

**SECTION 00 0101  
PROJECT TITLE PAGE  
PROJECT MANUAL  
FOR**

**GT ACADEMY OF MEDICINE  
ADA HANDRAIL IMPROVEMENTS**



**OWNER'S PROJECT NUMBER: 0465-2020**

**GEORGIA TECH  
875 WEST PEACHTREE STREET  
ATLANTA , GEORGIA 30318**

**DATE: 7/24/2020**

**PREPARED BY:  
MAKE3 ARCHITECTURE PLANNING DESIGN  
M3 Project #202008**

**END OF SECTION**

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**SECTION 01 1000  
SUMMARY**

**PART 1 GENERAL**

**1.01 PROJECT**

- A. Project Name: GT Academy of Medicine
- B. Owner's Name: Georgia Tech.
- C. Architect's Name: Make3 architecture planning design.
- D. The Project consists of the removal, replacement, and addition of handrails to improve ADA compliance.

**1.02 CONTRACT DESCRIPTION**

- A. The contract will be provided by the owner.

**1.03 OWNER OCCUPANCY**

- A. Owner intends to occupy the Project for the duration of the work. The contractor is to provide temporary life safety measures as necessary for continuous occupancy. .
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

**1.04 CONTRACTOR USE OF SITE AND PREMISES**

- A. The contractor is to discuss site logistics with the owner and provide a site logistics plan based on the owners requirements for continuous occupancy.
- B. Arrange use of site and premises to allow:
  - 1. Owner occupancy.
  - 2. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

**1.05 WORK SEQUENCE**

- A. Coordinate construction schedule and operations with Owner.

**END OF SECTION**

**SECTION 01 2500  
SUBSTITUTION PROCEDURES**

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**2.01 GENERAL REQUIREMENTS**

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
  - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
  - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
- D. Limit each request to a single proposed substitution item.

**2.02 RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
  - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

**2.03 ACCEPTANCE**

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

**2.04 CLOSEOUT ACTIVITIES**

- A. Include completed Substitution Request Forms as part of the Project record.

**END OF SECTION**

**SECTION 01 3000**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Contractor's daily reports.
- F. Submittals for review, information, and project closeout.
- G. Number of copies of submittals.
- H. Requests for Interpretation (RFI) procedures.
- I. Submittal procedures.

**1.02 PROJECT COORDINATOR**

- A. Project Coordinator: GT PM.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for building access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 - Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Architect through the Project Coordinator:
  - 1. Requests for Interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Manufacturer's instructions and field reports.
  - 6. Applications for payment and change order requests.
  - 7. Progress schedules.
  - 8. Coordination drawings.
  - 9. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 10. Closeout submittals.

**PART 2 PRODUCTS - NOT USED****PART 3 EXECUTION****3.01 PRECONSTRUCTION MEETING (TO BE CONCURRENT WITH SITE MOBILIZATION MEETING)**

- A. Project Coordinator will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
  - 4. Contractor's superintendent
  - 5. SUB CONTRACTORS AS NEEDED.

- C. Agenda:
  - 1. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  - 2. Submission of Submittal schedule.
  - 3. Designation of personnel representing the parties to Contract, Owner and Architect.
  - 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - 5. Scheduling.
- D. Contractor to record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.02 SITE MOBILIZATION MEETING (TO BE CONCURRENT WITH PRECONSTRUCTION MEETING)**

- A. Project Coordinator will schedule meeting at the Project site prior to Contractor occupancy.
- B. Attendance Required:
  - 1. Contractor.
  - 2. Owner.
  - 3. Architect.
  - 4. Contractor's superintendent.
  - 5. Major subcontractors.
- C. Agenda:
  - 1. Use of premises by Owner and Contractor.
  - 2. Owner's requirements.
  - 3. Construction facilities and controls provided by Owner.
  - 4. Temporary utilities provided by Owner.
  - 5. Security and housekeeping procedures.
  - 6. Schedules.
  - 7. Application for payment procedures.
  - 8. Procedures for maintaining record documents.
  - 9. Requirements for start-up of equipment.
  - 10. Inspection and acceptance of equipment put into service during construction period.
- D. Contractor to Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.03 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
  - 1. Contractor.
  - 2. Owner.
  - 3. Architect.
  - 4. Contractor's superintendent.
  - 5. Contractor's project manager
  - 6. Major subcontractors.
- D. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede, or will impede, planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Review of RFIs log and status of responses.

7. Review of off-site fabrication and delivery schedules.
  8. Maintenance and review of progress schedule.
  9. Corrective measures to regain projected schedules.
  10. Planned progress during succeeding work period.
  11. Coordination of projected progress.
  12. Maintenance of quality and work standards.
  13. Effect of proposed changes on progress schedule and coordination.
  14. Other business relating to work.
- E. Contractor to record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.04 CONSTRUCTION PROGRESS SCHEDULE**

- A. Submit a preliminary schedule with contractor pricing defining planned operations for the duration of preconstruction and construction. Include a submittal schedule that includes submittal delivery dates and review times. Include order timeframe for long lead items.
- B. Within 5 days after review of preliminary schedule, submit a complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- C. Submit updated schedule with each Application for Payment.

### **3.05 DAILY CONSTRUCTION REPORTS**

- A. Include only factual information. Do not include personal remarks or opinions regarding operations and/or personnel.
- B. Prepare a daily construction report recording the following information concerning events at Project site and project progress:
1. Date.
  2. High and low temperatures, and general weather conditions.
  3. List of subcontractors at Project site.
  4. Approximate count of personnel at Project site.
  5. Material deliveries.
  6. Safety, environmental, or industrial relations incidents.
  7. Meetings and significant decisions.
  8. Unusual events (submit a separate special report).
  9. Stoppages, delays, shortages, and losses. Include comparison between scheduled work activities (in Contractor's most recently updated and published schedule) and actual activities. Explain differences, if any. Note days or periods when no work was in progress and explain the reasons why.
  10. Testing and/or inspections performed.
  11. List of verbal instruction given by Owner and/or Architect.
  12. Signature of Contractor's authorized representative.

### **3.06 PROGRESS PHOTOGRAPHS**

- A. Submit photographs with each application for payment, taken not more than 2 days prior to submission of application for payment.
- B. When appropriate, submit relevant photographs with RFI's to illustrate the area in question.
- C. Photography Type: Digital; electronic files.

### **3.07 REQUESTS FOR INTERPRETATION (RFI)**

- A. Definition: A request seeking one of the following:
1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.

2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  1. Prepare a separate RFI for each specific item.
    - a. Do not forward requests which solely require internal coordination between subcontractors.
  2. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  2. Owner's, Architect's, and Contractor's names.
  3. Discrete and consecutive RFI number, and descriptive subject/title.
  4. Issue date, and requested reply date.
  5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  2. Note dates of when each request is made, and when a response is received.
  3. Highlight items requiring priority or expedited response.
  4. Highlight items for which a timely response has not been received to date.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.

### 3.08 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
  1. Coordinate with Contractor's construction schedule and schedule of values.



2. Format schedule to allow tracking of status of submittals throughout duration of construction.
3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
  - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

### **3.09 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

### **3.10 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  1. Design data.
  2. Certificates.
  3. Test reports.
  4. Inspection reports.
  5. Manufacturer's instructions.
  6. Manufacturer's field reports.
  7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

### **3.11 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
  1. Project record documents.
  2. Operation and maintenance data.
  3. Warranties.
  4. Bonds.
  5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.12 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit three; one of which will be retained by Architect.
  1. After review, produce duplicates.
  2. Retained samples will not be returned to Contractor unless specifically so stated.

**3.13 SUBMITTAL PROCEDURES**

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
  - 4. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
  - 5. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
    - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
  - 6. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
  - 7. When revised for resubmission, identify all changes made since previous submission.
  - 8. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  - 9. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  - 10. Submittals not requested will not be recognized or processed.
- B. Product Data Procedures:
  - 1. Submit only information required by individual specification sections.
  - 2. Collect required information into a single submittal.
  - 3. Submit concurrently with related shop drawing submittal.
  - 4. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
  - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
  - 2. Do not reproduce Contract Documents to create shop drawings.
  - 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
  - 1. Transmit related items together as single package.
  - 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
  - 3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.

**3.14 SUBMITTAL REVIEW**

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect's and consultants' actions on items submitted for review:
  - 1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.

- b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
    - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
  - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
- 2. Not Authorizing fabrication, delivery, and installation:
  - a. "Revise and Resubmit".
    - 1) Resubmit revised item, with review notations acknowledged and incorporated.
    - 2) Non-responsive resubmittals may be rejected.
  - b. "Rejected".
    - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
  - 1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  - 2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

**END OF SECTION**

## **SECTION 02 4100 DEMOLITION**

### **PART 1 GENERAL**

#### **1.01 SECTION INCLUDES**

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

#### **1.02 REFERENCE STANDARDS**

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.
- C. GT Yellowbook Standards

### **PART 2 PRODUCTS**

#### **2.01 OWNER SALVAGE**

- A. Prior to the start of demolition, the contractor is to meet with the owner and identify material to be salvaged and material to be recycled.

### **PART 3 EXECUTION**

#### **3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Obtain required permits.
  - 2. Provide, erect, and maintain temporary barriers and security devices.
  - 3. Do not close or obstruct roadways or sidewalks without permit.
  - 4. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements that are not to be removed.

#### **3.02 SELECTIVE DEMOLITION FOR ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Report discrepancies to Architect before disturbing existing installation.
  - 2. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
- C. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
  - 4. Patch as specified for patching new work.

#### **3.03 DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

**SECTION 05 7000  
DECORATIVE METAL**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Railing and guardrail assemblies.
- B. Wall-mounted handrails.
- C. Free-standing railings at steps.

**1.02 REFERENCE STANDARDS**

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- C. ASTM A47/A47M - Standard Specification for Ferritic Malleable Iron Castings; 1999, with Editorial Revision (2018).
- D. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2018.
- E. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2014.
- F. ASTM E935 - Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings; 2013, with Editorial Revision.
- G. AWS C3.4M/C3.4 - Specification for Torch Brazing; 2016.
- H. AWS C3.5M/C3.5 - Specification for Induction Brazing; 2016 (Amended 2017).
- I. AWS C3.9M/C3.9 - Specification for Resistance Brazing; 2009.
- J. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- K. AWS D1.6/D1.6M - Structural Welding Code - Stainless Steel; 2017.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturer's product data including description of materials, components, finishes, fabrication details, glass, anchors, and accessories.
- C. Shop Drawings: Indicate railing system elevations and sections, details of profile, dimensions, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Indicate anchor and joint locations, brazed connections, transitions, and terminations.
  - 1. Field Verify all conditons.
  - 2. Provide a shop drawing for each conditon
  - 3. The scale shale be no smaller than 3/8" = 1'-0"
- D. Samples: Submit one (1) of each item below for each type and condition shown.
  - 1. Railing: 12 inch long section of handrail illustrating color, finish and connection detail.
  - 2. Wall Bracket
  - 3. Lambs Tongue
- E. Test Reports: Submit test reports from an independent testing agency showing compliance with specified design and performance requirements.
- F. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.04 QUALITY ASSURANCE**

- A. Installer Qualifications: Company specializing in installing decorative stairs and railing systems and acceptable to owner.

**1.05 FIELD CONDITIONS**

- A. Do not install railings until project is enclosed and ambient temperature of space is minimum 65 degrees F and maximum 95 degrees F.
- B. Maintain ambient temperature of space at minimum 65 degrees F and maximum 95 degrees F for 24 hours before, during, and after railing installation.

**1.06 WARRANTY**

- A. Warranty: Manufacturer's standard one year warranty against defects in materials, fabrication, finishes, and installation commencing on Date of Substantial Completion.

**PART 2 PRODUCTS****2.01 MANUFACTURERS****2.02 RAILING SYSTEMS**

- A. Railing Systems - General: Shop-fabricated in design indicated, to suit specific project conditions, and for proper connection to building structure, and in largest practical sizes for delivery to site.
  - 1. Performance Requirements: Design and fabricate railings and anchorages to resist the following loads without failure, damage, or permanent set; loads do not need to be applied simultaneously.
    - a. Lateral Force: 75 lb minimum, at any point, when tested in accordance with ASTM E935.
    - b. Distributed Load: 50 lb/ft minimum, applied in any direction at the top of the handrail, when tested in accordance with ASTM E935.
    - c. Concentrated Loads on Intermediate Rails: 50 psf, minimum.
    - d. Concentrated Load: 200 lbs minimum, applied in any direction at any point along the handrail system, when tested in accordance with ASTM E935.
    - e. Handrails: Comply with applicable accessibility requirements of ADA Standards.
  - 2. Assembly: Join lengths, seal open ends, and conceal exposed mounting bolts and nuts using slip-on non-weld mechanical fittings, flanges, escutcheons, and wall brackets.
  - 3. Joints: Tightly fitted and secured, machined smooth with hairline seams.
  - 4. Field Connections: Provide sleeves to accommodate site assembly and installation.
  - 5. Welded and Brazed Joints: Make exposed joints butt tight, flush, and hairline; use methods that avoid discoloration and damage of finish; grind smooth, polish, and restore to required finish.
    - a. Ease exposed edges to small uniform radius.
    - b. Welded Joints:
      - 1) Carbon Steel: Perform welding in accordance with AWS D1.1/D1.1M.
      - 2) Stainless Steel: Perform welding in accordance with AWS D1.6/D1.6M.
    - c. Brass/Bronze Brazed Joints:
      - 1) Perform torch brazing in accordance with AWS C3.4M/C3.4.
      - 2) Perform induction brazing in accordance with AWS C3.5M/C 3.5.
      - 3) Perform resistance brazing in accordance with AWS C3.9M/C3.9.
- B. Metal Railing: Engineered, post-supported and wall supported railing system with metal infill.
  - 1. Rail Caps: Match Cap at Wall Mounted Handrail at North Entry
  - 2. Decorative Flanges for Embedded Posts: Circular, collared cover plate without screw holes.
  - 3. Wall Mounted Components: Components necessary to support railing with 1-1/2 inch clearance from wall, and as follows:
    - a. Underslung support brackets: Supports at 60 inches, maximum.
    - b. Wall return without support: Terminates 1/4 inch from side wall.
    - c. Match existing wall brackets at north entry
  - 4. Handrail Brackets: Same metal as railing.
  - 5. Fasteners: Concealed.
  - 6. Posts: Match Posts at Base of Exterior Rail at Back of Auditorium

7. Infill at Picket Railings: Vertical pickets.
  - a. Horizontal Spacing: Maximum 4 inches on center.
  - b. Material: Solid steel bar.
  - c. Shape: Square.
  - d. Size: Match Pickets at Exterior Rail at Back of Auditorium inch square.
  - e. Top Mounting: Welded to underside of top rail.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that substrate and site conditions are acceptable and ready to receive work.
- B. Verify field dimensions of locations and areas to receive work.
- C. Notify Architect immediately of conditions that would prevent satisfactory installation.
- D. Do not proceed with work until detrimental conditions have been corrected.
- E. Furnish components to be installed in other work to installer of that other work, including but not limited to blocking, sleeves, inserts, anchor bolts, embedded plates and supports for attachment of anchors.

#### **3.02 PREPARATION**

- A. Protect existing work.
- B. Review installation drawings before beginning installation. Coordinate diagrams, templates, instructions and directions for installation of anchorages and fasteners.
- C. Clean surfaces to receive units. Remove materials and substances detrimental to the installation.

#### **3.03 INSTALLATION**

- A. Comply with manufacturer's drawings and written instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects and with tight joints, except where necessary for expansion.
- C. Anchor securely to structure.
- D. Conceal anchor bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.
- E. Weld connections that cannot be shop welded due to size limitations.
  1. Weld in accordance with AWS D1.1/D1.1M.
  2. Match shop welding and bolting.
  3. Clean welds, bolted connections and abraded areas.
  4. Touch up shop primer and factory applied finishes.
- F. Isolate dissimilar materials with bituminous coating, bushings, grommets or washers to prevent electrolytic corrosion.

#### **3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1/4 inch per floor level, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

#### **3.05 CLEANING**

- A. Remove protective film from exposed metal surfaces.
- B. Metal: Clean exposed metal finishes with potable water and mild detergent, in accordance with manufacturer recommendations; do not use abrasive materials or chemicals, detergents or other substances that may damage the material or finish.

#### **3.06 PROTECTION**

- A. Protect installed components and finishes from damage after installation.

- B. Repair damage to exposed finishes to be indistinguishable from undamaged areas.
  - 1. If damage to finishes and components cannot be repaired to be indistinguishable from undamaged finishes and components, replace damaged items.

**END OF SECTION**



**SECTION 09 9113  
EXTERIOR PAINTING**

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
- D. Do Not Paint or Finish the Following Items:
  - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
  - 5. Floors, unless specifically indicated.
  - 6. Glass.
  - 7. Concealed pipes, ducts, and conduits.

**1.02 REFERENCE STANDARDS**

- A. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.
- B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- C. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).
- D. SSPC V1 (PM1) - Good Painting Practice: Painting Manual, Volume 1; 2016.
- E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).
- F. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three "draw down" samples, on metal rail material 8 inches in size, illustrating color and sheen.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Allow 5 for approval process, after receipt of complete samples by Architect.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.

**1.04 FIELD CONDITIONS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

### **2.02 PAINTS AND FINISHES - GENERAL**

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
  - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

### **2.03 PAINT SYSTEMS - EXTERIOR**

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including primed metal.
  - 1. Two top coats and one coat primer.
  - 2. Top Coat(s): Exterior Alkyd Enamel; MPI #94 or 96.
    - a. Products:
      - 1) Sherwin Williams Pro Industrial Urethane Alkyd Enamel, Gloss, Black Base.

### **2.04 PRIMERS**

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
- B. Sherwin Williams Pro-Cryl Universal Acrylic Primer, Gray Base

### **2.05 ACCESSORY MATERIALS**

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.

### **3.02 PREPARATION**

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

- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Ferrous Metal:
  - 1. Solvent clean according to SSPC-SP 1.
  - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
  - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

### **3.03 APPLICATION**

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance.
- D. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.
- E. Sand metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

### **3.04 CLEANING**

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

### **3.05 PROTECTION**

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

### **3.06 COLOR SCHEDULE**

- A. Black per owner and architect approved sample

**END OF SECTION**