

EAST COUNTY REGIONAL CENTER ELEVATOR MODERNIZATION

PROJECT MANUAL

BID SET
September 15, 2017

East County Regional Center

Elevator Modernization

250 East Main Street, El Cajon, CA 92020

Judicial Council of California

Mark Cavagnero Associates Architect

Syska Hennessy Group Elevator Consulting

Elevator Specifications

BID SET

September 15, 2017

East County Regional Center - Elevator Modernization

Specifications

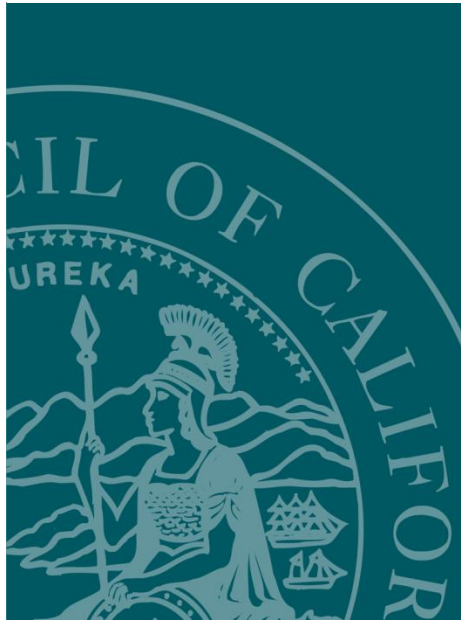
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010000	Division 1
14211	Modernization of Existing Traction Elevators

Refer to Permit Set drawings for associated Electrical and Mechanical specifications.

BID SET

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DIVISION 01

Courthouse

Superior Court of California

County of San Diego |



JUDICIAL COUNCIL
OF CALIFORNIA

OPERATIONS AND PROGRAMS DIVISION

DIVISION 01

SECTION 01 00 00

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SECTION 01 11 00

SUMMARY OF WORK

1. GENERAL

1.1. RELATED DOCUMENTS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Technical Specifications, Appendix; and
- 1.1.3. Design Documents.

1.2. PROJECT SUMMARY

- 1.2.1. Project Identification: Modernization of (9) traction elevators.
- 1.2.2. Project Location: 250 East Main Street, #1, El Cajon, CA, 92020
- 1.2.3. Judicial Council of California Project Manager: Michael Robinson
- 1.2.4. Architect: Mark Cavagnero Associates Architects
- 1.2.5. Judicial Council of California Inspector of Record: JCC
- 1.2.6. The Work consists of the following existing elevators:
 - a. Public passenger low rise elevators: 1, 2, and 3.
 - b. Public passenger high rise elevators: 5 & 6
 - c. Custody Elevators: 7 & 9
 - d. Judge's Elevator: 8
 - e. Service Elevator: 10

A detailed scope of work is provided in section 14 of the specifications. As an overview scope, the Contractors shall be responsible for providing materials, labor, and services necessary for the complete modernization of existing electric traction elevators. Modernization of these elevators shall include replacement of all of the hoist machines for all elevators. In addition, these elevators will have new car and hall pushbuttons and signal fixtures. The cabs and entrances for elevators 1 to 5, 8 and 10 will be upgraded. Elevators 7 & 9 the entrances and cabs will be retained and will be cleaned and have minor refurbishment.

Maintenance and Extended Warranty:

Upon award of the contract, the Contractor shall take immediate responsibility for maintenance of the existing elevators. The maintenance will continue thru

the modernization and will continue thru the extended three year warranty period. Maintenance shall be performed under the specifications provided in Section 14.

1.3. TYPE OF CONTRACT

- 1.3.1. Project will be constructed under the Judicial Council of California's Agreement for Construction Phase Services.

1.4. USE OF PREMISES

- 1.4.1. Confine construction operations to areas designated as scope of work in construction documents.
- 1.4.2. Security 'Badging': Comply with JCC Internal Background Check Policy and Security Operations Contractor Clearance Program. Refer to Background Check Policy document and Background Check Authorization and Badge Information/Authorization forms located elsewhere in Bid Package

1.5. WORK RESTRICTIONS

- 1.5.1. Check requirements of local jurisdiction and coordinate with existing Judicial Council of California facilities on or near the Project Site.
- 1.5.2. All work shall be performed during the hours when the courts are not in operation. The work shall be performed between the hours of 6 p.m. And 6 a.m. Provide an alternate to work 6 days a week; 10 hours (off hours as described above) a day. Any cranes used to bring equipment into the building shall be the responsibility of the elevator contractor and shall be completed only on weekends.
- 1.5.3. The sequence of the work shall be:
 - 2. ***Passenger Elevator Number 1 and Number 5***
 - 3. ***Passenger Elevator Number 2 and Elevator Number 6***
 - 4. ***Passenger Elevator Number 3 and Custody Elevator Number 9***
 - 5. ***Custody Elevator Number 7 and Judge's Elevator Number 8,***
 - 6. ***Service Elevator Number 10.***
- 6.1.1. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Judicial Council of California or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 6.1.1.1. Notify Judicial Council of California not less than two (2) days in advance of proposed utility interruptions.
 - 6.1.1.2. Do not proceed with utility interruptions without Judicial Council of California's written permission.

6.2. ENVIRONMENTAL REQUIREMENTS

- 6.2.1. This Project has been designated to incorporate environmental concepts established as part of the Judicial Council of California's California Trial Court Facilities Standards. To the extent possible, materials and equipment included in these Specifications shall comply with sustainable design practices.

END OF SECTION 01 11 00

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS:

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions

1.2. DESCRIPTION:

- 1.2.1. This Document contains procedures to be followed by the CMR to request payment.

- 1.2.2. **IF THERE IS ANY INCONSISTENCY IN THIS DOCUMENT WITH THE PROVISIONS IN THE GENERAL CONDITIONS THAT THE CMR SHALL COMPLY WITH RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES (e.g., “PAYMENTS,” “SCHEDULE OF VALUES”), THOSE PROVISIONS IN THE GENERAL CONDITIONS SHALL TAKE PRECEDENCE.**

1.3. SECTION INCLUDES

- 1.3.1. Schedule of Values.
- 1.3.2. Application for Payment.

1.4. SCHEDULE OF VALUES

- 1.4.1. Provide a breakdown of the GMP with enough detail to facilitate continued evaluation of CMR’s Invoices and Progress Reports.
- 1.4.2. CMR must update and resubmit the Schedule of Values before the next Invoice or Application for Payment when Change Orders result in a change in the GMP.

1.5. APPLICATIONS FOR PAYMENT

- 1.5.1. Form: CMR shall submit one (1) original and two (2) copies of the Judicial Council of California Request for Payment form.
- 1.5.2. Content and Format: CMR shall use Schedule of Values for listing items in Judicial Council of California Request for Payment Form.

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS:

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Allowances; and.
- 1.1.3. Substitutions

1.2. DESCRIPTION:

- 1.2.1. This Document contains procedures to be followed by the CMR to request changes in the Contract Time or the GMP.
- 1.2.2. IF THERE IS ANY INCONSISTENCY IN THIS DOCUMENT WITH THE PROVISIONS IN THE GENERAL CONDITIONS THAT THE CMR SHALL COMPLY WITH RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES (e.g., “CHANGES IN THE WORK”), THOSE PROVISIONS IN THE GENERAL CONDITIONS SHALL TAKE PRECEDENCE.

1.3. PRICE REQUESTS:

- 1.3.1. Price Requests issued by Judicial Council of California are for information only. CMR shall not consider Price Requests to be instructions either to stop work in progress or to execute the proposed change.
- 1.3.2. Within time specified in Price Request after receipt of Price Request, submit a quotation estimating cost adjustments to the GMP and the Contract Time necessary to execute the change.
 - 1.3.2.1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 1.3.2.2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 1.3.2.3. Include costs of labor and supervision directly attributable to the change.
 - 1.3.2.4. Include an updated CMR’s Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

1.4. PROPOSED CHANGE ORDERS:

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CMR may propose changes by submitting a request for a change on Judicial Council of California's Proposed Change Order form (PCO) to Judicial Council of California.

- 1.4.1. Include an updated Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- 1.4.2. Comply with Product Requirements if the proposed change requires substitution of one product or system for product or system specified.

END OF SECTION

SECTION 01 26 10

REQUESTS FOR INFORMATION

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Documentation Requirements;
- 1.1.3. Electronic Data Transfer
- 1.1.4. Submittals
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Operation and Maintenance Data;
- 1.1.7. Warranties;
- 1.1.8. Record Documents;
- 1.1.9. Demonstration and Training;
- 1.1.10. LEED; and
- 1.1.11. General Commissioning Requirements.

1.2. DESCRIPTION

This Document contains procedures to be followed by the CMR to request Architect provide additional information necessary to clarify or amplify an item in the Contract Documents that CMR thinks is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address issues that have arisen under field conditions.

1.3. PROCEDURES

- 1.3.1. Notification by CMR:
 - 1.3.1.1. Submit all requirements for clarification or additional information in writing to Judicial Council of California as required by the Contract Documents.
 - 1.3.1.2. Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI would be "001." The second RFI would be "002."
 - 1.3.1.3. All RFIs shall reference all applicable Contract Document(s), including Specification section(s), detail(s), page number(s), drawing number(s), and sheet number(s), etc. CMR shall make suggestions and interpretations of the issue

raised by each RFI. An RFI cannot modify the GMP, Contract Time, or the Contract Documents.

1.3.1.4. Limit each RFI to one subject.

1.3.1.5. Submit a RFI if one of the following conditions occurs:

1.3.1.5.1. CMR discovers an Unforeseen Site Condition or circumstance that is not described in the Contract Documents.

1.3.1.5.2. CMR discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.

1.3.2. All RFIs shall be submitted as .pdf documents and shall comply with the formatting and numbering requirements of the document “**Documentation Requirements.**”

1.3.3. CMR shall **not**:

1.3.3.1. Submit an RFI as a request for substitution.

1.3.3.2. Submit an RFI as a submittal.

1.3.3.3. Submit an RFI without first having thoroughly reviewed the Contract Documents.

1.3.3.4. Submit an RFI in a manner that suggests that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.

1.3.3.5. Submit an RFI in an untimely manner without proper coordination and scheduling of Work related trades.

1.4. RESPONSE TIME

1.4.1. Architect shall review RFIs and issue a response and instructions to CMR within a reasonable time frame.

1.4.2. Should CMR direct its subcontractors to proceed with the Work affected before receipt of a response from Architect, any portion of the Work which is not done in accordance with the Architect’s ultimate interpretations, clarifications, instructions, or decisions is subject to removal or replacement at CMR’s sole expense and responsibility.

END OF SECTION

SECTION 01 31 00

COORDINATION AND PROJECT MEETINGS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS:

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions.

1.2. SECTION INCLUDES

- 1.2.1. Coordination Responsibilities of the CMR.
- 1.2.2. Field Engineering Responsibilities of the CMR.
- 1.2.3. Preconstruction Conference.
- 1.2.4. Progress Meetings.
- 1.2.5. Pre-Installation Conferences.
- 1.2.6. Post Construction Dedication.

1.3. COORDINATION RESPONSIBILITIES OF THE CMR

- 1.3.1. Coordinate scheduling, submittals, and Work of the Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- 1.3.2. Prior to commencement of a particular type or kind of work examine relevant information, contract documents, and subsequent data issued to the Project.
- 1.3.3. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- 1.3.4. Closing up of holes, backfilling, and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
- 1.3.5. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- 1.3.6. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- 1.3.7. In locations where several elements of mechanical and electrical work must be sequenced and positioned with precision in order to fit into available space, prepare coordination

drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating, or installing any of the elements required to be coordinated.

- 1.3.8. Closing up of walls, partitions or furred spaces, backfilling, and other covering up operations shall not proceed until all enclosed or covered work and inspections have been completed. Verify before proceeding.
- 1.3.9. Coordinate completion and clean up of Work of separate sections in preparation for completion and for portions of work designated for Judicial Council of California's occupancy.
- 1.3.10. After Judicial Council of California occupancy of Project, coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Judicial Council of California's activities.
- 1.3.11. Coordinate all utility company work in accordance with the Contract Documents.

1.4. FIELD ENGINEERING RESPONSIBILITIES OF THE CMR

- 1.4.1. CMR shall employ a Land Surveyor registered in the State of California and acceptable to the Architect.
- 1.4.2. Control datum for survey is that established by Judicial Council of California provided survey. CMR to locate and protect survey control and reference points.
- 1.4.3. Replace dislocated survey control points based on original survey control.
- 1.4.4. Provide field engineering services. Establish elevations, lines, and levels utilizing recognized engineering survey practices.
- 1.4.5. Upon completion of Work, submit certificate signed by the Land Surveyor, that elevations and locations of Work are in conformance with Contract Documents. Record deviations on Record Drawings.

1.5. PRECONSTRUCTION CONFERENCE

- 1.5.1. Construction Manager or Project Engineer will schedule a conference immediately after receipt of fully executed Contract Documents prior to Project mobilization.
- 1.5.2. Mandatory Attendance: Construction Manager, Project Engineer, Inspector of Record, Architect of Record, CMR, CMR's Project Manager, and CMR's Job/Project Superintendent.
- 1.5.3. Optional Attendance: Architect's consultants, and utility company representatives.
- 1.5.4. Judicial Council of California Project Manager shall preside at conference and the Project Architect shall prepare and record minutes and distribute copies.
- 1.5.5. Agenda:
 - 1.5.5.1. Execution of Judicial Council of California-CMR Agreement.
 - 1.5.5.2. Issue Notice to Proceed.

- 1.5.5.3. Submission of executed bonds and insurance certificates.
- 1.5.5.4. Distribution of Contract Documents.
- 1.5.5.5. Submission of list of Subcontractors, list of Products, Schedule of Values, and Progress Schedule.
- 1.5.5.6. Designation of responsible personnel representing the parties.
- 1.5.5.7. Procedures for processing Change Orders.
- 1.5.5.8. Procedures for Request for Information.
- 1.5.5.9. Procedures for testing and inspecting.
- 1.5.5.10. Procedures for processing applications for payment.
- 1.5.5.11. Procedures for Project closeout.
- 1.5.5.12. Use of Premises.
- 1.5.5.13. Work restrictions.
- 1.5.5.14. Judicial Council of California's occupancy requirements or options.
- 1.5.5.15. Responsibility for temporary facilities and controls.
- 1.5.5.16. Construction waste management and recycling.
- 1.5.5.17. Parking availability.
- 1.5.5.18. Office, work and storage areas.
- 1.5.5.19. Equipment deliveries and priority.
- 1.5.5.20. Security.
- 1.5.5.21. Progress cleaning.
- 1.5.5.22. Review required submittals and LEED Certification requirements.

1.6. PROGRESS MEETINGS

- 1.6.1. CMR/ Judicial Council of California Project Manager shall schedule and administer meetings throughout progress of the Work at a minimum of every week.
- 1.6.2. Judicial Council of California Project Manager or Project Engineer will make arrangements for meetings, prepare agenda, and preside at meetings. Project Architect shall record minutes (Field Reports), and distribute copies.
- 1.6.3. Attendance Required: Job Superintendent, CMR, Project Engineer, Project Inspector, Architect of Record, Subcontractors, and suppliers as appropriate to agenda topics for each meeting.
- 1.6.4. Agenda:

- 1.6.4.1. Review minutes of previous meetings. (Field Reports)
 - 1.6.4.2. Review of Work progress.
 - 1.6.4.3. Field observations, problems, and decisions.
 - 1.6.4.4. Identification of problems which impede planned progress.
 - 1.6.4.5. Review of submittals schedule and status of submittals.
 - 1.6.4.6. Review of off-site fabrication and delivery schedules.
 - 1.6.4.7. Maintenance of construction schedule.
 - 1.6.4.8. Corrective measures to regain projected schedules.
 - 1.6.4.9. Planned progress during succeeding work period.
 - 1.6.4.10. Coordination of projected progress.
 - 1.6.4.11. Maintenance of quality and work standards.
 - 1.6.4.12. Effect of proposed changes on progress schedule and coordination.
 - 1.6.4.13. Other business relating to Work.
- 1.6.5. Judicial Council of California has authority to schedule meetings other than those listed, as necessary.

1.7. PRE-INSTALLATION CONFERENCES

- 1.7.1. When required in individual specification section, CMR shall convene a pre-installation conference prior to commencing work of the section. Refer to individual specification section for timing requirements of conference.
- 1.7.2. CMR shall require its Subcontractors and suppliers directly affecting, or affected by, work of the specific section to attend.
- 1.7.3. Notify the Judicial Council of California Project Manager, Project Engineer, Inspector of Record, and Architect of Record four (4) days in advance of meeting date.
- 1.7.4. The pre-installation conference may coincide with a regularly scheduled progress meeting.
- 1.7.5. CMR shall prepare agenda, preside at conference, record minutes, and distribute copies within two (2) days after conference to participants.
- 1.7.6. The purpose of the meeting will be to review Contract Documents, conditions of installation, preparation and installation procedures, and coordination with related work and manufacturer's recommendations.
- 1.7.7. Pre-installation Schedule: As a minimum, Work being installed under the Contract Documents technical sections will require pre-installation conferences. CMR shall review the technical specifications and add all additional requirements for pre-installation meetings

contained in those sections.

1.8. POST CONSTRUCTION DEDICATION

- 1.8.1. Attendance Required: Project Superintendent, CMR, Project Manager, major Subcontractors, Construction Manager, Project Engineer, Project Inspector, and Architect of Record.
- 1.8.2. Preparation prior to Dedication: CMR and appropriate Subcontractors and suppliers shall:
 - 1.8.2.1. Assist Judicial Council of California in operation of mechanical devices and systems.
 - 1.8.2.2. Verify operation and adjust controls for communication systems.
 - 1.8.2.3. Assist Judicial Council of California in operation of lighting systems.

END OF SECTION

SECTION 01 31 20

DOCUMENTATION REQUIREMENTS

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.12. General Conditions;
- 1.1.13. Requests for Information;
- 1.1.14. Electronic Data Transfer;
- 1.1.15. Submittals;
- 1.1.16. Contract Closeout and Final Cleaning;
- 1.1.17. Operation and Maintenance Data;
- 1.1.18. Warranties;
- 1.1.19. Record Documents;
- 1.1.20. Demonstration and Training;

1.2. RESPONSIBILITIES

The following table describes the responsibilities of the CMR related to the document creation and submittal. The table also summarizes the format that these documents need to be provided in for Judicial Council of California.

Document Type	Format (s)	Embedded Keywords
Shop Drawings	* PDF	* Document Type - "Drawing"
		* TAG # of the Major equipment on that sheet.
Project Record Documents (PRD)	* PDF	* Document Type - "Drawing"
	* DWG (or other CAD). * REVIT or NAVISWORKS.	* TAG # of the Major equipment on that sheet.
O&M	* PDF	* Document Type - "O&M"
		* Equipment TAG #
		* Technical Specifications Div #
Service Manuals	* PDF	* Document Type - "Manuals"
		* Equipment TAG #
		* Technical Specifications Div #

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RFIs	* PDF	None
Approved Submittals	* PDF	* Document Type - "Submittals"
		* Equipment TAG #'s for all equipment covered in that document
		* Technical Specifications Div #
Warranty / Licensing Documents	* PDF	* Document Type - "Warranty"
		* Technical Specifications Div #
		* Execution date * Expiration Date MMDDYYYY
Certificates (Fire, Elevator, Generator AQMB, etc.)	* PDF	None
Key Schedule	* Excel	None
Record Photographs	* JPG	None

1.3. SUBMITTAL PROCESS

All documents from the construction phase are to be turned over to the Judicial Council of California and CMR shall certify that the documents listed above meet the required standards set forth herein.

1.4. NAMING CONVENTION

1.4.1. The documents shall have a consistent naming convention that includes the following components as applicable to each type of document:

Building ID:	Unique Judicial Council of California Facility ID (e.g., - 01-A1)
Building Name:	This could be changed over the life of the building so do NOT include.
Discipline:	e.g., Electrical, Mechanical, etc.
Drawings Type:	Record Drawings, Warranty, Contract, License
Division #:	Use the specification sections within the Technical Specifications
Sheet #:	e.g., E01.1.1, M3.2.1 etc.
Asset TAG #:	Unique Equipment Tag # (e.g. CHW01, CTW01, etc.) Include full Judicial Council of California ID if finalized prior to Completion
Description:	e.g., First Floor Mechanical Layout, Centrifugal Chiller, etc.

1.4.2. The detailed naming convention for each type of document is provided in the Part 2 of this document.

1.4.3. File Format

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All documents shall be submitted in an electronic (digital) format. The acceptable formats include PDF. Additional hard copies of certain documents may be required and shall be in the following format:

1.4.3.1. 3-Ring binders;

1.4.3.2. White;

1.4.3.3. 3 to 5 inches;

1.4.3.4. The spine & front cover identified with:

1.4.3.4.1. Building ID;

1.4.3.4.2. Building name;

1.4.3.4.3. Division Number using the specification sections within the Technical Specifications;

1.4.3.4.4. Brief Title; and

1.4.3.4.5. Volume Number.

1.4.3.5. Each binder must contain a Table of Contents (TOC). Index the TOC using the specification sections within the Technical Specifications.

1.4.4. Embedded Key Words

Electronic documents shall contain keyword(s) for searching.

1.4.5. Media

All documents must be submitted in an electronic format unless specified otherwise.

2. PRODUCTS

All submittals shall be provided for with the following detailed naming convention for each type of document.

2.1. Submittals

2.1.1. **File Name:** <BldgID><FullSubmittal#><SubSections><Description>
Example: "07E3_02-057000-0506-0__DecorativeMetal" Format – ACAD"

2.1.2. Format – PDF

2.1.3. Embedded Keywords

2.1.4. Hard copies Required – Yes

2.2. RFIs

2.2.1. **File Name:** <BldgID><Technical Specifications#><RFI#><Description>
Example: "07E3_232123_RFI067_CWHPSquenceOfOperation"

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- 2.2.2. Format – PDF
- 2.2.3. Embedded Keywords – None
- 2.2.4. Hard copies Required – No

2.3. O&M Documents / Service Manuals

- 2.3.1. **File Name:** <BldgID><Technical Specifications#><EquipmentTag><Description>
Example: “07E3_232123_CHWP1_ChilledWaterPump”
- 2.3.2. Format – PDF
- 2.3.3. Embedded Keywords
- 2.3.4. Hard copies Required – No

2.4. Warranty Licensing Documents

- 2.4.1. **File Name:** <BldgID><DocType><Technical Specifications#><CMRName><ExpDateMMDDYYYY><Tag#><Description>
Example: “07E3_Warranty033000_Conco10052020_CastInPlaceConcrete”
Example: “07E3_Service0233400_Airco12312012_AHU1B_SupplyFanMotor”
- 2.4.2. Format – PDF
- 2.4.3. Embedded Keywords
- 2.4.4. Hard copies Required – Yes

2.5. Certificates

- 2.5.1. **File Name:** <BldgID><Technical Specifications#><Description>
Example: “07E3_232123_Elevator_E1”
- 2.5.2. Format – PDF
- 2.5.3. Embedded Keywords – None
- 2.5.4. Hard copies Required – No

END OF SECTION

SECTION 01 32 16

CONSTRUCTION SCHEDULE – NETWORK ANALYSIS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Coordination and Meetings; and
- 1.1.3. Submittals.

1.2. PERFORMANCE REQUIREMENTS

- 1.2.1. Ensure adequate scheduling during construction activities so Work may be prosecuted in an orderly and expeditious manner within stipulated Contract Time.
- 1.2.2. Ensure coordination of CMR and Subcontractors at all levels.
- 1.2.3. Ensure coordination of submittals, fabrication, delivery, erection, installation, and testing of Products, materials and equipment.
- 1.2.4. Ensure on-time delivery of Judicial Council of California furnished Products, materials and equipment.
- 1.2.5. Ensure coordination of jurisdictional reviews.
- 1.2.6. Prepare applications for payment.
- 1.2.7. Monitor progress of Work.
- 1.2.8. Prepare proper requests for changes to Contract Time.
- 1.2.9. Prepare proper requests for changes to Construction Schedule.
- 1.2.10. Assist in detection of schedule delays and identification of corrective actions.

1.3. QUALIFICATIONS

1.3.1. Scheduler:

- 1.3.1.1. CMR shall retain a construction scheduler to work in enough capacity to perform all of the CMR's requirements to prepare the Construction Schedule. The Scheduler shall plan, coordinate, execute, and monitor a cost/resource loaded CPM schedule as required for Project.
- 1.3.1.2. Scheduler will cooperate with Judicial Council of California and shall be available on site for monitoring, maintaining and updating schedules in a timely manner.

1.3.1.3. Judicial Council of California has the right to reject the Scheduler based upon a lack of experience as required by this Document or based on lack of performance and timeliness of schedule submittals/fragnets on past projects. CMR shall within seven (7) calendar days of Judicial Council of California's rejection, propose another scheduler who meets the experience requirements stated above.

1.3.2. **Administrative Personnel:** Five (5) years minimum experience in using and monitoring schedules on comparable projects.

1.4. SUBMITTALS

1.4.1. Submit Short Interval Schedule at each Construction Progress Meeting.

1.4.2. Submit Time Adjustment Schedule within five (5) days of commencement of a claimed delay.

1.4.3. Submit Recovery Schedules as required for timely completion of Work or when demanded by the Judicial Council of California.

1.4.4. Submit job cost reports when demanded by the Judicial Council of California.

1.4.5. Submit one (1) reproducible and two (2) copies of each schedule and cost report.

1.5. REVIEW AND EVALUATION

1.5.1. CMR shall participate in joint review of Construction Schedule and Reports with Judicial Council of California and Architect.

1.5.2. Within seven (7) days of receipt of Judicial Council of California and Architect's comments provide satisfactory revision to Construction Schedule or adequate justification for activities in question.

1.5.3. In the event that an activity or element of Work is not detected by Judicial Council of California or Architect review, such omission or error shall be corrected by next scheduled update and shall not affect Contract Time.

1.5.4. Acceptance by Judicial Council of California of corrected Construction Schedule shall be a condition precedent to making any progress payments.

1.5.5. Cost-loaded values of Construction Schedule shall be basis for determining progress payments.

1.5.6. Review and acceptance by Judicial Council of California and Architect of Preliminary Work Schedule or Construction Schedule does not constitute responsibility whatsoever for accuracy or feasibility of schedules nor does such acceptance expressly or impliedly warrant, acknowledge or admit reasonableness of activities, logic, duration, manpower, cost or equipment loading stated or implied on schedules.

1.6. FORMAT

1.6.1. Prepare diagrams and supporting mathematical analyses using Precedence Diagramming Method, under concepts and methods outlined in AGC Construction Planning and Scheduling Manual, or other method pre-approved by Judicial Council of California.

- 1.6.2. **Listings:** Reading from left to right, in ascending order for each activity.
- 1.6.3. **Diagram Size:** 42 inches maximum height x width required.
- 1.6.4. **Scale and Spacing:** To allow for legible notations and revisions.
- 1.6.5. Illustrate order and interdependence of activities and sequence of Work.
- 1.6.6. Illustrate complete sequence of construction by activity.
- 1.6.7. Provide legend of symbols and abbreviations used.

1.7. COST AND SCHEDULE REPORTS

- 1.7.1. **Activity Analysis:** Tabulate each activity of network diagram and identify for each activity:
 - 1.7.1.1. Description.
 - 1.7.1.2. Interface with outside CMRs or agencies.
 - 1.7.1.3. Number.
 - 1.7.1.4. Preceding and following number.
 - 1.7.1.5. Duration.
 - 1.7.1.6. Earliest start date.
 - 1.7.1.7. Earliest finish date.
 - 1.7.1.8. Actual start date.
 - 1.7.1.9. Actual finish date.
 - 1.7.1.10. Latest start date.
 - 1.7.1.11. Latest finish date.
 - 1.7.1.12. Total and free float.
 - 1.7.1.13. Identification of critical path activity.
 - 1.7.1.14. Monetary value keyed to Schedule of Values.
 - 1.7.1.15. Manpower requirements.
 - 1.7.1.16. Responsibility.
 - 1.7.1.17. Percentage complete.
 - 1.7.1.18. Variance positive or negative.
- 1.7.2. **Cost Report:** Tabulate each activity of network diagram and identify for each activity:

- 1.7.2.1. Description.
- 1.7.2.2. Number.
- 1.7.2.3. Total cost.
- 1.7.2.4. Percentage complete.
- 1.7.2.5. Value prior to current period.
- 1.7.2.6. Value this period.
- 1.7.2.7. Value to date.

1.7.3. **Required Sorts:** List activities in sorts or groups:

- 1.7.3.1. By activity number.
- 1.7.3.2. By amount of float time in order of early start.
- 1.7.3.3. By responsibility in order of earliest start date.
- 1.7.3.4. In order of latest start dates.
- 1.7.3.5. In order of latest finish dates.
- 1.7.3.6. Application for payment sorted by Schedule of Values.
- 1.7.3.7. Listing of activities on critical path.

1.7.4. Listing of basic input data which generates schedule.

1.8. CONSTRUCTION SCHEDULE

- 1.8.1. CMR shall develop and submit a cost loaded preliminary schedule of construction (or Preliminary Construction Schedule) as required by this Document and the Contract Documents. It shall be submitted in computer generated network format and shall be organized by Activity Codes representing the intended sequencing of the Work, and with time scaled network diagrams of activities. The Preliminary Construction Schedule shall include activities such as mobilization, preparation of submittals, specified review periods, procurement items, fabrication items, milestones, and all detailed construction activities.
- 1.8.2. Upon Judicial Council of California's acceptance of the Preliminary Construction Schedule, CMR shall update the accepted Preliminary Construction Schedule until CMR's Construction Schedule is fully developed and accepted. Since updates to the Construction Schedule are the basis for payment to CMR, submittal and acceptance of the Construction Schedule and updates shall be a condition precedent to making of monthly payments, as indicated in the General Conditions.
- 1.8.3. Failure to submit an adequate or accurate Preliminary Construction Schedule, Construction Schedule, updates thereto or failure to submit on established dates, will be considered a breach of Contract.
- 1.8.4. Failure to include any activity shall not be an excuse for completing all Work by required Completion Date.

- 1.8.5. Activities of long intervals shall be broken into increments no longer than fourteen (14) days or a value over \$20,000.00 unless approved by the Judicial Council of California or it is non-construction activity for procurement and delivery.
- 1.8.6. The Construction Schedule shall comply with the following and include the following:
 - 1.8.6.1. Provide a written narrative describing CMR's approach to mobilization, procurement, and construction during the first thirty (30) calendar days including crew sizes, equipment and material delivery, Site access, submittals, and permits.
 - 1.8.6.2. Shall designate critical path or paths.
 - 1.8.6.3. Procurement activities to include mobilization, shop drawings and sample submittals.
 - 1.8.6.4. Identification of key and long-lead elements and realistic delivery dates.
 - 1.8.6.5. Construction activities in units of whole days limited to fourteen (14) days for each activity except non-construction activities for procurement and delivery.
 - 1.8.6.6. Approximate cost and duration of each activity.
 - 1.8.6.7. Shall contain seasonal weather considerations.
 - 1.8.6.8. Indicate a date for Project Completion that is no later than Completion Date subject to any time extensions processed as part of a Change Order.
 - 1.8.6.9. Conform to mandatory dates specified in the Contract Documents.
 - 1.8.6.10. CMR shall allow for inclement weather in the Proposed Baseline Schedule by incorporating an activity titled "Rain Day Impact Allowance" as the last activity prior to the Completion Milestone. No other activities may be concurrent with it. The duration of the Rain Day Impact Allowance activity will in accordance with the Special Conditions, and will be calculated from the Notice to Proceed until the Completion.
 - 1.8.6.11. Level of detail shall correspond to complexity of work involved.
 - 1.8.6.12. Indicate procurement activities, delivery, and installation of Judicial Council of California furnished material and equipment.
 - 1.8.6.13. Designate critical path or paths.
 - 1.8.6.14. Subcontractors work at all levels shall be included in schedule.
 - 1.8.6.15. As developed shall show sequence and interdependence of activities required for complete performance of Work.
 - 1.8.6.16. Shall be logical and show a coordinated plan of Work.
 - 1.8.6.17. Show order of activities and major points of interface, including specific dates of completion.
 - 1.8.6.18. Duration of activities shall be coordinated with Subcontractors and suppliers and

shall be best estimate of time required.

1.8.6.19. Shall show description, duration and float for each activity.

1.8.7. **Activity.** An activity shall meet the following criteria:

1.8.7.1. Any portion or element of Work, action, or reaction that is precisely described, readily identifiable, and is a function of a logical sequential process.

1.8.7.2. Descriptions shall be clear and concise. Beginning and end shall be readily verifiable. Starts and finishes shall be scheduled by logical restraints.

1.8.7.3. Responsibility shall be identified with a single performing entity.

1.8.7.4. Additional codes shall identify building, floor, bid item and CSI classification.

1.8.7.5. Assigned dollar value (cost-loading) of each activity shall cumulatively equal total contract amount. Mobilization, bond and insurance costs shall be separate. General requirement costs, overhead, profit, shall be prorated throughout all activities. Activity costs shall correlate with Schedule of Values.

1.8.7.6. Each activity shall have manpower-loading assigned.

1.8.7.7. Major construction equipment shall be assigned to each activity.

1.8.7.8. Activities labeled start, continue or completion are not allowed.

1.8.8. **Equipment and Materials.** For major equipment and materials show a sequence of activities including:

1.8.8.1. Preparation of shop drawings and sample submissions.

1.8.8.2. Review of shop drawings and samples.

1.8.8.3. Finish and color selection.

1.8.8.4. Fabrication and delivery.

1.8.8.5. Erection or installation.

1.8.8.6. Testing.

1.8.9. Include a minimum of fifteen (15) days prior to Completion Date for punch lists and clean up. No other activities shall be scheduled during this period.

1.9. SHORT INTERVAL SCHEDULE

1.9.1. The Four-Week Rolling Schedule shall be based on the most recent Judicial Council of California Accepted Construction Schedule or Update. It shall include weekly updates to all construction, submittal, fabrication/procurement, and separate Work Contract activities. CMR shall ensure that it accurately reflects the current progress of the Work.

1.9.2. Shall be fully developed horizontal bar-chart-type schedule directly derived from Construction Schedule.

- 1.9.3. Prepare schedule on sheet of sufficient width to clearly show data.
- 1.9.4. Provide continuous heavy vertical line identifying first day of week.
- 1.9.5. Provide continuous subordinate vertical line identifying each day of week.
- 1.9.6. Identify activities by same activity number and description as Construction Schedule.
- 1.9.7. Show each activity in proper sequence.
- 1.9.8. Indicate graphically sequences necessary for related activities.
- 1.9.9. Indicate activities completed or in progress for previous two (2) week period.
- 1.9.10. Indicate activities scheduled for succeeding two (2) week period.
- 1.9.11. Further detail may be added if necessary to monitor schedule.

1.10. REQUESTED TIME ADJUSTMENT SCHEDULE

- 1.10.1. Updated Construction Schedule shall not show a Completion Date later than the Contract Time, subject to any time extensions processed as part of a Change Order.
- 1.10.2. If an extension of time is requested, a separate schedule entitled "Requested Time Adjustment Schedule" shall be submitted to Judicial Council of California and Architect.
- 1.10.3. Indicate requested adjustments in Contract Time which are due to changes or delays in completion of Work.
- 1.10.4. Extension request shall include forecast of Project Completion date and actual achievement of any dates listed in Contract Documents.
- 1.10.5. To the extent that any requests are pending at time of any Construction Schedule update, Time Adjustment Schedule shall also be updated.
- 1.10.6. Schedule shall be a time-scaled network analysis.
- 1.10.7. Accompany schedule with formal written time extension request and detailed impact analysis justifying extension.
- 1.10.8. Time impact analysis shall demonstrate time impact based upon date of delay, and status of construction at that time and event time computation of all affected activities. Event times shall be those as shown in latest Construction Schedule.
- 1.10.9. Activity delays shall not automatically constitute an extension of Contract Time.
- 1.10.10. Failure of Subcontractors shall not be justification for an extension of time.
- 1.10.11. Float is not for the exclusive use or benefit of any single party. Float time shall be apportioned according to needs of project, as determined by the Judicial Council of California.
- 1.10.12. Float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity durations, or imposed dates shall be apportioned according to benefit of Project.

- 1.10.13. Extensions will be granted only to extent that time adjustments to activities exceed total positive float of the critical path and extends Completion date.
- 1.10.14. Judicial Council of California shall not have an obligation to consider any time extension request unless requirements of Contract Documents, and specifically, but not limited to these requirements are complied with.
- 1.10.15. Judicial Council of California shall not be responsible or liable for any construction acceleration due to failure of Judicial Council of California to grant time extensions under Contract Documents should requested adjustments in Contract Time not substantially comply with submission and justification requirements of Contract for time extension requests.
- 1.10.16. In the event a Requested Time Adjustment Schedule and Time Impact Analysis are not submitted within ten (10) days after commencement of a delay it is mutually agreed that delay does not require a Contract Time extension.

1.11. RECOVERY SCHEDULE

- 1.11.1. When activities are behind Construction Schedule a supplementary Recovery Schedule shall be submitted.
- 1.11.2. CMR shall prepare and submit to the Judicial Council of California a Recovery Schedule at any time requested by the Judicial Council of California, at no cost to the Judicial Council of California.
- 1.11.3. Form and detail shall be sufficient to explain and display how activities will be rescheduled to regain compliance with Construction Schedule and to complete the Work by the Completion Date.
- 1.11.4. Maximum duration shall be one (1) month and shall coincide with payment period.
- 1.11.5. Ten (10) days prior to expiration of Recovery Schedule, CMR shall have to show verification to determine if activities have regained compliance with Construction Schedule. Based upon this verification the following will occur:
 - 1.11.5.1. Supplemental Recovery Schedule will be submitted to address subsequent payment period.
 - 1.11.5.2. Construction Schedule will be resumed.

1.12. UPDATING SCHEDULES

- 1.12.1. Review and update schedule at least ten (10) days prior to submitting an Application for Payment.
- 1.12.2. Maintain schedule to record actual prosecution and progress.
- 1.12.3. Approved Change Orders which affect schedule shall be identified as separate new activities.
- 1.12.4. Change Orders of less than \$5,000.00 value or less than three (3) days duration need not be shown unless critical path is affected.
- 1.12.5. No other revisions shall be made to schedule unless authorized by Judicial Council of

California.

1.12.6. **Written Narrative Report:** CMR shall include a written report to explain the Monthly Schedule Update. The narrative shall, at a minimum include the following headings with appropriate discussions of each topic:

1.12.6.1. Activities or portions of activities completed during previous reporting period.

1.12.6.2. Actual start dates for activities currently in progress.

1.12.6.3. Deviations from critical path in days ahead or behind.

1.12.6.4. List of major construction equipment used during reporting period and any equipment idle.

1.12.6.5. Number of personnel by trade engaged on Work during reporting period.

1.12.6.6. Progress analysis describing problem areas.

1.12.6.7. Current and anticipated delay factors and their impact.

1.12.6.8. Proposed corrective actions and logic revisions for Recovery Schedule.

1.12.6.9. Proposed modifications, additions, deletions and changes in logic of Construction Schedule.

1.12.6.10. In updating the Schedule, CMR shall not modify Activity ID numbers, schedule calculation rules/criteria, or the Activity Coding Structure required.

1.12.7. Schedule update will form basis upon which progress payments will be made.

1.12.8. Judicial Council of California will not be obligated to review or process Application for Payment until schedule and Progress Report have been submitted.

1.13. DISTRIBUTION

1.13.1. Following joint review and acceptance of updated schedules distribute copies to Judicial Council of California, Architect, and all other concerned parties.

1.13.2. Instruct recipients to promptly report in writing any problem anticipated by projections shown in schedule.

2. PRODUCTS

2.1. SCHEDULING SOFTWARE

2.2. CMR shall utilize Primavera P6 Project Management® software (latest version) by Oracle, or Judicial Council of California-approved equivalent scheduling software to employ the Critical Path Method (CPM) in the development and maintenance of the Construction Schedule. The scheduling software shall be capable of being resource loaded with manpower, costs and materials. It shall also be capable of generating time-scaled logic diagrams, resource histograms and profiles, bar charts, layouts and reports with any and/or all activity detail.

2.3. ELECTRONIC DATA

East County Regional Center Elevator Modernization

Provide compact disk(s) that contain a back-up of the Proposed Baseline Schedule data on it. The electronic P6 files shall be saved in “.XER” type format.

END OF SECTION

SECTION 01 32 80

ELECTRONIC DATA TRANSFER

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Documentation Requirements;
- 1.1.3. Submittals;
- 1.1.4. Contract Closeout and Final Cleaning;
- 1.1.5. Operation and Maintenance Data;
- 1.1.6. Warranties;
- 1.1.7. Record Documents;
- 1.1.8. Demonstration and Training;
- 1.1.9. LEED; and
- 1.1.10. General Commissioning Requirements.

1.2. SUMMARY

- 1.2.1. This Document includes Terms and Conditions for the transfer of the Judicial Council of California's Electronic Data to CMR for use in preparation of Submittals, Record Documents, Coordination Drawings, and related project documents.
- 1.2.2. CMR's acceptance of Electronic Data in any form shall constitute acceptance of the Terms and Conditions of this Document, including payment of indicated fees.
- 1.2.3. **THE ELECTRONIC DATA PROVIDED BY Judicial Council of California ARE THE PROPRIETARY INFORMATION OF Judicial Council of California. ALL ELECTRONIC DATA SHALL BE TREATED AS CONFIDENTIAL AND SHALL NOT BE DISCLOSED TO OR SHARED WITH OTHERS WITHOUT EXPRESS, WRITTEN CONSENT FROM THE Judicial Council of California'S EXPRESS, WRITTEN CONSENT.**

1.3. TERMS AND CONDITIONS

- 1.3.1. In consideration of CMR's request to the Judicial Council of California to deliver certain Electronic Data for use on the Project, CMR agrees to the following:
 - 1.3.1.1. Electronic Data includes but is not limited to, computer-aided design (CAD) files, and files produced by word processing, spread sheet, scheduling, data base and other software programs. The Electronic Data may be provided in an

original format produced by Architect or an alternate, “translated” format as requested.

- 1.3.1.2. The means by which the Electronic Data is transferred may include but are not limited to, electronic mail, File Transfer Protocol (FTP) sites, project websites, and disk copies transmitted between Judicial Council of California and CMR. CMR acknowledges that Electronic Data transferred in any manner or translated from the system and format used by Judicial Council of California’s Consultant to an alternate system or format is subject to errors that may affect the accuracy and reliability of the data and that the data may be altered, whether inadvertently or otherwise. Accordingly, the Judicial Council of California makes no warranty, express or implied, as to the accuracy of the information transferred. The Electronic Data are not the Construction Documents and differences may exist between these electronic files and corresponding hard-copy Construction Documents. Judicial Council of California reserves the right to retain hard copy originals in addition to electronic copies of the Electronic Data transferred, which originals shall be referred to and shall govern.
- 1.3.1.3. The Judicial Council of California shall issue the most current information available, but does not undertake the responsibility for providing updated information as the Project proceeds.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISION

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Requests for Information;
- 1.1.3. Documentation Requirements;
- 1.1.4. Electronic Data Transfer;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Operation and Maintenance Data;
- 1.1.7. Warranties;
- 1.1.8. Record Documents;
- 1.1.9. Demonstration and Training;

1.2. DOCUMENT INCLUDES

- 1.2.1. Submittal procedures;
- 1.2.2. Shop drawings;
- 1.2.3. Electronic Submittal Process;
- 1.2.4. Product data;
- 1.2.5. Samples;
- 1.2.6. Manufacturers' Instructions;
- 1.2.7. Manufacturers' Certificates;
- 1.2.8. Mock-Up; and

- 1.2.9. Deferred approval requirements.

1.3. SUBMITTAL PROCEDURES – USE OF PRE-APPROVED PROGRAM

- 1.3.1. CMR shall utilize for the submittal process a project / document management software program pre-approved by the Judicial Council of California.
- 1.3.2. CMR shall transmit each submittal in conformance with requirements of this Document. For each submittal, CMR shall:
 - 1.3.2.1. Sequentially number the transmittal forms. Resubmitted submittals must have the original number with an alphabetic suffix;
 - 1.3.2.2. Identify Judicial Council of California’s project number, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate;
 - 1.3.2.3. Apply CMR's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals without CMR's stamp and signature will be returned without review.
- 1.3.3. Coordinate preparation and processing of submittals with performance of Work. Transmit each submittal sufficiently in advance of performance of Work to avoid delay.
 - 1.3.3.1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 1.3.3.2. Coordinate transmittal of different types of submittals for related parts of Work so processing will not be delayed because of the need to review submittals concurrently for coordination.
 - 1.3.3.3. Judicial Council of California’s Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- 1.3.4. Comply with Contract Documents for list of submittals and time requirements for scheduled performance of Work.
- 1.3.5. No extension of Contract Time will be authorized because of failure to transmit submittals to the Judicial Council of California’s Architect sufficiently in advance of the Work to permit processing.
- 1.3.6. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- 1.3.7. Provide space for CMR and Architect review stamps.
- 1.3.8. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- 1.3.9. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly

report any inability to comply with provisions.

- 1.3.10. Submittals not requested will not be recognized or processed. Submittals not requested will be returned without review.

1.4. SHOP DRAWINGS

- 1.4.1. Prepare Project-specific information, drawn accurately to scale. Do not reproduce Contract Documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the Project is not a shop drawing.
- 1.4.2. Do not use or allow others to use Shop Drawings which have been submitted and have been rejected.
- 1.4.3. Preparation: Fully illustrate requirements in Contract Documents. Include the following information, as applicable:
 - 1.4.3.1. Dimensions.
 - 1.4.3.2. Identification of products.
 - 1.4.3.3. Fabrication and installation drawings.
 - 1.4.3.4. Roughing-in and setting diagrams.
 - 1.4.3.5. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - 1.4.3.6. Shopwork manufacturing instructions.
 - 1.4.3.7. Templates and patterns.
 - 1.4.3.8. Schedules.
 - 1.4.3.9. Design calculations.
 - 1.4.3.10. Compliance with specified standards.
 - 1.4.3.11. Notation of coordination requirements.
 - 1.4.3.12. Notation of dimensions established by field measurements.
 - 1.4.3.13. Relationship to adjoining construction clearly indicated.
 - 1.4.3.14. Seal and signature of professional engineer if specified.
 - 1.4.3.15. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 1.4.3.16. All deviations, from the Contract Documents, clearly indicated.
 - 1.4.3.17. Copy of letter indicating acceptance of deviations indicated on the submittal.
- 1.4.4. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop

Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).

- 1.4.5. Do not use Shop Drawings without an appropriate final stamp from the CMR and Judicial Council of California indicating action taken in connection with construction.
- 1.4.6. Deviations from Contract Documents require specific written acceptance by the Judicial Council of California of the noted deviation and clear indication on the submittal.
- 1.4.7. All Shop Drawings shall be submitted as .pdf documents and shall comply with the formatting and numbering requirements of the document “**Documentation Requirements.**”

1.5. ELECTRONIC SUBMITTAL PROCESS

1.5.1. Submittal Procedure for Large Format shop drawings.

- 1.5.1.1. CMR shall provide six (6) paper copies of the large format Shop Drawings directly to the Judicial Council of California and the Construction Manager (CM) and CMR will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings).
- 1.5.1.2. CMR shall verify that the Schedule of Submittals and all submittal log(s) are accurate and up to date.
- 1.5.1.3. The Judicial Council of California and Architect will review and markup each Submittal and provide changes to CMR for CMR’s incorporation into the Submittal.
- 1.5.1.4. This process will continue until the CMR has provided a Submittal that is acceptable to the Judicial Council of California and the Architect.
- 1.5.1.5. Once a Submittal is accepted, the Judicial Council of California will provide a final accepted Submittal to the CMR and the CMR will closeout that one Submittal.
- 1.5.1.6. CMR shall send one (1) copy of the completed record submittal of the large format documents to a vendor for scanning and posting.

1.5.2. Product Data, Calculations and Small Format Drawings

- 1.5.2.1. CMR shall upload/post one (1) electronic copy (from manufacturer’s website or pre-scanned) of the product literature, data, calculations, and/or small format shop drawings with a Transmittal (with a detailed description of the submittal) directly to the CM.
- 1.5.2.2. The Judicial Council of California and Architect will review and markup each Submittal and provide changes to CMR for CMR’s incorporation into the Submittal.
- 1.5.2.3. This process will continue until the CMR has provided a Submittal that is acceptable to the Judicial Council of California and the Architect.
- 1.5.2.4. Once a Submittal is accepted, the Judicial Council of California will provide a

final accepted Submittal to the CMR and the CMR will closeout that one Submittal.

1.5.2.5. CMR shall send one (1) copy of the completed record submittal of the large format documents to a vendor for scanning and posting..

1.5.3. Sample Submittal Procedure – (Product / Assembly Samples)

1.5.3.1. CMR shall provide four (4) physical samples directly to the Judicial Council of California and the CM and CMR will upload/post an electronic transmittal (with a detailed description of the submittal including the subject, specification number and number of drawings).

1.5.3.2. The Judicial Council of California and Architect will review and markup each Submittal and provide changes to CMR for CMR's incorporation into the Submittal.

1.5.3.3. This process will continue until the CMR has provided a Submittal that is acceptable to the Judicial Council of California and the Architect.

1.5.3.4. Once a Submittal is accepted, the Judicial Council of California will provide a final accepted Submittal to the CMR and the CMR will closeout that one Submittal.

1.5.3.5. CMR shall send one (1) copy of the completed record submittal of the large format documents to a vendor for scanning and posting.

1.6. PRODUCT DATA

1.6.1. In addition to the above requirements, mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

1.6.2. After review, distribute in accordance with the above provisions and provide copies for Record Documents described in the Contract Documents.

1.7. SAMPLES

1.7.1. In addition to the above requirements, submit samples to illustrate functional and aesthetic characteristics of the Product in accordance with this Document, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

1.7.2. Where specific colors or patterns are not indicated, provide materials and products specified in the full range of color, texture and pattern for selection by Judicial Council of California. Range shall include standard stocked color/texture/pattern, standard color/texture/pattern not stocked, but available from manufacturer, and special color/ texture/pattern available from manufacturer as advertised in product data and brochures. Unless otherwise indicated in individual specification sections, Judicial Council of California may select from any range at no additional cost to Judicial Council of California.

1.7.3. Include identification on each sample, with full Project information.

1.7.4. Submit the number of samples that CMR requires, plus one that will be retained by Architect and one by Judicial Council of California.

- 1.7.5. Reviewed samples which may be used in the Work are indicated in individual specification Sections.

1.8. MANUFACTURER'S INSTRUCTION

- 1.8.1. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- 1.8.2. Identify conflicts between manufacturers' instructions and Contract Documents.

1.9. MANUFACTURER'S CERTIFICATES

- 1.9.1. When specified in individual specification Sections, submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.
- 1.9.2. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- 1.9.3. Certificates may be recent or previous test results on material or Product, but must be acceptable to Judicial Council of California.

1.10. DEFERRED APPROVAL REQUIREMENTS

- 1.10.1. Installation of deferred approval items shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by the Architect or Engineer in general responsible charge of design and signed by a California registered Architect or professional engineer who has been delegated responsibility covering the work shown on a particular plan or specification and approved by the agency having authority (e.g., Corrections Standards Authority, State Fire Marshall, Division of the State Architect of the Department of General Services, gas company, electrical utility company, water district, etc.). Deferred approval items for this Project are as indicated in the Summary of Work.
- 1.10.2. Unless otherwise indicated in the Contract Documents or if Judicial Council of California provides written approval of a longer time period, CMR shall submit all deferred approval items for approval within thirty (30) days of the notice to proceed with the Construction Phase.
- 1.10.3. Deferred approval drawings and specifications become part of the approved documents for the Project when they are submitted to and approved by the agency having authority.
- 1.10.4. Submit material using electronic submittal process as defined above.
- 1.10.5. Identify and specify all supports, fasteners, spacing, penetrations, etc., for each of the deferred approval items, including calculations for each and all fasteners.
- 1.10.6. Submit documents to Architect for review prior to forwarding to the agency having authority.
- 1.10.7. Documents shall bear the stamp and signature of the Structural, Mechanical, or Electrical Engineer licensed in the State of California who is responsible for the work shown on the documents.

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- 1.10.8. Architect and its subconsultants will review the documents only for conformance with design concept shown on the documents. The Architect will then forward the Submittal to agency having authority for approval.
- 1.10.9. CMR shall respond to review comments made by agency having authority and revise and resubmit submittal to the Architect for re-submittal to agency having authority for final approval.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

1. PART GENERAL

1. RELATED DOCUMENTS

- a Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

2. SUMMARY

- a This Section includes administrative and procedural requirements for quality assurance and quality control.
- b Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1 Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2 Specified tests, inspections, and related actions do not limit Contractor's other quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3 Requirements for Contractor to provide quality-control services required by Judicial Council of California, Judicial Council of California's Consultants, or authorities having jurisdiction are not limited by provisions of this Section.

- c Related Sections include the following:

- 1 Section 01 32 16, "Construction Schedule-Network Analysis" for developing a schedule of required tests and inspections.
- 2 Section 01 73 10, "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
- 3 Divisions 02 through 49 Sections for specific test and inspection requirements.
- 4 Section 01 45 16, "Contractor's Quality Control Program".

3. DEFINITIONS

- a Quality-Control Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements. Services do not include contract enforcement activities performed by Judicial Council of California or their Consultants.
- b Quality-Assurance Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements.
- c Product Testing: Tests and inspections that are performed by an NRTL (National Recognized Testing Laboratory), an NVLAP (National Voluntary Laboratory Accreditation Program), or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- d Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- e Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

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- f Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- g Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1 Using a term such as "carpentry" does not 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-people of the corresponding generic name.
- h Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

4. CONFLICTING REQUIREMENTS

- a General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Judicial Council of California for a decision before proceeding.
- b Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Judicial Council of California for a decision before proceeding.

5. SUBMITTALS

- a Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- b Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1 Specification Section number and title.
 - 2 Description of test and inspection.
 - 3 Identification of applicable standards, codes or regulations.
 - 4 Identification of test and inspection methods.
 - 5 Number of tests and inspections required.
 - 6 Time schedule or time span for tests and inspections.
 - 7 Entity responsible for performing tests and inspections.
 - 8 Requirements for obtaining samples.
 - 9 Unique characteristics of each quality-control service.
- c Reports: Prepare and submit certified written reports that include the following:
 - 1 Date of issue.
 - 2 Project title and number.
 - 3 Name, address, and telephone number of testing agency.
 - 4 Dates and locations of samples and tests or inspections.
 - 5 Names of individuals making tests and inspections.
 - 6 Description of the Work and test and inspection method.
 - 7 Identification of product and Specification Section.
 - 8 Complete test or inspection data.
 - 9 Test and inspection results and an interpretation of test results.
 - 10 Record of temperature and weather conditions at time of sample taking and testing and inspecting.

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- 11 Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12 Name and signature of laboratory inspector.
 - 13 Recommendations on retesting and reinspecting.
- d Test reports shall include a description of deficiencies noted, and corrective action undertaken to resolve such deficiencies.
 - e Deficiencies observed shall immediately be brought to the attention of the Contractor's field superintendent, and trade foreman. In the event deficiencies are not corrected, or if an interpretation of the Contract Documents is required, the Testing Agency shall immediately notify the Judicial Council of California and applicable Consultant, Architect, or Engineer.
 - f The Testing Agency shall maintain a deficiency list of all items not corrected and shall reinspect the area after the deficiency has been corrected. The list shall include a description of the deficiency, the date and time the deficiency was observed, who was notified, the date of reinspection and description of corrective action taken. Distribute the deficiency list at least once per month.
 - g At the end of the project, the Testing Agency shall submit a final signed report stating whether the work tested and inspected conforms to the contract documents.
 - h Permits, Licenses, and Certificates: For Judicial Council of California's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
6. QUALITY CONTROL
- a General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
 - b Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance. Where required by the individual Specification Sections, Installer employing workers trained and approved by manufacturer, Installer being acceptable to manufacturer, and/or Installer being an authorized representative of manufacturer for both installation and maintenance.
 - c Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
 - d Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00, "Submittal Procedures."
 - e Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
 - f Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of California, and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
 - g Specialists: Certain Sections of the Specifications may require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

- 1 Requirement for specialists shall not supersede building codes and regulations governing the Work.
 - h Testing Agency Qualifications: A Division of the State of Architect's Accepted Laboratory or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1 Tests shall be made by an accredited testing agency with a minimum of 5 years experience in the specific type of testing to be performed. Except as otherwise provided, sampling and testing of all materials and the laboratory methods and testing equipment shall be in accordance with the applicable standards and methods of the California Building Standards code.
 - 2 For each type of inspection and testing service to be performed, the Testing Agency shall submit certification, signed and sealed by the Agency's professional engineer, of compliance with all applicable requirements. of the following:
 - a ASTM E329, "Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction."
 - b "Recommended Requirements for Independent Laboratory Qualifications" published by the American Council of Independent Laboratories.
 - 3 Furnish written certification to the Judicial Council of California that all equipment to be used has been calibrated in accordance with applicable ASTM standards within the last year and is in proper working order.
 - 4 Testing Agency Personnel Qualifications: Testing and inspection services shall be performed only by trained and experienced technicians currently qualified for the work they are to perform. Documentation of such training and experience shall be submitted to the Judicial Council of California and their Consultant upon request.
 - 5 Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.
 - i Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
 - j Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
7. QUALITY ASSURANCE
- A. Judicial Council of California Responsibilities: Where quality assurance services are indicated as Judicial Council of California's responsibility, Judicial Council of California will engage a qualified testing agency to perform these services.
 - 1 Judicial Council of California will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2 Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
 - b Tests and inspections not explicitly assigned to Judicial Council of California are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

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- 1 Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a Contractor shall not employ same entity engaged by Judicial Council of California, unless agreed to in writing by Judicial Council of California.
 - 2 Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 3 Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 4 Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 5 Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- c Testing Agency Responsibilities: Cooperate with Judicial Council of California, Judicial Council of California's Consultants, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
- 1 Notify Judicial Council of California, their Consultants, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2 Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3 Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4 Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 - 5 Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6 Do not perform any duties of Contractor.
- d Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
- 1 Access to the Work.
 - 2 Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3 Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4 Facilities for storage and field curing of test samples.
 - 5 Delivery of samples to testing agencies.
 - 6 Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7 Security and protection for samples and for testing and inspecting equipment at Project site.
 - 8 Furnish tools, samples of materials, design mixes, equipment and assistance as requested.
 - 9 Provide and maintain, for the sole use of the Testing Agency, adequate facilities for the safe storage and proper curing of concrete test cylinders on the project site for the first 24 hours after casting as required by ASTM C31, Method of Making and Curing Concrete Test Specimens in the Field.
 - 10 Build and store masonry test prisms in a manner acceptable to the Testing Agency. Prisms to be tested shall remain at the job site until moved by Testing Agency personnel.
 - 11 Notify Testing Agency at least 10 working days in advance of any qualification testing for welding required herein.
 - 12 Notify Testing Agency at least 24 hours prior to expected time for operations requiring testing or inspection services.
 - 13 Make arrangements with the Testing Agency and pay for additional samples and tests made for the Contractor's convenience or for retesting of failed samples.
 - 14 For deficiencies requiring corrective action, submit in writing a description of the deficiency and a proposed correction to the Judicial Council of California. After review and approval, the proposed

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corrective action shall be implemented and inspected by the Testing Agency. It is the Contractor's responsibility to ascertain that the deficiency is corrected and inspected prior to the work being covered.

15 Retention of an independent Testing Agency by the Judicial Council of California shall in no way relieve the Contractor of responsibility for performing all work in accordance with contract requirements.

e Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1 Schedule times for tests, inspections, obtaining samples, and similar activities.

8. TESTS AND SPECIAL INSPECTIONS

A. Tests and Special Inspections: Judicial Council of California will engage a qualified testing agency to conduct tests and special inspections required by authorities having jurisdiction, including but not limited to, as follows:

- 1 Miscellaneous: Table 1704.4, item 4 – Expansion and epoxy anchors
- 2 Miscellaneous: Table 1704.4, item 4 – Expansion and Epoxy Anchors (see above)
- 3 Fire resistive materials: Section 1704.12 – Spray applied fireproofing
 1. inspected work complies with or deviates from the Contract Documents.
 2. Retesting and reinspecting corrected work.

2. PART PRODUCTS

1. GENERAL

a Do not use any materials or equipment represented by samples until tests, if required, have been made and the materials or equipment found to be acceptable. Any product which becomes unfit for use after acceptance shall not be incorporated into the work.

3. PART EXECUTION

1. TEST AND INSPECTION LOG

a Prepare a record of tests and inspections. Include the following:

- 1 Date test or inspection was conducted.
- 2 Description of the Work tested or inspected.
- 3 Date test or inspection results were transmitted to Judicial Council of California.
- 4 Identification of testing agency or special inspector conducting test or inspection.

b Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Judicial Council of California's reference during normal working hours.

2. ACCESS

a Contractor to provide and maintain access to areas to be inspected

3. REPAIR AND PROTECTION

a General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

- 1 Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- 2 Comply with the Contract Document requirements for Section 01 73 10, "Cutting and Patching."

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- b Protect construction exposed by or for quality-control service activities.
- c Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

SECTION 01 42 00

GENERAL DEFINITIONS AND REFERENCES

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

1.1.1. General Conditions; and

1.1.2. Summary of Work.

1.2. DEFINITIONS

General: Basic Contract definitions are included in the General Conditions of the Contract for Construction. The following are in addition to those definitions.

1.2.1. “Alternate”: A cost or credit for certain Work that may be added to or deducted from the Project.

1.2.2. “Indicated”: Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including “shown,” “noted,” “scheduled,” and “specified” have the same meaning as “indicated.”

1.2.3. “Regulations”: Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

1.2.4. “Furnish”: Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

1.2.5. “Install”: Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

1.2.6. “Provide”: Furnish and install, complete and ready for the intended use.

1.3. STANDARDS

1.3.1. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations as indicated in Thomson Gale™ (www.gale.com), Gale Research's “Encyclopedia of Associations” or “Encyclopedia of Associations: National Organizations of the U.S.,” or in Columbia Books' “National Trade & Professional Associations of the U.S.”

END OF SECTION

SECTION 01 42 13

ABBREVIATIONS AND ACRONYMS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions

1.2. DOCUMENT INCLUDES

- 1.2.1. Abbreviations and Acronyms for Standards and Regulations used throughout the Contract Documents shall mean the recognized name of the standards and regulations indicated in:

- 1.2.1.1. Thomson Gale, Gale Research's "Encyclopedia of Associations: National Organizations of the U.S." or

- 1.2.1.2. Columbia Books' "National Trade & Professional Associations of the U.S."

- 1.2.2. Some of the applicable abbreviations and acronyms have the following meanings, subject to updates or revisions based on the above-referenced publications:

- AA: Aluminum Association
- AAMA: American Architectural Manufacturers Association
- AASHTO: American Association of State Highway and Transportation Officials
- ABPA: Acoustical and Board Products Association
- ACI: American Concrete Institute
- AGA: American Gas Association
- AGC: Associated General Contractors
- AHC: Architectural Hardware Consultant
- AI: Asphalt Institute
- AIA: American Institute of Architects
- AIEE: American Institute of Electrical Engineers
- AISC: American Institute of Steel Construction
- AISI: American Iron and Steel Institute
- AMCA: Air Movement and Control Association International, Inc.
- ANSI: American National Standards Institute
- APA: American Plywood Association
- ARI: Air Conditioning and Refrigeration Institute
- ASHRAE: American Society of Heating, Refrigeration and Air Conditioning Engineers
- ASME: American Society of Mechanical Engineers
- ASSE: American Society of Sanitary Engineering
- ASTM: American Society of Testing and Materials
- AWP: American Wood Protection Association
- AWS: American Welding Society
- AWS: American Welding Society Code

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- AWI: Architectural Woodwork Institute
- AWWA: American Water Works Association
- BHMA: Builders Hardware Manufacturers Association
- BIA: Brick Industry Association
- CCR: California Code of Regulations
- CLFMI: Chain Link Fence Manufacturers Institute
- CMG: California Masonry Guild
- CRA: California Redwood Association
- CRSI: Concrete Reinforcing Steel Institute
- CS: Commercial Standards
- CSI: Construction Specifications Institute
- CTI: Cooling Technology Institute
- FIA: Factory Insurance Association
- FM Global: FM Global
- FS: Federal Specification
- FSC: Forest Stewardship Council
- GA: Gypsum Association
- GANA: Glass Association of North America
- ICC: International Code Council
- IEEE: Institute of Electrical and Electronic Engineers
- IES: Illumination Engineering Society
- MIA: Marble Institute of America
- MLMA: Metal Lath Manufacturers Association
- MS: Military Specifications
- NAAMM: National Association of Architectural Metal Manufacturers
- NBFU: National Board of Fire Underwriters
- NBS: National Bureau of Standards
- NCMA: National Concrete Masonry Association
- NEC: National Electrical Code
- NEMA: National Electrical Manufacturers Association
- NFPA: National Fire Protection Association
- NMWIA: National Mineral Wool Insulation Association
- NTMA: National Terrazzo and Mosaic Association
- NWMA: National Woodwork Manufacturer's Association
- ORS: Office of Regulatory Services (California)
- OSHA: Occupational Safety and Health Act
- PCI: Precast Concrete Institute
- PCA: Portland Cement Association
- PDCA: Painting and Decorating Contractors of America
- PDI: Plumbing Drainage Institute
- PEI: Porcelain Enamel Institute
- PG&E: Pacific Gas & Electric Company
- PS: Product Standards
- SDI: Steel Door Institute; Steel Deck Institute
- SJI: Steel Joist Institute
- SSPC: Steel Structures Painting Council
- TCNA: Tile Council of North America
- TPI: Truss Plate Institute
- UBC: Uniform Building Code
- UL: Underwriters Laboratories Code

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- UMC: Uniform Mechanical Code
- USDA: United States Department of Agriculture
- VI: Vermiculite Institute
- WCLA: West Coast Lumberman's Association
- WCLB: West Coast Lumber Bureau
- WEUSER: Western Electric Utilities Service Engineering Requirements
- WIC: Woodwork Institute of California
- WPOA: Western Plumbing Officials Association

END OF SECTION

SECTION 01 45 16

CONTRACTOR'S QUALITY CONTROL PROGRAM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section describes the requirements for implementation of a Quality Control Program by the Contractor to assure performance of the Work in conformance with the requirements of the Contract Documents.
- B. Related Work Specified Elsewhere:
 - 1. Testing and Inspection Services of Quality Control are specified in Section 014000, "Quality Requirements."

1.3 QUALITY CONTROL PROGRAM

- A. The Contractor shall prepare and submit within 30 days after the issuance of Notice to Proceed, the Quality Control Program (QCP) they intend to implement for the Work for approval by the Judicial Council of California. This Program shall be tailored to the specific requirements of the Work and shall become an active part of the construction procedures. The Quality Control Program shall include the procedures, instructions, reports and forms to be used throughout the performance of the Work. The Judicial Council of California reserves the right to review and reject all or part of the Quality Control Program as proposed by the Contractor. The Contractor shall revise and resubmit as appropriate until satisfactory to the Judicial Council of California and their Consultants. The basic objectives of the Quality Control Program are as follows:
 - 1. To ensure that all Work adheres strictly to all requirements of the Contract Documents and governing agencies.
 - 2. To produce first class workmanship.
 - 3. To prevent deficiencies through pre-construction quality control coordination.
 - 4. To detect and correct deficiencies in a timely manner.
 - 5. To provide an auditable record of all tests, inspections, procedures, non-compliance and corrections, and any other pertinent data as required by the Judicial Council of California.
- B. The Contractor shall notify the Judicial Council of California in writing of any proposed change to his Quality Control system and changes shall not be permitted if they would, in the opinion of the Judicial Council of California or their Consultants, result in nonconformance with the Contract requirements.
- C. The Contractor may select either an outside "agency" or in-house personnel to administer the program. In either case, the Quality Control staff on-site shall be responsible only for Quality Control and the Quality Control manager shall report directly to the Contractor's highest ranking Corporate Officer involved in the

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Work. The management and/or control of the construction process. Quality Control staff members shall interface with the Judicial Council of California, its Inspectors and Consultants, as required and appropriate.

- D. Failure to comply with the Quality Control Program requirements stated herein may result in the withholding of monthly progress payments and/or termination of the Contractor for cause by the Judicial Council of California in accordance with the General Conditions.

1.4 REQUIREMENTS OF THE PROGRAM

- A. The Quality Control Program submittal shall include, as a minimum, the following:
 - 1. The Quality Control organization chart, beginning with the Quality Control Manager, shall include Quality Control personnel as may be necessary to accomplish complete and adequate inspection of the Work.
 - 2. Names and qualifications of personnel and firms selected to implement the Quality Control Program on-site and off-site.
 - 3. Authority and responsibility of the Quality Control Staff.
 - 4. Methods of Quality Control inspection including subcontractor's work and describing name of qualified testing laboratory to be used, if applicable.
 - 5. Documents to be used to record inspections and tests, including those specified in the Contract.
 - 6. Formats for documentation and reports.
 - 7. A letter signed by the Responsible Managing Officer of the Contractor's firm outlining the authority of the Quality Control Manager to include, among other things, the authority as described herein. Clerical personnel sufficient to accomplish timely submittal of Quality Control Reports and other required documentation shall be provided.

1.5 QUALIFICATION OF QUALITY CONTROL MANAGER

- A. The qualifications required of the Quality Control Manager are as follows:
 - 1. Has recent construction experience in projects of similar size and nature.
 - 2. Has a minimum of 10 years construction-related Quality Control experience.
- B. Responsibilities and Duties of the Quality Control Staff:
 - 1. The Quality Control Manager shall have the authority to stop work, reject work, order work removed, initiate remedial work, propose solutions, and reject material not in compliance with the Contract.
 - 2. Responsibilities of the Quality Control Manager shall include, but are not limited to the following:
 - a. Present on-site during all working hours and assigned "full time" to this Project. Contractor shall designate alternate individual(s) to assume responsibilities in the temporary absence of the Quality Control Manager or when overtime work is being performed.
 - b. Have complete familiarity with the Contract Drawings and Specifications.
 - c. Establish and implement Quality Control Programs for the Contractor and with the various Sub-contractors and monitor their conformance.

- d. Present samples, mock-ups and test panels to be used as standards of quality for review by the Judicial Council of California and their Consultants.
- e. Inspect existing conditions prior to the start of new work segments.
- f. Perform in-progress and follow-up inspections on each work segment to ensure compliance with the Contract Documents. Accompany the Judicial Council of California and their Consultants on such inspections.
- g. Coordinate required tests, inspections, and demonstrations with the Judicial Council of California's Testing Agency, County and State inspectors and any other authority having jurisdiction.
- h. Inspect all materials and equipment arriving at the job site to ensure conformance to the requirements of the Contract Documents. Prepare and submit to the Judicial Council of California written reports as required by the Contract Documents.
- i. Identify, report and reject defective Work or Work not in conformance with the Contract Documents. Monitor the repair or reconstruction of rejected Work.
- j. Develop checklists to be used for the inspection of each Division of the Work.
- k. Retain specialists or outside firms for inspection of Work in areas where additional technical knowledge is required (mechanical, electrical, electronics, controls, communications, security, welding, structural, security hardware, etc.). Submit qualifications of firms and specialists to the Judicial Council of California and their Consultants for approval.
- l. Schedule and accompany the Judicial Council of California and their Consultants on any Site visits when requested.
- m. Schedule additional Site visits where appropriate.
- n. Verify and report that all materials and equipment manufactured off-site are in conformance with the Contract Documents.
- o. Prior to the start of each Division, Section and/or major item of Work required by the Contract Documents, conduct a preconstruction Quality Control meeting with responsible field and office representative and the Judicial Council of California and their Consultants. Provide the Judicial Council of California and their Consultants minutes of these meetings within 48 hours.
- p. Work closely with the Judicial Council of California to ensure optimum Quality Control. Attend Project meetings as required by the Judicial Council of California.

1.6 REPORTING PROCEDURES

- A. As a minimum, develop forms, logs and reporting procedures consisting of the following:
 1. A Quality Control meeting held monthly between the Judicial Council of California, Judicial Council of California's Consultants and the Quality Control Manager during which only Quality related topics will be reviewed.
 2. A monthly written report published at month end providing an overview of Quality Control activities, problems found and/or solved status of remedial work, status of mock-ups, anticipated problems and planned activities for the coming month, etc.
 3. Deficiency reports: Plan of action by the Contractor for correcting any known contract deficiencies including delay in scheduled progress.
 4. Weekly reports (including reports from Contractor and Subcontractors) to the Judicial Council of California describing:
 - a. Equipment and material received.
 - b. Tests and inspections performed with submittal information.
 - c. Deficiencies noted and/or corrected.
 - d. Quality Control concerns and problems.
 - e. Record keeping (as required).

1.7 IMPLEMENTATION

- A. The Contractor's Quality Control program shall be adequate to cover all operations, including both on-site and off-site and will be keyed to the proposed sequence of work and shall include as a minimum at least 3 phases of inspection for all definable items or segments of work, as follows:
1. Preparatory Inspection shall be performed prior to beginning any work on any definable segment of the Work and shall include a review of Contract requirements; verification that all materials and/or equipment have been tested, submitted, and accepted; verification that provisions have been made to provide required control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials and equipment to assure that they conform to accepted shop drawings or submittal data and that all material and/or equipment are available. As a part of this preparatory work, Contractor's Quality Control organization will review and verify that all documents, including but not limited to; shop drawings, submittal data, method of Quality Control, product data sheets, test reports, affidavits, Certification and manufacturer's instructions have been submitted and accepted by the Judicial Council of California as required herein. Each submittal to the Judicial Council of California shall bear the date and the signature of the Contractor's Quality Control Manager indicating that he has reviewed the submittal and certified it to be in compliance with Drawings and Specifications or showing the required changes.
 2. Initial Inspection: To be performed as soon as a representative segment of the particular item of work has been accomplished and to include examination of the quality of workmanship and a review of control testing for compliance with Contract requirements, exclusion of defective or damaged materials, omissions, and dimensional requirements.
 3. Follow-up Inspection: To be performed daily or as frequently as necessary to ensure continuing compliance with Contract requirements, including control testing, until completion.
 4. The Contractor shall maintain daily current records with information as described above, in an appropriate format of all inspections and tests that the required inspection or tests have been performed. These records must cover both conforming and defective items and must include a statement that all supplies and materials, incorporated in the Work, are in full compliance with the terms of the Contract. Two legible copies must be furnished to the Judicial Council of California. The report will cover all work performed or completed subsequent to the previous report.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions; and
- 1.1.2. Temporary Tree and Plant Protection.

1.2. TEMPORARY UTILITIES

1.2.1. Electric Power and Lighting:

1.2.1.1. CMR will furnish and pay for power during the course of the work to the -extent power is not in the building(s) or on the Site. CMR shall be responsible for providing temporary facilities required on the Site to point of intended use.

1.2.1.2. CMR shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.

1.2.1.3. CMR shall be responsible for maintaining existing lighting levels in the Project vicinity should temporary outages or service interruptions occur.

1.2.2. Heat and Ventilation:

1.2.2.1. CMR shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to protect materials and finishes from

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damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.

1.2.2.2. CMR shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, and gases.

1.2.2.3. CMR shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

1.2.3. Water:

1.2.3.1. CMR will furnish and pay for water during the course of the work. CMR shall be responsible for providing temporary facilities required.

1.2.3.2. CMR shall make potable water available for human consumption.

1.2.4. Sanitary Facilities:

1.2.4.1. CMR shall provide sanitary temporary facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The facilities shall be maintained in a sanitary condition at all times and shall be left at the Site until removal is directed by the Judicial Council of California or CMR completes all Work.

1.2.5. Telephone Service:

1.2.5.1. CMR shall arrange with local telephone service company for telephone service for the performance of the Work. CMR shall, at a minimum, provide in its field office one line for telephone and one line for fax machine.

1.2.5.2. CMR shall pay the costs for telephone and fax lines installation, maintenance, service, and removal.

1.2.6. Fire Protection:

1.2.6.1. CMR shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire

Marshall and/or its designee.

1.2.6.2. Where on-site welding and burning of steel is unavoidable, CMR shall provide protection for adjacent surfaces.

1.2.7. Trash Removal:

1.2.7.1. CMR shall provide trash removal on a timely basis from all Site Offices and throughout the Site.

1.2.8. Temporary Facilities:

1.2.8.1. CMR shall provide sufficient space and facilities for its own force's needs.

1.3. CONSTRUCTION AIDS

1.3.1. Plant and Equipment:

1.3.1.1. CMR shall furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting materials and equipment; and for conveyances for transporting workmen. Include elevators, hoists, debris chutes, and other equipment, tools, and appliances necessary for performance of the Work.

1.3.1.2. CMR shall maintain plant and equipment in safe and efficient operating condition. Damages due to defective plant and equipment, and uses made thereof, shall be repaired by CMR at no expense to the Judicial Council of California.

1.3.2. No Judicial Council of California tools or equipment shall be used by CMR or its subcontractors for the performance of the Work.

1.4. BARRIERS AND ENCLOSURES

1.4.1. CMR shall obtain Judicial Council of California's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.

1.4.2. CMR shall provide a six (6) foot high, chain link perimeter fence with post driven into the ground and fabric screen as a temporary barrier around construction area. CMR shall

provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises. CMR shall remove temporary fence, barriers and enclosure upon Completion of the Work.

- 1.4.3. CMR shall provide site access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services and activities.

1.5. SECURITY

CMR shall secure all construction equipment, machinery and vehicles, park and store only within fenced area, and render inoperable during non-work hours. CMR is responsible for insuring that no construction materials, tools, equipment, machinery or vehicles can be used for unauthorized entry or other damage or interference to activities and security of existing facilities adjacent to and in the vicinity of the Project Site.

1.6. TEMPORARY CONTROLS

1.6.1. Noise Control:

- 1.6.1.1. CMR acknowledges that adjacent facilities may remain in operation during all or a portion of the Work, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.

- 1.6.1.2. Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to Judicial Council of California a minimum of forty-eight (48) hours in advance of their performance.

1.6.2. Noise and Vibration:

- 1.6.2.1. Equipment and impact tools shall have intake and exhaust mufflers.

- 1.6.2.2. CMR shall cooperate with Judicial Council of California to minimize and/or cease the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.

1.6.3. Dust and Dirt:

- 1.6.3.1. CMR shall conduct demolition and construction operations to minimize the generation of dust and dirt, and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas

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including, without limitation, occupied facilities.

1.6.3.2. CMR shall periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.

1.6.3.3. CMR shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.

1.6.3.4. CMR shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

1.6.4. Water:

CMR shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, CMR shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

1.6.5. Pollution:

1.6.5.1. No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.

1.6.5.2. CMR shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

1.6.6. Lighting

If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

1.7. JOB SIGN(S)

1.7.1. General:

1.7.1.1. CMR shall provide and maintain and locate a Project identification sign with the

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design, text, and colors designated by Judicial Council of California and/or the Architect.

- 1.7.1.2. Signs other than the specified Project sign and or signs required by law, for safety, or for egress, shall not be permitted, unless otherwise approved in advance by the Judicial Council of California.

1.7.2. Materials:

- 1.7.2.1. Structure and Framing: Structurally sound, new or used wood or metal; wood shall be nominal 3/4-inch exterior grade plywood.

- 1.7.2.2. Sign Surface: Minimum 3/4-inch exterior grade plywood.

- 1.7.2.3. Rough Hardware: Galvanized.

- 1.7.2.4. Paint: Exterior quality, of type and colors selected by the Judicial Council of California and/or the Architect.

1.7.3. Fabrication:

- 1.7.3.1. CMR shall fabricate to provide smooth, even surface for painting.

- 1.7.3.2. Size: 4'-0" x 8'-0", unless otherwise indicated.

- 1.7.3.3. CMR shall paint exposed surfaces of supports, framing, and surface material with exterior grade paint: one coat of primer and one coat of finish paint.

- 1.7.3.4. Text and Graphics: As indicated.

1.8. PUBLICITY RELEASES

CMR shall not release any information, story, photograph, plan, or drawing relating information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s).

END OF SECTION

SECTION 01 60 00

MATERIALS AND EQUIPMENT

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

1.1.1. General Conditions.

1.2. MATERIAL AND EQUIPMENT

1.2.1. Only items approved by the Judicial Council of California and/or Architect shall be used.

1.2.2. CMR shall submit lists of Products and other Product information in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.3. MATERIAL AND EQUIPMENT COLORS

1.3.1. The CMR shall comply with all schedule(s) of colors provided by the Judicial Council of California and/or Architect.

1.3.2. No individual color selections will be made until after approval of all pertinent materials and equipment and after receipt of appropriate samples in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.3.3. CMR shall request priority in writing for any item requiring advance ordering to maintain the approved Construction Schedule.

1.4. DELIVERY, STORAGE, AND HANDLING

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- 1.4.1. CMR shall deliver manufactured materials in original packages, containers, or bundles (with seals unbroken), bearing name or identification mark of manufacturer. Judicial Council of California may inspect materials prior to CMR unloading the delivered materials. Judicial Council of California may reject any materials that do not conform to the Contract Documents.
- 1.4.2. CMR shall deliver fabrications in as large assemblies as practicable; where specified as shop-primed or shop-finished, package or crate as required to preserve such priming or finish intact and free from abrasion.
- 1.4.3. CMR shall store materials in such a manner as necessary to properly protect them from damage. Materials or equipment damaged by handling, weather, dirt, or from any other cause will not be accepted.
- 1.4.4. Materials are not be acceptable that have been warehoused for long periods of time, stored or transported in improper environment, improperly packaged, inadequately labeled, poorly protected, excessively shipped, deviated from normal distribution pattern, or reassembled.
- 1.4.5. CMR shall store material so as to cause no obstructions of sidewalks, roadways, and underground services. CMR shall protect material and equipment furnished pursuant to the Contract Documents.
- 1.4.6. CMR may store materials on Site with prior written approval by the Judicial Council of California, all material shall remain under CMR's control and CMR shall remain liable for any damage to the materials. Should the Project Site not have storage area available, the CMR shall provide for off-site storage at no cost to Judicial Council of California.
- 1.4.7. When any room in Project is used as a shop or storeroom, the CMR shall be responsible for any repairs, patching, or cleaning necessary due to that use. Location of storage space shall be subject to prior written approval by Judicial Council of California.

2. PRODUCTS

2.1. MANUFACTURERS

- 2.1.1. Manufacturers listed in various sections of Contract Documents are names of those manufacturers that are believed to be capable of supplying one or more of items specified therein.
- 2.1.2. The listing of a manufacturer does not imply that every product of that manufacturer is acceptable as meeting the requirements of the Contract Documents.

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2.2. FACILITIES AND EQUIPMENT

CMR shall provide, install, maintain, and operate a complete and adequate facility for handling, the execution, disposal, and distribution of material and equipment as required for proper and timely performance of Work.

2.3. MATERIAL REFERENCE STANDARDS

Where material is specified solely by reference to “standard specifications” or other general reference, and if requested by Judicial Council of California, CMR shall submit for review data on actual material proposed to be incorporated into Work, listing name and address of vendor, manufacturer, or producer, and trade or brand names of those materials, and data substantiating compliance with standard specifications.

3. EXECUTION

3.1. WORKMANSHIP

- 3.1.1. Where not more specifically described in any other Contract Documents, workmanship shall conform to methods and operations of best standards and accepted practices of trade or trades involved and shall include items of fabrication, construction, or installation regularly furnished or required for completion (including finish and for successful operation, as intended).
- 3.1.2. Work shall be executed by tradespersons skilled in their respective field of work. When completed, parts shall have been durably and substantially built and present a neat appearance.

3.2. COORDINATION

- 3.2.1. CMR shall coordinate installation of materials and equipment so as to not interfere with installation of other work. Adjustment or rework because of CMR’s failure to coordinate will be at no additional cost to Judicial Council of California.
- 3.2.2. CMR shall examine in-place materials and equipment for readiness, completeness, fitness to be concealed or to receive Work, and compliance with Contract Documents. Concealing or covering work constitutes acceptance of additional cost which will result should in-place materials and equipment be found unsuitable for receiving other work or otherwise deviating from the requirements of the Contract Documents.

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3.3. COMPLETENESS

CMR shall provide all portions of the Work, unless clearly stated otherwise, installed complete and operational with all elements, accessories, anchorages, utility connections, etc., in manner to assure well-balanced performance, in accordance with manufacturer's recommendations and in accordance with Contract Documents. For example, electric water coolers require water, electricity, and drain services; roof drains require drain system; sinks fit within countertop, etc. Terms such as "installed complete," "operable condition," "for use intended," "connected to all utilities," "terminate with proper cap," "adequately anchored," "patch and refinish," "to match similar," should be assumed to apply in all cases, except where completeness of functional or operable condition is specifically stated as not required.

3.4. APPROVED INSTALLER OR APPLICATOR

CMR shall ensure that all installations are only performed by a manufacturer's approved installer or applicator.

3.5. MANUFACTURER'S RECOMMENDATIONS

All installations shall be in accordance with manufacturer's published recommendations and specific written directions of manufacturer's representative. Should Contract Documents differ from recommendations of manufacturer or directions of manufacturer's representative, CMR shall analyze differences, make recommendations to the Judicial Council of California and the Architect in writing, and shall not proceed until interpretation or clarification has been issued by the Judicial Council of California and/or the Architect.

END OF SECTION

SECTION 01 65 00

PRODUCT REQUIREMENTS

1. GENERAL

1.1. RELATED DOCUMENTS

- 1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2. SUMMARY

- 1.2.1. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

1.2.1.1. Compatibility of options between products proposed and specified.

1.2.1.2. Reliability of date calculations by Date Sensitive Equipment.

1.2.1.3. Selection of products for use in Project.

1.2.1.4. Product delivery, storage, and handling.

1.2.1.5. Manufacturers' standard warranties on products.

1.2.1.6. Special warranties.

1.2.1.7. Product substitutions.

1.2.1.8. Comparable products.

- 1.2.2. Related Sections include the following:

1.2.2.1. Division 01 Section "Allowances" for products selected under an allowance.

1.2.2.2. Division 01 Section "References" for applicable industry standards for products specified.

1.2.2.3. Division 01 Section "Warranties" for warranties for Contract closeout.

1.2.2.4. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3. DEFINITIONS

- 1.3.1. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

- 1.3.1.1. **Named Products:** Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
- 1.3.1.2. **New Products:** Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
- 1.3.1.3. **Comparable Product:** Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- 1.3.2. **Substitutions:** Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- 1.3.3. **Basis-of-Design Product Specification:** Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4. SUBMITTALS

- 1.4.1. **Coordinate durations with General Conditions and CMR Contract.**
- 1.4.2. **Product List:** Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1.4.2.1. **Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.**
 - 1.4.2.2. **Completed List:** Within [thirty (30)] days after date of commencement of the Work, submit [three (3)] copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 1.4.2.3. **Judicial Council of California's Action:** Judicial Council of California will respond in writing to Contractor within [fifteen (15)] working days of receipt of completed product list. Judicial Council of California's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Judicial Council of California's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- 1.4.3. **Substitution Requests:** Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1.4.3.1. **Form:** Use Judicial Council of California's transmittal form at the end of this Section. The MS Word file of this form will be provided to the Contractor for use on each Substitution Request.

- 1.4.3.2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
- 1.4.3.3. Statement indicating why specified material or product cannot be provided.
- 1.4.3.4. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Judicial Council of California and separate contractors, that will be necessary to accommodate proposed substitution.
- 1.4.3.5. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
- 1.4.3.6. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- 1.4.3.7. Samples, where applicable or requested.
- 1.4.3.8. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
- 1.4.3.9. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- 1.4.3.10. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
- 1.4.3.11. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
- 1.4.3.12. Cost information, including a proposal of change, if any, in the Contract Sum.
- 1.4.3.13. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
- 1.4.3.14. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 1.4.3.15. Coordinate durations with General Conditions and CMR Contract.
- 1.4.3.16. Judicial Council of California's Action: If necessary, Judicial Council of California will request additional information or documentation for evaluation within [seven (7)] days of receipt of a request for substitution. Judicial Council of California will notify Contractor of acceptance or rejection of proposed substitution within [fifteen (15)] days of receipt of request, or [seven (7)] days of receipt of additional information or documentation, whichever is later.
- 1.4.3.17. Form of Acceptance: Change Order.

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- 1.4.4. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1.4.4.1. Judicial Council of California's Action: If necessary, Judicial Council of California will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Judicial Council of California will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - 1.4.4.2. Form of Approval: As specified in Section 01 33 00, "Submittal Procedures."
 - 1.4.4.3. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5. QUALITY ASSURANCE

- 1.5.1. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
- 1.5.2. Reliability of Calculations by Date Sensitive Equipment, Systems and Components:
 - 1.5.2.1. Date sensitive equipment, systems and components thereof must individually and in combination properly function and continue to correctly process, sequence and utilize date and time related data for all dates and times, which occur during a reasonable life expectancy for said equipment, systems and components thereof.
 - 1.5.2.2. Correctly process, sequence, and calculate all date and date related data for all dates prior to, through and after January 1, 2000, including leap year calculations.
 - 1.5.2.3. Software products that process date or date related data shall recognize, store and transmit date data in a format which explicitly and unambiguously specifies the correct century.
 - 1.5.2.4. Contractor shall include this requirement in all sub-contracts and equipment orders for this Project.
 - 1.5.2.5. Submittals: Provide certification from suppliers and sub-contractors providing date sensitive equipment, systems, and software that the proposed equipment, components and systems comply with these requirements.

1.6. PRODUCT DELIVERY, STORAGE, AND HANDLING

- 1.6.1. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- 1.6.2. Delivery and Handling:
 - 1.6.2.1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

- 1.6.2.2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
- 1.6.2.3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- 1.6.2.4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

1.6.3. Storage:

- 1.6.3.1. Store products to allow for inspection and measurement of quantity or counting of units.
- 1.6.3.2. Store materials in a manner that will not endanger Project structure.
- 1.6.3.3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- 1.6.3.4. Store cementitious products and materials on elevated platforms.
- 1.6.3.5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 1.6.3.6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 1.6.3.7. Protect stored products from damage and liquids from freezing.

1.7. PRODUCT WARRANTIES

- 1.7.1. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1.7.1.1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Judicial Council of California.
 - 1.7.1.2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Judicial Council of California.
- 1.7.2. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1.7.2.1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 1.7.2.2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.

1.7.2.3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

1.7.3. Submittal Time: Comply with requirements in Division 01 Section "Warranties."

2. PRODUCTS

2.1. PRODUCT SELECTION PROCEDURES

2.1.1. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

2.1.1.1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2.1.1.2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

2.1.1.3. Judicial Council of California reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

2.1.1.4. Where products are accompanied by the term "as selected," Judicial Council of California will make selection.

2.1.1.5. Where products are accompanied by the term "match sample," sample to be matched is Judicial Council of California's.

2.1.1.6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

2.1.1.7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.

2.1.2. Product Selection Procedures:

2.1.2.1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.

2.1.2.2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.

2.1.2.3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.

2.1.2.4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.

- 2.1.2.5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
- 2.1.2.6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
- 2.1.2.7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
- 2.1.2.8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
- 2.1.2.9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches sample. Judicial Council of California's decision will be final on whether a proposed product matches.
- 2.1.2.10. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
- 2.1.2.11. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
- 2.1.2.12. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Judicial Council of California will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
- 2.1.2.13. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Judicial Council of California will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2. **PRODUCT SUBSTITUTIONS**

- 2.2.1. Comply with the requirements stated in the General Conditions, Article 3.11.12, "Substitutions and Approved Equals."
- 2.2.2. Conditions: Judicial Council of California will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are

not satisfied, Judicial Council of California will return requests without action, except to record noncompliance with these requirements:

- 2.2.2.1. Requested substitution offers Judicial Council of California a substantial advantage in cost, time, energy conservation, or other considerations, where the best interests of the State so requires.
- 2.2.2.2. Requested substitution does not require extensive revisions to the Contract Documents.
- 2.2.2.3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- 2.2.2.4. Substitution request is fully documented and properly submitted.
- 2.2.2.5. Requested substitution will not adversely affect Contractor's Construction Schedule.
- 2.2.2.6. Requested substitution has received necessary approvals of authorities having jurisdiction.
- 2.2.2.7. Requested substitution is compatible with other portions of the Work.
- 2.2.2.8. Requested substitution has been coordinated with other portions of the Work.
- 2.2.2.9. Requested substitution provides specified warranty.
- 2.2.2.10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

2.3. COMPARABLE PRODUCTS

- 2.3.1. Conditions: Judicial Council of California will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Judicial Council of California will return requests without action, except to record noncompliance with these requirements:
 - 2.3.1.1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - 2.3.1.2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - 2.3.1.3. Evidence that proposed product provides specified warranty.
 - 2.3.1.4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 - 2.3.1.5. Samples, if requested.

3. EXECUTION

3.1.

SUBSTITUTION REQUEST FORM

TO: _____ DATE: _____

PROJECT: _____

We hereby submit to your consideration the following product instead of the specified item for the above referenced project:

Proposed Substitution: _____

Section _____ Paragraph _____ Specified Item _____

Attach complete technical data, including laboratory tests, if applicable.

Provide complete information below on changes to Drawings and Specifications which proposed substitution will require for its proper installation.

- A. Does the substitution affect dimensions shown on Drawings? Yes ___ No _____ If yes, clearly indicate changes.

- B. What effect does substitution have on other trades? _____

- C. What effect does substitution have on construction schedule? _____

- D. Cost difference between proposed substitution and specified item? _____
- E. Manufacturer's warranty/guarantees of the proposed and specified items are:
_____ Same _____ Different (explain on attachment)

The undersigned certifies that the function, appearance and quality are equivalent or superior to the specified item. The undersigned also certifies that all costs caused by or resulting from the requested substitution including, but not limited to, additional design work, construction changes and review time will be paid by the firm requesting the substitution.

Submitted by:
Signature: _____

Evaluated by:
Accepted _____ Accepted as Noted

Firm _____

Not Accepted _____ Received Too Late

Address _____

By _____

East County Regional Center Elevator Modernization

Firm _____

Date _____

Date _____

Telephone _____

Remarks _____

END OF SECTION

SECTION 01 71 10

FIELD ENGINEERING

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions.

1.2. REQUIREMENTS INCLUDED

- 1.2.1. CMR shall provide and pay for field engineering services by a California-registered engineer, required for the Project, including, without limitations:

- 1.2.1.1. Survey work required in execution of the Project.

- 1.2.1.2. Civil or other professional engineering services specified, or required to execute construction methods.

1.3. QUALIFICATIONS OF SURVEYOR OR ENGINEERS

CMR shall only use a qualified licensed engineer or registered land surveyor, to whom Judicial Council of California makes no objection.

1.4. SURVEY REFERENCE POINTS

- 1.4.1. Existing basic horizontal and vertical control points for the Project are those designated on the Drawings.

- 1.4.2. CMR shall locate and protect control points prior to starting Site Work and preserve all permanent reference points during construction. In addition CMR shall:

- 1.4.2.1. Make no changes or relocation without prior written notice to Judicial Council of California and Architect.

- 1.4.2.2. Report to Judicial Council of California and Architect when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.

- 1.4.2.3. Require surveyor to replace Project control points based on original survey control that may be lost or destroyed.

1.5. RECORDS

CMR shall maintain a complete, accurate log of all control and survey work as it progresses.

1.6. SUBMITTALS

- 1.6.1. CMR shall submit name and address of Surveyor and Professional Engineer to Judicial Council of California and Architect prior to its/their work on the Project.

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- 1.6.2. On request of Judicial Council of California and Architect, CMR shall submit documentation to verify accuracy of field engineering work, at no additional cost to the Judicial Council of California.
- 1.6.3. CMR shall submit a certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance or nonconformance with Contract Documents.

2. EXECUTION

2.1. COMPLIANCE WITH LAWS

CMR is responsible for meeting all applicable codes, OSHA, safety and shoring requirements.

2.2. NONCONFORMING WORK

CMR is responsible for any re-surveying required by correction of nonconforming work.

END OF SECTION

SECTION 01 73 10

CUTTING AND PATCHING

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions.

1.2. CUTTING AND PATCHING

- 1.2.1. CMR shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:

- 1.2.1.1. Make several parts fit together properly.
- 1.2.1.2. Uncover portions of Work to provide for installation of ill-timed Work.
- 1.2.1.3. Remove and replace defective Work.
- 1.2.1.4. Remove and replace Work not conforming to requirements of Contract Documents.
- 1.2.1.5. Remove samples of installed Work as specified for testing.
- 1.2.1.6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
- 1.2.1.7. Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.

- 1.2.2. In addition to Contract requirements, upon written instructions from Judicial Council of California, CMR shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents, remove samples of installed materials for testing as directed by Judicial Council of California, and remove Work to provide for alteration of existing Work.

- 1.2.3. CMR shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

- 1.2.4. CMR shall not cut and patch operating elements and safety related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:

- 1.2.4.1. Primary operational systems and equipment.
- 1.2.4.2. Air or smoke barriers.
- 1.2.4.3. Fire-suppression systems.

- 1.2.4.4. Mechanical systems piping and ducts.
- 1.2.4.5. Control systems.
- 1.2.4.6. Communication systems.
- 1.2.4.7. Conveying systems.
- 1.2.4.8. Electrical wiring systems.
- 1.2.5. CMR shall not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing capacity to perform as intended, or that results in increased maintenance or decreased operational life of safety. Miscellaneous elements include the following:
 - 1.2.5.1. Water, moisture or vapor barriers.
 - 1.2.5.2. Membranes and flashings.
 - 1.2.5.3. Exterior curtain-wall construction.
 - 1.2.5.4. Equipment supports.
 - 1.2.5.5. Piping, ductwork, vessels and equipment.
 - 1.2.5.6. Noise and vibration control elements and systems.
 - 1.2.5.7. Shoring, bracing and sheeting.

1.3. REQUEST TO CUT, ALTER, PATCH OR EXCAVATE

- 1.3.1. CMR shall submit written notice to Judicial Council of California pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration (“Request”) at least ten (10) days prior to any cutting or alterations that may affect the structural safety of Project, or work of others, including the following:
 - 1.3.1.1. The work of the trades.
 - 1.3.1.2. Structural value or integrity of any element of Project.
 - 1.3.1.3. Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
 - 1.3.1.4. Efficiency, operational life, maintenance or safety of operational elements.
 - 1.3.1.5. Visual qualities of sight-exposed elements.
- 1.3.2. CMR's Request shall also include:
 - 1.3.2.1. Identification of Project.
 - 1.3.2.2. Description of affected Work.
 - 1.3.2.3. Necessity for cutting, alteration, or excavations.

1.3.2.4. Affects of Work on trades, or structural or weatherproof integrity of Project.

1.3.2.5. Description of proposed Work:

1.3.2.5.1. Scope of cutting, patching, alteration, or excavation.

1.3.2.5.2. Trades that will execute Work.

1.3.2.5.3. Products proposed to be used.

1.3.2.5.4. Extent of refinishing to be done.

1.3.2.6. Alternates to cutting and patching.

1.3.2.7. Cost proposal, when applicable.

1.3.2.8. The scheduled date the Work is to be performed and the duration of time to complete the Work.

1.3.2.9. Written permission of other trades whose Work will be affected.

1.4. QUALITY ASSURANCE

1.4.1. CMR shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.

1.4.2. CMR shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the Judicial Council of California's decision shall be final.

1.5. PAYMENT FOR COSTS

1.5.1. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the Judicial Council of California, its consultants, including but not limited to the Architect, inspector(s), engineers, and agents, will be paid by CMR and/or deducted from the GMP by the Judicial Council of California.

1.5.2. CMR shall provide written cost proposals prior to proceeding with cutting and patching. Judicial Council of California shall only pay for cost of Work if it is part of the GMP or if a change has been made to the Contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the Judicial Council of California, other than defective or nonconforming Work, will be paid by Judicial Council of California on approval of written Change Order.

2. PRODUCTS

2.1. MATERIALS

2.1.1. CMR shall provide for replacement and restoration of Work removed. CMR shall comply with the Contract Documents and with the Industry Standard(s), for the type of

Work, and the Specification requirements for each specific product involved. If not specified, CMR shall first recommend a product of a manufacturer or appropriate trade association for approval by the Judicial Council of California.

- 2.1.2. Materials to be cut and patched include those damaged by the performance of the Work.

3. EXECUTION

3.1. INSPECTION

- 3.1.1. CMR shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, CMR shall inspect conditions affecting installation of new products.
- 3.1.2. CMR shall report unsatisfactory or questionable conditions in writing to Judicial Council of California as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by Judicial Council of California.

3.2. PREPARATION

- 3.2.1. CMR shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.
- 3.2.2. CMR shall provide devices and methods to protect other portions of Project from damage.
- 3.2.3. CMR shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. CMR shall keep excavations free from water.

3.3. ERECTION, INSTALLATION AND APPLICATION

- 3.3.1. With respect to performance, CMR shall insure its Subcontractors:
 - 3.3.1.1. Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
 - 3.3.1.2. Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.
 - 3.3.1.3. Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.
 - 3.3.1.4. CMR shall use original installer or fabricator to perform cutting and patching for:
 - 3.3.1.5. Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.
 - 3.3.1.6. Sight-exposed finished surfaces.
- 3.3.2. CMR shall ensure its Subcontractors execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances,

and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.

- 3.3.3. Subcontractors shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. CMR shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. CMR shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.
- 3.3.4. CMR's Subcontractors shall restore Work which has been cut or removed and install new products to provide completed Work in accordance with requirements of the Contract Documents and as required to match surrounding areas and surfaces.
- 3.3.5. CMR's Subcontractors shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF SECTION

SECTION 01 73 20

INDOOR AIR QUALITY PROCEDURES

[ARCHITECT TO MODIFY DOCUMENT TO ADDRESS WHETHER PROJECT WILL PURSUE LEED CERTIFICATION (AND TO WHAT LEVEL),]

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Temporary Facilities and Controls;
- 1.1.3. [LEED;]
- 1.1.4. General Commissioning Requirements;
- 1.1.5. Contract Closeout and Final Cleaning;
- 1.1.6. Record Documents..

1.2. SUBMITTALS

- 1.2.1. Indoor Air Quality (IAQ) Construction Management Plan. Submit five (5) copies of plan within thirty (30) days of Notice to Proceed.
 - 1.2.1.1. Include a schedule of all IAQ-related construction activities in the IAQ Construction Management Plan submittal.
 - 1.2.1.2. Update plan as required during the construction process to reflect Project conditions.
- 1.2.2. Meeting Minutes: Submit minutes from CMR meetings related to the execution and verification of the IAQ Construction Management Plan.
- 1.2.3. Project Photographs: Submit to document IAQ measures implemented.
- 1.2.4. Product Data: Submit cut sheets of filtration media proposed for use.

1.3. QUALITY ASSURANCE

- 1.3.1. IAQ Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Document "Project Management and Coordination."
 - 1.3.1.1. Review methods and procedures related to IAQ management during construction.
 - 1.3.1.2. Review IAQ management requirements for each trade.

2. EXECUTION

2.1. IAQ MANAGEMENT DURING CONSTRUCTION

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- 2.1.1. General: CMR's IAQ Construction Management Plan shall include procedures to prevent indoor air quality problems resulting from the construction/renovation process in order to help sustain the comfort and well-being of construction workers and building occupants.
 - 2.1.1.1. CMR's Subcontractors and their employees shall be provided instruction and training in the IAQ Management Plan.
- 2.1.2. Plan Implementation:
 - 2.1.2.1. Implement waste management plan as approved by Judicial Council of California. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.1. General Conditions;
- 1.1.2. Temporary Facilities and Controls;
- 1.1.3. Contract Closeout and Final Cleaning; and
- 1.1.4. Drawings.

1.2. DEFINITIONS

- 1.2.1. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- 1.2.2. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- 1.2.3. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- 1.2.4. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- 1.2.5. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- 1.2.6. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3. PERFORMANCE REQUIREMENTS

- 1.3.1. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of fifty percent (50%) by weight of total waste generated by the Work.
- 1.3.2. Salvage/Recycle Requirements: Judicial Council of California's goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible including the following materials:
 - 1.3.2.1. Demolition Waste; and
 - 1.3.2.2. Construction Waste.

- 1.3.3. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle one hundred percent (100%) of the following uncontaminated packaging materials:
 - 1.3.3.1. Paper
 - 1.3.3.2. Cardboard
 - 1.3.3.3. Boxes
 - 1.3.3.4. Plastic sheet and film
 - 1.3.3.5. Polystyrene packaging
 - 1.3.3.6. Wood crates
 - 1.3.3.7. Plastic pails

1.4. SUBMITTALS

- 1.4.1. Waste Management Plan: Submit three (3) copies of plan within thirty (30) calendar days after the starting date on the Notice to Proceed.
- 1.4.2. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three (3) copies of report. Include separate reports for Demolition and Construction Waste. Include the following information:
 - 1.4.2.1. Material category
 - 1.4.2.2. Generation point of waste
 - 1.4.2.3. Total quantity of waste in tons
 - 1.4.2.4. Quantity of waste salvaged, both estimated and actual in tons
 - 1.4.2.5. Quantity of waste recycled, both estimated and actual in tons
 - 1.4.2.6. Total quantity of waste recovered (salvaged plus recycled) in tons
 - 1.4.2.7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste
- 1.4.3. Waste Reduction Calculations: Before request for final inspection, submit three (3) copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- 1.4.4. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- 1.4.5. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- 1.4.6. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

- 1.4.7. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- 1.4.8. LEED Submittal: Submit LEED letter template for Credit MR 2.1 and/or 2.2 (as applicable), signed by CMR, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met. Use Judicial Council of California approved format for documentation.

1.5. QUALITY ASSURANCE

- 1.5.1. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council.
- 1.5.2. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- 1.5.3. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- 1.5.4. Waste Management Conference: Conduct conference at Project Site to comply with requirements in Document “Coordination and Project Meetings.” Review methods and procedures related to waste management including, but not limited to, the following:
 - 1.5.4.1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - 1.5.4.2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 1.5.4.3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 1.5.4.4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 1.5.4.5. Review waste management requirements for each trade.

1.6. WASTE MANAGEMENT PLAN

- 1.6.1. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Include separate sections in plan for demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- 1.6.2. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- 1.6.3. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

- 1.6.3.1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
- 1.6.3.2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
- 1.6.3.3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
- 1.6.3.4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
- 1.6.3.5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
- 1.6.3.6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project Site where materials separation will be located.
- 1.6.4. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
 - 1.6.4.1. Total quantity of waste
 - 1.6.4.2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste
 - 1.6.4.3. Total cost of disposal (with no waste management)
 - 1.6.4.4. Revenue from salvaged materials
 - 1.6.4.5. Revenue from recycled materials
 - 1.6.4.6. Savings in hauling and tipping fees by donating materials
 - 1.6.4.7. Savings in hauling and tipping fees that are avoided
 - 1.6.4.8. Handling and transportation costs. Include cost of collection containers for each type of waste
 - 1.6.4.9. Net additional cost or net savings from waste management plan

2. EXECUTION

2.1. PLAN IMPLEMENTATION

- 2.1.1. General: Implement waste management plan as approved by Judicial Council of California. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

- 2.1.1.1. Comply with Document “Temporary Facilities and Controls” for operation, termination, and removal requirements.
- 2.1.2. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- 2.1.3. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 2.1.3.1. Distribute waste management plan to everyone concerned within three (3) days of submittal return.
 - 2.1.3.2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- 2.1.4. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 2.1.4.1. Designate and label specific areas on Project Site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

2.2. SALVAGING DEMOLITION WASTE

- 2.2.1. Salvaged Items for Reuse in the Work:
 - 2.2.1.1. Clean salvaged items.
 - 2.2.1.2. Pack or crate items after cleaning. Identify contents of containers.
 - 2.2.1.3. Store items in a secure area until installation.
 - 2.2.1.4. Protect items from damage during transport and storage.
 - 2.2.1.5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- 2.2.2. Remove salvaged items that are to be sold or donated. Do not store on the Project Site.
- 2.2.3. Salvaged Items for Judicial Council of California's Use:
 - 2.2.3.1. Clean salvaged items.
 - 2.2.3.2. Pack or crate items after cleaning. Identify contents of containers.
 - 2.2.3.3. Store items in a secure area until delivery to Judicial Council of California.
 - 2.2.3.4. Transport items to Judicial Council of California's storage area designated by Judicial Council of California.
 - 2.2.3.5. Protect items from damage during transport and storage.

2.3. RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- 2.3.1. General: Recycle paper and beverage containers used by on-site workers.
- 2.3.2. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project Site to the maximum extent practical.
 - 2.3.2.1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project Site. Include list of acceptable and unacceptable materials at each container and bin.
 - 2.3.2.2. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2.3.2.3. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 2.3.2.4. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 2.3.2.5. Store components off the ground and protect from the weather.
 - 2.3.2.6. Remove recyclable waste off Judicial Council of California's property and transport to recycling receiver or processor.

2.4. RECYCLING DEMOLITION WASTE

- 2.4.1. Asphaltic Concrete Paving: Grind asphalt to maximum of 1-1/2-inch (38-mm) or 4-inch (100-mm) size, as required by the Technical Specifications including, without limitation, "Earthwork" or "Earth Moving."
 - 2.4.1.1. Crush asphaltic concrete paving and screen to comply with the requirements of the Technical Specifications including, without limitation, "Earthwork" or "Earth Moving," for use as general fill.
- 2.4.2. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- 2.4.3. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 - 2.4.3.1. Pulverize concrete to maximum 1-1/2-inch (38-mm) or 4-inch (100-mm) size, as required by the Technical Specifications including, without limitation, "Earthwork" or "Earth Moving."
 - 2.4.3.2. Crush concrete and screen to comply with the requirements of the Technical Specifications including, without limitation, "Earthwork" or "Earth Moving."
- 2.4.4. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 2.4.4.1. Pulverize masonry to maximum 3/4-inch (19-mm) or 1-inch (25-mm) or 1-1/2-inch (38-mm) or 4-inch (100-mm) size, as required by the Technical Specifications including, without limitation, "Earthwork" or "Earth Moving."

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- 2.4.4.1.1. Crush masonry and screen to comply with the requirements of the Technical Specifications including, without limitation, “Earthwork” or “Earth Moving.”
- 2.4.4.1.2. Crush masonry and screen to comply with the requirements of the Technical Specifications including, without limitation, “Plants” or “Exterior Improvements.”
- 2.4.4.2. Clean and stack undamaged, whole masonry units on wood pallets.
- 2.4.5. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- 2.4.6. Metals: Separate metals by type.
 - 2.4.6.1. Structural Steel: Stack members according to size, type of member, and length.
 - 2.4.6.2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- 2.4.7. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- 2.4.8. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- 2.4.9. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
 - 2.4.9.1. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
- 2.4.10. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
 - 2.4.10.1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- 2.4.11. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- 2.4.12. Plumbing Fixtures: Separate by type and size.
- 2.4.13. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- 2.4.14. Lighting Fixtures: Separate lamps by type and protect from breakage.
- 2.4.15. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- 2.4.16. Conduit: Reduce conduit to straight lengths and store by type and size.

2.5. RECYCLING CONSTRUCTION WASTE

- 2.5.1. Packaging:

- 2.5.1.1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
- 2.5.1.2. Polystyrene Packaging: Separate and bag materials.
- 2.5.1.3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
- 2.5.1.4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- 2.5.2. Site-Clearing Wastes: Chip brush, branches, and trees off site or on-site location designated by Judicial Council of California.
 - 2.5.2.1. Comply with the requirements of the Technical Specifications including, without limitation, “Plants” or “Exterior Improvements,” for use of chipped organic waste as organic mulch.
- 2.5.3. Wood Materials:
 - 2.5.3.1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
- 2.5.4. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
 - 2.5.4.1. Comply with the requirements of the Technical Specifications including, without limitation, “Plants” or “Exterior Improvements,” for use of clean sawdust as organic mulch.
- 2.5.5. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 2.5.5.1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.
 - 2.5.5.1.1. Comply with the requirements of the Technical Specifications including, without limitation, “Plants” or “Exterior Improvements,” for use of clean ground gypsum board as inorganic soil amendment.

2.6. DISPOSAL OF WASTE

- 2.6.1. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 2.6.1.1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on the Project Site.
 - 2.6.1.2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- 2.6.2. Burning: Do not burn waste materials.
- 2.6.3. Disposal: Transport waste materials off the Project Site and legally dispose of them.

END OF SECTION

SECTION 01 77 00

CONTRACT CLOSEOUT AND FINAL CLEANING

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.10. General Conditions;
- 1.1.11. Requests for Information;
- 1.1.12. Electronic Data Transfer;
- 1.1.13. Submittals;
- 1.1.14. Operation and Maintenance Data;
- 1.1.15. Warranties;
- 1.1.16. Record Documents;
- 1.1.17. Demonstration and Training;
- 1.1.18. General Commissioning Requirements; and
- 1.1.19. Site Safety Management Plan / OCIP Manual

1.2. PRELIMINARY PROCEDURES

- 1.2.1. Before requesting inspection for determining date of Completion, complete the following. List items below that are incomplete in request.
 - 1.2.1.1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 1.2.1.2. Advise Judicial Council of California of pending insurance changeover requirements.
 - 1.2.1.3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 1.2.1.4. Obtain and submit releases permitting Judicial Council of California unrestricted use of the Work and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases, if required.
 - 1.2.1.5. Prepare and submit Project Record Documents, operation and maintenance manuals, Completion construction photograph prints and electronic files, damage or settlement surveys, property surveys, and similar final record information.

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- 1.2.1.6. Deliver tools, spare parts, extra materials, and similar items to location designated by Judicial Council of California. Label with manufacturer's name and model number where applicable.
- 1.2.1.7. Make final changeover of permanent locks and deliver keys to Judicial Council of California. Advise Judicial Council of California's personnel of changeover in security provisions.
- 1.2.1.8. Complete startup testing of systems.
- 1.2.1.9. Submit test/adjust/balance records.
- 1.2.1.10. Terminate and remove temporary facilities from Project Site, along with mockups, construction tools, and similar elements.
- 1.2.1.11. Advise Judicial Council of California of changeover in heat and other utilities.
- 1.2.1.12. Submit changeover information related to Judicial Council of California's occupancy, use, operation, and maintenance.
- 1.2.1.13. Complete final cleaning requirements, including touchup painting.
- 1.2.1.14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

1.3. COMPLETION

- 1.3.1. Preliminary Procedures: Before requesting inspection for determining date of Completion, complete the following:
 - 1.3.1.1. Submit a final Application for Payment according to the Contract Documents.
 - 1.3.1.2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 1.3.1.3. Submit pest-control final inspection report and warranty.
 - 1.3.1.4. Instruct Judicial Council of California's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videos where required.
- 1.3.2. Inspection: Submit a written request for inspection.

1.4. LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- 1.4.1. CMR shall notify Judicial Council of California when CMR considers the Work complete. Upon notification, Judicial Council of California and Architect will prepare a list of minor items to be completed or corrected ("Punch List"). CMR and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the CMR to complete all Work in accordance with the Contract Documents.
- 1.4.2. CMR and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the CMR to complete all Work in accordance with the Contract Documents.

- 1.4.3. CMR shall comply with Punch List procedures as provided herein, and maintain the presence of a Project Superintendent and Project Manager until the Punch List is complete to ensure proper and timely completion of the Punch List. Under no circumstances shall CMR demobilize its forces prior to completion of the Punch List. Upon receipt of CMR's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, Judicial Council of California and Architect will inspect the Work and shall submit to CMR a final inspection report noting the Work, if any, required in order to complete in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.
- 1.4.4. Upon CMR's completion of all items on the Punch List and any other uncompleted portions of the Work, the CMR shall notify the Judicial Council of California and Architect, who shall again inspect such Work. If the Judicial Council of California and Architect find the Work complete and acceptable under the Contract Documents, the Judicial Council of California will notify CMR, who shall then jointly submit to the Architect and Judicial Council of California its final Application for Payment.
- 1.4.5. **Costs of Multiple Inspections.** More than two (2) requests of Judicial Council of California to make a final inspection shall be considered an additional service of Judicial Council of California, the Architect and/or the Inspector, and all subsequent costs will be invoiced to CMR and if funds are available, withheld from remaining payments.
- 1.4.6. Punch List shall be complete only upon the Judicial Council of California's determination that all items on the Punch List, and all updates to the Punch List, are complete.

1.5. WARRANTIES

- 1.5.1. Submittal Time: Submit written warranties on request of Judicial Council of California for designated portions of the Work where commencement of warranties other than date of Completion is indicated.
- 1.5.2. Organize warranty documents into an orderly sequence as required by the "Warranties" document.

2. PRODUCTS

2.1. MATERIALS

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

3. EXECUTION

3.1. FINAL CLEANING

- 3.1.1. Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations. CMR shall use cleaning methods and procedures that reduce the overall impact on human health and the natural environment by reducing the amount of disposed waste, pollution and environmental degradation. If Project is subject to LEED certification, CMR shall ensure compliance with the applicable LEED requirements for final cleaning of the Site.

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- 3.1.2. CMR shall employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program.

3.1.2.1. Complete the following cleaning operations before requesting final inspection:

- 3.1.2.1.1. Clean Project Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- 3.1.2.1.2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- 3.1.2.1.3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- 3.1.2.1.4. Remove tools, construction equipment, machinery, and surplus material from Project Site.
- 3.1.2.1.5. Remove snow and ice to provide safe access to building.
- 3.1.2.1.6. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- 3.1.2.1.7. Clean all surfaces and other work in accordance with recommendations of the manufacturer.
- 3.1.2.1.8. Remove spots, mortar, plaster, soil, and paint from ceramic tile, stone, and other finish materials.
- 3.1.2.1.9. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- 3.1.2.1.10. Sweep concrete floors broom clean in unoccupied spaces.
- 3.1.2.1.11. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- 3.1.2.1.12. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- 3.1.2.1.13. Remove labels that are not permanent.
- 3.1.2.1.14. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 3.1.2.1.14.1. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

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- 3.1.2.1.15. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - 3.1.2.1.16. Replace parts subject to unusual operating conditions.
 - 3.1.2.1.17. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - 3.1.2.1.18. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - 3.1.2.1.19. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - 3.1.2.1.20. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - 3.1.2.1.21. Leave Project Site clean and ready for occupancy.
- 3.1.3. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests.
 - 3.1.4. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Judicial Council of California's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project Site and dispose of lawfully.

END OF SECTION

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.20. General Conditions;
- 1.1.21. Electronic Data Transfer;
- 1.1.22. Submittals;
- 1.1.23. Contract Closeout and Final Cleaning;
- 1.1.24. Warranties;
- 1.1.25. Record Documents;
- 1.1.26. Demonstration and Training;
- 1.1.27. General Commissioning Requirements.

1.2. QUALITY ASSURANCE

CMR shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.3. FORMAT

- 1.3.1. All documents required herein shall be submitted in compliance with the formatting and numbering requirements of the document "**Documentation Requirements.**"
- 1.3.2. CMR shall prepare data in the form of an instructional manual entitled "OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS" ("Manual").
- 1.3.3. Binders: CMR shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size. When multiple binders are used, CMR shall correlate data into related consistent groupings.
- 1.3.4. Cover: CMR shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.
- 1.3.5. CMR shall arrange content by systems process flow under section numbers and sequence of Table of Contents of the Contract Documents.
- 1.3.6. CMR shall provide tabbed fly leaf for each separate Product and system, with typed description of Product and major component parts of equipment.

- 1.3.7. Text: The content shall include Manufacturer's printed data, or typewritten data on 24 pound paper.
- 1.3.8. Drawings: CMR shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

1.4. CONTENTS, EACH VOLUME

- 1.4.1. Table of Contents: CMR shall provide title of Project; names, addresses, and telephone numbers of the Architect, any engineers, subconsultants, Subcontractor(s), and CMR with name of responsible parties; and schedule of Products and systems, indexed to content of the volume.
- 1.4.2. For Each Product or System: CMR shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.
- 1.4.3. Product Data: CMR shall mark each sheet to clearly identify specific Products and component parts, and data applicable to installation. Delete inapplicable information.
- 1.4.4. Drawings: CMR shall supplement Product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. CMR shall not use Project Record Documents as maintenance drawings.
- 1.4.5. Text: The CMR shall include any and all information as required to supplement Product data. CMR shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.5. MANUAL FOR MATERIALS AND FINISHES

- 1.5.1. Building Products, Applied Materials, and Finishes: CMR shall include Product data, with catalog number, size, composition, and color and texture designations. CMR shall provide information for re-ordering custom manufactured Products.
- 1.5.2. Instructions for Care and Maintenance: CMR shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- 1.5.3. Moisture Protection and Weather Exposed Products: CMR shall include Product data listing applicable reference standards, chemical composition, and details of installation. CMR shall provide recommendations for inspections, maintenance, and repair.
- 1.5.4. Additional Requirements: CMR shall include all additional requirements as specified in the Specifications.
- 1.5.5. CMR shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.6. MANUAL FOR EQUIPMENT AND SYSTEMS

- 1.6.1. Each Item of Equipment and Each System: CMR shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. CMR shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.

- 1.6.2. Panelboard Circuit Directories: CMR shall provide electrical service characteristics, controls, and communications.
- 1.6.3. CMR shall include color coded wiring diagrams as installed.
- 1.6.4. Operating Procedures: CMR shall include start-up, break-in, and routine normal operating instructions and sequences. CMR shall include regulation, control, stopping, shut-down, and emergency instructions. CMR shall include summer, winter, and any special operating instructions.
- 1.6.5. Maintenance Requirements: CMR shall include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- 1.6.6. CMR shall provide servicing and lubrication schedule, and list of lubricants required.
- 1.6.7. CMR shall include manufacturer's printed operation and maintenance instructions.
- 1.6.8. CMR shall include sequence of operation by controls manufacturer.
- 1.6.9. CMR shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- 1.6.10. CMR shall provide control diagrams by controls manufacturer as installed.
- 1.6.11. CMR shall provide CMR's coordination drawings, with color coded piping diagrams as installed.
- 1.6.12. CMR shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- 1.6.13. CMR shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- 1.6.14. Additional Requirements: CMR shall include all additional requirements as specified in Specification(s).
- 1.6.15. CMR shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.7. SUBMITTAL

- 1.7.1. Concurrent with the Schedule of Submittals as indicated in the General Conditions, CMR shall submit to the Judicial Council of California for review two (2) copies of a preliminary draft of proposed formats and outlines of the contents of the Manual.
- 1.7.2. For equipment, or component parts of equipment put into service during construction and to be operated by Judicial Council of California, CMR shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.
- 1.7.3. On or before the CMR submits its final application for payment, CMR shall submit two (2) copies of a complete Manual in final form. The Judicial Council of California will provide comments to CMR and CMR must revise the content of the Manual as required

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by Judicial Council of California prior to Judicial Council of California's approval of CMR's final Application for Payment.

- 1.7.4. CMR must submit two (2) copies of revised Manual in final form within ten (10) days after receiving Judicial Council of California's comments. Failure to do so will be a basis for the Judicial Council of California withholding funds sufficient to protect itself for CMR's failure to provide a final Manual to the Judicial Council of California.

END OF SECTION

SECTION 01 78 36

WARRANTIES

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.28. General Conditions;
- 1.1.29. Electronic Data Transfer;
- 1.1.30. Submittals;
- 1.1.31. Contract Closeout and Final Cleaning;
- 1.1.32. Operation and Maintenance Data;
- 1.1.33. Record Documents;
- 1.1.34. Demonstration and Training;

1.2. FORMAT

- 1.2.1. All documents required herein shall be submitted in compliance with the formatting and numbering requirements of the document “**Documentation Requirements.**”
- 1.2.2. Binders: CMR shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two inch maximum ring size.
- 1.2.3. Cover: CMR shall identify each binder with typed or printed title "WARRANTIES" and shall list title of Project.
- 1.2.4. Table of Contents: CMR shall provide title of Project; name, address, and telephone number of CMR and equipment supplier, and name of responsible principal. CMR shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the Product or work item is specified.
- 1.2.5. CMR shall separate each warranty with index tab sheets keyed to the Table of Contents listing, providing full information and using separate typed sheets as necessary. CMR shall list each applicable and/or responsible Subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).
- 1.2.6. In addition to all warranty documentation and information required herein, CMR shall provide its Guarantee as required by the Contract Documents.

1.3. PREPARATION

- 1.3.1. CMR shall obtain warranties, executed in duplicate by each applicable and/or responsible Subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or work. Except for items put into use with Judicial Council of

California's permission, CMR shall leave date of beginning of time of warranty until the date of completion is determined.

- 1.3.2. CMR shall verify that warranties are in proper form, contain full information, and are notarized, when required.
- 1.3.3. CMR shall co-execute submittals when required.
- 1.3.4. CMR shall retain warranties until time specified for submittal.

1.4. TIME OF SUBMITTALS

- 1.4.1. Schedule of Warranties. CMR shall provide Judicial Council of California with a schedule of warranties at least fourteen (14) days prior to submitting its other required submittals indicated herein. This will provide Judicial Council of California the opportunity to review the anticipated warranties and make any comments, suggestions or revisions Judicial Council of California may require.
- 1.4.2. For equipment or component parts of equipment put into service during construction with Judicial Council of California's permission, CMR shall submit a draft warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.
- 1.4.3. On or before the CMR submits its final application for payment, CMR shall submit all warranties and related documents in final form. CMR shall indicate any warranty related work that is being performed and incomplete at the time it submits its final application for payment. The Judicial Council of California will provide comments to CMR and CMR must revise the content of the warranties as required by Judicial Council of California prior to Judicial Council of California's approval of CMR's final Application for Payment.
- 1.4.4. For items of Work that are not completed until after the date of Completion, CMR shall provide an updated warranty for those item(s) of Work within ten (10) days after acceptance, listing the date of acceptance as start of warranty period.

END OF SECTION

SECTION 01 78 39

RECORD DOCUMENTS

1. GENERAL

1.1. RELATED DOCUMENTS AND PROVISIONS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.35. General Conditions;
- 1.1.36. Electronic Data Transfer;
- 1.1.37. Submittals;
- 1.1.38. Contract Closeout and Final Cleaning;
- 1.1.39. Operation and Maintenance Data;
- 1.1.40. Warranties;
- 1.1.41. Demonstration and Training;

2. RECORD DOCUMENTS

2.1. GENERAL

- 2.1.1. All documents required herein shall be submitted in compliance with the formatting and numbering requirements of the document “**Documentation Requirements.**”
- 2.1.2. “Record Documents” may also be referred to in the Contract Documents as “As-Built Drawings.”
- 2.1.3. As indicated in the Contract Documents, Judicial Council of California will provide CMR with one set of reproducible plans of the original Drawings.
- 2.1.4. CMR shall maintain at each Project Site one (1) set of marked-up Drawings and shall transfer all changes and information to those marked-up Drawings, as often as required in the Contract Documents, but in no case less than once each month. CMR shall submit to the Project Inspector one set of reproducible vellums of the Project Record Documents (“As-Built”) showing all changes incorporated into the Work since the preceding monthly submittal. The As-Built shall be available at the Project Site. The CMR shall submit reproducible vellums at the conclusion of the Project following review of the blue-line prints.
- 2.1.5. Label and date each Record Document "RECORD DOCUMENT" in legibly printed letters.
- 2.1.6. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused by without limitation Change Orders, RFI's, and Addenda, shall be accurately and legibly recorded by CMR.

- 2.1.7. Locations and changes shall be done by CMR in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

2.2. RECORD DOCUMENT INFORMATION

- 2.2.1. CMR shall record the following information:
 - 2.2.1.1. Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.
 - 2.2.1.2. Actual numbering of each electrical circuit.
 - 2.2.1.3. Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Drawings.
 - 2.2.1.4. Locations of all items, not necessarily concealed, which vary from the Contract Documents.
 - 2.2.1.5. Installed location of all cathodic protection anodes.
 - 2.2.1.6. Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.
 - 2.2.1.7. Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, etc.
 - 2.2.1.8. Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.
- 2.2.2. In some instances, this information may be recorded by dimension. In other instances, it may be recorded in relation to the spaces in the building near which it was installed.
- 2.2.3. CMR shall provide additional drawings as necessary for clarification.
- 2.2.4. CMR shall provide in an electronic format as indicated in the Contract Documents, a copy of the Drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."
 - 2.2.4.1. With the Judicial Council of California's prior approval, the CMR may provide these reproducible Drawings, in hard copy.

2.3. RECORD MATERIALS LOG

- 2.3.1. Materials Log shall be submitted prior to Completion.
- 2.3.2. Preparation: Mark Material Log to indicate the actual product installation where installation varies from that indicated in original Material Log.
- 2.3.3. Give particular attention to information on concealed materials and installations that cannot be readily identified and recorded later.
- 2.3.4. Mark copy with the proprietary name and characteristics of products, materials, and equipment furnished, including substitutions and product options selected.

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- 2.3.5. Record the name of the manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
- 2.3.6. The working copy of Materials Log shall be consistently maintained throughout construction, and shall be accessible at Project Site.

3. MAINTENANCE OF RECORD DOCUMENTS

- 3.1.** CMR shall store Record Documents apart from documents used for construction as follows:
 - 3.1.1. Provide files and racks for storage of Record Documents.
 - 3.1.2. Maintain Record Documents in a clean, dry, legible condition and in good order.
- 3.2.** CMR shall not use Record Documents for construction purposes.

END OF SECTION

SECTION 01 79 00

DEMONSTRATION AND TRAINING

1. GENERAL

1.1. RELATED DOCUMENTS

CMR shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

- 1.1.42. General Conditions;
- 1.1.43. Electronic Data Transfer;
- 1.1.44. Submittals;
- 1.1.45. Contract Closeout and Final Cleaning;
- 1.1.46. Operation and Maintenance Data;
- 1.1.47. Warranties;
- 1.1.48. Record Documents;

1.2. SUMMARY

- 1.2.1. This Document includes administrative and procedural requirements for on-site instruction of Judicial Council of California's personnel, including the following:
 - 1.2.1.1. Demonstration of operation of systems, subsystems, and equipment.
 - 1.2.1.2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 1.2.1.3. Demonstration and training videotapes.

1.3. SUBMITTALS

- 1.3.1. Instruction Program: Submit three (3) copies of outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1.3.1.1. At completion of training, submit two (2) complete set of training manual(s) for Judicial Council of California's use (hard copy and electronic files).
- 1.3.2. Attendance Record: For each training module, submit list of participants and length of instruction time.
- 1.3.3. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.
- 1.3.4. Demonstration and Training Videos: Submit two (2) copies to Judicial Council of California within seven (7) days of end of each training module.

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1.3.4.1. Identification: On each copy, provide an applied label with the following information:

1.3.4.1.1. Name of Project and Judicial Council of California Project Number.

1.3.4.1.2. Name and address of photographer.

1.3.4.1.3. Name of Judicial Council of California's Representative.

1.3.4.1.4. Name of CMR.

1.3.4.1.5. Date videotape was recorded.

1.3.4.2. Transcript: Prepared on 8-1/2-by-11-inch (215-by-280-mm) paper, punched and bound in heavy-duty, 3-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding videotape. Include name of Project and date of video on each page.

1.4. COORDINATION

1.4.1. Coordinate instruction schedule with Judicial Council of California's Facilities Management Unit. Adjust schedule as required to minimize disrupting Judicial Council of California's operations. Notify at least fourteen (14) days in advance.

1.4.2. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

1.4.3. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Judicial Council of California.

1.5. INSTRUCTION PROGRAM

1.5.1. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections.

1.5.2. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master.

1.6. PREPARATION

1.6.1. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a combined training manual.

1.6.2. Set up instructional equipment at instruction location.

1.7. INSTRUCTION

1.7.1. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between CMR and Judicial Council of California for number of participants, instruction times, and location.

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- 1.7.2. Engage qualified instructors to instruct Judicial Council of California's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1.7.2.1. Judicial Council of California will furnish CMR with names and positions of participants.
- 1.7.3. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1.7.3.1. Schedule training with Judicial Council of California, with at least fourteen (14) days' advance notice.
- 1.7.4. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a performance-based test.
- 1.7.5. Cleanup: Collect used and leftover educational materials and remove from Project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

END OF SECTION |

SECTION 14 21 11

MODERNIZATION OF EXISTING TRACTION ELEVATORS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope: Provide materials, labor, and services necessary for the complete modernization of existing electric traction elevators. B. Elevator Lists:

1. Modernize:
 - a) Low Rise Passenger Elevators 1 to 3
 - b) High Rise Passenger Elevators 5 & 6
 - c) Custody Elevators 7 & 9
 - d) Judge's Elevator 8
 - e) Service Elevator 10

C. The modernization is intended to provide an elevator for East County Regional Courthouse with new reliable operation and new updated fixtures.

D. All work shall be performed during the hours when the courts are not in operation. The work shall be performed between the hours of 6 p.m. and 6 a.m. Provide an alternate to work 6 days a week; 10 hours (off hours as described above) a day. Any cranes used to bring equipment into the building shall be the responsibility of the Elevator Contractor and shall be completed only on weekends.

E. Upon bidding the work, the elevator contractor shall indicate any additional code compliance items which may be affected as a result of this work. This shall be reported to the Owner/Purchaser and Consultant regardless of whether it is included in any contract document including the specifications and drawings. If additional work is required for compatibility with the elevator contractor's equipment, that shall be identified and itemized with the bid submittal.

F. The Contractor is required to design all changes to not exceed a 5% increase in the original deadweight of the car enclosure, plus rated capacity. Should the total car weight be exceeded, Contractor shall be responsible for the following:

1. All code required changes.
2. Provide structural calculations as required by code to determine integrity and capability of existing elevator components including machine support beams, with ASME A17.1, to withstand the new weights.
3. Review of existing structural electrical and mechanical provisions for compatibility with Contractor's products.

4. Documentation shall be furnished to the AHJ verifying the results.
5. Purchaser shall not be responsible for changes to structural, mechanical, electrical or other systems required to accommodate Contractor's equipment.

1.02 NON-PROPRIETARY

- A. It is recognized that each manufacturers system contains components that are proprietary to the development of their systems. The Owner/Purchaser may wish to have the elevator system maintained by another technically qualified service Contractor and by submitting a bid for this project, the manufacturer shall guarantee that for a minimum of 20 years they will provide the following:
1. Diagnostic, adjusting and monitoring tools for all components including documents, manuals, wiring diagrams and spare parts of this specification shall be provided in each machine room, controller room or machine space as a permanent part of the installation and become the property of the Owner/Purchaser. Devices shall be permanent at no additional cost to Owner/Purchaser, shall not self-destruct, and require charging or exchange. Remote monitoring devices are excluded from this requirement, however if such devices are removed all wiring shall be neatly terminated, tied within a junction box and properly marked as to its content.
 2. Manufacturer shall guarantee to support the equipment for this project with regard to notification to Owner/Purchaser of system corrective updates, provide and install such updates at no cost to Owner/Purchaser.
 3. Provide contact information for their separate parts warehouse so that the Owner/Purchaser or designated service Contractor can order parts on a 24-hour basis and delivered with 48 hours.
 4. Provide a list of parts of each component manufactured and stored at the warehouse and the retail cost of each at closeout of the project and estimated escalation cost. The cost of these parts is what would be charged to Owner/Purchaser or other service Contractor
 5. Provide contact information for technical support so that the Owner/Purchaser or designated service Contractor can obtain technical support on a 24-hour basis to provide assistance in troubleshooting problems. Indicate hourly rate charged to Owner/Purchaser or designated service Contractor for such service.

1.03 ELEVATOR CONTRACTOR RESPONSIBILITY

A. GENERAL REQUIREMENTS

1. Provide all floor protection to disburse the weight of materials being removed and/or brought into the facility. Floor protection shall be adequate to prevent damage to existing flooring. Contractor accepts responsibility for cost of replacing any building surfaces, features or finishes damaged by their actions
2. Provide, identify and protect clear pathway, subject to Owner's prior approval, for any and all movement and storage of equipment, material and tools, around the property and within the building.

3. Provide guards and barricades to shield people from worksite hazards, including open hoistway, machinery, materials, equipment, and tools.
4. Protect premises from damage throughout course of construction, including floors, walks, walls, thresholds, entrance frames, doors, equipment, etc. Repair or replace items damaged or marred during construction.
5. Clean and paint areas and equipment as specified.
6. Paint the machine room walls, ceilings and floors.
7. Perform code and performance related tests as specified.
8. Remove and properly dispose of discarded equipment and materials, including debris, rubbish, oil and lubricants.
9. Adjust all safety and emergency control-related devices and perform code-mandated safety tests.
10. Remove and legally dispose of all elevator equipment required by this modification. Removed equipment shall be disposed of as fast as it accumulates and shall not be staged in public spaces.
11. Contractor shall include all code required items, permits, testing and inspection costs.
12. Coordinate with the General Contractor to restore all damaged building finishes, including carpet, door frames, walls, ceilings, etc. to pre-modernization condition.
13. All modifications to the entry/exit areas shall be the General Contractor's responsibility and are the Elevator Contractor's responsibility to coordinate.
14. Provide LED Light strip in the pit of not less than 100 lx (10 fc), measured at the pit floor. Furnish properly located light switch and GFCI duplex outlet near pit entry.
15. Provide GFCI convenience outlets in pit for sump pump.
16. Removal all non-elevator equipment from machine room, as required by the AHJ.
17. Provide a class "ABC" fire extinguisher mounted inside each machine room.
18. Secure the storage space for tools and materials.
19. Include all costs associated with the safe hoisting of new equipment to the machine room.

- B. NOTE: To the Elevator Contractor: Should additional work be required either due to code or the elevator contractor's specific requirements, these shall be noted and included with the bid. In the absence of such a list it is assumed the Contractor's equipment is compatible with the existing building system and any resulting work or revisions to the building or to the elevators shall be the responsibility of the Elevator Contractor.

1.04 RELATED BUILDING WORK. THE FOLLOWING WORK SHALL BE THE RESPONSIBILITY OF THE OTHER TRADES.

1. Patching and finishing around entrances and adjacent flooring after installation.
 2. Provide code required machine room door signage.
 3. All modifications to the entry/exit areas shall be the Contractor's responsibility but are the Elevator Contractor's responsibility to coordinate.
 4. Bevel all shaft ledges with an angle of not less than 75 degrees with the horizontal, where required.
 5. Modifications to the existing hoistway walls.
 6. Provide all required hoistway wall patching.
 7. Wall block outs and fire rated closure for control and signal fixture boxes which penetrate walls.
 8. Patching and finishing around entrances and adjacent flooring after installation.
 9. Modifications to the entry/exit areas shall be the Contractor responsibility but are the Elevator Contractor's responsibility to coordinate.
 10. Restore all damaged building finishes, including carpet, door frames, walls, ceilings, etc. to pre-modernization condition. Build back surfaces and or building areas to match pre-existing finishes.
 11. Provide storage space for tools and materials. Elevator Contractor shall be responsible for securing the area.
 12. HVAC: Refer to HVAC Contract Documents. The following are general guidelines. Provide adequate machine room heating and cooling necessary to maintain an ambient temperature between 55 and 85 degrees Fahrenheit, with relative humidity not exceeding 85% non-condensing.
- B. Electrical: Refer to the Electrical Contract Documents. The following are general guidelines.
1. Verify existing electrical system is compatible with the new equipment being proposed, identify any necessary modifications and include modifications in bid.
 2. Provide LED pit lighting of not less than 100 lx (10 fc), measured at the pit floor. Furnish properly located light switch and GFCI duplex outlet near pit entry. All to be NEMA 4 for wet application.
 3. Provide one GFCI type duplex utility receptacle near each elevator hoist machine. Replace existing outlets with GFCI type. Receptacles shall be manually reset type
 4. Provide single non-GFCI outlet in pit when there is an existing sump pump.
 5. Provide required conduit between hoistway and remote elevator control panel.
 6. Provide proper machine room lighting arranged for optimal viewing of control equipment. The light level must be a minimum of 200 lx (19 fc), measured at the

machine room floor. Provide sufficient quantity of T8 fluorescent fixtures with wire cage bulb guards. Locate light switch near the lockable side of the entry door.

7. Provide properly sized, 3-phase power with lockable, fused disconnect switch at code required location for each elevator. Run feeder wires in separate code

compliant conduit, terminated at each individual car controller or transformer. If alternate for auxiliary power supply is accepted, disconnect switch must be equipped with auxiliary contacts. Verify requirements with Contractor.

8. Provide 120 VAC single phase with fused disconnect switch mounted adjacent to group controller, where required. Verify requirements with Contractor.
9. Provide insulated copper grounding conductor from the main building ground to each power disconnect switch.

C. Fire Alarm

1. Provide code compliant elevator recall fire alarm panel.
2. Provide addressable smoke detectors installed in accordance with NFPA 72 and the applicable building code, capable of initiating Phase 1 Emergency Recall Operation and notifying the Fire Department via the Central Monitoring station or City Tie Fire Alarm Box where required.
3. Provide required main and alternate floor signals with wiring and contacts terminated in junction box, located in appropriate machine room. Machine room and elevator hoist way must be equipped with at least one smoke detector and one heat detector within 18" of each sprinkler head. Include required signals to flash the in-car fire hat in the event smoke or heat detector is activated in the machine room or hoistway.

1.05 GENERAL CONTRACTOR'S RESPONSIBILITY: A.

ACCESS TO SITE/GENERAL:

1. On-site Parking shall be provided for the Elevator contractor.
2. Provide and designate adequate storage space for tools and materials.
3. No objects adjacent to, and below, the hall push button station shall project more than 4-inches from the wall.

B. MACHINE ROOM:

1. Service all air conditioning systems and clean all vents. C.

COMMUNICATION AND SECURITY:

1. Provide card readers where desired.

1.06 REFERENCES

A. Applicable Codes (Latest Edition):

1. All work shall be completed in accordance with national, state and local codes in effect at time of award. All requirements of local building department and fire jurisdictions shall be fulfilled by the Elevator Contractor.
2. The American Society of Mechanical Engineers, Safety Code for Elevators and Escalators
3. The American Society of Mechanical Engineers, Safety Code for Existing Elevators and Escalators
4. American National Standard Accessible and Usable Buildings and Facilities (ICC/ANSI A117.1-2017 Edition)
5. National Fire Protection Association (NFPA 13) Standard for the Installation of Sprinkler Systems 2016 Edition with CA Amendments
6. National Fire Protection Association (NFPA 72) National Fire Alarm and Signaling Code 2016 Edition with CA Amendments
7. National Electrical Code (NFPA 70) 2014 Edition CA Electrical Code 2016 Edition
8. American with Disabilities Act (ADA)
9. 2016 California Building Code, California Fire Code 2016 Edition, Elevator and Accessibility Code 2016 Edition.
10. American Welding Society (AWS) D1.1 - Structural Welding Code - Steel
11. Authorities having jurisdiction.
12. California Trial Court Facilities Standards

1.07 CONTRACT

- A. Elevator Contractor shall advise Consultant and Owner/Purchaser of any discrepancies or ambiguities found in the project specifications prior to submitting bid.
- B. Contract includes all engineering, labor, tools, materials, permits, equipment, required to complete the specified work, except those items defined as to be performed by the General Contractor.
- C. Contractor shall familiarize itself with the site conditions and include all incidental work that might occur or be required as part of this project.

1.08 DEFINITIONS

- A. The following definitions apply to work of this Section:

1. "Owner/Purchaser": as used herein, refers to East County Regional Courthouse East County Regional Courthouse.
2. "General Contractor" refers to is the contractor with main responsibility for the construction, improvement, or renovation project under contract, and is the party signing the prime construction contract for the project. The general contractor is the person or entity who hires all of the subcontractors and suppliers for a project.
3. "Elevator Contractor": refers to the Elevator Contractor having the contract with Owner/Purchaser to furnish labor and materials for the execution of work as specified herein.
4. "Installer" refers to the Elevator Contractor.
5. "Bidder" refers to the Elevator Contractor.
6. "Consultant": refers to the Syska Hennessy Group, Inc.
7. "Provide": to furnish and install, complete for safe operation, unless specifically indicated otherwise.
8. "Install": to erect, mount and connect complete with related accessories.
9. "Refurbish": to modify as required for like new operation and characteristics, meeting all current code requirements.
10. "Supply": to purchase, procure, acquire and deliver complete with related accessories.
11. "As required", "where required", "as needed", "if required", and "if necessary": repair or replace components to provide like new operation or meet code requirements.
12. "Work": labor and materials required for proper and complete installation.
13. "Wiring": raceway, fittings, wire, boxes, and related items.
14. "Concealed": embedded in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces or in enclosures.
15. "Exposed": not installed underground or "concealed" as defined above.
16. "Indicated", "shown", or "noted": as indicated, shown or noted on Drawings or as specified.
17. "Similar" or "equal": of base bid manufacturer, equal in materials, weight, size, design and efficiency of specified product, conforming to "Acceptable manufacturers."
18. "Reviewed", "satisfactory", "accepted", or "directed": as reviewed, satisfactory, accepted or directed, by or to Owner/Purchaser.

19. Where a device or a part of equipment is referred to in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

1.09 INSTRUCTIONS TO BIDDERS:

- A. Bids shall be subject to all the requirements of the contract documents and any other documents issued in connection with this project.
- B. Bidder shall identify any operations and features that are unique to their product or practices.
- C. If Bidder desires to furnish items differently than specified, Bidder shall submit substitution as an alternate quotation along with bid. Bidder shall supply information in regard to the proposed substitution of components or materials.
- D. Bidder shall identify any conflicts or problems/issues with the implementation of this work. In the absence of such identification, bidder is responsible for existing conditions and modifications to the existing hoistway, machine rooms, elevator cars, etc. pertaining to this work, shall be the responsibility of the elevator contractor. Modifications to building systems, i.e. mechanical, structural, and electrical, etc., shall not be made to accommodate elevator contractor's equipment.

1.10 HAZARDOUS MATERIALS NOTIFICATION, TRAINING & REQUIREMENTS:

- A. If asbestos containing building materials or other hazardous materials are found to be present within the elevator machine rooms and hoistways, moving, drilling, cutting or otherwise disturbing such materials can pose a health risk and should not be attempted by untrained personnel. Elevator Contractor shall immediately notify Owner/Purchaser if there is need to disturb such materials as part of the project or if they observe any materials that they suspect contain asbestos or other hazardous materials that are not properly maintained.
- B. All technicians working on the project are to have undergone hazardous materials awareness training to learn about adverse health effects, necessary precautions, emergencies, inspections, and maintenance.
- C. Should removal or abatement be required, it shall performed by others and the responsibility of the Owner/Purchaser.

1.11 MATERIALS:

- A. All exposed retained metal in the hoistway and on the car tops shall have all rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating.
- B. Satin brushed #4 stainless steel: Type 302 or 304 or 316 complying with ASTM A240, with standard tempers and hardness required for fabrication, strength and durability.
- C. Paint: Clean all new exposed metal parts and assemblies of oil, grease, scale, and other foreign matter and factory paint one shop coat of standard rust-resistant primer. After erection, provide one finish coat of low VOC low odor, industrial enamel paint. Galvanized metal need not be painted.

1.12 OPERATION PERFORMANCE

- A. The control system shall provide smooth acceleration and deceleration with 1/8-inch leveling accuracy at all landings, from no load to full rated load in the elevator, under normal or unloading conditions. The self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct for over travel and under travel. The car shall remain at the landing irrespective of load.
- B. The floor-to-floor performance time under the above criteria shall be measured from the start of door close at one floor to ¾ open at the next floor):
1. Passenger Elevators: 9.0 seconds
 2. Judge's Elevator: 10.0 seconds
 3. Custody Elevators: 12.0 seconds
 4. Service Elevator: 12.0 seconds
- C. The door open time shall be measured from start of door open to fully open.
1. Passenger Elevators: 1.8 seconds
 2. Judge's Elevator: 1.6 seconds
 3. Custody Elevators: 2.4 seconds
 4. Service Elevator: 2.4 seconds
- D. The door close time shall be 24 measured from start of door close to fully closed.
1. Passenger Elevators: 2.4 seconds
 2. Judge's Elevator: 2.4 seconds
 3. Custody Elevators: 4.4 seconds
 4. Service Elevator: 4.4 seconds
- E. The door close time shall be based on the Code requirements with a door delay feature.
- F. The hall call door dwell time shall be based on the code requirements with a door delay feature. The door delay is the minimum acceptable time from notification that a car is answering a call (lantern and audible signal) until the doors of the car start to close. The minimum acceptable time for doors to remain fully open after answering a hall call shall not be less than 5-seconds. Time shall be calculated by the following equation:
- T = $D/(1.5 \text{ ft/s})$
T = Total time in seconds.
D = Distance from a point in the lobby 60-inches directly in front of the hall station to center line of the door opening.

- G. Car call door dwell time: The minimum acceptable time for doors to remain fully open after answering a car call shall not be less than 3-seconds, per code. Initial setting shall be 3.5-seconds.
- H. The speed of the elevator shall not vary by more than +/- 3% under loading conditions.
- I. Differential Door Timing Feature: Provide adjustable timers to vary the time that the doors remain open in response to a car or hall call. The doors shall remain open for 4.0-seconds in response to a car call and 5 to 8-seconds for a hall call. The doors shall remain open as long as passengers are crossing the threshold.
- J. Nudging: When doors are prevented from closing for 20-seconds due to failure of the proximity device or obstruction, the doors shall remain open and a buzzer shall sound.
- K. Prior to final acceptance and prior to the termination of the maintenance period, the elevators shall be adjusted as required to meet these performance requirements.

1.13 SOUND CONTROL/NOISE AND VIBRATION/RIDE QUALITY

- A. Limit overall elevator noise emissions to the building to the following maximum A-weighted sound pressure levels in any mode of operation:
 - 1. 55-decibels measured 5-feet above the cab floor near center while running at rated speed.
 - 2. 55-decibels measured 5-feet above the cab floor near center while the doors are opening or closing.
 - 3. 40-decibels measured in the elevator lobby 10-feet from the elevator doors.
 - 4. All elevator equipment including their supports and fastenings to building, shall be mechanically and electrically isolated from the building structure and main line power feeders to minimize objectionable noise and vibration transmission to car, building structure, or adjacent occupied areas of building.
 - 5. Ride Quality requirements shall include a horizontal acceleration measured inside of the cab during all conditions to not exceed 10 mg peak to peak within the 1-10 MHz range.
 - 6. Vertical acceleration and deceleration shall free of bumps, jerk, and sway, and shall be not less than 3.3 feet/sec² with initial ramp of between 0.5 and 0.75seconds.
 - 7. Make all necessary modifications or replacement of equipment as necessary prior to final acceptance or warranty expiration to meet the performance requirement. This shall be performed at no additional charge.

1.14 SUBMITTALS

- A. Submit the following before beginning fabrication of equipment:

1. The source of all finishes shall be provided by Owner/Purchaser. The elevator contractor shall coordinate procurement of those materials with the Owner/Purchaser and shall direct any of its subcontractor accordingly. Sourcing of all materials and the intended manufacturer/installer shall be submitted for approval.
2. Shop Drawings: Provide an electronic set of complete fully dimensioned shop drawings, to scale in PDF format. Include layouts of pits, overhead, plan view of hoistway, cab, machine room, equipment loads, power and heat data for all equipment and required clearances. Provide detailed signal fixture drawings and cut sheets for all major components (controller, door operator, roller guides, etc.)
3. Details of hold-to interior dimensions shall be provided. Drawings shall include details of cab interior including plans, and elevations. Fixture details shall be submitted for review. Generic brochures shall be rejected as not job specific. All details are to reflect modification to existing conditions and exact locations on the new materials. Provide hoistway, overhead and pit sections, and plan view of pit and machine room. Include all applicable structural, electrical and mechanical loads for new equipment. Provide manufacturer cut sheets for control system, power unit and door operator.
4. Design Information: Provide calculations verifying the following:
 - a) Adequacy of existing electrical provisions.
 - b) Adequacy of retained equipment relative to Code requirements if car weight increased by more than 5%.
 - c) Machine room heat emissions in B.T.U.
 - d) Adequacy of existing retained elevator machine beams.
 - e) Adequacy of existing car platform structure for intended loading.
5. The new cab and car components shall be designed to stay within 5% of the original car weight, as stamped on the crosshead. Should the original weight be exceeded by more than 5%, comply with all ASME, A17.1 requirements. This will be identified prior to manufacture of any equipment.
6. Samples: Provide three sets of materials and finishes exposed to public view, 6-inch by 6-inch panels or 12-inch lengths as applicable.
7. Color Charts: Provide three sets of color charts for all paint and car interior, entrance finish selections.
8. Product Brochures: Provide an electronic submittal in PDF format including of literature on controller, landing system, motor starter, door operator and related door operating equipment, and door detector. B. Before acceptance of work, submit the following:
 1. Provide an electronic submittal in PDF format of job specific manufacturer's equipment brochures and service manuals. Assemble manuals in chronological

order according to the specification alphanumeric system. Provide in manufacturers standard binders consisting of:

- a) Equipment and components, descriptive literature.
 - b) Performance data, model number.
 - c) Installation instructions.
 - d) Operating instructions.
 - e) Maintenance and repair instructions.
 - f) Spare parts lists.
 - g) Lubrication instructions.
 - h) Detailed, record and as-built layout drawings.
2. Detailed, simplified, one line, wiring diagrams. Provide one complete set per manual.
 3. Diagnostics: Controller and system shall include all necessary on-board diagnostics for performance of routine maintenance and troubleshooting. Installer shall provide all diagnostic documentation required for troubleshooting and maintaining the elevator system upon completion including a composite listing of the individual settings chosen for variable software parameters stored in the software programs.
 4. Layout Drawings: Provide a minimum of two sets of record as-built layout drawings. Drawings shall be prepared in AutoCAD. Provide one (1) complete set of drawings on compact disk.
 5. Wiring Diagrams: Provide a minimum of three (3) sets of "as-built" wiring diagrams that include all electrical circuits in the cars, hoistways and machine rooms. An additional set shall be mounted in the machine room. Diagrams shall include definition of all nomenclature and symbols. Provide two (2) sets of wiring diagrams in protective binders or in laminated format and one (1) set on compact disk.
 6. Wire Pull Sheets: Provide a minimum of three (3) sets of wire pull sheets. Provide two (2) sets of wiring diagrams in protective binders or in laminated format and one (1) set on compact disk.
 7. Keys: Provide six sets of keys for all keyed switches installed as part of this project, including: controller cabinet, fire service, stop switch, service cabinet, inspection and others if provided.
 8. Certificate of Warranty in accordance with Specifications.
- C. Consultant shall review and return to Contractor all submittals including shop drawings, samples and color charts, where applicable. Consultant shall review all close-out documents, including service manuals, wiring diagrams, letter from structural engineer, keys, etc. and deliver to Owner/Purchaser upon approval.

1.15 QUALITY ASSURANCE:

A. Installer and Maintenance Qualifications:

1. Be able to show evidence of recent local installations of similar scope and size with the proposed control system.
2. Directly employ sufficient competent personnel within 50-miles of project to handle modernization and maintenance duties.
3. Modernization work and maintenance duties shall be separately performed by specialized crews and individuals. B. Quality and Gauges of Materials:

1. New, best of their respective kinds free from defects. Gauges as noted.

- a) Materials, equipment of similar application; same manufacturer, except as noted.
- b) Entire elevator equipment shall operate without irregularities and quietly by use of high-grade materials, first class workmanship and adjustments.

1.16 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Ship in factory crated sections of a size to permit passage through available space.
- B. Obtain approval and schedule delivery of material to meet Owner/Purchaser's requirements.
- C. Storage of equipment and materials shall be coordinated with Owner/Purchaser.
- D. Hoisting and Storage: All hoisting operations and storage of equipment and materials shall be coordinated in advance of delivery with Owner/Purchaser.
 1. Supply a plan detailing the planned methods for hoisting of equipment including anticipated roof preparation, hoisting times and durations, and other special requirements.
 2. Supply a proposed location and size of area needed for tools, materials and equipment to be stored.
 3. Schedule of anticipated delivery, hoisting and storage dates.

1.17 SEQUENCING AND SCHEDULING

A. Schedule of Operations:

1. Within thirty (30) days after contract award, the Elevator Contractor shall submit a complete plan and schedule of its proposed operations for approval. In preparation of its plan and schedule, the Installer shall make due allowance for and include the following:
 - a) Preparation of equipment and material submittal.

- b) Review of each submittal (four weeks)
- c) Manufacturing lead times for the equipment.
- d) Shipping durations and anticipated delivery dates.
- e) Related work by other trades, whether under the Elevator Contractor's or Purchaser's responsibility.
- f) The schedule shall be updated and resubmitted on a monthly basis.
- g) The schedule may be in the form of a bar chart, graph or other approved system by which are shown predicted sequence, dependencies, durations starting and completion dates for the various work units or trades involved, together with such other information relative to job progress and completion. If required, the schedule shall be submitted in PDF Format. B. Sequence of the work:

1. The Elevator Contractor shall be responsible for providing a sequencing schedule based on the Purchaser's requirement. The Elevator Contractor shall base their bid on removing two (2) elevators from service simultaneously but never more than one (1) low rise and one (1) high rise passenger elevators shall be out of service. Sample sequencing may be:

- a) Passenger Elevator Number 1 and Number 5
- b) Passenger Elevator Number 2 and Elevator Number 6
- c) Passenger Elevator Number 3 and Custody Elevator Number 9
- d) Custody Elevator Number 7 and Judge's Elevator Number 8,
- e) Service Elevator Number 10. C. Interruptions of Building

Elevator Service:

1. Elevator Modernization Working Hours:
 - a) Base Bid: All work shall be performed during the hours when the courts are not in operation. The work shall be performed between the hours of 6 p.m. and 6 a.m.
 - b) Alternate One: Provide an alternate to work 6 days a week; 10 hours (off hours as described above) a day.
 - c) Alternate Two: The Contractor shall work normal hours and normal days with the exception of noisy work, which shall be performed from 5 a.m. to 8 a.m. Noisy work is considered work which will create disruption to normal court or building operation and is performed in the hoistways/lobbies/elevator cabs. The work in the machine room is not

considered to be part of this "noisy" work except for Elevators 1, 2 and 3, which are adjacent to occupied building spaces.

2. Any cranes used to bring equipment into the building shall be the responsibility of the Elevator Contractor and shall be scheduled for use on weekends.
3. All work shall be done with a minimum amount of interference to the operation of the building. The Contractor shall not interrupt the services without the expressed prior written permission of the Owner/Purchaser.
4. Contractor shall perform as much pre-work as possible, prior to removing the first elevator from service. As a minimum, all new equipment shall be hoisted to the machine room.
5. The Contractor shall be responsible for cross connection of the modernized and non-modernized Passenger Elevators.
6. The elevator shall be tested and accepted by the Owner/Purchaser prior to starting work on another elevator. Contractor shall run each elevator on auto-call operation for a minimum of 72 hours without cycling doors and at least 8 hours with cycling doors, before turning the elevator over to the building. During door cycling period, Contractor shall provide personnel in the elevator at all times, preventing the public from entering the elevator.
7. Work shall begin after detailed work schedule has been approved.
8. Liquidated Damages
 - a) In the event the work is not completed per the contract schedule, the following liquidated damage provision shall be used to calculate the damages.
 - b) If the work is still not completed, as defined by the Specifications, liquidated damages will be assessed as follows: Initial assessment of 2% of contract value (defined as the original contract price plus any authorized change orders) plus 0.25% of contract value for each calendar day until the project is completed.

1.18 WARRANTY

The elevators and associated equipment shall be free of defective material, imperfect work and faulty operation not due to ordinary wear and tear or improper use or care, for a period of one year from final acceptance after completion of the final elevator. Defective work shall be repaired or replaced at no additional cost to the Owner/Purchaser. Provide Certificate of Warranty with start date effective on the date the Consultant accepts all work, including completion of all punch list items.

Alternate provide an extended warranty and warranty maintenance service for a three year period. Maintenance service shall be as defined below.

1.19 MAINTENANCE SERVICE

- A. All maintenance service shall be broken out and quoted separately.
- B. Coverage shall be in accordance with Vertical Transportation Interim Maintenance Agreement.
- C. Quote a lump sum amount for maintenance as described in the Purchaser/Owner's maintenance agreement. The maintenance shall begin upon award of the modernization contract and shall continue until the final elevator is completed. The total number of days included for this maintenance service shall be identified along with the lump sum amount.
- D. A separate monthly rate shall be submitted in the event the schedule is extended beyond the projected date.
- E. Any and all escalation shall be included in the lump sum amounts. The escalation factor shall be identified with the lump sum amount.
- F. Warranty Maintenance: Submit with base bid a separate lump sum price for 12-month maintenance service during warranty period. Maintenance shall commence upon completion and acceptance of all elevator work on the final elevator. Coverage shall be in accordance with Vertical Transportation Warranty Maintenance Agreement.
- G. On-Going Maintenance: Submit with base bid a separate monthly price for on-going maintenance agreement following warranty period. Coverage shall be in accordance with Vertical Transportation Maintenance Agreement.
- H. The Owner/Purchaser reserves the right to accept or reject any or all maintenance terms noted above at any time prior to their commencement date.

1.20 PROTECTION OF PERSONS AND PROPERTY

- A. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.
- B. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
 - 1. Employees working on the project and other persons who may be affected thereby.
 - 2. The work, materials, and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-Subcontractors.
 - 3. Contractor shall repair or replace all damaged items including, but not limited to roofing, walls, ceilings, flooring, furnishings, and etc. Under no circumstances shall any employees of Contractor or subcontractor employees smoke while on-site. Contractor shall advise all employees and Subcontractors that smoking on roof may void Owner/Purchaser's roofing warranty and Contractor shall be responsible for all costs associated with violation of this requirement.
- C. The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's

superintendent unless otherwise designated in writing by the Contractor to the Owner/Purchaser.

- D. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of public authority having jurisdiction for the safety of persons, property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the work, all partitions for safety and protection, including posting danger signs, and other warnings against hazards, promulgating safety regulations and notifying Owner/Purchasers and users of adjacent utilities. The Contractor shall restore all damaged building
- E. In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damages, injury or loss.

1.21 PERMITS AND INSPECTION FEES

- A. The Contractor shall obtain without cost to the Owner/Purchaser, all permits and certificates as required.

1.22 SIGNS

- A. Provide "Temporarily out of Service for Modernization" signs and post on all affected elevator entrances at all floors.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Product of individuals, firms or corporations regularly engaged in modernizing elevators comparable with this contract and in satisfactory operation for a period of not less than five years.
- B. Qualified Bidders—or Approved Equal:
 - 1. Kone Elevator Company
 - 2. Otis Elevator Company
 - 3. Schindler Elevator Company
 - 4. ThyssenKrupp Elevator Company
 - 5. Mitsubishi Elevator Company C. Approved Base Bid Control System:
 - 1. Motion Control Engineering: Controls or approved equal.

2.02 OUTLINE OF EQUIPMENT

- A. Passenger Elevator Numbers 1, 2, & 3; 5 & 6 (All information shall be field verified by Elevator Contractor):

1. Elevator Type: Geared Traction
2. Contract Load, in Pounds: Retain Existing
3. Contract Speed, in FPM: Retain Existing
4. Machine Location: Direct Overhead; Machine room mounted
5. Machine Type: Provide new Permanent Magnet AC Machine
6. Type of Control: Provide new VVVF-AC
7. Operation New MCE Microprocessor iControl ; Group

8. Car & Landing Door Type: Automatic
Retain existing type.
9. Guide Rails Retain existing; remove all dirt, debris rust; paint non running surface with an application of common, low VOC low-odor, rust inhibiting coatings
10. Buffers and Pit Channels Retain existing; rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating. Test and make any modifications necessary to pass state tests.
11. Roller Guide Assembly Provide new car and counterweight assemblies and rollers.
12. Traveling Cable Provide new
13. Door Operation Provide new VVVF-AC Closed Loop type; GAL MOVFR or approved equal.

14. Door Detector Provide new infrared full screen full height of door device with differential timing, nudging and interrupted beam time.

15. Car Safety and Platform Retain and refurbish safety; test to ensure proper operation and make all necessary adjustments.

Remove all rust, debris and dirt; repaint all exposed areas. Check all fastenings, tighten and secure.

Platform: remove rust, dirt and debris; inspect for damage/termites/water damage. Clean and provide treatment as required. Restore to like new condition. Provide stainless steel plate over the bottom of the platform.

16. Cab Enclosure

New car doors with textured satin brushed #4 stainless steel finish; refer to drawings.

Interior Finishes: Refer to drawings attached to the specification.

17. Cab Door Equipment: Provide all new GAL or approved equal door equipment including headers, tracks, rollers, hangers, etc.
18. Cab Sills Retain existing; remove rust, debris and dirt, rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating. Check and tighten all fastenings.
19. Top of Car Inspection Station: Provide new with light fixture and convenience outlet.
20. Hoistway Entrances: Retain existing configuration.
21. Hoistway Entrance Equipment: All new equipment shall be GAL or approved equal.
New interlocks, door tracks, headers, hanger's rollers and closers.
Any retained equipment: Remove all rust, dirt, debris, rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating
22. Lobby Hoistway Sills & Sill Angles Retain existing; remove rust, dirt, debris, rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating. Check and tighten all fastenings
23. Lobby Hoistway Doors & Frames: Provide new doors with satin brushed #4 stainless steel finish at all floors.
Alternate to retain existing door panels at all floors.
Frames: Retain existing frames; clean down, check all fastenings and refinish.
24. Car Operating Panel: Provide new main and auxiliary applied car operating panels
Incorporate a 12" to 15" CEC Elite P.I into the main car operating panel.
The car pushbutton for the 5th floor in both the Low and High rise cars shall be installed.
25. Hall Fixtures Provide all with new; reuse of existing boxes is acceptable. All fixtures shall be mounted to meet disabled height requirements.
26. Hall Signage At all floors provide engraved elevator numbers above the elevator entrance; size to match existing.

At the first floor provide an engraved sign which directs traffic to the appropriate elevators (High Rise, Low Rise) and the floors those elevators serve.

27. Hall Position Indicator and Provide new with adjustable chimes and voice Hall Lanterns: annunciation at all floors for all elevators as specified.

New combination hall lanterns and hall position indicators shall be provided at the first floor. The lens shall protrude from the faceplate so that the fixture is easily identifiable from the lobby.

Where cut outs are provided in the existing jambs for hall lanterns, provide and install new stainless steel faceplate with new round lens. Provide visual and audible signals. A blinking light shall illuminate signaling the elevators arrival and when doors begin to open the lights will remain steady.

Where hall lanterns are installed on the face of the wall, provide new stainless steel faceplates with digital type combination hall position indicator and hall lanterns.

28. Hall Call Stations:

Provide new surface mount type with oversized faceplate and engraved fire exit signs. Provide the same number of risers as existing.

At the Ground Floor provide Low Rise Signs which shall read: Floors Served G, 1 to 4 and provide High Rise Signs which shall read Floors G, 5 to 8; no stops at floors 1 to 4.

At the 5th Floor The Low Rise Signs will read Floors 1 to 5; The High Rise Signs shall read Floors G; 5 to 8. At the 5th floor, there shall be a down hall pushbutton for the Low Rise and an up and down pushbutton for the High Rise Elevators.

29. Phase 1 Fire Recall Switch & Emergency Power Key Switch and Jewel:

Provide new at main return landing; integrate with hall pushbutton station

30. Emergency Return Car to Lobby/ Security Mode

Operation

Key switch in each hall station for each group and key switch inside the elevator car on the car operating panel. Override Key switch in service cabinet. All key switches shall have positions

identified with blue bezel.

31. Access Switches:

Provide new in existing location.

32. Car Blower:

Provide new three speed blower.

33. Communication System: Provide new self-dialing vandal resistant push to call two way communication system with recall, tracking and voiceless communication.
Provide a two way emergency communication system which shall allow emergency personnel to speak to passengers inside the elevator car per A17.1 – 2004; Rule 2.27.1.1.4.
An intercom station shall be provided adjacent to the hall pushbutton station at the main lobby floor. The intercom station shall have a visual and audible signal.
34. Under Car Light: Provide new car light under car platform with switch in service cabinet.
35. Special Features: Load weighing device, fire recall operation, emergency power operation, verbal floor and direction annunciation, car to lobby switch and Panic Button as described below.

B. Service Elevator Number 10 (All information shall be field verified by Elevator Contractor):

1. Elevator Type: Geared Traction
2. Contract Load, in Pounds: Retain Existing
3. Contract Speed, in FPM: Retain Existing
4. Machine Location: Direct Overhead; Machine room mounted
5. Machine Type: Provide new Permanent Magnet AC Machine
6. Type of Control: Provide new VVVF-AC
7. Operation: New MCE Microprocessor iControl; Selective
8. Car & Landing Door Type: Collective
Retain existing type.
9. Guide Rails: Retain existing; remove all dirt, debris and rust; paint non running surfaces
10. Buffers and Pit Channels: Retain existing; remove all debris, rust and dirt; paint non running surfaces. Test and make any modifications necessary to pass state tests.
11. Roller Guide Assembly: Provide new car and counterweight assemblies and rollers.
12. Traveling Cable: Provide new
13. Door Operation: Provide new VVVF-AC Closed Loop type; GAL MOVFR or approved equal.

14. Door Detector Provide new infrared full screen full height of door device with differential timing, nudging and interrupted beam time.
15. Car Safety and Platform Retain and refurbish safety; test to ensure proper operation and make all necessary adjustments. Remove all rust; repaint all exposed areas. Check all fastenings, tighten and secure.
- Platform: remove rust and inspect for damage/termites/water damage. Clean and provide treatment as required. Restore to like new condition. Provide stainless steel plate over the bottom of the platform.
16. Cab Enclosure New car doors with textured satin brushed #4 stainless steel finish; refer to drawings.
- Interior Finishes: Refer to drawings attached to the specification.
17. Cab Door Equipment: Provide all new GAL or approved equal door equipment including headers, tracks, rollers, hangers, etc.
18. Cab Sills Retain existing; remove rust, debris and dirt, rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating Check and tighten all fastenings.
19. Top of Car Inspection Station: Provide new with light fixture and convenience outlet.
20. Hoistway Entrances: Retain existing configuration.
21. Hoistway Entrance Equipment: All new equipment shall be GAL or approved equal.
- New interlocks, door tracks, headers, hanger's rollers and closers.
- Any retained equipment: Remove all rust, dirt, debris, wire brush and clean all equipment which is being retained. Paint all non-running surfaces.
22. Lobby Hoistway Sills & Sill Angles Retain existing; remove rust, dirt, debris, wire brush and clean. Paint non-running surfaces. Check and tighten all fastenings
23. Lobby Hoistway Doors & Frames: Doors: At all floors: Provide new with satin brushed #4 stainless steel finish.
- Frames: Retain existing frames; clean down, check all fastenings and refinish.

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| 24. Car Operating Panel: | Provide new main applied car operating panel.
Provide key switch operation to match existing. |
| 25. Hall Fixtures | Provide all with new; reuse of existing boxes is acceptable. All fixtures shall be mounted to meet disabled height requirements. |
| 26. Car Lanterns: | Provide new surface mounted type vandal resistant type with adjustable chimes and voice annunciation. |
| 27. Hall Call Stations: | Provide new surface mount type with oversized faceplate and engraved fire exit signs. Provide vandal resistant buttons and button assemblies to meet CBC requirements.

Provide key switch operation to match existing.

Interface with existing key pad in lobby to activate pushbutton.

. |
| 28. Phase 1 Fire Recall Switch & Emergency Power Jewel: | Provide new at main return landing; integrate with hall pushbutton station |
| 29. Emergency Return Car to Lobby/Security Mode Operation | Key switch in each hall station for each group and key switch inside the elevator car on the car operating panel. Override Key switch in service cabinet. All key switches shall have positions identified with blue bezel. |
| 30. Access Switches: | Provide new in existing location. |
| 31. Car Blower: | Provide new three speed blower. |
| 32. Communication System: | Provide new self-dialing vandal resistant push to call two way communication system with recall, tracking and voiceless communication.

Provide a two way emergency communication system which shall allow emergency personnel to speak to passengers inside the elevator car per A17.1 – 2004; Rule 2.27.1.1.4 |
| 33. Under Car Light: | Provide new car light under car platform with switch in service cabinet. |
| 34. Special Features: | Load weighing device, fire recall operation, emergency power operation, verbal floor and direction annunciation. |
- C. Custody Elevator Numbers 7 & 9 (All information shall be field verified by Elevator Contractor):
1. Elevator Type: Geared Traction
 2. Contract Load, in Pounds: Retain Existing

3. Contract Speed, in FPM: Retain Existing
4. Machine Location: Direct Overhead; Machine room mounted
5. Machine Type: Provide new Permanent Magnet AC Machine
6. Type of Control: Provide new VVVF-AC
7. Operation New MCE Microprocessor iControl; Selective

8. Car & Landing Door Type: Collective
Retain existing type.

9. Guide Rails Retain existing; remove all dirt, debris and rust;
paint non running surfaces
10. Buffers and Pit Channels Retain existing; remove all debris, rust and dirt;
paint non running surfaces. Test and make any
modifications necessary to pass state tests.
11. Roller Guide Assembly Provide new car and counterweight assemblies
and rollers.
12. Traveling Cable Provide new
13. Door Operation Provide new VVVF-AC Closed Loop type; GAL
MOVFR or approved equal.

14. Door Detector Provide new infrared full screen full height of door
device with differential timing, nudging and
interrupted beam time.
15. Car Safety and Platform Retain and refurbish safety; test to ensure proper
operation and make all necessary adjustments.
Remove all rust; repaint all exposed areas. Check
all fastenings, tighten and secure.

Platform: remove rust and inspect for
damage/termites/water damage. Clean and
provide treatment as required. Restore to like new
condition. Provide stainless steel plate over the
bottom of the platform.
16. Cab Enclosure Retain existing; refurbish, check and tighten all
fastenings. Check operation of gate and align as
required.

Interior Finishes: Refer to drawings attached to the
specification.
17. Cab Door Equipment: Provide all new GAL or approved equal door
equipment including headers, tracks, rollers,
hangers, etc.

18. Cab Sills Retain existing; remove rust, debris and dirt, wire brush and clean. Check and tighten all fastenings.
19. Top of Car Inspection Station: Provide new with light fixture and convenience outlet.
20. Hoistway Entrances: Retain existing configuration.
21. Hoistway Entrance Equipment:
All new equipment shall be GAL or approved equal.
New interlocks, door tracks, headers, hanger's rollers and closers.
Any retained equipment: Remove all rust, dirt, debris, wire brush and clean all equipment which is being retained. Paint all non-running surfaces.
22. Lobby Hoistway Sills & Sill Angles Retain existing; remove rust, dirt, debris, wire brush and clean. Paint non-running surfaces. Check and tighten all fastenings
23. Lobby Hoistway Doors & Frames: Doors: All floors: Retain existing, clean down, check all fastenings and refinish.
Frames: Retain existing frames; clean down, check all fastenings.
24. Car Operating Panel: Provide new main applied car operating panel.
I Provide key switch operation to match existing.
25. Hall Fixtures Provide all with new; reuse of existing boxes is acceptable. All fixtures shall be mounted to meet disabled height requirements.
26. Car Lanterns: Provide new surface mounted type vandal resistant type with adjustable chimes and voice annunciation.
27. Hall Call Stations: Provide new surface mount type with oversized faceplate and engraved fire exit signs. Provide vandal resistant buttons and button assemblies to meet CBC requirements.
Provide key switch operation to match existing.
28. Phase 1 Fire Recall Switch & Emergency Power Jewel: Provide new at main return landing; integrate with hall pushbutton station
29. Emergency Return Car to Lobby/Security Mode Operation Key switch in each hall station for each group and key switch inside the elevator car on the car operating panel. Override Key switch in service cabinet. All key switches shall have positions identified with blue bezel.

30. Access Switches: Provide new in existing location.
31. Car Blower: Provide new three speed blower.
32. Communication System: Provide new self-dialing vandal resistant push to call two way communication system with recall, tracking and voiceless communication.

Provide a two way emergency communication system which shall allow emergency personnel to speak to passengers inside the elevator car per A17.1 – 2004; Rule 2.27.1.1.4
33. Under Car Light: Provide new car light under car platform with switch in service cabinet.
34. Special Features: Load weighing device, fire recall operation, emergency power operation, verbal floor and direction annunciation.

D. Judge's Elevator Number 8 (All information shall be field verified by Elevator Contractor):

1. Elevator Type: Geared Traction
2. Contract Load, in Pounds: Retain Existing
3. Contract Speed, in FPM: Retain Existing
4. Machine Location: Direct Overhead; Machine room mounted
5. Machine Type: Provide new Permanent Magnet AC Machine
6. Type of Control: Provide new VVVF-AC
7. Operation: New MCE Microprocessor iControl; Selective
8. Car & Landing Door Type: Collective
Retain existing type.
9. Guide Rails: Retain existing; remove all dirt, debris rust; paint non running surfaces
10. Buffers and Pit Channels: Retain existing; remove all debris, rust and dirt; paint non running surfaces. Test and make any modifications necessary to pass state tests.
11. Roller Guide Assembly: Provide new car and counterweight assemblies and rollers.
12. Traveling Cable: Provide new
13. Door Operation: Provide new VVVF-AC Closed Loop type; GAL MOVFR or approved equal.

14. Door Detector Provide new infrared full screen full height of door device with differential timing, nudging and interrupted beam time.
15. Car Safety and Platform Retain and refurbish safety; test operation and make all necessary adjustments. to ensure proper
- Remove all rust; repaint all exposed areas. Check all fastenings, tighten and secure.
- Platform: remove rust and inspect for damage/termites/water damage. Clean and provide treatment as required. Restore to like new condition. Provide stainless steel plate over the bottom of the platform.
16. Cab Enclosure New car doors with textured satin brushed #4 stainless steel finish; refer to drawings.
- Interior Finishes: Refer to drawings attached to the specification.
17. Cab Door Equipment: Provide all new GAL or approved equal door equipment including headers, tracks, rollers, hangers, etc.
18. Cab Sills Retain existing; remove rust, debris and dirt, wire brush and clean. Check and tighten all fastenings.
19. Top of Car Inspection Station: Provide new with light fixture and convenience outlet.
20. Hoistway Entrances: Retain existing configuration.
21. Hoistway Entrance Equipment:
- All new equipment shall be GAL or approved equal.
- New interlocks, door tracks, headers, hanger's rollers and closers.
- Any retained equipment: Remove all rust, dirt, debris, wire brush and clean all equipment which is being retained. Paint all non-running surfaces.
22. Lobby Hoistway Sills & Sill Angles Retain existing; remove rust, dirt, debris, wire brush and clean. Check and tighten all fastenings
23. Lobby Hoistway Doors & Frames: Doors: Provide new doors with satin brushed #4 stainless steel finish at all floors.
- Frames: Retain existing frames; clean down, check all fastenings and refinish.

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| 24. Car Operating Panel: | Provide new main applied car operating panel.
Incorporate a CEC Elite P.I. with camera feature into the new applied car operating panel.
Provide key switch operation to match existing. |
| 25. Hall Fixtures | Provide all with new; reuse of existing boxes is acceptable. All fixtures shall be mounted to meet disabled height requirements.
Provide key switch operation to match existing. |
| 26. Combination Hall Position Indicator and Hall Lanterns: | At all floors: Provide new surface mounted type vandal resistant type with adjustable chimes and voice annunciation at all floors for all elevators. |
| 27. Hall Call Stations: | Provide new surface mount type with oversized faceplate and engraved fire exit signs. Provide vandal resistant buttons and button assemblies to meet CBC requirements.
Provide key switch operation to match existing. |
| 28. Phase 1 Fire Recall Switch & Emergency Power Jewel: | Provide new at main return landing; integrate with hall pushbutton station |
| 29. Access Switches: | Provide new in existing location. |
| 30. Car Blower: | Provide new three speed blower. |
| 31. Communication System: | Provide new self-dialing vandal resistant push to call two way communication system with recall, tracking and voiceless communication.
Provide a two way emergency communication system which shall allow emergency personnel to speak to passengers inside the elevator car per A17.1 – 2004; Rule 2.27.1.1.4
An intercom station shall be provided adjacent to the hall pushbutton station at the main lobby floor. The intercom station shall have a visual and audible signal. |
| 32. Under Car Light: | Provide new car light under car platform with switch in service cabinet. |
| 33. Special Features: | Load weighing device, fire recall operation, emergency power operation, verbal floor and direction annunciation and a Panic Button inside the elevator car.. |

2.03 MACHINE ROOM EQUIPMENT

A. Provide equipment to fit in existing machine room space. Any and all costs for re-design of, and revisions to, building spaces and structure due to selection of Elevator Contractor, Manufacturer, change to equipment availability, production or selection shall be borne by Elevator Contractor.

B. Hoist Machine:

Provide new AC Synchronous Permanent Magnet gearless type machine with permanent magnet motor.

All machines shall be mounted in proper alignment on an isolated bedplate.

Hire a licensed structural engineer to verify the adequacy of existing hoistway construction, supporting structure and machine beams relative to weight increase and redistribution of loads. Provide additional support beams, as required. Include all required blocking beams and supports. Provide machine manufacturer's standard rubber isolation pads. Provide new deflector sheave and supporting structure.

C. VVVF Motor Drive Remove existing motor generator and provide VVVF motor drive as follows:

1. The drive shall be capable of varying the torque on the motor during acceleration and deceleration.
2. The drive shall be capable of on-site programming the volts per Hertz acceleration and deceleration ride profiles to adjust the ride quality to drive control characteristics.
3. The flux vector drive shall control AC induction motors through the use of a high resolution, dual channel optical reader.
4. The flux vector drive shall be capable of delivering 100-percent rated motor torque from base speed down to zero speed.
5. The flux vector drive shall not use DC injection for slowdown braking.
6. The flux vector drive shall be adjustable to achieve the required current motor voltage and frequency so as to match the characteristics of the hoist motor.
7. The drive shall not create excessive audible noise in the elevator motor.
8. The drive shall be capable of delivering sufficient current to accelerate the elevator to contract speed at the rated load. The drive shall provide speed regulation within 3-percent during all phases of acceleration, deceleration and leveling.

D. Isolation Transformer: Provide necessary isolation transformers, reactors, capacitors and other devices to limit the overall Distortion Factor at the point of connection of the elevator converter feeders to the electrical distribution system to a maximum of 3-percent. This shall include compensation for the following: Harmonic distortion, Power factor, Flicker, Line Notching.

All control wiring shall be isolated from power wiring to minimize inductive coupling.

1. Submit for approval, applicable brochures and technical information as required for solid state equipment (motor drives, system processors, etc.)
 2. The use of solid state equipment shall not interfere with any of Owner/Purchaser's sensitive electronic equipment. In addition, provide adequate sound suppression equipment acceptable to Owner/Purchaser to control airborne and/or structuralborne noises and vibration.
- E. Controller: Disconnect and completely remove the existing controller and selector for each elevator and replace with a new microprocessor system.
1. Provide MCE or approved equal non-proprietary diagnostic control system from approved manufacturer. Provide NEMA – 1 enclosures and doors arranged with locks or mechanical latches.
 2. All controller components shall be designed to provide the required operation as herein specified.
 3. All assemblies, power supplies, switches, relays and other items shall be securely mounted on a substantial, self-supporting steel frame of angles or channels and shall be totally enclosed with hinged or removable covers in a floor mounted cabinet. Equipment shall not be mounted on any of the covers.
 4. All controller switches and relays shall be magnet operated with contacts of design and material to ensure maximum conductivity, long life and reliable operation without overheating or excessive wear and shall provide a wiping action to prevent sticking due to fusion.
 5. Where time delay relays are used in the circuits, they shall be of an acceptable design that is reliable and consistent, such as condenser timing or electronic timing circuits. No dashpot time relays shall be used.
 6. Each device on all panels shall be properly identified by name, letter, or standard symbol that shall be neatly stencil painted (or otherwise marked), in an indelible and legible manner, on device or panel. Identification markings shall be coordinated with identical markings used on wiring diagrams. The ampere rating shall be marked adjacent to all fuse holders. All spare conductors shall be neatly formed, laced and identified.
 7. Safety switch shall cut off current, automatically apply brake and stop car upon current failure or upon operation of any electrical safety device.
 8. All high voltage (110-volt or above) contact points inside the controller cabinet shall be protected from accidental contact when the doors are open.
 9. Controllers shall be designed, tested and certified for Electromagnetic Interference (EMI) immunity in compliance with EN12015.

10. Provide adequate ventilation fans.
 11. Provide isolated input with opto-isolation modules.
 12. Power Supplies: All power supplies utilized shall be UL recognized. They shall all have short-circuit protection.
 13. Frame: All assemblies, power supplies, chassis, switches, relays, and other items shall be securely mounted on a substantial, self-supporting steel frame. The equipment shall be completely enclosed with covers. No equipment is to be mounted on the covers.
 14. Wiring: All factory wiring shall utilize UL labeled copper wires. All wiring interconnections shall be neatly routed. All wiring connections to studs of terminals shall be made by means of solder or solder less lugs.
 15. Marking: All components shall be clearly and permanently identified adjacent to each device and shall be identical to the wiring diagram.
 16. Terminals shall be provided for a future connection to a computerized test system. An adequate number of terminals shall be provided so as to monitor all of the various functions of the elevators. These shall include but not be limited to car positions, running functions up and down, door open and close, hall and car calls, door protective devices, safety circuits, elevator recapture, etc.
 17. Printed Circuits and Related Hardware:
 18. All inputs from external devices (such as pushbuttons) and all outputs to external devices (such as indicators, relays) shall be isolated.
 19. The use of relays as input/output devices is not acceptable.
 20. A separate regulated power supply shall be used for each computer chassis.
 21. The control circuits shall be so designed so that one side of the power supply is grounded to provide for testing.
 22. Under no circumstances shall the safety circuits be affected by accidental grounding of any part of the system.
 23. In the event of a power failure or interruption, the system shall be designed so that it will start properly when power is returned.
 24. System memory shall be provided so that data shall not be lost in the event of a power failure or disturbance.
- F. Auxiliary Disconnects shall be provided where the equipment is not in the line of sight of the Main Line Disconnects. These are the responsibility of the Elevator Contractor.
- G. Speed Regulation:

The rate of acceleration and deceleration of the cars under any condition of load shall be as nearly constant as is possible with the method of control specified and employed and shall be independent of the operating devices in the car.

The acceleration, deceleration and velocity shall all be computer controlled. The detection of velocity and position of the car shall be fed into the computer. The computer shall compare this information with the velocity profile and adjust as necessary to insure a fast and smooth acceleration and deceleration curve. The minimum acceleration/deceleration shall be 3.3 feet/sec² and shall change uniformly.

- H. Diagnostic Tools: Subcontractor shall provide all diagnostic tools and documentation required for the adjustment, troubleshooting, and reprogramming of the elevator system upon completion, including:

Passwords or identification codes required to gain access to each software program in order to perform diagnostics or program changes.

A composite listing of the individual settings chosen for variable software parameters stored in the software programs.

A complete dictionary of fault codes with recommended steps for resolution, in sequence from highest to lowest probable cause.

Provide one project laptop capable of and configured for displaying elevator status, hoistway position and direction, door position and direction, approximate percentage loading, existing issue and direction of hall and car calls and any current or recent faults for troubleshooting the equipment. It is the intent that the laptop be left on-site for diagnostic use in each control room.

- I. Encoder: Provide solid-state, optical, digital-count type, mechanically coupled to car, machine or car governor.
- J. Provide vibration sound isolation to eliminate structure-borne sound being transmitted to the building. Vibration isolators shall be equivalent to Mason Industries Model RBA or SWM waffle pad with neoprene grommet and washer isolated bolt attachment. Select isolators to compress a minimum of 0.1-inches under load. In lieu of machine beams the Seismic Protective Features: Provide per the Code requirements. K. Governor and Tension Sheave:
1. Governor: Provide new centrifugal type governor.
 2. Tension Sheave: Provide new with tension weight.
 3. Governor Rope: Provide new.
 4. Adjustment: The governor shall be accurately adjusted and full-load, full-speed tested to operate within limits specified by code. All adjustable parts shall be sealed. Provide each unit with a test tag.

2.04 SYSTEM OPERATION AND FEATURES

- A. Selective Collective Operation—Judge, Service and Custody Elevators:
1. Controls shall be a microprocessor based system.
 2. Registration of car call button shall cause the car to start. The car shall respond to its own car calls and corridor calls, in the direction of travel, and in order in which the landings are reached.
 3. The car shall remain at the arrival floor for an adjustable interval to permit passenger transfer. Doors shall close after a predetermined interval, unless the car is parked at the main floor, after opening unless closing is interrupted by car door reversal device or door open button in car.
 4. Delayed Car Protection: The system shall automatically disassociate a car from the Duplex system in the event the car is delayed for a predetermined time. The car shall be automatically restored to the Duplex System when the cause of the delay has been eliminated.
 5. Programmed Door Control: Separate adjustable times shall be provided for each car to establish minimum passenger transfer time for car stops, intermediate floor hall call stops and lobby floor stops. All timing shall be computerized to coincide with traffic demands.
 6. Designated Parking: The system shall provide for cars to park as designated by the Duplex system or park at its last call.
 7. Provisions shall be made in the dispatch computer so that the elevator system dispatching can be modified at a future time. The system shall be so designed that the modifications to the software shall be all that is required to revise the dispatching. It shall be further designed so that there will be minimum shut down time should changes be required.
- B. Group Supervisory System: Passenger Elevators 1, 2, & 3 and Passenger Elevators 5 & 6:
1. Provide a temporary cross connection between the modernized and nonmodernized controllers and pushbuttons.
 2. Provide a solid state microprocessor dispatch system that shall provide for continuously changing operations in various traffic situations, and efficiently handle the varying passenger traffic demands:
 3. Provide reprogrammable software as provided by MCE or approved equal.
 4. The system shall provide for a continuously changing program of varying combinations when there are landing calls registered. These shall include components of incoming, outgoing, interflow and special traffic in varying intensities.
 5. The main floor up call is to be given priority.

6. The system shall measure the call waiting times on all floors, and determine through forecasting whether the elevator on becoming vacant shall continue in the previous running direction or reverse and assist in concentrated inter-floor traffic in specific areas of the building.
 7. The system shall have forecasting capabilities that will assign the desired degree of priority to any additional entrance floor.
 8. The system shall constantly evaluate the service quality of all forecasted waiting times. The process of optimization will allocate the landing calls with no final assignment established until the total quality of passenger service is assessed.
 9. A light traffic mode is assumed when there are no registered landing calls within a preset time. During periods of traffic, elevators shall be parked in anticipation of new landing calls. At least one elevator is to be parked at the main floor. Other elevators can be parked at upper or lower floors, as previously stated. The elevators shall be parked with the doors closed. The need for parking shall be checked by the system at frequent intervals.
 10. With the increasing traffic intensity, a priority method of call assignments shall be initiated. Priority of service for landing calls is determined by the call waiting time in relation to the prevailing traffic condition. The system shall prevent waiting times that are excessive as compared to the traffic intensity.
 11. Peak type of demands shall be recognized by monitoring the total traffic flow including a predominance of car calls in one direction, a high intensity of landing calls in one direction, a sudden high percentage of load increase when answering landing calls, main floor landing hall call intensities and departure of elevators from a designated floor with a predetermined load several times in a preset time.
 12. The system operation shall continuously change by demand and shall not require forced system changes to provide optimum operation and call response.
 13. Dispatch Protection: The system shall automatically provide dispatching in the event of failure of the primary system. A visible and audible alarm shall be provided to indicate loss of the dispatching computer.
 14. Delayed Car Protection: The system shall automatically disassociate a car from the Group System in the event the car is delayed for a predetermined time. The car shall be automatically restored to the Group System when the cause of the delay has been eliminated.
 15. Designated Parking: The system shall provide for cars to park as designated by the Group Controller or park at its last call.
- C. Independent Service: Provide controls to remove elevator from normal operation and provide control of the elevator from car buttons only. Car shall travel at contract speed and shall not respond to corridor calls.
- D. Car Top Inspection Operation: Provide new per Code requirements.

- E. Emergency Recall Operation (Fire Service): Provide operation and equipment per Code requirements. Contractor shall provide relays, wiring, and terminal strips to receive signals from the fire alarm system.
- F. Load Weighing: Provide automatic load weighing device for passenger elevators set at approximately 80% of full load. The device when activated shall cause the elevator to bypass corridor calls and shall initiate dispatch of car at main terminal prior to elapse of normal dispatching interval. Provide adjustable setting from 50 - 80% of full load.
- G. False Call Canceling: Provide device to cancel all passenger car calls when car loading is not equal to the number of calls registered.
- H. Differential Door Timing Feature: Provide adjustable timers to vary the time that the doors remain open in response to a car or hall call. The doors shall remain open for 3.5-seconds in response to a car call and 5 to 8-seconds for a hall call.
- I. Nudging: When doors are prevented from closing for 20-seconds due to failure of the proximity device or obstruction, the doors shall close at reduced speed and a buzzer shall sound.
- J. Fan and Light Output Timer: Provide an adjustable timer (Range 5 to 10-minutes) that when activated will turn off the fan and light within the car. The time will start when the car becomes inactive.
- K. Ascending Car Over-speed and Unintended Car Movement Protection: Provide future operation to prevent the elevator from striking the hoistway overhead and prevent unintended car movement per code.
- L. Seismic Operation: Provide operation and equipment per Code.

2.05 SECURITY SYSTEM:

- A. Interface with building security systems shall be required.
- B. Provisions for future card readers shall be installed. Car operating panels for custody and judge's elevator shall have provisions for future card reader/proximity reader installation. These provisions shall include wiring and mounting brackets. Provide filler plate.
- C. Provide a Panic Button in each car and a two way intercom system (Described in the communication system section of this specification) which will allow for the Sheriff to communicate with passengers in any of the elevators. This system shall be separate and exclusive from the telephone 24 hour system. Wiring and conduit from the elevator machine room to this station shall be the responsibility of the Elevator Contractor.

This shall be a two way system and activation of the panic button can occur either by the passenger inside the elevator or from a remote location by a designated building personnel. Activation of the panic button will illuminate a jewel and audible signal in the elevator and in the intercom control panel.

- D. Security Mode Operation (this operation shall be similar to a code blue operation typically seen in hospitals):

1. Provide a spring return momentary contact two-position key switch within each hall station.
 - a) Key switch shall have it's "OFF" and "ON" positions identified on a blue bezel. The key shall be removable only in the "OFF" position.
 - b) Provide a timing feature that shall return the elevator to group operation if the Code Blue switch within the elevator is not activated within 30 seconds of car arrival.
 2. Momentary contact of the key switch in the "ON" position summons the nearest elevator to that designated floor.
 3. Upon arrival the attendant activates a two- position key switch within the car operating panel.
 - a) Provide override key switch in locked service cabinet. Key switch shall have it's "OFF" and "ON" positions identified on a blue bezel.
 4. Activation if the car key switch places the elevator in the Independent Service mode.
 - a) Elevator is removed from normal operation.
 - b) Control is from car buttons only.
 - c) Car shall not respond to hall calls.
 5. The elevator then proceeds to the requested floor.
 6. The car key switch in the "OFF" position deactivates the operation.
 7. Earthquake Operation overrides the Security operation.
- E. Car to Lobby: Provide a key switch for each of the elevator groups (single elevator) to return the elevators to the main floor. Car shall return non-stop after answering all existing car calls. The cars shall park and remain at the landing for a maximum of 90 seconds.
- F. Security Wiring in Traveler: Coordinate requirements with Security Contractor. Provide Security Reader wiring for the car and for remote locations. Provide adequate wiring for tracking of calls and for the security system specified. Position and secure cables to prevent rubbing or chafing against hoistway or car items. Traveling cable shall include

adequate wiring for the security system and tracking of registered calls. A minimum of eight (8) additional shielded pair shall be provided.

2.06 SEISMIC

- A. Provide a minimum of one seismic switch for each single or group of elevators. A dual axis seismic switch shall activate per code requirements in both vertical and horizontal directions.
- B. Each elevator shall have a dual counterweight derailment device. The counterweight frame shall include derailment rings.
- C. Provide retainer plates on all car and counterweight guides.

2.07 HOISTWAY EQUIPMENT

- A. Guide Rails and Brackets:
 - 1. Retain existing car and counterweight guide rail brackets.
 - 2. Thoroughly clean all guide rails free of grease, oil and other foreign substances, file and remove all rough edges and surfaces. Realign, and tighten bracket bolts and guide rail clips as required for smooth and quiet operation of car and counterweight. Provide additional rail brackets or backing as required by code or as necessary to meet ride quality standards.
- B. Buffers:
 - 1. Existing car and counterweight oil buffers shall be refurbished. Clean thoroughly, flush and refill units with new oil.
 - 2. Provide inspection ladder and under car platform, where required by code.
 - 3. Paint exterior of buffer with rust inhibiting paint and stencil number the car number on each buffer.
 - 4. Buffers shall be load tested and tagged prior to turnover.
- C. Pit Stop Switch: Provide new red colored stop switches to meet code requirements.
- D. Alarm Bell: Provide car top alarm bell and second alarm bell inside hoistway at lobby level.
- E. Counterweight Roller Guides:
 - 1. Roller Guides: Provide new roller type guides to provide smooth and quiet ride free of rumbles, bumps, vibrations, and excessive sway. Guides shall consist of three or more spring mounted rollers per guide assembly (3 1/2-inch minimum diameter) to maintain rail contact and include adjustable stops. Rollers shall be constructed of neoprene or other similar sound deadening material. Rollers shall have high memory characteristics, enabling the rollers to quickly regain their round shape after an elevator sits still overnight or for a moderate period of time. Provide adapter plates and mounting hardware as necessary.

- F. Compensation: If required with the manufacturer's application provide as:
1. Provide new Whisper-Flex® compensating chains of appropriate quantity and size.
 2. Provide new Swayless® dampening device for each compensating chain. G.
- Final Terminal Stopping Devices:
1. Final Device Operation: New final limit switches located at top and bottom of the hoistway shall be arranged to automatically stop the car and counterweight within the predetermined over travel limits, independently of all other devices.
 2. Rollers: Switches shall be equipped with engaging arms provided with polyurethane-tired rollers for engagement with cams.
- H. Electrical Wiring: Terminal connections for all conductors at equipment panels, center of hoistway and on elevator car shall be made with terminal blocks or studs having identifying numbers. All conductor connections shall be made with terminal eyelets of the solderless type.
1. Conductors: Provide copper insulated wiring with flame retarding and moisture resisting outer cover. Install in galvanized metal wireways and raceways.

Conductors from shaft riser to door interlocks shall be SF-2 type or equal, maximum operating temperature 392-degrees F. All terminations shall be insulated to maintain integrity of wiring. Flexible conduit may be used for short connections. Provide 10-percent conductors throughout.
 2. Traveling Cables: UL- labeled fire and moisture resistant outer braid and steel supporting strand. Provide a minimum of eight (8) pairs of shielded communication wires and car lighting circuits.
 3. Provide wiring as required for fire alarm initiating devices, emergency two way communication, and firefighter's phone jacks, paging speaker's intercom, announcement speakers and card reader interface.
 4. Remote Wiring: Provide wiring between machine room, hoistway and remote locations of guard, security, life safety and fire control panels.
 5. Work Light and Plug Receptacles: Provide on top and bottom of car with lamp guards.
 6. Stop Switches: Provide Code required stop switches in the pit, near the governor access door, in the machinery spaces of machine room less elevators and where split level machine rooms occur.
 7. Provide NEMA4 weatherproof electrical equipment and wiring identified for use in wet locations when any electrical devices are located less than four (4) feet above the pit floor.

8. Note: Conduits or other wiring shall not be exposed in the lobby or other occupied parts of the building.
- I. Raceway: Remove all rust, wire brush, clean and paint with 3 coats of Rustoleum. Retain existing raceway where suitable and replace sections as necessary for new equipment. Modify lower section, where required, to accommodate proper pit ladder access.

2.08 DOORS AND ENTRANCE EQUIPMENT

- A. Prior to beginning the work, a thorough report shall be provided to the Owner/Purchaser/Consultant detailing which equipment is to be retained and which will be replaced. An overview of this equipment list shall be provided with the bid documents. Owner/Purchaser (or their representative) shall review the condition and the report and make a determination on the condition of the equipment. Owner/Purchaser's findings are final and work shall be completed in accordance with those findings.
- B. Retained Equipment: Remove all rust, dirt, debris; clean all surfaces on the hoistway and lobby side. Paint all non-running surfaces.
- C. Frames: Retain existing entrance frames. Remove all rust, debris and dirt from face and back side of frames. Clean both hoistway and lobby side of frames. Remove all scratches and dents. If removal of existing braille plate's scars or leaves marks on the jambs and clean. All touch up painting shall be applied to match existing.
- D. Provide new rubber bumpers on struts to avoid doors hitting metal when in the fully open position.
- E. Remove existing and provide new Braille plates centered at a height of 60-inches above the floor, mounted at each entrance side jamb. Match design of car Braille plates. Provide epoxy adhesively mounted plates; no rivets or visible fasteners. Braille and Designation plates shall have white numerals with black background at typical floors. Plates shall be manufactured by SCS, Vison Mark or Entrada; cast design.
- F. Sills and Sill Angles: Reuse existing; check and tighten all fastenings.
- G. Struts: Reuse existing and clean thoroughly. Check and tighten all fastenings.
- H. Headers: Provide new.
- I. Dust Covers: Reuse existing. Align, adequately reinforce and secure as required. Replace any missing covers or fasteners. Check and tighten all fastenings.
- J. Fascia: Reuse existing and clean thoroughly. Align, adequately reinforce and secure as necessary to prevent contact with the car. Replace any missing fascia and fasteners. Check and tighten all fastenings. Paint floor number on fascia.
- K. Door Panels:
 1. Passenger Service and Judge's Elevator at all floors:

- a) Provide new 14 gauge panels with a satin brushed #4 stainless steel finish. Provide rubber astragals on leading edge. Each door panel shall have two gibs which shall remain in the sill the entire length of door travel. Any cladding shall wrap around the trailing edge of the door a minimum of ½"
 - b) Provide 14 gauge sight guards with finish to match doors.
2. Alternate: Retain existing door panels. Realign, refurbish and remove all rust, debris and dirt from face and back side of the doors. Clean both hoistway and lobby side of door panels. Remove all scratches and dents. All touch up painting shall be applied to match existing.
3. Custody Elevators at Typical Floors:
- a) Reuse existing door panels. Align and plumb doors as required for smooth operation.
 - b) Provide two new door guides per panel.
 - c) Sight Guards: Retain existing sight guards. Replace where missing or damaged with finish to match existing door panels.
- L. Stencil paint 4-inch high floor number on the back of each landing door panel.
- M. Door Hangers: Provide new removable two-point suspension type with provisions for vertical and lateral adjustments. Sheaves shall be 2 ½-inch diameter with sealed or roller bearings.
- N. Door Tracks: Provide new Removable steel tracks with smooth roller contact surface.
- O. Door Closers: Spring, spirator or jamb/strut mounted counterweight type. Design and adjust to ensure smooth, quiet mechanical close of doors.
- P. Interlocks: Provide new interlocks and door release roller assembly at each entrance. Where door release assembly is replaced with new design, roller assembly shall be mounted to an 8-inch by 6-inch (10-gauge) reinforcement plate, properly screwed to the back of each landing door. Reinforcement plate shall be equipped with two (2) ¼-20 by 1 inch long self-clinching zinc studs designed specifically for door release roller assembly attachment. The interlock shall be the same make as the door operator.

2.09 CAR EQUIPMENT

- A. All existing equipment shall have all rust, dirt and debris removed, rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating. B. Car Frame:
- 1. Retain and refurbish existing car frame. Rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating.

2. Square and adjust frame within guide rails in order to center, as evenly as possible, between the guide rail surfaces. Tighten fasteners and clean.
 3. Stencil paint 4" high car number on crosshead.
- C. Under Car Lighting: Provide new incandescent light fixture with bulb guard in NEMA 4 water tight and weather resistant box. Provide switch in service cabinet and adjacent to light fixture to turn light on/off.
- D. Platform:
1. Retain and refurbish existing platform.
 2. Balance in order to distribute, as evenly as possible, the pressure of the individual guides on the guide rail surfaces. Tighten fasteners and clean.
 3. Provide new rubber platform isolation pads.
 4. Repair or replace any missing or damaged brace or support angles.
- E. Test at full load and full speed at the end of the equipment modernization. Replace all defective components or devices that do not function properly, including new safety actuating ropes as required.
- F. Toe Guard: Provide new 48", paint with one coat of black enamel.
- G. Roller Guides: Provide new roller type guides to provide smooth and quiet ride free of rumbles, bumps, vibrations, and excessive sway. Guides shall consist of three or more adjustable, spring mounted rollers per guide assembly (3 1/2-inch minimum diameter) to maintain rail contact and include adjustable stops. Rollers shall be constructed of neoprene or other similar sound deadening material. Rollers shall have high memory characteristics, enabling the rollers to quickly regain their round shape after an elevator sits still overnight or for a moderate period of time. Provide adapter plates and mounting hardware as necessary.
- H. Door Hangers: Provide new removable two-point suspension type with provisions for vertical and lateral adjustments. Sheaves shall be 2 1/2-inch diameter with sealed or roller bearings. Hangers shall be galvanized metal or treated with an application of common, low VOC low-odor, rust inhibiting.
- I. Door Tracks: Removable steel tracks with smooth roller contact surface.
- J. Door Protection: Infrared detector: Provide a door proximity edge that projects an infrared curtain of light guarding the door opening. Unit shall extend the height of the door panel. Arrange to reopen doors if one beam of the curtain is penetrated. Unit shall have Transmitters and Receivers spaced at a minimum distance to provide the maximum amount of protection within the height of the doorway. Systems which have the availability to turn off or on individual zones within the curtain will not be allowed. Door Detector shall extend the entire height of the door panel.

- K. Door Operator: Provide new VVVF-AC, high speed, closed-loop door operator to automatically open and close the car and hoistway doors. The doors shall be capable of smooth and quiet operation without slam or shock.
 - 1. Opening speed shall not be less than 3.0-f.p.s. with reversal in no more than 2-1/2inches.
 - 2. An auxiliary-closing device shall automatically close hoistway doors if car leaves the landing zone.
 - 3. In case of a power interruption, it shall be possible to manually operate car and hoistway doors from inside the cab.
- L. Door Restrictor: Provide new mechanical zone lock. Electronic door restrictor shall not be allowed.
- M. Car Door Contact: Electrical contact shall prevent the operation of the elevator by normal operating devices unless car doors are closed or within tolerances allowed by Code.
- N. Emergency Exit Contact: Provide electrical contact to shut-off power to the elevator if emergency exit is open.
- O. Car Top Service Guardrail: Provide a 42-inch high railing on the car top with intermediate rail, toe board and stationary posts, where required by Code.

2.10 CAR ENCLOSURE

- A. All retained metal shall have rust removed, shall be mechanically and chemically cleaned followed immediately by the application of common, low VOC low-odor, rust inhibiting coating. If removal of rust compromises the integrity of the equipment, the Contractor shall indicate as such with their bid.
- B. Custody Elevators: Retain existing interiors.
 - 1. Confirm the structural integrity of the cab shell and platform. Repair platform and remove all rust. Check for termites and any deterioration. Replace platform if necessary. If platform is to be retained check and tighten all fastening. Broken welds on the floor support braces shall be re-welded or replaced. Reinforce the existing platform as required. The Contractor shall survey the sub floor to ensure it is free of deterioration and rust. The broken welds on the floor support braces underneath the floor shall be either replaced or repaired Check and tighten all fastenings.
 - 2. Gate inside elevator: Align, check and tighten all fastenings.
 - 3. Ensure there is adequate ventilation and if necessary provide new vent slots.
 - 4. Ensure and modify if necessary unobstructed access to the emergency exit.
 - 5. Verify weight of interiors is per code and manufacturers weight requirements. Provide verification of weights.

6. Check and tighten all fastenings. Of all retained materials.
7. Replace ceiling and lights with new to match existing.
8. Provide new EPCO Flexi light emergency cab lighting system, capable of relighting two normal -light fixtures. Emergency light transformer and fixture to be mounted in a water tight/weather proof enclosure.
9. Handrail check and tighten all fastenings. C. Passenger, Service and Judge's Elevators:
 1. An approved company shall manufacture car enclosure. Interior finishes as manufactured by Forms + Surfaces, City Lift, Sterling Corporation or approved equal. Provide the following features:
 2. General: The enclosure shall be adequately reinforced and ventilated to meet Code requirements. Weigh all interiors and verify weight of new interiors is per code and manufacturers weight requirements. Provide verification of weights prior to ordering any material. Check and tighten all fastenings. Confirm the structural integrity of the cab shell and platform.
 3. Confirm the structural integrity of the cab shell and platform. Repair platform and remove all rust. Check for termites and any deterioration. Replace platform if necessary. If platform is to be retained check and tighten all fastening. Broken welds on the floor support braces shall be re-welded or replaced. Reinforce the existing platform as required. The Contractor shall survey the sub floor to ensure it is free of deterioration and rust. The broken welds on the floor support braces underneath the floor shall be either replaced or repaired.
 4. Shell: Arrange shell to accept interior panels as specified.
 5. Refer to attached drawings for all new finishes.
 6. Canopy: Check and tighten all fastenings. Modify canopy for light fixtures. Lighting fixtures that uniformly distribute not less than foot-candles of light at handrail height as required by Code. Provide clear and easily accessible access to the emergency exit per Code requirements.
 7. Drop Ceiling and Lighting: Provide new EPCO Flexi light emergency cab lighting system, capable of re-lighting two normal down-light fixtures. Emergency light transformer and fixture to be mounted in a water tight/weather proof enclosure.
 8. Floor Covering Provide new as shown on the drawings.
 9. Transom, Front Return Panels and Entrance Columns: Clad existing.
 10. Car Door Panels: Door panels shall be 14 gauge hollow metal flush door construction, furniture steel. Provide reinforcement by formed vertical sections running full height of door. Doors shall be provided with two removable, gibs with fire tabs, located at the leading and trailing edge of the door panel. Finish shall be

textured satin brushed #4 stainless steel. There shall be no visible exposed or protruding fasteners.

11. Ventilation: Three-speed type AA exhaust blower mounted to car canopy on isolated rubber grommets.

2.11 SIGNALS AND FIXTURES

A. All new fixtures shall be provided.

B. Car Operating Panel

1. Provide new applied-type main car operating panel in compliance with applicable Code per architectural drawings.
 - a) Car Operating Panel: Provide new illuminating satin brushed #4 stainless steel vandal resistant pushbuttons or approved equal product. Faceplate shall have Satin brushed #4 stainless steel finish. Faceplate shall have continuous hinge with three point latching.
 - b) Provide a keyed stop switch and alarm bell button, door open and door close buttons. All floor pushbuttons shall be located no higher than 48inches above the car floor, the keyed in car stop switch and alarm button shall be located no lower than 35-inches above finished floor height. Provide fire service cabinet, phase 2 switch, fire jewel, call cancel button, emergency light fixture, and voice annunciation grill and flush mounted speaker grill for the Hands Free telephone.
 - c) Braille/Arabic designations shall be identified by a minimum of 5/8-inch Arabic numeral, standard alphabet character, or standard symbol immediately to the left of the control button. Braille shall be located immediately below the numeral, character or symbol. Controls and emergency equipment shall be identified by raised symbols, including but not limited to, door open, door close, alarm bell, emergency stop and telephone. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation. Braille and Arabic designations shall be flush with inconspicuous mechanical mounting. The plaques shall have raised white numerals on a black background. Provide cast Oval Surround style Braille plates as provided by Entrada, Vison Mark or SCS.
 - d) Provide a code blue key switch in the car operating panel.
 - e) Mount the intercom station integral on the car operating panel.
 - f) Provide the panic button as described in the specifications.
 - g) Provide key switches as specified in emergency security operation and replicate any key switches and key switch operation presently installed.

- h) Provide a lockable service cabinet with concealed hinges. Cabinet door shall be flush with the faceplate with hairline joints.
 - 1) Cabinet shall contain the following toggle type controls:
 - (a) Light toggle switch.
 - (b) Three speed fan switch.
 - (c) Inspection keyed switch.
 - (d) Independent service toggle switch.
 - (e) Emergency Light test button
 - (f) Duplex 120 volt, A.C. GFCI convenience outlet.
 - (g) Light switch for under car platform light.
 - (h) 2 USB Ports and key board plug in for programing the Digital Display. All programing for the Elite PI shall be possible thru the ports in the service cabinet.
- i) Engrave the following; the font shall be as directed by architect and code:
 - 1) Elevator Number. Minimum ½-inch high lettering.
 - 2) Elevator Capacity below Elevator Number.
 - 3) Building Name and Address.
 - 4) Fire Instruction signage.
 - 5) All Code Required Signage/Verbiage Shall be engraved on the new car operating panel.
- j) Floor Annunciator: Provide new digitized voice annunciator providing both male and female voices in a system capable of up to 5-minutes of speech. Provide concealed speaker. Messages shall include the following announcements:
 - 1) Floor number and direction of travel.
 - 2) Notice of doors closing prior to nudging operation.
 - 3) Notice of car on independent service.
 - 4) Emergency operation announcements:
 - 5) Firefighter's Service, "Elevator returning to lobby."

- C. Car Position Indicator: Custody Elevators: Provide new segmented digital readout type with 2-inch high (minimum) indications at upper section of car operating panel. Indicator shall provide car position and direction of travel.
- D. CEC Digital Display—Passenger, Service and Judge's Elevators:
 - 1. CE Electronics, Elite PI Display: Provide on main car operating panel. Use to display information and customize with USB port or from main control station. Provide a 12 inch minimum display. Display elevator position, direction of travel and priority messages. The system shall also be capable of displaying floor-based messages, time, date, temperature as well as scheduled messages.
 - 2. Configure display to provide messages such as security override, fire service, earthquake alert, special club activities, etc.
- E. Fixture Requirements: Provide new faceplates constructed of Satin brushed satin brushed #4 stainless steel at all floors, minimum thickness 1/8-inch. All edges shall be relieved. All hall fixtures to have concealed fasteners. Wherever feasible, reuse existing electrical boxes; otherwise, perform all required cutting and patching. Extend faceplates as required to cover holes left by removal of existing fixture. F. Hall Signs:
 - 1. All Signs shall be engraved and mounted on stainless steel faceplates.
 - 2. At the Ground Floor provide Low Rise Signs which shall read: Floors Served G, 1 to 4 and provide High Rise Signs which shall read Floors G, 5 to 8; no stops at floors 1 to 4.
 - 3. At the 5th Floor The Low Rise Signs will read Floors 1 to 5; The High Rise Signs shall read Floors G; 5 to 8.
 - 4. At the 5th floor, there shall be a down hall pushbutton for the Low Rise and an up and down pushbutton for the High Rise Elevators.
- G. Hall Pushbutton Station: Provide the same number of risers as presently existing for each group or single elevator. Station shall include flush mounted satin brushed #4 stainless steel faceplate which are of sufficient size to cover hole left by removal of existing fixtures. Centerline of riser to be at 3-feet-6-inches above the finished floor. Buttons shall have a minimum dimension of 3/4-inch, be raised 1/8-inch plus or minus 1/32-inch above the surrounding surface, and have a detectable mechanical motion. A minimum clear space of 3/8-inch separation shall be provided. Button design shall meet California code requirement for full illumination. Provide spanner type security fasteners.
 - 1. Service Elevator: Provide interface with existing keypad to match existing operation.
 - 2. Judge's Elevator: Provide new vandal resistant pushbuttons and install existing key switches in the existing faceplate. Match existing operation.
- H. Fire Key Switch, Emergency Power Switch and Jewel, Fire Instruction Verbiage and In Case of Fire Sign:

1. Locate the fire key switch, the emergency power switch and jewel with the hall pushbutton at the main return landing.
 2. Provide Code required pictograph Fire signs incorporated with the hall buttons, at all floors. Provide 3-position Code required Phase I key switch and operational instructions engraved minimum 1/8-inch high on the faceplate at the main return floor. In Case of Fire signs minimum 1/2-inch high shall be integral within the faceplate, at all floors. Faceplate edges shall be relieved with a satin brushed #4 stainless steel No. 4 brushed finish. Backfill for engraving shall be epoxy filled.

Integral signs shall be as follows:
 - a) Fire Signs. Minimum 1/2-inch high lettering.
 - b) Fire Operational Instructions. Minimum 1/8-inch high lettering.
 3. Provide spanner type security fasteners. Finish matching faceplate.
- I. Hoistway Access Switch: Mount in existing location and reuse existing electrical boxes; otherwise, provide all required cutting and patching. Extend faceplates as required to cover holes left by removal of existing fixture.
- J. Hall Lanterns
1. Passenger and Judge's Elevators:
 - a) Hall Lanterns/Hall Position Indicator: Retain existing locations for all fixtures.
 - b) Where wall mounted fixtures exist, provide new combination hall lantern and hall position indicators. Provide stainless steel faceplate of sufficient size to cover hole left by removal of existing fixtures.
 - c) Where jamb mounted fixtures exist, provide new stainless steel faceplate over existing location and provide new plug in round. Provide new chimes/tones.
 - d) Where car lanterns exist provide new in existing location.
 2. Service & Custody Elevators:
 - a) Provide new Car Lanterns: Vandal resistant type at floors with satin brushed #4 stainless steel faceplate. Provide arrow shaped up and down lanterns with audible signals at each car jamb. The visual signal for each direction, minimum 2 1/2-inches by 2 1/2-inches. Indicators shall have audible signals and voice annunciation consisting of volume adjustable chimes that sound once for the up direction and twice for the down direction of travel. Extend faceplates as required to cover holes left by removal of existing fixture.

2.12 COMMUNICATION AND SECURITY SYSTEMS

- A. Telephone System: Provide automatic dial Hands Free telephone station located in the car station. A button shall suitably identify activation of auto dialer for the visually impaired. Speaker shall be mounted without faceplate or visible fasteners and located either behind the control station or within the telephone box. Communication shall be capable of being heard from any location within the car enclosure.
 - 1. Provide a telephone symbol minimum 2-inch high, and raised 1/32-inch with Braille indications adjacent to a separate activation button mounted on the control panel.
 - 2. Provide engraved emergency instructions above the activation button. Instructions shall read: TO USE EMERGENCY TELEPHONE, PRESS BUTTON BELOW. DIALING WILL OCCUR AUTOMATICALLY. Identical instructions in Braille shall be provide below the engraved instructions.
 - 3. Provide a visual indication, approximately 3/4-inch in diameter, or a jewel that illuminates once a call has been received. Instructions under the visual indicator or within the lighted jewel shall read: ASSISTANCE IS ON THE WAY.
- B. Provide wiring from car to telephone terminal box in elevator machine room.
- C. Mount fire alarm speaker on each car top and run required wiring from speaker to life safety terminal box in machine room. Speakers to be provided by fire alarm contractor.
- D. Provide a two way emergency communication system which shall allow emergency personnel to speak to passengers inside the elevator car per A17.1 – 2004; Rule 2.27.1.1.4
- E. Panic Button & Intercom System: Include stations in the each of the elevator Machine Room, a master station in the main lobby adjacent to the hall pushbutton station for each group of elevator and in each of the elevator cars. The intercom will provide a communication system which shall override all other communication and allow two way communication. The Master Station shall be located adjacent to the hall pushbutton station at the first floor.
 - 1. Equipment:
 - a) Amplifier with voice transmission and pre-amplifier capable of receiving voice inputs from building.
 - b) Master Station shall be mounted in a Number 4 satin stainless steel faceplate adjacent to the hall pushbutton. Have a speaker microphone for two way communication. Provide selection buttons for communication with all stations. Provide a talk/listen button and illuminated in use light. Provide the following:
 - 1) Speaker microphone
 - 2) Selection buttons for communication with all stations.
 - 3) Talk/listen button.

- 4) Illuminated In use light
 - 5) Reset button
 - 6) Volume control
 - 7) Distress light and audible signal which illuminates and sounds when button inside elevator is activated.
 - 8) Incorporate the panic button and the code blue button on the intercom faceplate.
- c) In Car Station:
- 1) Activate with two way communication system or Panic Buttons inside each of the elevators.
 - 2) Light jewel (or illuminate button) and flash when call is acknowledged. Provide required braille adjacent to button.
 - 3) Locate in car operating panel.

PART 3 - EXECUTION

3.01 EXAMINATION OF EXISTING BUILDING AND CONTRACT DOCUMENTS

- A. Contractor shall carefully examine all existing building conditions and be informed as to facilities for delivery of materials and equipment, floor loading limitations, and be familiar with difficulties that may be encountered in completing execution of all work, prior to bid.
- B. Contractor will be held to have examined all specifications and all other data pertaining to work.
- C. The Owner/Purchaser shall bear no responsibility for any incomplete or missing wiring diagrams or other data that may be needed to adapt the new equipment to the existing equipment. Obtaining such information from other sources is the Contractor's responsibility.
- D. No consideration or allowance will be granted for failure to visit site, or for alleged misunderstanding of materials to be furnished, or work to be done, it being understood that tender of proposal carries with it agreement to all items and conditions referred to herein.

3.02 MAJOR ALTERATION - INCREASE IN DEAD WEIGHT

- A. The Contractor is required to design all changes to not exceed a 5% increase in the original deadweight of the car enclosure, plus rated capacity. Should the total car weight be exceeded, Contractor shall be responsible for all code required changes.

Documentation shall be furnished to the enforcing code authorities verifying the results.

3.03 FIELD QUALITY CONTROL A. Tests:

1. Perform as required by code, and authorities having jurisdiction.
2. Provide labor, material, equipment and connections.
3. Repair or replace defective work as required.
4. Pay for restoring or replacing damaged work due to tests.

B. Final Inspection: When all work is completed, and tested, notify the Owner/Purchaser in writing that the elevator is ready for final inspection and acceptance test. A testing and inspection date shall then be arranged. The proper operation of every part of the elevator system and compliance with contract requirements of the code shall be demonstrated to the Owner/Purchaser. Furnish all test instruments, weights, and materials, required at the time of final inspection. The following tests shall be made on each elevator at the time of final inspection:

1. Test Period: The elevator shall be subjected to a test for a period of one hour continuous run, with full specified load in the car. During the test run, the car shall be stopped at all floors in both directions of travel for a standing period of 10-seconds per floor.
2. Speed Load Tests: The actual speed of the elevator car shall be determined in both directions of travel with full contract load and with no load in the elevator car. Speed shall be determined by a tachometer. The actual measured speed of elevator car with full load shall be within 5% of rated speed. The maximum difference in actual measured speeds obtained under the various conditions outlined between the UP and the DOWN directions shall be checked.
3. Floor-to-floor times with no load in the car, balanced load in the car and full load in the car shall be checked.
4. Car Leveling Tests: Elevator car leveling devices shall be tested for accuracy of landing at all floors with no load in the car, balanced load, and full load, in both directions of travel. Accuracy of floor landing (plus or minus 1/8-inch) shall be determined both before and after the full-load run test.
5. Final System Tests for Smoke Detection/Fire Elevator Recall: After work is completed, conduct a final test of entire system. Perform testing "after hours" unless normal business hours testing is authorized by Owner/Purchaser. Submit results on approved test report forms.
6. Re-inspection: If any equipment is found to be damaged or defective, or if the performance of the elevator does not conform to the requirements of the contract specifications or the Safety Code, no approval or acceptance of the elevators shall be issued until all defects have been corrected. When the repairs and adjustments have been completed and the discrepancies corrected the

Owner/Purchaser shall be notified and the elevator shall be re-inspected.
Rejected elevators shall not be used until they have been re-inspected and approved.

3.04 ADJUSTING, CLEANING, LUBRICATION AND PAINTING

- A. In order to maintain cleanliness throughout the project, Contractor shall thoroughly clean all hoistways, car tops, pits and landing sills free of dirt, grease, oil and debris, prior to disabling the first elevator from service for modernization.
- B. Perform the following work prior to final testing and acceptance:
 - 1. Adjust all equipment for optimum performance, including controllers, motors, motor drive, landing systems, hoistway switches, door operating equipment and safety equipment to achieve the required performance levels.
 - 2. Thoroughly clean all equipment and equipment areas free of all dust, dirt, debris and excessive oil and grease.
 - 3. Lubricate all equipment in accordance with manufacturer's guidelines.
 - 4. Patch and paint exposed work soiled or damaged during installation. Repair to match adjoining work prior final acceptance.
 - 5. Clean and paint the following equipment and areas: Hoist machine, machine room floor, car top, buffers and pit floor.

3.05 INSTRUCTIONS

- A. Upon completion of all work, the Contractor shall provide an instruction period. Instructions shall be given by competent supervisory personnel and shall apply to actual field conditions. The instructions shall cover, but shall not be limited to the following:
 - 1. Operation of elevators under emergency conditions, maintenance, adjustment, troubleshooting and diagnostic procedures.
 - 2. Operation and maintenance of smoke detectors and elevator fire recall system.
 - 3. Operation of elevator communication, door reversal device, etc.

PART 4 - MAINTENANCE

4.01 MAINTENANCE

- A. Contractor shall comply with the maintenance specifications set forth in Attachment A to these specifications.

END OF SECTION

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I. GENERAL SPECIFICATIONS FOR MAINTENANCE

1. DEFINITIONS:

- 1.1 "Provide": to furnish and install, complete for safe operation, unless specifically indicated otherwise.
- 1.2 "Install": to erect, mount and connect complete with related accessories.
- 1.3 "Refurbish": to modify as required for like new operation and characteristics, meeting all current code requirements.
- 1.4 "Supply": to purchase, procure, acquire and deliver complete with related accessories.
- 1.5 "As required", "where required", "as needed", "if required", and "if necessary": repair or replace components to provide like new operation or meet code requirements.
- 1.6 For this provision a "regular work day" is as defined by the International Union of Elevator Constructors (IUEC), as defined in the IUEC Agreement -- Contract Service which consists of eight (8) consecutive work hours and an un-paid lunch period between 6 A.M. and 6 P.M. five (5) days per week Monday to Friday inclusive.
- 1.7 "Work": labor and materials required for proper and complete installation.
- 1.8 "Wiring": raceway, fittings, wire, boxes, and related items.
- 1.9 "Concealed": embedded in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces or in enclosures.
- 1.10 "Exposed": not installed underground or "concealed" as defined above.
- 1.11 "Similar" or "equal": of base bid manufacturer, equal in materials, weight, size, design and efficiency of specified product, conforming to "Acceptable manufacturers."
- 1.12 "Reviewed", "satisfactory", "accepted", or "directed": as reviewed, satisfactory, accepted or directed, by or to Purchaser.
- 1.13 "Outstanding work" is overdue maintenance or repair procedures scheduled by contractor at the time of termination but not completed.
- 1.14 "Modernization" is defined as a process of updating an existing unit to more modern standards.
- 1.15 Time Frames:
 - A. Semi-monthly: Twice per month (once every 14 calendar days).
 - B. Monthly: Every thirty (30) calendar days.
 - C. Annual: Once every year or every 365 calendar days.
- 3.18 Callbacks: A callback is a request for service if the unit is unavailable for use whether reported by the Purchaser or observed by the Contractor.

2. DESCRIPTION OF SCOPE:

- 2.1 Type of Equipment: Purchaser's elevators vary by manufacturer, age, size and performance characteristics and are subject to intense use and passenger loads. The maintenance program will be developed and executed with these characteristics in mind.
- 2.2 The Contractor will provide a pro-active Preventive Maintenance Program which will:
 - A. Yield the optimum levels of performance.

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- B. Maximize the life span of the equipment.
 - C. Maximize availability of the units to the riding public.
 - D. Ensure safe, reliable and consistent operation.
- 2.3 Contractor will regularly and systematically perform preventive maintenance on all equipment, in accordance with the prescribed and recommended tasks and on minimum frequencies as designated by the original equipment manufacturer and not less than the specified requirements in this contract and by code.
- 2.4 The work to be performed by Contractor will consist of furnishing all labor, materials, tools and equipment for the complete, routine, Preventive Maintenance, callback service and repairs of all Purchaser's elevators.
- 2.5 All equipment necessary to meet the requirements of this contract and to perform the maintenance tasks will be the responsibility of the Contractor.
- 2.6 The maintenance coverage will include all components with exceptions only as specifically indicated herein. The Purchaser reserves the right to inspect all components being replaced by Contractor prior to being removed from the work site.
- 2.7 The Preventive Maintenance program is intended to prevent all equipment failure before it occurs. The program will be designed to preserve and restore equipment reliability by replacing worn components before they fail.
- 2.8 The Contractor agrees that the existing conditions and environment will not be reason for exclusion of any Preventive Maintenance activities. The equipment is to be kept in reliable condition with consistent operation regardless of these conditions. Any maintenance necessary because of the environmental conditions is to be included in the Preventive Maintenance program unless specifically listed in the exclusion section of this contract.
- 2.9 The Contractor agrees to provide the Purchaser with documentation that they have sufficient resources and technical knowledge to maintain, trouble shoot and adjust the elevator equipment.
- 2.10 Accurate, timely planning of service and repair needs will be implemented.
- 2.11 The Contractor will perform the requirements and obligations and will maintain equipment safety standards, reliability and availability always.
- 2.12 Contractor maintenance and repair schedules will be arranged to minimize downtime.
- 2.13 Contractor will have sole responsibility for means, methods, techniques, procedures, and safety precautions about performance of the Services.
- 2.14 Additional charges for existing conditions will not be allowed; Pre-maintenance and or Pro-rations of equipment will not be allowed.

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- 2.15 The Contractor will develop effective corrective and preventive actions addressing systemic problems.
- 2.16 The effectiveness of the maintenance is to be closely monitored and kept under constant review and adjusted considering the experience gained. An analysis of the callback and down time will be performed and the Contractor will make necessary corrections to the maintenance program to enhance performance and minimize downtime.
- 2.17 The Contractor will provide:
- A. Care and servicing using personnel for the purpose of maintaining equipment in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.
 - B. Maintenance including tests, measurements, adjustments, and parts replacement.
 - C. Partial or complete overhauls at specified periods, oil changes, lubrication, minor adjustments, etc.
 - D. Documentation of equipment deterioration and use of that documentation to predict optimum replacement or repair of worn parts before they fail or cause system failure.
 - E. A defined, specific maintenance program including the goals and specific activities to be accomplished on a daily, monthly and annual basis.
 - F. All testing necessary to maintain the standards stated herein. This will include but is not limited to vibration analysis, oil sample testing, and trend analysis as required.

3. GENERAL CONDITIONS:

- 3.1 This Agreement is one in which the Contractor is engaged in the business of providing services hereunder as an independent contractor. Contractor will have sole responsibility for means, methods, techniques, procedures, and safety precautions about performance of the Services.
- 3.2 The Contractor will warrant and guarantee that the material and workmanship provided meets the specified and code requirements. Repair and /or replacement of defective equipment whether due to workmanship or material defect, is the responsibility of the Contractor.
- 3.3 Removing the units for service will be coordinated with the Purchaser.
- 3.4 If Contractor elects to work overtime hours, no additional compensation will be paid by Purchaser.
- 3.5 Damage to the Property because of the Contractor's activities will be the responsibility of the Contractor to repair as directed and required by the Purchaser. In the event the Contractor damages property, in addition to being responsible for repairs, the Contractor may be liable for all additional encumbrances of the Purchaser such as lost revenue, additional services required to compensate for down time while repairs are performed, etc.
- 3.6 The Contractor will provide access to equipment which is not included in the coverage of this contract but which are in areas in which the vertical transportation systems are located, such as in the machine rooms, hoistway areas and related areas.

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- 3.7 Electronic or troubleshooting diagnostic devices will be the Contractor's responsibility to have available to the mechanic and any upgrades necessary will be made by the Contractor.
- 3.8 Thirty (30) days prior to any tests, Contractor will notify the Purchaser and will provide the Purchaser with a detailed schedule.
- 3.9 Inspection fees for any of the equipment are the responsibility of the Contractor. Re-inspection fees due to Contractor's non-compliance or due to Contractor's activities are the responsibility of the Contractor.
- 3.10 Contractor will guarantee that 24-hour callback service is available. Calls during off hours due to equipment malfunctions are to be covered and there will be no additional charge for these types of calls.
- 3.11 Should the Contractor determine that work is required which is not covered, the Contractor will:
 - A. Immediately provide a verbal report to the Purchaser.
 - B. Provide a written report within 24 hours with a cost proposal including a breakdown of labor and material.
 - C. If a safety issue is involved, the Contractor will, after verbal notification to the Purchaser, commence the repairs if authorized to do so or will take the equipment out of service.
- 3.12 In the event of any conflict of the documents which form the contract, the code and/or original manufacturer's requirements, the most stringent provisions will apply.
- 3.13 During the execution of the work, should the Contractor become privy to information regarding the Purchaser's property (intellectual or physical), the Contractor is obligated to hold such information as confidential. If the Contractor wishes to use reports or information gathered during performing maintenance, use of such information must be approved in writing. Use of the Purchaser's name, corporate identification or other identifying information will not be allowed without prior written approval by the Purchaser.
- 3.14 The rights and obligations of the parties hereunder will be construed and enforced in accordance with, and governed by the laws of the State of California.
- 3.15 Obsolescence: After the modernization is completed, consideration for obsolescence will not be given for any equipment.
- 3.16 The Contractor will notify the Purchaser of dates of expired permits and/or if Permits are expiring. Notification will be a minimum of 60 days prior to expiration of permits.
- 3.17 Damage to doors, door finishes, or other equipment which are a result of improper adjustment or improper maintenance are the Contractor's responsibility.

4. MAINTENANCE TASKS

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- 4.1 The maintenance will include but is not limited to:
- A. Cleaning:
 - i. Complete and continued cleaning of all parts of the equipment and all areas in which the equipment is operating
 - ii. The contractor will be responsible for maintaining the equipment in a consistently clean condition.
 - iii. The contractor will use a HEPA filtered vacuum when cleaning equipment.
 - B. Adjustments: All components will be adjusted within the original equipment manufacturer's recommended specification and as conditions warrant.
 - C. Lubrication: All fluids will be maintained at the proper levels. All moving parts will be lubricated with the appropriate quantities of manufacturer's recommended lubricant, per the original equipment manufacturer's recommended frequency and as conditions warrant.
 - D. Painting: The equipment and machine areas will be painted annually, or more often if required.
 - E. Repair and Replacement: This will be all inclusive and Contractor will, unless specifically excluded, proactively and as required make all necessary repairs and or replacement of components to keep equipment reliable and providing consistent operation.
- 4.2 The Contractor shall be responsible for properly disposing of used material including used oils, waste oil, batteries, etc. as delineated by appropriate Federal, State and regulatory agencies having jurisdiction. These codes shall include ASME A17.1. Documentation of disposal shall be forwarded to Purchaser upon completion of disposal.
- 4.3 All work scheduled during the month will be performed during the times scheduled and not at call back times.
- 4.4 The Contractor will be responsible for pro-active replacement. Waiting for failure of parts prior to replacement is not acceptable.
- 4.5 During routine inspections, parts will be examined and the Contractor will undertake repairs/replacements.
- 4.6 Adjustment to meet performance and ride quality criteria as set forth by these specifications and by the terms of this contract will be performed at a minimum on an annual basis or more often if required. Should adjustments be required due to seismic events, the Contractor will immediately notify the Purchaser in writing of the occurrence.
- 4.7 Provide access and stand by labor for all associated testing for components in conjunction with safe operation of the elevator to include but not limited to annual testing of fire alarm systems, sprinkler systems and other requirements as specified in applicable Federal, State and regulatory agencies having jurisdiction.
- 4.8 Facilitate access to the equipment to clean down pits, glass, etc.

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- 4.9 Provide access and stand by labor for replacement of lighting in the machine room, hoistway and/or car interiors.
- 4.10 The Contractor will assist in reviews by third party including Third Party and/or state inspectors. This assistance will include but not limited to access to hoistways, machine rooms, machine areas, etc. This will be provided at no additional cost to the Purchaser. This stand by will not exceed 4 times every 12 months and will require not more than 16 hours per review. If more time or more frequency is required, the Contractor may submit an extra cost request.
- 4.11 Supervisor Review: At a minimum, annual reviews are to be performed by the Supervisor and by the Quality Control Person assigned to the account. A report detailing the findings will be submitted within 30 days of the physical survey.

5. EXCLUSIONS FROM SCHEDULED MAINTENANCE SERVICES

- 5.1 Scheduled Maintenance Services do not include the maintenance, repair, or replacement of the following items. However, if the work of the Contractor causes either directly or indirectly damage or results in repairs, these exclusions will not apply:
- A. Elevator car interiors limited to interior panels, flooring and finishes, hoistway enclosures, hoistway door panels, frames and sills. The maintenance of operational items such as the proper operation of doors, pushbuttons, fixtures, fixture lights, etc. are the responsibility of the Contractor.
 - B. Damage caused by acts of God or obvious misuse, abuse or vandalism exclusive of the hourly allotment specified herein.
 - C. Government or other entities requirements to modify the existing equipment.
 - D. Performance of tests mandated after the commencement of the contract. Requirements for these tests or installations will be quoted within two (2) weeks of receipt of the notification except if a safety issue is cited in which case the quote will be provided within 24 hours.
 - E. Upon receipt of clear, detailed, written notification from Contractor, the Purchaser may authorize repairs for excluded equipment by Contractor as an additional service.

6. DOCUMENTATION

- 6.1 Contractor will submit for approval a proposed work schedule and log within ten (10) days after award. The work schedule will be designed for each type of equipment to be serviced, and will conform to the manufacturer's recommended practice for the specific equipment concerned. The schedule will show the type and frequency of service and lubrication proposed by the Contractor for the duration of the maintenance. All inspections, lubrication, adjustments, tests, cleaning, routine repairs and other Preventive Maintenance activities will be performed in accordance with the schedule.
- 6.2 After approval of the schedule by the Purchaser, the Contractor will keep the work schedule on display in each equipment room and perform regular maintenance service in accordance therewith. The posted schedule will be of the chart type which will be initialed by the

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Contractor when the work is performed. Data compiled will be provided monthly on a disk or flash drive of the PM work accomplished.

- 6.3 Inventory of Parts: Contractor will provide an inventory of parts located on the premises and parts which are available in a local warehouse. This inventory will be site and equipment specific and will be provided within 30 days of contract execution. The list will be updated every month or more often as parts are used. The Contractor will submit a list of inventoried parts upon contract execution and will update the list when parts are used but not less than every 6 months.
- 6.4 Contractor will provide a log book and provide the following data when the mechanic arrives at the site:
- A. Person's name and cell number
 - B. Purpose of visit
 - C. Description of work to be accomplished
 - D. Description of work which was performed
 - E. Use of work codes will not be considered an adequate description.
- 6.5 All work performed by the Contractor will be logged and reported both electronically and in hard copies.
- 6.6 Invoices: Copies of work tags with monthly invoices. Work tag will include date, facility, time-in, time-out, and ID numbers of equipment serviced.
- 6.7 Monthly, the Contractor will meet with the Purchaser and provide the following information, records and documents. The documentation will be provided electronically and in hard copies. Access to the company web site is not considered adequate to meet these requirements.
- A. A service schedule on the first day of each month for that month.
 - B. Account of hours spent on site.
 - C. Updated programs and maintenance schedules.
 - D. Complete and accurate monthly logs of all work performed at each location.
 - E. Identifiable weekly and monthly tasks; those completed and those not completed. Where tasks were not completed, schedules indicating completion of postponed tasks along with explanation on why they were postponed will be provided.
 - F. Callbacks, time spent on callback and the nature of the callback along with an analysis of the callback and down time and corrective solutions.
 - G. Invoices with work tags.
 - H. Updates and completion of any deficiency reports as prepared by third party or state inspectors.
 - I. Schedules of safety tests and results of tests performed. Provide the Purchaser with a detailed schedule of any upcoming tests.
 - J. Documentation of unit availability percentage.
 - K. A list of units out of service and duration of the out of service time.
 - L. Accounting of the available credit hours and remaining hours.

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- M. Update on the status of the Purchaser's stored equipment, equipment used and replacement timing.
- 6.8 Contractor will maintain an updated set of wiring diagrams and within 30 days of making revisions the Contractor will provide the Purchaser copies of the revised wiring diagrams. Purchaser will have sole possession of these drawings during and after expiration of the contract.
- 6.9 The Contractor will maintain and make available to the Purchaser within 24 hours or request, any records of work performed.
- 6.10 The Contractor will maintain and make available to the Purchaser within 24 hours of any accident, a report including the nature of the accident and the resulting corrective action.

7. Labor & Hours of Work

- 7.1 Those executing the work are to be qualified, trained to maintain these specific units and familiar with all aspects of the equipment.
- 7.2 All persons (supervisors, managers, sales personnel) will be knowledgeable in the equipment and are directly employed by the Contractor
- 7.3 Contractor is required to have sufficient staff and mechanics available throughout the term to provide the services required.
- 7.4 An account representative, a maintenance supervisor and a lead mechanic will be identified with Purchaser responsibilities for meetings, maintenance and Purchaser requirements.
- 7.5 Upon commencement of the contract, the Contractor will assign a mechanic to perform the maintenance.
- 7.6 The hourly requirement for maintenance will be as noted in Section II; Contract Term and Amount
- 7.7 These requirements are for on-site routine preventive maintenance, exclusive of callbacks, repair work or work not covered by this contract.
- 7.8 Prior to assigning the mechanic, the Purchaser will meet with the Contractor and mechanic to determine if the mechanic is acceptable. Upon acceptance, the mechanic will not be replaced. Should the Contractor wish to assign another mechanic, the Contractor will meet with the Purchaser, explain the rationale and upon approval by the Purchaser, the new technician will be assigned.

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- 7.9 The Purchaser retains the right to determine if the persons performing the work are unsatisfactory and if so will direct the Contractor to provide a qualified replacement person. If the performance of this person is not satisfactory, the Purchaser reserves the right to terminate the contract without any financial ramifications.
- 7.10 The Purchaser and Contractor will work together to develop a schedule detailing the days and hours of the week the maintenance is to be performed, with the understanding those hours are within the Contractor's regular working hours.
- 7.11 At any time, should additional time or manpower is required to perform all tasks it shall be included in this contract and not an additional expense to the Purchaser.

8. UNIT AVAILABILITY AND CALLBACKS

- 8.1 These time frames apply unless special manufacturing is required in which case the Contractor will have a maximum of 15 working days to provide the part. The Contractor will be required to provide evidence that the part is not available and that special manufacturing is required.
- 8.2 Service Interruptions
 - A. If an elevator is inoperative for more than sixty (60) minutes, Contractor will post at each entrance a neat and clearly legible sign and/or barricade indicating that the equipment is inoperable.
 - B. The Purchaser will be notified of all scheduled downtimes a minimum of 48 hours prior to the shut-down.
 - C. Unscheduled down time will be minimized. Contractor will make every effort to bring units on-line as quickly as possible.
 - D. Equipment failures which require less than two hours to rectify will be completed on the same business day the failure occurs.
 - E. Immediately upon returning a unit to service the technician will contact the Purchaser to inform them that the unit is back in service.
- 8.3 Availability:
 - A. The following will apply unless a part must be special manufactured in which case the Contractor will have a maximum of 15 working days to provide the part.
 - B. Units are intended to be available for use a minimum of 94.5% of the property operating hours. This percentage is based on a facility operating 24 hours a day, 7 days a week. The use is calculated based on the number of available hours' minus hours for the allowed number of callbacks and minus the required number of maintenance hours. The average will be measured over a three-month period.

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- C. Any unit out of service will be returned to operation within seventy-two (72) hours after notification that the unit is out of service.
- D. The Contractor will be responsible to undertake repairs on units for which a service request was made within 24 hours of notification.

8.4 Callbacks

- A. The Contractor will provide prompt service in the event of improper functioning of elevators twenty-four (24) hours per day, seven (7) days per week.
- B. Calls during off hours due to equipment malfunctions are to be covered and additional charges will not be incurred for these types of calls.
- C. In the event of an emergency call where actual or imminent physical or psychological damage to the user of the elevator, response times will be measured from the placement of the call by the Purchaser during regular working hours and days.
- D. The callback will be responded to by an assigned mechanic which can be the regular mechanic if that mechanic is not involved in performing their Preventive Maintenance at the property. Wilcox mechanic can respond to trouble calls under any condition. However, the mechanics hours for responding to callbacks will not be considered as the routine maintenance hours.
- E. If the call involves an imminent safety or life threatening situation the mechanic closest to the elevator and/or facility will be assigned to respond.
- F. The maximum number of callbacks will not exceed a total of three (3) callbacks per unit per month.
- G. Response times will be:
 1. If the call is placed before 1400 (2 p.m.) the call will be responded to the same day without charge of overtime.
 2. Entrapment: Maximum 60 minutes during regular working hours and days and a maximum of sixty (60) minutes on overtime.
 3. Regular Hour/Day: Maximum 120 minutes
 4. Overtime: Maximum 160 minutes
- H. Charges for Callbacks:
 1. If the call occurs during regular hours, there will be no charge for travel, sundries, etc. of any kind.
 2. Call backs for which the elevator is running upon arrival of the Contractor and for which the Contractor is unable to determine a cause of failure will be at no charge to the Purchaser.

9. STOCK OF MATERIALS

9.1 On-Site Stock

- A. Provide metal cabinets of suitable size for storage of materials in each machine room. No open storage of materials will be permitted.
- B. Contractor will stock cabinets with adequate renewal parts and lubricants to maximize beneficial usage of equipment.

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- C. Contractor will maintain in each Purchaser approved area or machine room an adequate supply of material and parts to which are required for prompt replacement, maximize unit availability and to minimize the time the unit is out of service.
- D. Parts will include but are not limited to: contacts, switch parts, coils, conductors, springs, holders, resistors, relays, lamps, condensers, tubes, transformers, car and hall buttons, fuses, and other parts which are required, together with an adequate supply of lubricants and wiping rags.
- E. All materials delivered and stored at the Property, will pass to Purchaser upon installation.
- F. As part of this contract, the Purchaser may choose to purchase parts to minimize downtime. These parts will be stored in a designated area and use of the parts are to be coordinated and approved by the Purchaser. When the Contractor uses these parts, it will be the Contractor's responsibility to replace them within 30 days of use. If more time is required, the Contractor will notify the Purchaser of expected delivery time and shipping method. The Purchaser retains the right to require the Contractor to ship the parts in the most expeditious fashion including air freight when possible.
- G. The Purchaser will have the final right to determine if they wish to retain any parts which are replaced and/or removed from the units. The parts will be stored in an area directed and controlled by the Purchaser. Use of these parts will only be allowed upon authorization of the Purchaser and will be replaced within 90 days of use. These parts will be the responsibility of the Contractor to maintain in good, useable condition.
- H. The Contractor must maintain an inventory of parts to perform the work for a minimum of a 6-month supply.
- I. All parts required to perform maintenance will become the property of the Purchaser upon expiration or termination for cause.

9.2 Off-Site Stock

- A. The Contractor will maintain in an approved facility in San Diego the following items.
 1. One (1) set motor brushes and holders for each type of motor and generator.
 2. One (1) door operator motor of each elevator type used.
 3. Hanger sheaves for car and host way doors.
 4. Two (2) complete door interlocks.
 5. One (1) set of generator bearings for each type of generator.
 6. One (1) set of brake linings for each type of elevator brake.
 7. Parts for door protective devices.
 8. All other parts as needed to assure prompt replacement in the event of the shutdown of any elevator.
- B. Purchaser reserves the right to inspect Contractor's inventory.

10. TESTING

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- 10.1 Contractor will be responsible for all testing as required by the Authorities having Jurisdiction and as required by this contract.
- 10.2 Testing shall conform to current industry standards and code requirements as specified in applicable Federal, State and regulatory agencies having jurisdiction. These codes shall include ASME A17.1
- 10.3 When testing reveals corrective action, the Contractor will make the necessary repairs within 30 days or sooner if a safety issue is involved. The Contractor will notify the Purchaser of this work and if the work is outside the coverage of the contract, the Contractor will provide a written proposal. If a safety or potential safety issue exists, the Contractor will make the repairs or take the unit out of service as directed by the Purchaser.
- 10.4 The Contractor will not be responsible for delays attributable to the scheduling of elevator inspections should the state inspectors not be available, unless the Contractor did not allow for sufficient time to schedule the inspection.
- 10.5 The Contractor will be responsible to notify the state inspector a minimum of 30 days or whatever regulations apply to the longest notification time.
- 10.6 Monthly (30 day intervals).
- A. To be completed within the first month of contract execution or earlier if required by code or if conditions warrant, and monthly thereafter:
1. Test for the proper operation of all safety features.
 2. Test for the proper operation of the battery pack emergency light testing.
 3. Test for the proper operation of battery lowering testing.
 4. Test for the proper operation of communication device testing.
 5. Perform the monthly testing of Fire service with written logs.
 6. Any other tests which are required by code.
- 10.7 Annually (Every 12 months):
- A. To be completed within the first six (6) months of contract execution or earlier if required by code or if conditions warrant, and annually thereafter, the Contractor will perform the following tests:
1. All safety devices and governors.
 2. Electrically test the car balance.
 3. Test unit speed.
 4. Stand by power tests
- 10.8 Five Year Testing:
- A. To be completed within the six (6) months of contract execution or earlier if required by code or if conditions warrant, and each five year thereafter, the Contractor will perform the following tests:
1. Full load test of the safety mechanisms, overhead speed governors and counter weight buffers.

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2. The testing of safeties on all traction elevators will be in accordance with Rule 1001-4A of the American National Standard Safety Code (ANSI, A17-1-2971).

11. BASIC PERFORMANCE REQUIREMENTS—FOR EAST COUNTY REGIONAL CENTER

The elevators will be adjusted to meet the following basic performance.
 Consistent failure to meet performance requirements will be grounds for cancellation.

CHART ONE: ELEVATOR SPEED IN FEET PER MINUTE (FPM)		
Elevator Number	Plus, or Minus 3% of Rated Speed	
Passenger 1 to 3 & 5 to 6	500	Actual speed of the car plus or minus 3%
Judge's 8	350	
Custody 7 and 9	500	
Annex	85	

FLOOR TO FLOOR TIMES IN SECONDS		
Elevator Number	Criteria	
Passenger 1 to 3 & 5 to 6	9.0	Measured with no load from the start of the door close until the door is 3/4 open at the next floor level.
Judge's 8	10.0	
Custody 7 and 9	12.0	
Annex	15.0	

DOOR OPEN & CLOSE TIMES IN SECONDS		
Elevator Number	Door Open	Door Close
Passenger 1 to 3 & 5 to 6	1.8	2.4
Judge's 8	1.6	2.2
Custody 7 and 9	2.4	4.4
Annex	1.8	2.4
	Door Open Time is measured from the start of the doors open until door is fully open.	Door Close Time is measured from the start of doors closing to fully closed

CAR AND HALL DWELL TIMES IN SECONDS		

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Elevator Number	Car Dwell ADA	Hall Dwell ADA
All	Minimum 3.0	Minimum 5.0
	Car Dwell Time is measured from the time the doors are fully open to when they begin to close in response to a car call.	Hall Dwell Time is measured from the time the doors are fully open to when they begin to close in response to a hall call.

NUDGING TIMES IN SECONDS	
Elevator Number	ADA Criteria
All	20 to 25
	This feature closes the doors at a reduced speed and sound a buzzer when the doors are prevented from closing due to failure of the proximity device or an obstruction in the doors. Measurements are in seconds. Nudging times should be between 20 to 25 seconds.

DOOR STALL PRESSURE	
Elevator Number	Criteria Per Code
All	<30 lbf
	This is the force necessary to prevent closing of the hoistway door from rest and should not exceed 30 lbf (A17.1: 2.13.3.1). This force is measured on the leading edge of the door.

11.1 Leveling: The car stopping and accuracy shall be measured under all load conditions and will not be more than 1/4"

11.2 Sound Control/Noise And Vibration/Ride Quality:

- A. The Elevator Contractor shall provide dBa and accelerometer readings which will document the present levels of noise and vibration for each elevator. Detailed accelerometer studies of vibration coming from machines, counterweights, cars, and related equipment will be required to identify locations of poor rail alignment, required machine alignments. After the modernization is completed, similar studies will be required to document the improvement and to form the benchmark for elevator operation.

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- B. Limit overall elevator noise emissions to the building to the following maximum A-weighted sound pressure levels in any mode of operation
- C. 55-decibels measured 5-feet above the cab floor near the center while running at rated speed.
- D. 45-decibels measured 5-feet above the cab floor near the center while the doors are opening or closing.
- E. 45-decibels measured in the elevator lobby 10-feet from the elevator doors.
- F. Check, maintain and replace all equipment isolation supports mechanical and electrical and minimize objectionable noise and vibration transmission to car, building structure, or adjacent occupied areas of building.
- G. Ride Quality requirements as measured by a horizontal acceleration measured inside of the cab during all conditions will not exceed 10 mg peak to peak within the 1-10 MHz range.
- H. Vibration Control: All elevator equipment including their supports and fastenings to the building will be checked at a minimum semi-annually to ensure the isolation pads and all isolators are intact. Replace as necessary to minimize the noise and vibrations being transmitted to occupied areas of the building and to the elevator car.
- I. Vertical acceleration and deceleration will be free of bumps, jerk, and sway, and will be not less than 3.3 feet/sec² with initial ramp of between 0.5 and 0.75-seconds.
- J. Hoist Machines, Solid State Power Conversion Cabinets, Deflector Sheaves, etc.: Ensure proper alignment of all components and check/repair or replace any isolation pads. Isolate machine and overhead sheave beams to prevent noise and vibration transmission to building structure.
- K. Adjust and align roller guides to ensure they are minimizing noise into surrounding areas when in contact with guide rails. Utilize materials that do not flatten when idle, are equivalent to neoprene or other approved resilient materials. Do not utilize phenolic or other hard materials.
- L. Make all necessary modifications or replacement of equipment as necessary.

12. PAYMENT WITHHELD

12.1 Credits:

- A. If an elevator is out of service for more than 40 total (not necessarily continuous) hours per month, the entire maintenance price will be deducted from billing.
 - B. If the unit out of service for more than 72 continuous hours during any 30-day period, the entire maintenance price will be deducted from billing.
 - C. In the event the Contractor fails to commence repairs within 24 hours, an initial Credit of \$100 per unit will be credited against the monthly billing for that unit until the repairs are completed for failure to undertake repairs.
 - D. As measured over a three (3) month period, should the callback (per unit) exceed the allowed amount, a credit of \$250 per callback will be assessed.
- 12.2 Payment Withheld: Purchaser may withhold the amounts due should any of the following take place:
- A. The Contractor fails to execute the work properly.
 - B. The Contractor's inaction or non-response to the Purchaser's requests for service.

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- C. In the event, it is necessary to hire another company to complete the work. Any additional costs incurred to complete the work, will be invoiced to the Contractor. This withholding of payment may not be used by the Contractor as a reason to cease work or to effect cancellation of the contract

13. CANCELTATION

- 13.1 Purchaser will have the right to effect cancellation at the end of the initial term. The Purchaser may choose to extend coverage on a month-to-month basis following expiration of the initial term. The same terms and conditions will apply.
- 13.2 If the property is sold or ownership changes, the agreement will remain in force unless canceled by the Purchaser or new ownership.
- 13.3 Should cancellation be effected, an independent elevator consultant or the Purchaser's representative will determine if the elevator system is operating per the original specifications. The Contractor will assist in this effort and provide all tools necessary to demonstrate system operational characteristics. If there are parts, boards, CPU's, etc. missing or damaged, the Contractor will:
1. Reimburse the Purchaser any costs incurred.
 2. Within 5 days, replace the damaged and/or missing boards at the Contractor's expense.
- 13.4 Incomplete Work:
1. The Contractor will receive no payment until all outstanding work has been completed if termination is due to cause. Outstanding work is defined as maintenance tasks or repair procedures scheduled by Contractor at the time of termination but not completed.
 2. Purchaser has the right to choose another company to complete such outstanding work.
 3. If the cost of completion of this work exceeds the remaining amount already paid for maintenance, the Contractor will pay to Purchaser the difference between the amount charged by the other company and any outstanding balance.
 4. In the event of a dispute over the nature and/or cost of required work, the Purchaser may hire an independent third party. The third party will review the proposed work and provide a determination on work required and to verify the cost to complete the work. The decision of the third party will then be considered valid and final, and the Contractor will be bound to the determinations made by the third party. If the Contractor is found to be negligent or if it is found that work is required, then the cost of the third part consultant will be reimbursed by the Contractor to the Purchaser.

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- 13.5 In the event of cancelation, the Contractor agrees to act reasonably necessary to cause an orderly cessation and transition of services to Purchaser or another Contractor designated by Purchaser without detriment to rights of Purchaser or to continued operation of Property including, but not limited to, refraining from any interference or disruption of occupants or other contractors.
- 13.6 Contractor will immediately deliver to Purchaser all reports, records, as-built wiring diagrams, portable electronic diagnostic devices and/or access codes and other materials and documentation related to and required to facilitate maintenance of this equipment.
- 13.7 Purchaser may withhold final payments due Contractor until receipt of required information and devices.
- 13.8 Purchaser has the right to suspend or permanently take units out of service or request the units be removed from service. In such event, the units removed from service will be deleted and the amount owed to Contractor for the Services will be reduced accordingly.
- 13.9 In the event of modernization of all or a portion of vertical transportation the Purchaser may choose cancelation.
- 13.10 The following items are listed to indicate reasons that may be used to terminate this contract by the Purchaser. The list is not all inclusive and will not be considered a limitation:
 - A. If there are more than four (4) incidences, by property, of failing to return the units to operation within the established time limits.
 - B. Failure to provide new parts unless approved by the Purchaser.
 - C. Failure to provide Preventive Maintenance as required.
 - D. Failure to provide required information to the Purchaser upon request.
 - E. The necessity of the Purchaser to contract with another company to remedy specific problems.
 - F. Failure to make needed repairs and/or to perform specified equipment and operational tests.
 - G. If the Contractor fails to substantially complete the work on or before the dates established hereunder,
 - H. Should the Contractor fail to correct deficiencies noted by the State within the allotted time or should the Contractor received two state inspection reports indicating repeat items.

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II. CONTRACT TERM AND AMOUNT

1. Maintenance Prior to Start of and During Modernization work:

1. Prior to the start of the modernization and during the modernization work, the Contractor shall be responsible for maintenance as indicated in the attached specifications.
2. The Contractor shall submit their standard oil and grease contract modified as noted in this Section.
3. However, the Contractor shall not be responsible for the cost of materials (except for minor parts, grease, oil, lubrication materials, cleaning materials) for repairs during this time. If the work requires more than one mechanic (regardless of the amount of time required) or if the work requires more than two hours of work, the labor shall be reimbursed.
4. If repairs are required, the Contractor shall provide a quote within 4 hours for minor repairs (less than \$3,000) and the quote shall be provided within 8 hours for major repairs. The time frame shall start at the time of verbal request for the repair.
5. Preventative maintenance tasks of cleaning, lubrication, minor replacement parts, oil, grease, adjustments, shall be performed as routine and shall be included as a lump sum cost during the modernization period.
6. The Contractor shall be responsible for notifying the Purchaser of any pending repairs which are required at the time of the routine maintenance visit. The purpose of this notification is to pro-actively identify necessary repairs in lieu of having un-planned shut downs. It is understood that emergency repairs may be required which are beyond the control of the Contractor and which the Contractor might not have noted during the preventive maintenance visit.
7. **Preventive Maintenance Schedules:** The Contractor shall assign a mechanic to the East County Regional Center Courthouse for routine maintenance a minimum of three days a week, 8 hours a day. Response to callbacks shall be included and responded to in the time frames specified on the attached specification.
8. **Pricing during the Pre-Modernization and during the Modernization Period:**
 - 1.1.8.1.1 For pricing purposes, the Contractor shall include a lump sum amount for routine maintenance for a total of eight (8) months prior to the start of the modernization.
 - 1.1.8.1.2 The sequence and phasing of the modernization work shall be as follows:
 - 1.1.8.1.2.1.1 Custody Elevator Number 1 and Public Elevator Number 1
 - 1.1.8.1.2.1.2 Judge's Elevator Number 5, Custody Elevator Number 2 and Public Elevator Number 2
 - 1.1.8.1.2.1.3 Public Elevator Number 3 and Annex Elevator Number 4 (Hydraulic).
 2. The Contractor shall include a lump sum amount for routine maintenance for a total of 12 weeks per phase noted above to complete the modernization.
 3. Should the Contractor's schedule differ from than the time frames specified above, the Contractors shall indicate that amount with their bid as noted in the pricing provisions below.

2. UPON COMPLETION OF THE MODERNIZATION OF ALL UNITS—THREE YEAR WARRANTY MAINTENANCE PERIOD:

- 2.1 All coverage shall be provided in accordance with the attached Vertical Transportation Maintenance Specifications.

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- 2.2 Upon completion of the individual units and upon final acceptance of all units, the elevator contractor shall assume complete responsibility including the cost of all repairs unless they are damaged due to vandalism and misuse.
- 2.3 All escalation shall be included in the three-year lump sum amount. The JCC shall pay this warranty maintenance monthly after the work is completed.
- 2.4 A separate monthly rate, which shall be subject to escalation will be quoted in the event the JCC decides to extend the maintenance coverage past the three-year period.

3. PRICING PROVISIONS AFTER EXPIRATION OF THE THREE YEAR WARRANTY MAINTENANCE TERM:

3.1 ADJUSTMENT:

- A. The contract amount shall be subject to review and adjustment on the anniversary date and at the end of the initial three-year warranty maintenance term. The adjustment shall be based on Mechanic rate and Material indices as noted:

Labor adjustment: 80% of total contract amount.
 Material adjustment: 20% of total contract amount.

Labor index: Mechanic Rate Inclusive of fringe Benefits:
 _____ Rate; _____ Date

Material index: U. S. Metal Products Index:
 _____ Index; _____ Date

4. PRICING PROVISIONS THROUGHOUT THE TERM OF THE MAINTENANCE CONTRACT

Prior to the start of the modernization:

- 4.1.1.1.1.1 Amount included in base bid for routine maintenance during the 8 months prior to the start of the modernization:

- 4.1.1.1.1.2 Contractors schedule prior to the start of the modernization:

- 4.1.1.1.1.3 Adjustment to this amount based on the Contractor's schedule prior to the start of the modernization:
_____.

4.1.1.1.2 During the Modernization:

- 4.1.1.1.2.1 Amount included in base bid for routine maintenance during the modernization period based on the schedule noted above:

- 4.1.1.1.2.2 Contractor's schedule during the modernization using the Phases noted above (12 Weeks per Phase).

- 4.1.1.1.2.3 Adjustment to this amount based on the Contractor's installation schedule and sequence of the work:
_____.

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4.1.1.1.1.3 After completion of the modernization—Pricing for Three Year Maintenance Period:

4.1.1.1.1.3.1 Amount included in base bid for routine maintenance during the warranty maintenance period for a three-year period:

4.1.1.1.1.3.2 Post modernization monthly amount subject to the escalation provisions noted in this document should the JCC determine an extension past the 3-year warranty maintenance period be required. _____

5. **HOURLY RATES:** If work is required outside the scope the following hourly rates shall apply. After the modernization is completed, there shall be no additional charges for overtime work required within this scope or for overtime callbacks due to equipment failures. Prior to and during the modernization, overtime callbacks and overtime work shall be quoted to the Purchaser.

BILLING RATES	MECHANIC	HELPER	CREW
NON-CONTRACT WORK			
STRAIGHT TIME			
OVERTIME (1.5 TIME)			
OVERTIME (1.7 TIME)			
OVERTIME (DOUBLE TIME)			

CONTRACTOR

PURCHASER

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

END OF ATTACHMENT A