notice, when delivered to the Contractor or his authorized representative at the job site, will be deemed sufficient for the purpose.
  2. Immediately upon receipt of such notice, initiate the required action or actions.
- B. Noncompliance:
  1. If the Contractor fails or refuses to comply promptly, the Construction Manager may issue an order stopping all or part of the Work of this Contract until satisfactory corrective action has been taken.

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2. No part of the time lost due to any such Stop Orders shall be made the subject of a Claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION

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**SECTION 01500**

**TEMPORARY FACILITIES**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section describes temporary utilities, construction facilities, and project sign which are to be provided and maintained by Contractor.
- B. Temporary water and electrical lines shall be removed at the completion of the contract work, unless the District directs that they remain in place and become the property of the District.

**1.2 RELATED REQUIREMENTS**

- A. Contract General Conditions, Article 57, Utility Usage

**1.3 SUBMITTALS**

- A. Temporary Utilities: Submit reports of tests, inspections, applicable meter readings and similar procedures performed on temporary utilities.

**1.4 QUALITY ASSURANCE**

- A. Regulations: Comply with requirements of local laws and regulations governing construction and local industry standards, in installation and maintenance of temporary services and facilities.
  - 1. Building Codes, including local requirements for permits, testing and inspection.
  - 2. Local and county health and safety regulations.
  - 3. District regulations and recommendations governing temporary utility services.
  - 4. Police and Fire Department rules and recommendations.
  - 5. EPA regulations governing use of water and energy, and the control of dust, noise and other nuisances.
  - 6. Requirements of the Regional Water Quality Board.
  - 7. Code of Regulations that regulates environmental quality as outlined in Title 22 CCR.
  - 8. CAL-OSHA Construction Safety Orders.

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- B. Standards: Comply with requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-A10 Series Standards for "Safety Requirements for Construction and Demolition".
  - 1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
  - 2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

### 1.5 PROJECT CONDITIONS

- A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on the site.

### 1.6 TEMPORARY CONSTRUCTION SERVICES

- A. Make all necessary arrangements for, and provide, extend, and maintain temporary utility and construction services as described and as necessary for the work of all trades and workmen employed on the project, until completion and acceptance of the project by the District, or until no longer required. When no longer required, discontinue services and remove all paraphernalia

### 1.7 RUNWAYS, LADDERS AND TEMPORARY STAIRS

- A. Provide and maintain runways, ladders, and temporary stairs to provide access to the work for the use of all trades.
- B. Provide all temporary means of access in accordance with the "Manual of Accident Prevention in Construction" of the Associated Prime Contractors of America and with applicable Federal, State, and Local Safety Regulations.

### 1.8 DELIVERY, STORAGE AND HANDLING OF MATERIALS

- A. Store materials only in the materials storage/staging areas within project boundary , and as designated in the Contract documents.

### 1.9 UTILITY SERVICES

- A. Water: Extend water service from existing temporary water services to the new buildings or other areas of the construction site. A temporary system, consisting of temporary connections from the extended service is to be provided with temporary lines extended with necessary taps for connections at convenient locations. The entire distribution system shall be furnished, installed, maintained, metered, and paid



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for by Contractor. All water consumed shall be paid for by Contractor. Completely remove temporary system, except for existing lines shown on site plan, upon completion of construction. Clean and repair damage caused by installation; restore to original condition:

1. Furnish and install an approved double check valve at the connection to the main.
  2. Perform all relocations required to clear work of others when requested by the Construction Manager. The District reserve the right to make connections to the temporary lines by themselves or by other contractors.
  3. Where "non-potable" water is used, provide warning signs on the discharge end of each hose.
- B. Compressed Air: Provided by the contractor as required for accomplishing the work.
- C. Temporary sanitary facilities shall be provided by Contractor, including approved portable sanitary facility (single occupant, self-contained chemical type, housed in glass fiber reinforced polyester shell) and approved potable water for construction personnel. Sanitary facilities for first aid station and field offices shall be constructed and maintained in accordance with the regulations of local authorities having jurisdiction. Provide one toilet facility for every 15 workers:
1. Keep toilet facilities supplied with toilet paper and keep in a clean and sanitary condition until completion of the work. Remove temporary facility promptly at completion of project.
  2. Pump all sanitary facility tanks a minimum of once per week.
- D. Water Control: Surface or subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams, or other methods approved by Architect/Engineer.
- E. Electric Light and Power: Provide temporary power and appropriate transformation as required. All energy consumed by Contractor is to be paid for by the Contractor. Any contractor or trade requiring service capacity or characteristics other than herein defined shall provide and pay for his own service:
1. The minimum requirements for the system consist of lighting required for construction needs, safe and adequate working conditions, public safety, security lighting and lighting for temporary office, storage and construction buildings.
  2. Provide all equipment, including connections and other materials necessary for extending the utility lines to where they will be used. Coordinate the installation with the District Representative. Contractor shall install a meter and reimburse the District for any power used. Where sub-metering is not possible or practical, a flat fee may be established and paid to the District.

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- a. When not available from the District, the Contractor must arrange and pay for electric service through the local utility or furnish his own portable power.
  - b. All permanent power used by the Contractor prior to Occupancy by the District shall be metered and paid for by the Contractor.
  - c. Once the buildings are enclosed and the HVAC equipment is operational, power shall be available at all times to allow operation of the HVAC equipment at reduced settings to provide air circulation.
3. Provide light levels complying with safety regulations and codes. Provide 20 foot candles minimum inside building and 5 foot candles outside and along perimeter of site.
  4. Temporary electrical power for construction shall comply with applicable NEMA, NECA, and UL Standards safety regulations and codes; temporary power shall have automatic ground fault feature and there shall be not less than one power center per floor for miscellaneous tools and equipment, located so that power is available at any desired point with no more than 100 ft. extension cords; weatherproof distribution boxes with minimum of four 20A, 120V, grounded outlets, circuit breaker protection for each outlet, and equipment grounding continuity for entire system shall be provided. Grounded UL extension cords shall be used from power centers to point of operation.
  5. Ground-Fault Protection: Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for plug-in connection of power tools and equipment.
  6. Provide temporary electric power for temporary field offices, temporary storage and construction buildings, temporary lighting, temporary HVAC, pumping and water control and miscellaneous requirements.

#### 1.10 HEAT AND VENTILATION

- A. Provide, maintain, and pay for all heat needed for proper installation of work and to protect materials and finishes from damage due to weather.
- B. Provide ventilation of enclosed areas to cure materials, disperse humidity, and prevent accumulation of dust, fumes or gases.
- C. Prior to and during plastering and drywall application, setting and curing thereof, provide sufficient heat to maintain building temperature of not less than 55 degrees F. while maintaining adequate ventilation for drying of plaster.
- D. Before casework is delivered to the building and prior to installing wood finish, and throughout placing of this finish and other finishing operations such as painting and laying of resilient floor covering, provide sufficient heat to maintain building temperature at 65 degrees F.

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- E. Temporary Ventilation: Provide ventilation to prevent hazardous accumulations of dusts, fumes, mists, vapors or gases in areas occupied during construction.
- F. Provide local exhaust ventilation to prevent harmful dispersal of hazardous substances into atmosphere of occupied areas.
- G. Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
- H. Ventilate storage spaces containing hazardous or volatile materials.
- I. Provide adequate ventilation for curing installed materials, dispersal of humidity, and ventilation of temporary sanitary facilities.
- J. Provide temporary weather tight enclosures at openings in exterior walls to create acceptable working conditions, to allow for temporary heating and for security.

#### 1.11 CONTRACTOR'S FACILITIES

##### A. Contractor's Facilities:

- 1. Provide temporary Contractors' offices, storage sheds, fencing, barricades, chutes, elevators, hoists, scaffolds, railings, and other facilities in area as shown on the plans. Installation and maintenance of such items shall be the responsibility of Contractor.

#### 1.12 MATERIALS HOIST (IF REQUIRED)

- A. Provide adequate temporary scaffolding, stairs and hoist facilities, for materials and personnel. Provide for inspection and approval of facilities operation by the proper authorities.
- B. All temporary wiring to hoist machinery and cost of all electricity consumed shall be paid for by Contractor. At completion of the work, remove hoist from the site.

#### 1.13 ELEVATOR (IF REQUIRED)

- A. When the construction has progressed sufficiently to permit the installation and operation of the elevators, at Contractor's option and expense, make arrangements to provide, install and maintain elevator for temporary use, provided that the elevator has been inspected and approved for temporary use by the proper authorities. Provide for District's use at no cost.
- B. Equip elevator with electric light, car and hoisting doors, as required by law. Protect inside of cab with padding and a substantial wood lining against damage during temporary use. Provide metal screen ceiling below the permanent ceiling of the cab.
- C. At completion of the work, turn the elevator over to the District in "like-new" condition; Contractor is responsible all work, repairs, etc., required to satisfy this requirement. Warranty for the elevator will commence when all work is accepted as complete.

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### 1.14 SECURITY ENCLOSURES AND BARRICADES

- A. Contractor shall provide security at all times against loss caused by theft, vandalism or other preventable causes.
- B. 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.
- C. 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. Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup.

### 1.15 TEMPORARY FIRE PROTECTION

- A. 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" or as directed by the State Fire Marshal. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell

### 1.16 MISCELLANEOUS PROVISIONS

- 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.
- C. Termination and Removal: Unless the District requires that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than 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. At Completion, clean and renovate permanent facilities that have been used during the construction period.

END OF SECTION

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## SECTION 01545

### SAFETY AND HEALTH

#### PART 1 – GENERAL

The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract. The Contractor's safety program shall include all actions and procedures necessary for compliance with California or federally mandated workplace safety programs. The Contractor shall require that its subcontractors similarly initiate and maintain all appropriate or required safety programs.

#### 1.1 RELATED DOCUMENTS

- A. Contract General Conditions, Article 74

#### 1.2 COMPLIANCE

- A. All work and materials shall be in strict accordance with all applicable State, City, County, and Federal rules, regulations, and codes, and attention is drawn to the requirements of *CAUOSHA*. The Contractor shall be solely responsible for compliance with all City, County, State, and Federal requirements and for any damages caused by his operations.
- B. In accordance with Section 6705 of the State Labor Code' the Contractor shall submit to the Owner specific plans to show details of provisions for worker protection from caving ground.
  - 1. This in no way relieves the Contractor from the requirement of maintaining safety in all operations performed by him or his subcontractors.
  - 2. The detailed plan showing design of shoring, bracing, sloping, or other provisions shall be prepared by a registered professional civil or structural engineer as required.
  - 3. Acceptance by the Owner or its designated agent only constitutes acknowledgment of the submission and does not constitute review or approval pf the designs, design assumptions, criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and his registered professional engineer.
- C. Notwithstanding any classification relative to the Tunnel Safety Orders, work within confined spaces on this Project is subject to the definitions and applicable provisions of Section 5156 et seq., Title 8, California Administrative Code.
- D. The Contractor shall so perform its work as not to expose personnel to, or to discharge into the atmosphere from any source whatsoever, smoke, dust, asbestos, toxic chemicals, or other air contaminants in violation of the laws, rules, and regulations of the governmental entities having jurisdiction.

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- E. Nothing in these Documents is to be construed to permit work not conforming to governing codes.
1. When Contract Documents differ from governing codes, the Contractor shall furnish and install the higher standards called for without extra charge.
  2. All equipment furnished shall be grounded and provided with guards and protection as required by safety codes.
  3. Where vapor-tight or explosion-proof electrical installation is required by code, this shall be provided with guards and protection as required by safety codes.
  4. In accordance with the provisions of Section 6707 of the Labor Code, the Contractor shall provide adequate sheeting, shoring, and bracing for employee protection.
- F. The Contractor shall comply with provisions of the Safety and Health Regulations for Construction, promulgated by the Secretary of Labor under Section 1078 of the Contract Work Hours and Safety Standards Act (40 USC 327 et seq.) as set forth in Title 29, C.F.R., Title 8, Cal-OSHA, and the regulations issued thereunder. Compliance shall be the Contractor's sole responsibility, and neither the Owner, the Construction Manager, nor the Architect shall have any liability for non-compliance.
- G. The Contractor shall be responsible to obtain all trenching, shoring, tower crane, and mobile crane permits and certificates by Federal OSHA and CAL-OSHA regulations.

### **1.3 REPORTING**

- A. Certain activities require a CAL-OSHA permit prior to commencement of the activity.
1. Each contractor shall be responsible for obtaining CAL-OSHA permits for his portion of work if work activity includes any of the following:
    - a. Erection or dismantling of any scaffold or falsework more than three stories or 36 feet in height;
    - b. Tower crane erection or dismantling;
    - c. Construction of trenches which are five feet or deeper and into which a person is required to descent;
    - d. Use of explosives;
    - e. Underground use of diesel engines in mines or tunnels;
    - f. Asbestos work as defined by CAL-OSHA reporting requirements.
  2. A copy of the CAL-OSHA permit shall be provided to the Construction Manager prior to commencement of any activity requiring a CAL-OSHA permit.
- B. Under Federal and State safety requirements, certain tasks such as operating a forklift, crane or powder-actuated tool require the operator to be certified by his employer. When required, copies of certifications shall be provided to the Construction Manager before any employee operates such equipment.
- C. Contractors are required to have weekly safety meetings for all employees on the job site. Copies of the weekly safety meeting reports, signed by each contractor employee on the job site, shall be provided to the Construction Manager within 24 hours after each weekly safety meeting.

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- D. Contractors shall appoint an on-site safety representative, whose duty shall be the prevention of accidents and the implementation and maintenance of safety precautions and programs. Notification as to whom the on-site safety representative is shall be provided to the i Construction Manager before the Contractor commences work on the job site.
- E. Certain operations may require Owner's permission.
  - 1. The safety representative of each contractor shall determine if any part of his activities require Owner's permission.
  - 2. Such activities may include electrical work, hot work, and vessel or confined space entry.
- F. An accident report shall be filed with the Construction Manager any time an employee is given medical attention.
  - 1. Also, a report shall be issued for all potential lost time accidents (sprains, strains, back injuries).
  - 2. These reports shall be submitted with proper documentation (i.e., employee signature, supervisor signature, pictures) within 24 hours of the occurrence.
  - 3. The Contractor shall be responsible to maintain his own Federal/OSIER 200 Report or CAL-OSHA Reports depending on the requirements of the regulating agency.
- G. Serious injuries or illness and any injury to the general public, shall be reported to the Construction Manager immediately.

### **1.4 SAFETY PROGRAM**

- A. Upon award of the Contract, the Contractor shall submit to the Construction Manager his Project Safety Program, including his Material Data Safety Sheets for materials that will be used on the construction site.
- B. Contractor shall have the written safety program at the Project site at all times contractor personnel are present in accordance with Federal and State safety regulations

### **1.5 BASIC SAFETY RULES**

- A. Following are the basic safety rules that apply at all times to all work being conducted on this Project.
  - 1. These safety rules are not inclusive, and all Federal and State safety regulations shall be applicable.
  - 2. Where a conflict exists between a Federal, State, and/or other safety rule, the more stringent safety requirements shall be in force on the job site.
- B. Rules:
  - 1. Hard hats shall be worn at all times.
  - 2. Sleeved shirts shall be worn at all times

## **GYM CLERESTORY WINDOW REPLACEMENT**

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3. Long pants shall be worn at all times.
4. Leather shoes shall be worn at all times; no tennis or running shoes will be allowed.
5. Adequate eye protection shall be worn when cutting, grinding, sawing, or conducting any other activity that poses a potential eye hazard.
6. Safety belts with lanyards shall be worn at unprotected heights of more than 6'-0" ; this includes working off of a ladder when more than 6'-0" off the ground or floor.
7. Hearing protection shall be worn when employees are exposed to noise levels requiring hearing protection as defined by Federal or State safety standards.
8. Illegal drugs, alcohol, firearms, or other dangerous substances shall not be allowed on the job site.
9. Good housekeeping practices shall be maintained continually.
10. Any time work is performed overhead, the contractor conducting such work shall erect a barricade.
  - a. The barricade shall consist of caution or danger barricade tape and appropriate warning signs.
  - b. All barricades shall be removed when not in use.
  - c. Contractor employees shall be required to honor the barricades erected by other contractors on the job site.
11. Whenever the scope of construction requires a worker to operate within twenty feet of an opening, the opening shall be guarded by a fixed standard railing on all exposed sides, or a cover capable of sustaining the weight of a 200 pound person.
12. No AM-FM radios, cassette players, compact disks, or other audio producing devices shall be used on the Project.

### **1.6 EQUIPMENT**

- A. All equipment brought onto the job site shall, at a minimum, comply with Federal and State OSHA requirements.
- B. All equipment on the job site shall be used in accordance with Federal and State safety requirements, and the manufacturer's instructions and guidelines. Equipment shall not be altered in any way to adapt it for a job for which it is not intended.
- C. Copies of certificates, permits, etc., shall be provided to the Construction Manager for all equipment such as cranes that require certification, permit, etc. Said certification shall be provided before any such equipment is used on the job site.

### **1.7 HAZARD COMMUNICATION PROGRAM**

- A. Contractor shall have a written Hazard Communication Program meeting Federal and State safety regulations as a minimum, and comply with the requirements of that Program. A copy of the Program shall be available at the site at all times when contractor personnel are present.
- B. Any chemical or hazardous material brought onto the site shall be in proper containers, labeled as to content, and accompanied by Material Safety Data Sheet(s) (MSDS).



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1. A copy of the MSDS shall be given to the Construction Manager when the material is brought onto the site if the material is different from, or was not included in, the MSDS submitted previously with the Contractor's Project Safety Program.
  2. MSDS shall be available for review at the contractor's field office or work area.
- C. The Construction Manager shall be notified before any chemical/material creating noxious or toxic fumes is used.

#### 1.8 SAFETY SURVEYS

- A. The Contractor's Responsible Managing Officer and the Contractor's Safety Manager shall conduct periodic safety surveys of the job site. Any safety discrepancy observed will be reported to the appropriate contractor representative for immediate correction.
- B. Periodic safety surveys in no way relieve the Contractor of responsibility to self-inspect the Work and equipment and to maintain the Work in a safe manner .

#### PART 2 - PRODUCT

##### 2.1 HAZARDOUS MATERIALS

- A. The Contractor shall bring to the attention of the Construction Manager, any material suspected of being hazardous which he encounters during execution of the Work. Prosecuting of the Work shall be halted until there's an expert determination whether the material encountered is hazardous. The District shall perform tests to determine if the material is hazardous. If the material is found hazardous and additional protective measures are needed, directions for handling the material and proceeding with the Work will be provided by the Construction Manager.

#### PART 3 - EXECUTION

##### 3.1 ADMINISTRATION

- A. The Contractor shall at all times maintain emergency first aid treatment materials at the site which conform with applicable law, rule, or regulation.
- B. The Contractor shall give or post all notices required by applicable law.
- C. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents and the implementation and maintenance of safety precautions and programs.

##### 3.2 PROTECTION

- A. The Contractor shall take all necessary precautions to prevent injury to the public, building occupants, or damage to property of others. For the purposes of this contract, the public or building occupants shall include all persons not employed by the Contractor or a Subcontractor working under the Contractor's direction.
- B. Work shall not be performed in any area occupied by the public or the District employees unless specifically permitted by the Contract or the District and unless adequate steps are taken for the protection of the public and the District' employees.

## **GYM CLERESTORY WINDOW REPLACEMENT**

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- C. Whenever practicable, the work area shall be fenced, barricaded, or otherwise blocked off from the public or building occupants to prevent unauthorized entry into the work area.
- D. Alternate Precautions: When the nature of the Work prevents isolation of the work area, and the public or building occupants may be in or pass through, under or over the work area, alternate precautions such as the posting of signs, the use of signal persons, the erection of barricades or similar protection around particularly hazardous operations shall be used as appropriate.
- E. Public Thoroughfare: When Work is to be performed over a public thoroughfare such as a sidewalk, lobby, or corridor, the thoroughfare shall be closed, if possible, or other precautions taken such as the installation of screens or barricades. When the exposure to heavy falling objects exists, as during the erection of building walls or during demolition, special protection of the type detailed in 29 CFR 1910/1926 shall be provided.
- F. Fences and barricades shall be removed upon completion of the project to the satisfaction of the District Representative.
- G. Storing, positioning or use of equipment, tools, materials, scraps, and trash in a manner likely to present a hazard to the public or building occupants by its accidental shifting, ignition, or other hazardous qualities is prohibited.
- H. Special facilities, devices, equipment, clothing, and similar items used by the Contractor in the execution of the Work shall comply with the applicable regulations.

### **3.3 STOP WORK ORDERS**

- A. When the Contractor or its Subcontractors are notified by the District of any noncompliance with the provisions of the Contract, and the action(s) to be taken, the Contractor shall immediately, if so directed, or within 48 hours after receipt of a notice of violation correct the unsafe or unhealthy condition. If the Contractor fails to comply promptly, all or any part of the work being performed may be stopped by the District with a "Stop Work Order." When, in the opinion of the District, satisfactory corrective action has been taken to correct the unsafe and unhealthy condition, a start order will be given. The Contractor shall not be allowed any extension of time or compensation for damages by reason of or in connection with such work stoppage.

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01620**

**STORAGE AND PROTECTION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and other Sections in Division 1 of these Specifications.
  - 2. Additional procedures also may be prescribed in other Sections of these Specifications.

**1.2 QUALITY CONTROL**

- A. Include within the Contractor's quality control program such procedures as are required to assure full protection of work and materials.

**1.3 MANUFACTURERS' RECOMMENDATIONS**

- A. Determine and comply with manufacturers' recommendations on product handling, storage, and protection.

**1.4 PACKAGING**

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
  - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements.
- B. The Construction Manager may reject as non-complying such material and products that do not bear identification satisfactory to the Architect as to manufacturer, grade, quality, and other pertinent information.

**1.5 STORAGE**

- A. Except as otherwise recommended by the manufacturer, store all materials of suitable size, in secured steel cargo containers.

## **GYM CLERESTORY WINDOW REPLACEMENT**

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### 1.6 PROTECTION

- A. Protect finished surfaces, including jambs, soffits, and thresholds of openings used as passageways, through which equipment and materials are handled.
- B. Provide protection for curbs, sidewalks, ramps, and finished floor surfaces, indoors and outdoors, in traffic areas prior to allowing equipment or materials to be moved over such surfaces.
- C. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

### 1.7 REPAIRS AND REPLACEMENTS

- A. Prior to commencement of work each day, examine the area or areas of work under this Contract and immediately notify the Construction Manager if any work of this Contract or work of other contractors appears to have been damaged.
- B. In event of damage or improperly labeled material provided by this Contractor, promptly make replacements and repairs to the satisfaction of the District's Architect.
- C. In event of damage by others, the Construction Manager will assess responsibility for repairs and replacements.

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01700**

**PROJECT CLOSEOUT**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section identifies the submissions and actions required for Project close-out.

**1.2 RELATED DOCUMENTS**

- A. Contract General Conditions
- B. Division 1 , Section 01720, "Project Record Documents"
- C. Division 1 , Section 01740, "Warranties and Bonds".

**1.3 REQUIREMENTS LISTING (AS APPLICABLE)**

- 1. Punchlist and Final Inspection
- 2. Operating and Maintenance manual submittal
- 3. HVAC balance report
- 4. Spare parts/materials
- 5. Keys/keying
- 6. Submittal of Warranties
- 7. Training
- 8. Record Drawings and Specifications
- 9. As-built schedule
- 10. State Fire Marshal Inspection and Notification of Certificate of Occupancy
- 11. Elevator inspection
- 12. Other regulatory inspection
- 13. Removal of temporary facilities
- 14. Final cleaning and pest control

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15. Landscape maintenance
16. Equipment startup
17. Final Verified Report for DSA

### 1.4 PUNCHLIST INSPECTION

- A. When, in the opinion of the Contractor, the Work is complete in all respects, the Contractor shall call for a punch-list inspection.
  1. Inspection Procedures: Upon receipt of a request for inspection, the Construction Manager will schedule the Inspection with the Architect and Project Inspector. Construction Manager will then perform a preliminary, walk-through. If, in the judgment of the Architect, the project is not sufficiently complete in all respects, the Construction Manager will so advise the Contractor and discontinue the inspection.
  2. The Architect will resume the inspection when requested and assured that the work has been completed.
- B. The results of the completed inspection will form the basis of requirements for final acceptance punch-list.

PART 2 - PRODUCT (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01710**

**CLEANING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions Article 65. Cleaning, Supplementary Conditions, and other Sections in Division I of these Specifications.
  - 2. In Expansion to standards described in this Section, comply with requirements for cleaning as described in other pertinent Sections of these Specifications.

**1.2 QUALITY CONTROL**

- A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In Expansion to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

**PART 2 – PRODUCTS**

**2.1 CLEANING MATERIALS AND EQUIPMENT**

- A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

**2.2 COMPATIBILITY**

- A. Use only the cleaning materials, methods, and equipment which are compatible with the surface or item being cleaned, and as recommended by the manufacturer of the material.

**PART 3 - EXECUTION**

**3.1 PROGRESS CLEANING**

- A. General:
  - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.

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2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work. Construction debris left overnight shall subject the Contractor to a charge of \$1,000.00, per occurrence.
3. At least twice each month, and more often if necessary, completely remove all containers of scrap, debris, and waste material from the job site.
4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

### B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material associated with the Work of this Contract. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials of this Contract stored on the site.
3. Cooperate in maintaining the site in a neat and orderly condition at all times.

### C. Structures:

1. Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material associated with the Work of this Contract. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, sweep clean such interior spaces as are being occupied or used under this Contract.
  - a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort, a handheld broom, and a wet-dry heavy duty shop vacuum cleaner.
3. As required preparatory to installation of succeeding materials, clean the pertinent structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.
4. Following the installation of finish floor materials, any contractor performing work in the space in which finished materials are installed shall protect and clean the finish floor daily (and more often if necessary).
  - a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, may be injurious to the finish floor material.

### D. Daily verification:

1. At the end of each day during which Work of this Contract is being performed at the site, or during which materials of this Contract have been delivered to the site, meet with the Construction Manager and secure the Construction Manager's signed approval of compliance with this Section of these Specifications.



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2. On Contractor's Daily Report, include the following statement and signature block: "After inspection of the Contractor's work space, it has been determined that the Contractor has / has not (circle one) complied with the requirements of Section 01710, "Cleaning," of the Specifications.

Date:

Signature of Construction Manager:

3. In the event of the Contractor's failure to so meet and secure approval, the District may provide such labor and materials as are in the District's sole discretion required to make the Work comply with this Section of these Specifications, and the District will deduct the costs of such labor and materials from the Contract Price.

### 3.2 FINAL CLEANING

- A. "Clean" for the purpose of, this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.
- C. Site:
  1. Unless otherwise specifically directed by the Construction Manager, broom clean paved areas on the site and public paved areas adjacent to the site where debris or waste material from the Work of this Contract has accumulated.
  2. Completely remove resultant debris.
- D. Structures:
  1. Exterior:
    - a. Visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter associated with the Work of this Contract.
    - b. Remove all traces of such splashed materials from adjacent surfaces.
    - c. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.
    - d. In the event of stubborn stains not removable with water, the District may require light sandblasting or other cleaning and restoration at no Additional cost to the District.
  2. Interior:

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- a. Visually inspect interior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter associated with the Work of this Contract.
  - b. Remove all traces of such splashed materials from adjacent surfaces.
  - c. Remove paint droppings, spots, stains, and dirt associated with the Work of this Contract from finished surfaces.
3. Glass associated with or affected by the Work of this Contract: Clean inside and outside.
  4. Polished surfaces associated with or affected by the Work of this Contract: To surfaces requiring routine application of buffed polish, apply the polish recommended by the manufacturer of the material being polished.
- E. Schedule final cleaning in conjunction with the Construction Manager to enable the District to accept a completely clean Work.

### **3.3 CLEANING DURING JOINT OCCUPANCY**

- A. Should the District occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the District, responsibilities for interim and final cleaning shall be as determined by the District.

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01720**

**PROJECT RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.1 herein and, upon completion of the Work, transfer the recorded changes to a set of Record Documents, as described in Article 3.2 herein.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions Article 55. Documents on Work, Supplementary Conditions, and other Sections in Division 1 of these Specifications.
  - 2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

**1.2 SUBMITTALS**

- A. Comply with pertinent provisions of Section 01300.
- B. The District acceptance of the current status of Project Record Documents may be a prerequisite to approval of requests for progress payment and request for final payment under the Contract.
- C. Prior to submitting each request for progress payment, secure, via the Construction Manager, the District approval of the current status of the Project Record Documents.
- D. Prior to submitting request for final payment, submit the final Project Record Documents to the Construction Manager for obtaining approval.

**1.3 QUALITY CONTROL**

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff and subject to satisfactory performance of responsibility.
- B. Accuracy of records:
  - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.

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2. Accuracy of records shall be such that future search for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- C. Make entries within 24 hours after receipt of information that the change has occurred.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.
- B. In the event of loss of recorded data, use means necessary to again obtain and submit the data to at no additional cost to the District.
  1. Such means shall include, if necessary in the opinion of the Construction Manager, removal and replacement of concealing materials.
  2. In such case, provide replacements to the standards originally required by the Contract Documents.

#### PART 2 - PRODUCTS

##### 2.1 RECORD DOCUMENTS

- A. Promptly following receipt of the District's Notice to Proceed, secure from the Construction Manager at no charge to the Contractor one complete set of Documents comprising the Contract.
- B. At a time nearing completion of the Work, secure from the Construction Manager at no charge to the Contractor one complete set of transparencies of Drawings for the Contract. These transparencies are to be used for preparing the Final Record Documents:

#### PART 3 - EXECUTION

##### 3.1 MAINTENANCE OF RECORD DOCUMENTS

- A. Immediately upon receipt of the job set described in Paragraph 2.1.A above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET."
- B. Preservation:
  1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set to the approval of the Construction Manager.

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2. Do not use the job set for any purpose except entry of new data and for review by the Architect, Project Inspector and Construction Manager, until start of transfer of data to final Project Record Documents.
  3. Maintain the job set at the Work Site.
- C. Making entries on Drawings:
1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
  2. Date all entries.
  3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
    - a. Use red colored pencil for drawing "cloud" around deletions;
    - b. Use green colored pencil for drawing "cloud" around Expansions.
    - c. Blue colored pencil is exclusively reserved for use by the Construction Manager.
  4. In the event of overlapping changes, use different colors for the overlapping changes.
- D. Conversion of schematic layouts:
1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically. and is not intended to portray precise physical layout.
    - a. Final physical arrangement is determined by the Contractor, subject to the Architects' approval.
    - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items which are shown only schematically on the Drawings.
  2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as are described in subparagraph 3.1- E-1 above.
    - a. Clearly identify the item by accurate note such as "cast iron drain" , "galvanized water pipe," and the like.
    - b. Show, by symbol or note, the vertical location of the item ("under slab," "in ceiling plenum," "exposed," and the like).
    - c. Make all identification so descriptive that it may be related reliably to the Specifications.
- E. Make entries in the Specifications and other pertinent Documents as approved by the Construction Manager.

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1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by note as required.
2. Date all entries in the outside margin.
3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
  - a. Use red colored pencil for drawing "cloud" around deletions, and strike through the words being deleted.
  - b. Use green colored pencil for drawing "cloud" around Expansions, and print words to technical drafting standards.
  - c. Blue colored pencil is exclusively reserved for use by the Construction Manager.
4. In the event of overlapping changes, use different colors for the overlapping changes, or use other technique acceptable to the Architect.

### 3.2 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.
- B. Acceptance of recorded data prior to transfer:
  1. Following receipt of the transparencies described in Paragraph 2.1-B above, and prior to start of transfer of recorded data thereto, secure the Construction Manager's acceptance of all recorded data.
  2. Make required revisions.
- C. Transfer of data to Drawings:
  1. Carefully transfer change data shown on the job set of Record Drawings to the corresponding transparencies, coordinating the changes as required.
  2. Clearly indicate at each affected detail and other Drawings a full description of changes made during construction, and the actual location of items described in subparagraph 3.1-E-1 above.
  3. Call attention to each entry by drawing a "cloud" around the area or areas affected, using the colors called for in subparagraph 3.1-C-3 above.
  4. Reference Change Order numbers and RFI numbers where appropriate.
  5. Make changes neatly, consistently, and with the proper media to assure longevity and clear reproduction.

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- D. Transfer of data to other Documents:
1. If the Documents other than Drawings have been kept clear during progress of the Work, and if entries thereon have been orderly and approved the job set of these Documents other than Drawings will be accepted as final Record Documents.
  2. If any such Document is not so approved, secure a new copy of that Document from the Construction Manager, and carefully transfer the change data to the new copy to the satisfaction of the Architect.
- E. Review and submittal:
1. Submit the completed set of Project Record Documents to the Construction Manager as described in Paragraph 1.2-D above.
  2. Participate in review meetings as required.
  3. Make required changes and promptly deliver the final Project Record Documents to the Construction Manager.

END OF SECTION

**GYM CLERESTORY WINDOW REPLACEMENT**  
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**SECTION 01730**

**OPERATING AND MAINTENANCE DATA**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Contract General Conditions.
- B. Mechanical and Electrical O and M requirements, Divisions 15 and 16.

**1.2 REQUIREMENTS INCLUDED**

- A. Compile product data and related information appropriate for The District' maintenance and operation of products furnished under Contract.
  - 1. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of Specification.
  - 2. Submit draft copies of all O and M Manuals within 6 months of Notice of Completion. No payment will be made for affected systems until manuals are provided.
- B. Instruct The District' personnel in maintenance of products and in operation of equipment and systems.

**1.3 QUALITY ASSURANCE**

- A. Preparation of data shall be done by personnel:
  - 1. Trained and experienced in maintenance and operation of described products.
  - 2. Familiar with requirements of this Section.
  - 3. Skilled as technical writer to the extent required to communicate essential data.
  - 4. Skilled as draftsman competent to prepare required drawings.

**1.4 FORM OF SUBMITTALS**

- A. Prepare data in form of an instructional manual for use by The District' personnel.
- B. Format:
  - 1. Size: 8-1/2 in. by 11 in.
  - 2. Paper: Manufacturer's printed data, or neatly typewritten.
  - 3. Drawings:
    - a. Provide reinforced punched binder tab, bind in with text.
    - b. Fold larger drawings to size of text pages.
  - 4. Provide fly-leaf for each separate product, or each piece of operating equipment.
  - 5. Organize manual in order of specification Divisions and Sections.



## **GYM CLERESTORY WINDOW REPLACEMENT**

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- a. Provide typed description of product, and major component parts of equipment.
- b. Provide indexed tabs.
6. Cover: Identify each volume with typed or printed title, "Operating and Maintenance Instructions." List:
  - a. Title of Project
  - b. Identity of separate structure as applicable.
  - c. Identity of general subject matter covered in the manual.

### **C. Binders:**

1. Commercial quality three-ring binders with durable and cleanable plastic covers.
2. Maximum ring size: 2 inches per 500 sheets
3. When multiple binders are used, correlate the data into related consistent groupings.

### **D. Review**

1. Submit three (3) sets of the manual to Construction Manager for obtaining reviews and approval. If the manual is acceptable to all reviewers, the Construction Manager will so notify the Contractor and turn over the manuals to the District.

## **1.5 CONTENT OF MANUAL**

### **A. Neatly typewritten table of contents for each volume, arranged in systematic order.**

1. Contractor, name of responsible principal, address and telephone number.
2. A list of each product required to be included, indexed to content of the volume.
3. List, with each product, name, address and telephone number of:
  - a. Subcontractor or installer.
  - b. Maintenance contractor, as appropriate.
  - c. Identify area of responsibility of each.
  - d. Local source of supply for parts and replacement.
4. Identify each product by product name and other identifying symbols as set for in Contract Documents.

### **B. Product Data:**

1. Include only those sheets which are pertinent to the specific product.
2. Annotate each sheet to:
  - a. Clearly identify specific product or part installed.
  - b. Clearly identify data applicable to installation.
  - c. Delete references to inapplicable information.

### **C. Drawings:**

1. Supplement product data with drawings as necessary to clearly illustrate:
  - a. Relations of Component parts of equipment and systems.

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- b. Control and flow diagrams.
- 2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
  - a. Do not use Project Record Documents as maintenance drawings.
- D. Written text, as required to supplement product data for the particular installation:
  - 1. Organize in a consistent format under separate headings for different procedures.
  - 2. Provide logical sequence of instructions for each procedure.
- E. Copy of each warranty, bond and service contract issued.
  - 1. Provide information sheet for The District' personnel, give:
    - a. Proper procedures in event of failure.
    - b. Instances which might affect validity of warranties or bonds.
- F. Copy of each Material Safety Data Sheet (MSDS) received with products or materials delivered to the site for incorporation into the Project, for The District' future reference.

### 1.6 MANUAL FOR MATERIALS AND FINISHES

- A. Submit three copies of complete manual in final form.
- B. Content, for Architectural products, applied materials and finishes:
  - 1. Manufacturer's data, giving full information on products.
    - a. Catalog number, size, composition.
    - b. Color and texture designations.
    - c. Information required for re-ordering special manufactured products.
  - 2. Instructions for care and maintenance.
    - a. Manufacturer's recommendation for types of cleaning agents and methods.
    - b. Cautions against cleaning agents and methods which are detrimental to the product.
    - c. Recommended schedule for cleaning and maintenance.
- C. Content, for moisture-protection and weather-exposed products:
  - 1. Manufacturer's data, giving full information on products.
    - a. Applicable standards.
    - b. Chemical composition.
    - c. Details of installation.
  - 2. Instructions for inspection, maintenance, and repair.
- D. Additional requirements for maintenance data: Respective sections of Specifications.

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### 1.7 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit three copies of complete manual in final form.
- B. Content, for each unit of equipment and system, as appropriate:
  - 1. Description of unit and component parts.
    - a. Function, normal operating characteristics, and limiting conditions.
    - b. Performance curves, engineering data and tests.
    - c. Complete nomenclature and commercial number of replaceable parts.
  - 2. Operating procedures:
    - a. Start-up, break-in, routine and normal operating instructions.
    - b. Regulation, control, stopping, shut-down, and emergency instructions.
    - c. Summer and winter operating instructions.
    - d. Special operating instructions.
  - 3. Maintenance Procedures:
    - a. Routine operations.
    - b. Guide to "trouble shooting".
    - c. Disassembly, repair and re-assembly.
    - d. Alignment, adjusting and checking.
  - 4. Servicing and lubrication schedule.
    - a. List of lubricants required.
  - 5. Manufacturer's printed operating and maintenance instructions.
  - 6. Description of sequence of operation by control manufacturer.
  - 7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for Maintenance.
    - a. Predicted life of parts subject to wear.
    - b. Items recommended to be stocked as spare parts.
  - 8. As-installed control diagrams by controls manufacturer.
  - 9. Each contractor's coordination drawings.
    - a. As-installed color coded piping diagrams.
  - 10. Charts of valve tag numbers, with location and function of each valve.
  - 11. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
  - 12. Other data as required under pertinent sections of specifications.
- C. Content, for each electric and electronic system, as appropriate:
  - 1. Description of system and component parts.

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- a. Function, normal operating characteristics and limiting conditions.
  - b. Performance curves, engineering data and tests.
  - c. Complete nomenclature and commercial number of replaceable parts.
2. Circuit directories of panel boards.
    - a. Electrical service.
    - b. Controls.
    - c. Communications.
  3. As-installed color coded wiring diagrams.
  4. Operating procedures:
    - a. Routine and normal operating instructions.
    - b. Sequences required.
    - c. Special operating instructions.
  5. Maintenance procedures:
    - a. Routine operations.
    - b. Guide to "trouble-shooting."
    - c. Disassembly, repair and re-assembly.
    - d. Adjustment and checking.
  6. Manufacturer's printed operating and maintenance instructions.
  7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
  8. Other data as required under pertinent sections of specifications.
- D. Prepare and include additional data when the need for such data becomes apparent during instruction of the District's personnel.
- E. Additional requirements for operating and maintenance data: Respective sections of specifications.

END OF SECTION

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**SECTION 01740**

**WARRANTIES AND BONDS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies the general requirements for written warranties, guarantees, and bonds required by Contract Documents. Final payment under the Contract will not be made until the warranties and guarantees have been submitted in acceptable form. Refer to requirements specified in Contract General Conditions.

**1.2 MANUFACTURERS' WARRANTIES AND BONDS**

- A. Deliver all manufacturers' warranties, guarantees, and bonds required by Contract Documents, with the District named as beneficiary. In addition, for such equipment and machinery, or components thereof, bearing a manufacturers' warranty, guarantee, or bonds extending for a longer time period than the Contractor's warranty, guarantee, and bonds deliver manufacturers' warranties, guarantees, or bonds in the same manner, whether or not specifically mentioned in the technical sections.
- B. Manufacturers' warranties shall commence on the Date of Substantial Completion of the Work.

**1.3 FORM OF WARRANTIES OR BONDS**

- A. Submit all written warranties, guarantees, and bonds, except manufacturers' standard printed warranties, guarantees, and bonds on the form designated by the District. Submit warranties, guarantees, and bonds in duplicate, unless otherwise directed, signed by all pertinent parties and Installation Contractor in every case, with modifications as approved by the District to suit conditions pertaining to warranty, guarantee, or bonds.

**1.4 SUBMISSION OF WARRANTIES**

- A. Collect and assemble all written warranties, guarantees, and bonds into a bound booklet form, and deliver bound books to Construction Manager for securing final review and approval.
- B. Submittal and approval of all warranties is a prerequisite to the filing of project completion.

**PART 2 - PRODUCT (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION**

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**SECTION 02 4100**  
**DEMOLITION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Selective demolition of building elements for alteration purposes.

**1.02 REFERENCE STANDARDS**

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

**1.03 PROJECT CONDITIONS**

- A. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- B. Comply with other requirements specified in Section 01 7000.

**PART 3 EXECUTION**

**2.01 SCOPE**

- A. Remove existing glazing, frames, sealant, and all appurtenances as required at existing clerestory windows for replacement with new aluminum framed window systems.

**2.02 GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Comply with California Building Code Chapter 33 and California Fire Code Chapter 33.
  - 2. Obtain required permits.
  - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
  - 4. Provide, erect, and maintain temporary barriers and security devices.
  - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
  - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  - 7. Do not close or obstruct roadways or sidewalks without permit.
  - 8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
  - 9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Protect existing structures and other elements that are not to be removed.
  - 1. Provide bracing and shoring.
  - 2. Prevent movement or settlement of adjacent structures.
  - 3. Stop work immediately if adjacent structures appear to be in danger.
- F. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- G. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- H. Perform demolition in a manner that maximizes salvage and recycling of materials.
  - 1. Dismantle existing construction and separate materials.

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2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

**2.03 EXISTING UTILITIES**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

**2.04 SELECTIVE DEMOLITION FOR ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation only.
  1. Verify that construction and utility arrangements are as shown.
  2. Report discrepancies to Architect before disturbing existing installation.
  3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- C. Remove existing work as indicated and as required to accomplish new work.
  1. Remove items indicated on drawings; and
  2. Remove all existing construction, components, and accessories as required for installation of new improvements.
- D. Services (Including but not limited to HVAC, Plumbing, and Electrical): Remove existing systems and equipment as indicated.
  1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
  2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
  3. Verify that abandoned services serve only abandoned facilities before removal.
  4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
  1. Prevent movement of structure; provide shoring and bracing if necessary.
  2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  3. Repair adjacent construction and finishes damaged during removal work.
  4. Patch as specified for patching new work.

**2.05 DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Remove from site all materials not to be reused on site; do not burn or bury.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

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**SECTION 07 9005**  
**JOINT SEALERS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Sealants and joint backing at window system installation.

**1.02 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate the work with other sections referencing this section.

**1.03 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum three years documented experience and approved by manufacturer.

**1.04 FIELD CONDITIONS**

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

**1.05 COORDINATION**

- A. Coordinate the work with all sections referencing this section.

**1.06 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

**PART 2 PRODUCTS**

**2.01 SEALANTS**

- A. General Purpose Exterior Sealant: Polyurethane; ASTM C920, Grade NS, Class 25 minimum; Uses M, G, and A; single component.
  - 1. Color: To match adjacent surfaces.
  - 2. Applications: Use for:
    - a. Joints between metal frames and other materials.
    - b. Other exterior joints for which no other sealant is indicated.
- B. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable.
  - 1. Applications: Use for:
    - a. Joints between door and window frames and wall surfaces.
    - b. Other interior joints for which no other type of sealant is indicated.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify that joint backing and release tapes are compatible with sealant.

**3.02 PREPARATION**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Protect elements surrounding the work of this section from damage or disfigurement.



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**3.03 INSTALLATION**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave.

**3.04 CLEANING**

- A. Clean adjacent soiled surfaces.

**3.05 PROTECTION**

- A. Protect sealants until cured.

**END OF SECTION**

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**SECTION 08 5113**  
**ALUMINUM WINDOWS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Extruded aluminum windows with fixed sash.
- B. Factory glazing.

**1.02 REFERENCE STANDARDS**

- A. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/Specification for windows, doors, and skylights; 2011.
- B. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; 2015.
- C. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2012.
- D. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; American Architectural Manufacturers Association; 2012.
- E. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- F. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2014.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2013.
- I. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).
- J. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2009).

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide component dimensions and information on glass and glazing.
- C. Shop Drawings: Indicate opening dimensions, framed opening tolerances, method for achieving air and vapor barrier seal to adjacent construction, anchorage locations, anchor types, and installation requirements.
- D. Test Reports: Prior to submitting shop drawings or starting fabrication, submit test report(s) by independent testing agency showing compliance with performance requirements in excess of those prescribed by specified grade.
- E. Installer's Qualification Statement.
- F. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer and Installer Qualifications: Company specializing in fabrication of commercial aluminum windows of types required, with not fewer than five years of experience.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Comply with requirements of AAMA CW-10.

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- B. Protect finished surfaces with wrapping paper or strippable coating during installation. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

**1.06 FIELD CONDITIONS**

- A. Do not install sealants when ambient temperature is less than 40 degrees F.
- B. Maintain this minimum temperature during and 24 hours after installation of sealants.

**1.07 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after the Date of Substantial Completion.
- C. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Basis of Design: Torrance Aluminum 1500 Series.
  - 1. Substitutions: See Section 01 6000 - Product Requirements.

**2.02 WINDOWS**

- A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
  - 1. Frame Depth: 1-1/2 inch.
  - 2. Provide units factory glazed.
  - 3. Outside glazed.
  - 4. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
  - 5. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
  - 6. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
  - 7. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- B. Fixed, Non-Operable Type:
  - 1. Glazing: Tempered; 1/4 inch; Single; clear; transparent.
  - 2. Exterior Finish: Class I natural anodized.
  - 3. Interior Finish: Class I natural anodized.

**2.03 PERFORMANCE REQUIREMENTS**

- A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 requirements for specific window type:
- B. Design Pressure (DP): In accordance with applicable codes.
- C. Member Deflection: Limit member deflection to 1/175 in any direction, with full recovery of glazing materials.
- D. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 10 psf.
- E. Air Leakage: Maximum of 0.3 cu ft/min sq ft per unit area of outside frame dimension, with 6.27 psf differential pressure when tested in accordance with ASTM E283.

**2.04 MATERIALS**

- A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T5 temper.
- B. Sheet Aluminum: ASTM B209 (ASTM B209M), 5005 alloy, H34 temper.

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**2.05 FINISHES**

- A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils thick.

**END OF SECTION**

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**SECTION 09 9000**  
**PAINTING AND COATING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints. Repairing and painting existing surfaces affected by work of this contract.
- C. Scope: Finish all surfaces exposed to view affected by work of this contract, unless fully factory-finished
- D. Do Not Paint or Finish the Following Items:
  - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
  - 5. Stainless steel, anodized aluminum, bronze, terne, and lead items.
  - 6. Floors, unless specifically so indicated.
  - 7. Ceramic and other tiles.
  - 8. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
  - 9. Glass.
  - 10. Concealed pipes, ducts, and conduits.

**1.02 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
- D. Certification: By manufacturer that all paints and coatings comply with VOC limits specified.

**1.03 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

**1.04 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

**1.05 FIELD CONDITIONS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

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- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. Base Manufacturer: Dunn Edwards.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 6000 - Product Requirements.

**2.02 PAINTS AND COATINGS - GENERAL**

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
  - 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Supply each coating material in quantity required to complete entire project's work from a single production run.
  - 3. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: As follows unless other primer is required or recommended by manufacturer of top coats; where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Volatile Organic Compound (VOC) Content:
  - 1. Provide coatings that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
  - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- E. Colors: To be selected from manufacturer's full range of available colors.
  - 1. Selection to be made by Architect after award of contract.
  - 2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

**2.03 PAINT SYSTEMS - EXTERIOR**

- A. Paint E-OP - All Exterior Surfaces Indicated to be Painted, Unless Otherwise Indicated: Including concrete, concrete masonry, and cement board.
- B. Paint CE-OP-3L - Masonry/Concrete, Opaque, Latex, 3 Coat:
  - 1. One coat of block filler.
  - 2. Semi-gloss: Two coats of latex enamel; Spartashield.
- C. Paint GE-OP-3L - Gypsum Board and Plaster, Opaque, Latex, 3 Coat:
  - 1. One coat of latex primer sealer.

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- 2. Flat: Two coats of latex; Spartashield.
- D. Paint ME-OP-3L - Ferrous Metals, Unprimed, Latex, 3 Coat:
  - 1. One coat of latex primer, Bloc-Rust Primer.
  - 2. Semi-gloss: Two coats of latex enamel; Spartashield.
- E. Paint ME-OP-2L - Ferrous Metals, Primed, Latex, 2 Coat:
  - 1. Touch-up with rust-inhibitive primer recommended by top coat manufacturer.
  - 2. Semi-gloss: Two coats of latex enamel; Spartashield.
- F. Paint MgE-OP-3L - Galvanized Metals, Latex, 3 Coat:
  - 1. One coat galvanize primer. Ultra-Grip.
  - 2. Semi-gloss: Two coats of latex enamel; Spartashield.

**2.04 PAINT SYSTEMS - INTERIOR**

- A. Paint MI-OP-3L - Ferrous Metals, Unprimed, Latex, 3 Coat:
  - 1. One coat of latex primer, Bloc-Rust Premium.
  - 2. Semi-gloss: Two coats of latex enamel; Spartawall.
- B. Paint MI-OP-2L - Ferrous Metals, Primed, Latex, 2 Coat:
  - 1. Touch-up with latex primer.
  - 2. Semi-gloss: Two coats of latex enamel; Spartawall.
- C. Paint Mgl-OP-3L - Galvanized Metals, Latex, 3 Coat:
  - 1. One coat galvanize primer. Ultra-Grip Premium.
  - 2. Semi-gloss: Two coats of latex enamel; Spartawall.
- D. Paint GI-OP-3L - Gypsum Board/Plaster, Latex, 3 Coat:
  - 1. One coat of latex primer sealer, Vinylastic Select.
  - 2. Semi-gloss: Two coats of latex enamel; Spartawall.
  - 3. Eggshell: Two coats of latex enamel; Spartawall.

**2.05 ACCESSORY MATERIALS**

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  - 1. Gypsum Wallboard: 12 percent.
  - 2. Plaster and Stucco: 12 percent.
  - 3. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.

**3.02 PREPARATION**

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

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- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete and Unit Masonry Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- G. Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Plaster Surfaces to be Painted: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- I. Galvanized Surfaces to be Painted: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- J. Un corroded Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.
- K. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.

**3.03 APPLICATION**

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's instructions.
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance.
- F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- G. Sand wood and metal surfaces lightly between coats to achieve required finish.
- H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

**3.04 CLEANING**

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

**3.05 PROTECTION**

- A. Protect finished coatings until completion of project.
- B. Touch-up damaged coatings after Substantial Completion.

**END OF SECTION**