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DOCUMENT 00 21 00 INSTRUCTIONS TO BIDDERS

1. Project Name and Location:

**City of Inkster – Senior Wellness Center**

**2025 Middlebelt Rd, Inkster MI ,48140**

1. Bidding Documents: This document contains instructions to bidders for the project named above. This bidding document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.
2. Bidders shall price all labor based on Davis Bacon Wages and Buy American Steel Federal Requirements.
3. Bid Documents: To obtain bidding documents visit <https://www.bidnetdirect.com/mitn>
4. Deposit for Documents: None
5. Submission of Bids: Submit Bid Form before the time and date below. Late or incomplete submissions will not be considered.

Submit Bid To: <https://www.bidnetdirect.com/mitn>

Date and Time of Day**: March 14, 2025 5:00PM EST.**

1. Bid Opening: Bids will be opened online in Bidnetdirect (MITN) by the City of Inkster. Bidders may not be present. Bids may not be withdrawn for 30 calendar days after receipt of bids. Announcements of bid results will be made within 14 days after receipt of bids.
2. Bid Security: A bid security is not required. ((or))
3. Bonds: A Performance and Payment Bond is required. Each bidder shall submit evidence of bondability for the entire value of the work. Bonds must be executed by a surety company licensed to do business at the location of the project. Bond form shall be AIA Document A312.
4. Modifications: Oral, fax or email modifications to bids will not be considered.
5. Acceptance of Bids: The Owner reserves the right to reject or accept any or all bids or to enter into negotiations with any bidder. The Owner reserves the right to waive any alleged breach of technicality.
6. Modifications: The Owner reserves the right to modify the Contract Documents and rebid the project, if necessary, to meet Owner's budgetary requirements.
7. Questions: During the bidding period, submit questions in <https://www.bidnetdirect.com/mitn> to the person named below. Questions will be answered in writing and posted in <https://www.bidnetdirect.com/mitn> for the bidders of record. If you have any questions contact:

Name**: Derek Dowdell, Community Development Director** Firm: City of Inkster Address: 26215 Trowbridge, Inkster MI, 48140

Telephone: 313-563-9760 Fax:313-563-6488

Email: ddowdell@cityofinkster.com

1. Site Visit: A site visit is not required. Contact the person named above to arrange to visit the site.

END OF DOCUMENT

DOCUMENT 00 41 00 BID FORMS

1. Submission of Bids: Submit bids in compliance with Document 00 21 00 - Instructions to Bidders. Fill in blanks. The Owner reserves the right to reject incomplete bid forms.
2. Bidding Documents: This Bidding document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.

Project Name:

Project Owner:

Name of Bidder: \_

1. Base Bid: The Bidder proposes to perform all of the Work required by the Contract Documents for the amount of: Please complete Bid Worksheet (Attachment A words and numbers.)

$

1. Bonds: If the Bidder is required to furnish a Performance Bond and Payment Bond (AIA A312) for the entire value of the Work, add the following amount to the base bid amount:

$

1. Alternates: If an Alternate is selected by the Owner, the Bidder proposes to do the Work required by the Contract Documents by increasing or decreasing the Base Bid the following amount: (Fill in amounts in words and numbers)
   1. Alternate No. 1 - ((Name of Alternate)): Increase/decrease (underline one) Base Bid by:

$

* 1. Alternate No. 2 - ((Name of Alternate)): Increase/decrease (underline one) Base Bid by:

$

1. Time: The Bidder proposes the following dates (Fill in): Proposed Starting Date:

Proposed Date of Substantial Completion (not later than (insert date)):

1. Submission of Bid Form: By submitting this Bid Form, the Bidder certifies that Bidder has visited the project site, is aware of existing conditions which affect the work, and has reviewed the Contract Documents, including the following Addenda:

(List addenda received)

1. Bid Qualifications: Submit bid qualifications and reasons for qualifications with this Bid Form at the end of the Bid Form. Include impact of bid qualifications on time, cost or quality. Bid qualifications may include: Cash flow requirements, assumptions for access to the work, assumptions for staging the work, assumptions for protecting existing and abutting work, proposed modifications to General and Supplementary Conditions, proposed modifications to drawings and specifications.
2. Signature: Signed and sealed (Enter date, Bidder's signature, title, name of firm, legal business address, phone and fax numbers, email address):

Signature:

Name and Title: \_ Firm:

Address:

City, State, ZIP: \_ Telephone:

Fax:

Email: \_

1. Project Manager: Bidder's Project Manager To Be Assigned to the Project (name and brief summary of experience):
2. Subcontractors: Bidder's List of Proposed Major Subcontractors (list):

END OF DOCUMENT

DOCUMENT 00 52 00 AGREEMENT FORMS

1. Owner-Contractor Agreement Form: AIA A101, Owner-Contractor Agreement Form - Stipulated Sum. (See Sample Contract)

END OF DOCUMENT

DOCUMENT 00 61 00 BOND FORMS

1. Bid Bond: AIA A310, Bid Bond.
2. Performance Bond and Payment Bond: AIA A312, Performance Bond and Payment Bond.
3. Bond Forms: Bond forms are available from the American Institute of Architects, Washington, D.C., 202-347-9403. Bond Forms will be prepared and approved for use on the project by the Owner in consultation with an attorney.

END OF DOCUMENT

DOCUMENT 00 72 00 GENERAL CONDITIONS

1. General Conditions: AIA A201, General Conditions of the Contract for Construction.
2. General Conditions Forms: General Conditions are available from the American Institute of Architects, Washington, D.C., 202-347-9403. General Conditions will be prepared and approved for use on the project by the Owner in consultation with an attorney.

END OF DOCUMENT

SECTION 01 10 00 SUMMARY

PART 1 GENERAL

* 1. SUMMARY
     1. Project Identification: City of Inkster Senior Wellness Center.
     2. Project Summary: Includes a new 4,906 sqft. single story steel structure addition to the northern portion of the Booker T. Dozier Recreation Center. The scope includes a new parking lot, connection to existing building utilities, and waterproofing of existing building adjacent wall.
     3. Particular Project Requirements:
        1. Existing site conditions and restrictions: (())
        2. Requirements for sequencing, scheduling and completion date: The contractor shall perform all tasks as required for completion in accordance with the agreement A101.
        3. Pre-purchased and pre-ordered items: (())
        4. Occupancy of adjacent facilities: The Booker T. Dozier Recreation Center is fully operational and the contractor shall coordinate utility connections with the City of Inkster to minimize disruptions to the facility.
     4. Permits and Fees: Apply for, obtain, and pay for permits, fees, and utility company backcharges required to perform the work. Submit copies to Architect.
     5. Codes: Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices and similar communications to Architect.
     6. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
     7. Existing Conditions: Notify Architect of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.
     8. Coordination:
        1. Coordinate the work of all trades.
        2. Prepare coordination drawings for areas above ceilings where close tolerances are required between building elements and mechanical and electrical work.
        3. Verify location of utilities and existing conditions.
     9. Installation Requirements, General:
        1. Inspect substrates and report unsatisfactory conditions in writing.
        2. Do not proceed until unsatisfactory conditions have been corrected.
        3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
        4. Install materials in exact accordance with manufacturer's instructions and approved submittals.
        5. Install materials in proper relation with adjacent construction and with proper appearance.
        6. Restore units damaged during installation. Replace units which cannot be restored at no additional expense to the Owner.
        7. Refer to additional installation requirements and tolerances specified under individual specification sections.
     10. Limit of Use: Limit use of work as indicated. Keep driveways and entrances clear.
     11. Existing Construction: Maintain existing building in a weathertight condition. Repair damage caused by construction operations. Protect building and its occupants.
     12. Definitions:
         1. Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.
         2. Approved: Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General and Supplementary Conditions.
         3. Match Existing: Match existing as acceptable to the Owner.
     13. Intent: Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.
     14. Writing Style: Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, 'Provide tile' means 'Contractor shall provide tile.'

PART 2 PRODUCTS - Not Applicable To This Section PART 3 EXECUTION - Not Applicable To This Section

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

* 1. SUMMARY
     1. Price and Payment Procedures:
        1. Alternates.
        2. Allowances.
        3. Tenant Allowances.
  2. ALTERNATES
     1. Total Price: Provide total price for each alternate in Bid Form. Include cost of modifications to other work to accommodate alternate. Include related costs such as overhead and profit..
     2. Acceptance of Alternates: Owner will determine which alternates are selected for inclusion in the Contract.
     3. Coordination of Alternates: Modify or adjust affected adjacent work as necessary to integrate work of the alternate into Project. Coordinate alternates with related work to ensure that work affected by each selected alternate is properly accomplished.
     4. List of Alternates:
        1. Contractor to propose and qualify in bid.
  3. ALLOWANCES
     1. Allowances: Lump sum allowances and unit cost allowances are listed below and as indicated on the Drawings. Amounts shall include all costs including overhead and profit except as specifically noted. Coordinate allowances with requirements for related and adjacent work.
     2. Notification of Owner: Notify Owner of date when final decision on allowance items is required to avoid delays in the work.
     3. Certification of Quantities: Furnish certification that quantities of products purchased are the actual quantities needed with reasonable allowance for cutting or installation losses, tolerances, mixing, waste, and similar margins.
     4. Invoices and Delivery Slips: Submit invoices or delivery slips to indicate actual quantities of materials delivered and costs. Indicate amounts of applicable trade discounts.
     5. Lump Sum Allowances: Include the following amounts in the base bid for materials, installation, overhead, profit and all costs for the following items.
        1. Owner Controlled Allowance for unforeseen conditions: **$100,000**
     6. Unit Cost Allowances: None

. PART 2 PRODUCTS - Not Applicable To This Section PART 3 EXECUTION - Not Applicable to This Section

END OF SECTION

SECTION 01 30 00 ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Administration of Contract: Provide administrative requirements for the proper coordination and completion of work including the following:
        1. Supervisory personnel.
        2. Preconstruction conference.
        3. Project meetings, minimum of two per month; prepare and distribute minutes.
     2. Reports: Submit daily and special reports.
     3. Work Schedule: Submit progress schedule, updated monthly.
     4. Submittal Schedule: Prepare submittal schedule; coordinate with progress schedule.
     5. Schedule of Values: Submit schedule of values.
     6. Schedule of Tests: Submit schedule of required tests including payment and responsibility.
     7. Perform Surveys: Lay out the work and verifying locations during construction. Perform final site survey.
     8. Emergency Contacts: Submit and post a list of emergency telephone numbers and address for individuals to be contacted in case of emergency.
     9. Record Documents: Submit record drawings and specifications; to be maintained and annotated by Contractor as work progresses.
  2. SUBMITTALS
     1. Types of Submittals: Provide types of submittals listed in individual sections and number of copies or usb drive required below.
        1. Shop drawings, reviewed and annotated by the Contractor - 2 copies.
        2. Product data - 2 copies.
        3. Samples - 2, plus extra samples as required to indicate range of color, finish, and texture to be expected.
        4. Inspection and test reports - 2 copies.
        5. Warranties - 2 copies.
        6. Survey data - 2 copies.
        7. Closeout submittals - 2 copies.
        8. Project photographs - 12 digital images each month submitted via email or usb drive. Submit cumulative usb drive at each subsequent submittal. Label each image with date.
     2. Submittal Procedures: Comply with project format for submittals. Comply with submittal procedures established by Architect including Architect's submittal and shop drawing stamp. Provide required resubmittals if original submittals are not approved. Provide distribution of approved copies including modifications after submittals have been approved.
     3. Samples and Shop Drawings: Samples and shop drawings shall be prepared specifically for this project. Shop drawings shall include dimensions and details, including adjacent construction and related work. Note special coordination required. Note any deviations from requirements of the Contract Documents.
     4. Warranties: Provide warranties as specified; warranties shall not limit length of time for remedy of damages Owner may have by legal statute. Contractor, supplier or installer responsible for performance of warranty shall sign warranties.

PART 2 PRODUCTS - Not Applicable To This Section

PART 3 EXECUTION - Not Applicable To This Section

END OF SECTION

SECTION 01 40 00 QUALITY REQUIREMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Quality Monitoring: Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality. Perform quality control procedures and inspections during installation.
     2. Standards: Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
     3. Tolerances: Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate. Comply with manufacturers' tolerances.
     4. Reference Standards: For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
     5. Manufacturer's Field Services: When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to perform the following as applicable, and to initiate instructions when necessary.
        1. Observe site conditions.
        2. Conditions of surfaces and installation.
        3. Quality of workmanship.
        4. Start-up of equipment.
        5. Test, adjust and balance of equipment.
     6. Mock-Ups: Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes. Accepted mock-ups shall be a comparison standard for the remaining Work.
     7. Removal of Mock-Ups: Where mock-up has been accepted by Architect and no longer needed, remove mock-up and clear area when directed to do so.

PART 2 PRODUCTS - Not Applicable To This Section PART 3 EXECUTION - Not Applicable To This Section

END OF SECTION

SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

* 1. SUMMARY
     1. Temporary Services: Provide temporary services and utilities, including payment of utility costs including the following.
        1. Water (potable and non-potable).
        2. Lighting and power.
        3. Metering.
        4. Telephone.
        5. Toilet facilities.
        6. Materials storage.
     2. Construction Facilities: Provide construction facilities, including payment of utility costs including the following.
        1. Construction equipment.
        2. Dewatering and pumping.
        3. Enclosures.
        4. Heating.
        5. Lighting.
        6. Elevator.
        7. Access.
        8. Roads.
     3. Security and Protection: Provide security and protection requirements including the following.
        1. Fire extinguishers.
        2. Site enclosure fence, barricades, warning signs, and lights.
        3. Building enclosure and lock-up.
        4. Temporary jobsite protection.
        5. Environmental protection.
        6. Pest control during and at the end of construction.
        7. Snow and ice removal if applicable.
     4. Personnel Support: Provide personnel support facilities including the following.
        1. Architect's field office with telephone, fax and data connection.
        2. Contractor's field office.
        3. Sanitary facilities.
        4. Drinking water.
        5. Project identification sign.
        6. Cleaning. PART 2 PRODUCTS
  2. TEMPORARY BRACING
     1. Temporary Bracing of structure: As required to stabilize construction during installation of work.
        1. Manufacture[r:Ram Board/Surface Shields.](https://www.arcat.com/arcatcos/cos46/arc46237.html)
  3. TEMPORARY JOBSITE PROTECTION
     1. Temporary Jobsite Protection of the Following Types:
        1. Manufacturer: Refer to Surface Shields In[c.Armorlon, Division of Reef Industries,](https://www.arcat.com/arcatcos/cos39/arc39666.html)  [Inc.](https://www.arcat.com/arcatcos/cos39/arc39666.html)[;TuffWrap](https://www.arcat.com/arcatcos/cos44/arc44876.html).
        2. Hard surface protection.
        3. Carpet protection.
        4. Dust containment.
        5. Specialty; window, door, entry and marble protection.
        6. Adhesive tape.

PART 3 EXECUTION - Not Applicable To This Section

END OF SECTION

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Substantial Completion: The following are prerequisites to substantial completion. Provide the following.
        1. Punch list prepared by Contractor and subcontractors as applicable.
        2. Supporting documentation.
        3. Warranties.
        4. Certifications.
        5. Occupancy permit.
        6. Start-up and testing of building systems.
        7. Change over of locks.
        8. Meter readings.
        9. Commissioning documentation.
     2. Final Acceptance: Provide the following prerequisites to final acceptance.
        1. Final payment request with supporting affidavits.
        2. Completed punch list.
     3. As-Built Drawings: Provide a marked-up set of drawings including changes, which occurred during construction.
     4. Project Closeout: Provide the following during project closeout.
        1. Submission of record documents.
        2. Submission of maintenance manuals.
        3. Training and turnover to Owner's personnel.
        4. Final cleaning and touch-up.
        5. Removal of temporary facilities. PART 2 PRODUCTS - Not Applicable To This Section PART 3 EXECUTION
  2. CUTTING AND PATCHING
     1. Cutting and Patching: Provide cutting and patching work to properly complete the work of the project, complying with project requirements for:
        1. Structural work.
        2. Mechanical/electrical systems.
        3. Visual requirements, including detailing and tolerances.
        4. Operational and safety limitations.
        5. Fire resistance ratings.
        6. Inspection, preparation, and performance.
        7. Cleaning.
     2. Means and Methods: Do not cut and patch in a manner that would result in a failure of the work to perform as intended, decrease energy performance, increase maintenance, decrease operational life, or decrease safety performance.
     3. Inspection: Inspect conditions prior to work to identify scope and type of work required. Protect adjacent work. Notify Owner of work requiring interruption to building services or Owner's operations.
     4. Performance of Operations: Perform work with workmen skilled in the trades involved. Prepare sample area of each type of work for approval.
     5. Cutting: Use cutting tools, not chopping tools. Make neat holes. Minimize damage to adjacent work. Inspect for concealed utilities and structure before cutting.
     6. Patching: Make patches, seams, and joints durable and inconspicuous. Comply with tolerances for new work.
     7. Cleaning: Clean work area and areas affected by cutting and patching operations.

END OF SECTION

SECTION 02 14 19 SELECTIVE DEMOLITION

PART 1 GENERAL

* 1. SUMMARY
     1. Provide demolition activities
  2. SUBMITTALS
     1. Schedule: Submit for approval selective demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service.
  3. QUALITY ASSURANCE
     1. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.
  4. PROJECT CONDITIONS
     1. Occupancy: Immediate areas of work will not be occupied during selective demolition. The public, including children, may occupy adjacent areas.
     2. Existing Conditions: No responsibility for buildings and structures to be demolished will be assumed by the Owner

PART 2 PRODUCTS

* 1. DEMOLITION APPLICATIONS
     1. Selective Site Demolition:
        1. Application: Demolition of designated site improvements including paving, curbing, site walls, and utility structures.
        2. Application: Demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction or site work.
        3. Application: Removal of hollow items or items which could collapse.
        4. Application: Salvage of designated items.
        5. Application: Protection of site work and adjacent structures.
        6. Application: Disconnection, capping, and removal of utilities.
        7. Application: Pollution control during building demolition, including noise control.
        8. Application: Removal and legal disposal of materials.
        9. Protection: Designated site improvements and adjacent construction.
        10. Salvage: Designated items.
        11. Utilities: Interruption, capping or removal as applicable.
        12. Hazardous Materials: Not present.

1. PART 3 EXECUTION
   1. SELECTIVE DEMOLITION
      1. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.
      2. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.
      3. Shoring and Bracing: Provide and maintain interior and exterior shoring and bracing.
      4. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
      5. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
      6. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
      7. Restoration: Restore finishes of patched areas.
   2. SCHEDULE
      1. Items for Protection During Demolition and Construction:
         1. Site trees, plantings, roads, and utilities.
         2. Adjacent Building walls, and roofing
      2. Utilities Requiring Interruption, Capping, or Removal:
         1. Electric.
         2. Water.
         3. Gas.
         4. Storm Sewerage.

END OF SECTION

SECTION 02 30 00 SUBSURFACE INVESTIGATION

PART 1 GENERAL

* 1. SUMMARY
     1. Geotechnical Report: A copy of the geotechnical report and boring logs are available from the Architect and Owner.
     2. Information Not Guaranteed: Information on the Drawings and in the Project Manual relating to subsurface conditions and existing utilities and structures is from information available from sources available to the Owner's engineering consultants. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.

PART 2 PRODUCTS - Not Applicable To This Section PART 3 EXECUTION - Not Applicable to This Section

END OF SECTION

SECTION 02 41 00 DEMOLITION

PART 1 GENERAL

* 1. SUMMARY
     1. Provide demolition activities.
  2. SUBMITTALS
     1. Schedule: Submit for approval selective demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service.
  3. QUALITY ASSURANCE
     1. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.
  4. PROJECT CONDITIONS
     1. Occupancy: Immediate areas of work will not be occupied during selective demolition. The public, including children, may occupy adjacent areas.
     2. Existing Conditions: No responsibility for buildings and structures to be demolished will be assumed by the Owner

PART 2 PRODUCTS

* 1. DEMOLITION APPLICATIONS
     1. Structure Demolition:
        1. Application: Demolition of designated building structures.
        2. Application: Demolition of designated site improvements including paving, curbing, site walls, and utility structures.
        3. Application: Demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction or site work.
        4. Application: Removal of hollow items or items which could collapse.
        5. Application: Salvage of designated items.
        6. Application: Protection of site work and adjacent structures.
        7. Application: Disconnection, capping, and removal of utilities.
        8. Application: Pollution control during building demolition, including noise control.
        9. Application: Removal and legal disposal of materials.
        10. Protection: Designated site improvements and adjacent construction.
        11. Salvage: Designated items.
        12. Utilities: Interruption, capping or removal as applicable.
        13. Hazardous Materials: Not present.
        14. Hazardous Materials: Removed under separate prior contract.
        15. Hazardous Materials: Removed as a part of this contract. PART 3 EXECUTION
  2. SELECTIVE DEMOLITION
     1. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is

prohibited.

* + 1. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.
    2. Shoring and Bracing: Provide and maintain interior and exterior shoring and bracing.
    3. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
    4. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
    5. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
    6. Restoration: Restore finishes of patched areas.

END OF SECTION

SECTION 03 30 00 CAST-IN-PLACE-CONCRETE

PART 1 GENERAL

* 1. SUMMARY
     1. Provide cast-in-place concrete, reinforcing and accessories.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
     3. Mix Design: Submit for approval mix design proposed for use.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Testing: Employ an independent testing agency acceptable to Owner to design concrete mixes and to perform material evaluation tests. Provide 7 and 28 day cylinder tests. Comply with ASTM C 143, C 173, C 31 and C 39.
     3. Standards:
        1. ACI 301, Specifications for structural Concrete for Buildings.
        2. ACI 318, Building Code Requirements for Reinforced Concrete, and CRSI Manual of Standard Practice.
     4. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
     5. Floor Flatness and Levelness Tolerances:
        1. Subfloors Under Materials Such as Concrete Toppings, Ceramic Tile, and Sand Bed Terrazzo: ACI 302.1R and ASTM E 1155, floor flatness (Ff) of 15, floor levelness (Fl) of 13.
        2. Subfloors Under Materials Such As Vinyl Tile, Epoxy Toppings, Paint, and Carpet: ACI 302.1R and ASTM E 1155, floor flatness (Ff) of 20, floor levelness (Fl) of 17.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Cast-In-Place Concrete:
        1. Manufacturers: Concrete Color Additives[:ISE Logik Industries](https://www.arcat.com/arcatcos/cos49/arc49683.html)[;LATICRETE](https://www.arcat.com/arcatcos/cos33/arc33748.html)  [International, Inc..](https://www.arcat.com/arcatcos/cos33/arc33748.html)
        2. Manufacturers: Concrete Forming and Accessorie[s:Architectural Polymers](https://www.arcat.com/arcatcos/cos45/arc45349.html)[;ISE Logik](https://www.arcat.com/arcatcos/cos49/arc49683.html)  [Industries](https://www.arcat.com/arcatcos/cos49/arc49683.html)[;Spec Formliners, Inc..](https://www.arcat.com/arcatcos/cos43/arc43867.html)
        3. Manufacturers: Concrete Formliners for Embedding Brick in Cast-In-Place Concrete: Refer to[www.arcat.com/divs/sec/sec03300.html](https://www.arcat.com/divs/sec/sec03300.shtml)
        4. Manufacturers: Concrete Anchoring: Refer to[www.arcat.com/divs/sec/sec03300.html](https://www.arcat.com/divs/sec/sec03300.shtml)
        5. Manufacturers: Colored and Imprinted Concrete: Refer to[www.arcat.com/divs/sec/sec03300.html](https://www.arcat.com/divs/sec/sec03300.shtml)
        6. Manufacturers: Integral Waterproofing of Concrete:[Hycrete, Inc.](https://www.arcat.com/arcatcos/cos45/arc45522.html)[;ISE Logik](https://www.arcat.com/arcatcos/cos49/arc49683.html)  [Industries](https://www.arcat.com/arcatcos/cos49/arc49683.html)[;Xypex Chemical Corp..](https://www.arcat.com/arcatcos/cos36/arc36630.html)
        7. Manufacturers: High Tolerance Floor Treatment[:ISE Logik Industries.](https://www.arcat.com/arcatcos/cos49/arc49683.html)
        8. Manufacturers: Concrete Finishe[s:LATICRETE International, Inc..](https://www.arcat.com/arcatcos/cos33/arc33748.html)
        9. Manufacturers: Concrete Curing, Sealing and Hardening:[ISE Logik Industries.](https://www.arcat.com/arcatcos/cos49/arc49683.html)
        10. Manufacturers: Cement Grouts, Adhesives and Sealants:
        11. Manufacturers: Concrete Resurfacing and Rehabilitation:[LATICRETE International,](https://www.arcat.com/arcatcos/cos33/arc33748.html)  [Inc.](https://www.arcat.com/arcatcos/cos33/arc33748.html).
        12. Application: Columns and beams.
        13. Application: Foundations and footings.
        14. Application: Concrete on metal deck.
        15. Application: Exterior site concrete and pads.
        16. Finish for Vertical Surfaces Exposed To View: Smooth rubbed finish.
        17. Mechanically Applied Finish for Vertical Surfaces Exposed to View: Bushhammer finish.
        18. Finish for Vertical Surfaces Not Exposed To View: As-cast form finish.
        19. Finish for Horizontal Surfaces To Receive Concrete or Mortar Setting Bed: Scratch finish.
        20. Finish for Surfaces to be Exposed to View or Covered with Resilient Flooring, Carpet Tile or Other Thin Finish System: Trowel finish.
        21. Finish for Surfaces to Receive Thin-set Ceramic or Quarry Tile: Trowel and fine broom finish.
        22. Finish for Exterior Concrete Platforms, Steps, Ramps and Sloped Walls: Non-slip broom finish.
        23. Cast-In-Place Concrete Reinforcing and Accessories:
            1. Concrete Design Mixes: ASTM C 94, 28 day compressive strength suitable for project requirements and site conditions.
            2. Formwork: Plywood or metal panel formwork sufficient for structural and visual requirements.
            3. Reinforcing Bars: ASTM A 767, Class II, galvanized.
            4. Steel Wire: ASTM A 82.
            5. Steel Wire Fabric: ASTM A 497, welded, deformed.
            6. Concrete Materials: ASTM C 150, Type I, Portland cement; potable water.
            7. Concrete Admixtures: Containing less than 0.1 percent chloride ions.
            8. Reglets: Galvanized sheet steel reglets, minimum 26 gauge (.018 inch).
            9. Waterstops: Rubber, PVC or self expanding butyl/bentonite waterstops.
            10. Vapor Retarder: ASTM D 4397 polyethylene sheet, 10 mils.
            11. Liquid Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class A.
            12. Underlayment Compound: Free-flowing, self-leveling cement-based compound.
            13. Bonding Compound: Polyvinyl acetate or acrylic base.
            14. Epoxy Adhesive: ASTM C 881, two-component material. PART 3 EXECUTION
  2. INSTALLATION
     1. Comply with ASTM C 94. Do not change mix design without approval. Calcium chloride admixtures are not permitted.
     2. Chamfer exposed edges/corners to provide straight lines.
     3. Tolerance: Plus 1/8" in 10" for grade, alignment, and straightness.
     4. Construction Joints: Use keyways, continue reinforcement through joint.
     5. Expansion Joints: For exterior work locate 30' o.c. at approved locations. Provide smooth dowels across joint which permit 1" horizontal movement and no vertical shear movement.
     6. Isolation Joints: Provide between slabs and vertical elements such as columns and structural walls.
     7. Control Joints: Provide sawn or tooled joints or removeable insert strips; depth equal to 1/4 slab thickness. Spacing as required and approved.
     8. Wall Finishes: As-cast and patched for concealed work; rubbed smooth, filled and cement paste coated for exposed work.
     9. Slab Finishes: Obtain sample approval before beginning work.
        1. Scratch: For surfaces to receive mortar setting beds or cementitious flooring materials.
        2. Trowel: Hard, smooth, uniform surface for areas to receive resilient flooring, carpet, or other thin finish material.
        3. Broom: After trowel finishing, roughen surface by fine brooming perpendicular to traffic direction for exposed exterior walks, steps and ramps.
        4. Non-Slip Aggregate: After trowel finishing, uniformly trowel 25-lbs./100 s. f. of damp non-slip aggregate into surface. Cure, then rub lightly to expose aggregate. Use for interior exposed concrete stairs and ramps.
        5. Exposed Aggregate: Use chemical retarder or tamp aggregate into wet concrete and expose by brushing with water. Use where indicated.
        6. Hardener Finish: For exposed interior concrete floors. Follow manufacturer's directions.
     10. Cure and protect work. Report defective work in writing.

END OF SECTION

SECTION 05 12 00 STRUCTURAL STEEL FRAMING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide structural steel assemblies and accessories.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
     3. Submit for approval test reports.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: AISC, Code of Standard Practice for Steel Buildings and Bridges, and applicable regulations.
     3. Architecturally Exposed Structural Steel: Comply with fabrication requirements, including tolerance limits, and installation tolerances of AISC's "Code of Standard Practice for Steel Buildings and Bridges" for structural steel identified as architecturally exposed structural steel.
     4. Testing: Independent testing laboratory.
     5. Erection Tolerances: AISC standards. PART 2 PRODUCTS
  4. MATERIALS
     1. Structural Steel:
        1. Manufactures: Owner approved
        2. Application: Building structure.
        3. Application: Architecturally exposed structural steel.
        4. Application: Remodeling of existing structural steel systems.
        5. Structural Steel Shapes, Plates, and Bars: ASTM A 572.
        6. Cold-Formed Steel Tubing: ASTM A 500, Grade B.
        7. Hot-Formed Steel Tubing: ASTM A 501.
        8. Steel Pipe: ASTM A 53, Type E or S, Grade B; or ASTM A 501.
        9. Steel Castings: ASTM A 27, Grade 65-35.
        10. Headed Stud-Type Shear Connectors: ASTM A 108, Grade 1015 or 1020.
        11. Anchor Bolts: ASTM A 307, nonheaded type.
        12. Unfinished Threaded Fasteners: ASTM A 307, Grade A.
        13. High-Strength Threaded Fasteners: ASTM A 325 or ASTM A 490, as applicable.
        14. Auxiliary Materials:
            1. Direct Tension Indicators: ASTM A 959.
            2. Electrodes for Welding: AWS Code.
        15. Structural Steel Primer Paint: SSPC - Paint 13, compatible with topcoats.
            1. Cement Grout: Portland cement, sand.
            2. Metallic Shrinkage-Resistant Grout: Premixed ferrous aggregate grouting compound ASTM C 1107.
            3. Nonmetallic Shrinkage-Resistant Grout: Premixed nonmetallic grouting compound, ASTM C 1107.

PART 3 EXECUTION

* 1. INSTALLATION
     1. Comply with AISC codes and specifications, and with AWS "Structural Welding Code".
     2. Employ a registered engineer to check elevations and plumb and level tolerances; certify that installed work is within AISC Standards. Owner may engage testing/inspection agency to inspect welded and bolted connections.
     3. Architecturally exposed steel: Fabricate with special care using materials carefully selected for best appearance. Store materials off ground and keep clean. Cut, fit and assemble work with surfaces smooth, square and with complete contact at joints. Set all cambers up. Weld all work continuously; grind smooth and flush to make seams not visible after priming. Prepare surfaces to comply with SSPC-SP6; apply prime coat within 24 hours after cleaning.
     4. Touch-up field welds and abraded areas with shop primer.

END OF SECTION

SECTION 05 21 00 STEEL JOIST FRAMING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide steel joists.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: Steel Joist Institute (SJI) Standard Specifications. PART 2 PRODUCTS
  4. MATERIALS
     1. Steel Joists:
        1. Manufacture[rs:New Millennium Building Systems.](https://www.arcat.com/arcatcos/cos35/arc35565.html) Or owner approved equal
        2. Application: Floor support.
        3. Application: Roof support.
        4. Steel: SJI specifications for chord and web sections.
        5. Steel Bearing Plates: ASTM A 36.
        6. Type: K-series open web steel joists.
        7. Type: KCS-series open web steel joists.
        8. Type: LH-series longspan steel joists.
        9. Type: DLH-series deep longspan steel joists.
        10. Type: Joist girders.
        11. Auxiliary Materials:
            1. Unfinished Threaded Fasteners: ASTM A 307, Grade A.
            2. Steel Prime Paint: SJI specifications. PART 3 EXECUTION
  5. INSTALLATION
     1. Fabricate and install joists in compliance with SJI requirements and recommendations. Shop primer shall be compatible with finish paint specified in painting section.
     2. Coordinate installation of anchor bolts with other work as necessary. Place joists and bridging simultaneously; align work and weld or bolt into place in accordance with SJI specifications. Grout as required for sound bearing.
     3. Touch-up damaged coatings using same primer as shop painting.

END OF SECTION

SECTION 05 31 00 STEEL DECKING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide steel decking.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: AISI, Specification for the Design of Cold-Formed Steel Structural Members; and SDI Design Manual for Composite Decks, Form Decks, and Roof Decks.
     3. Approvals: UL label and FM listing. PART 2 PRODUCTS
  4. MATERIALS
     1. Steel Decking:
        1. Manufacture[rs:ASC Steel Deck](https://www.arcat.com/arcatcos/cos41/arc41894.html)[;CSM Metal Deck](https://www.arcat.com/arcatcos/cos53/arc53828.html)[;Fortress Framing Products](https://www.arcat.com/arcatcos/cos51/arc51263.html)[;New](https://www.arcat.com/arcatcos/cos35/arc35565.html)  [Millennium Building Systems](https://www.arcat.com/arcatcos/cos35/arc35565.html)[;Vulcraft/Verco Group.](https://www.arcat.com/arcatcos/cos36/arc36399.html) Or Owner approved equal.
        2. Application: Steel roof deck.
        3. Application: Acoustical steel roof deck.
        4. Application: Long-span steel roof deck.
        5. Application: Long-span cellular steel roof deck.
        6. Application: Composite steel floor deck.
        7. Application: Composite cellular metal floor deck with electrical distribution.
        8. Application: Noncomposite cellular metal floor deck with electrical distribution.
        9. Application: Noncomposite steel form deck.
        10. Application: Noncomposite vented steel form deck.
        11. Steel Type: Steel for painted metal deck, ASTM A 611, Grade C.
        12. Steel Type: Steel for galvanized metal deck, ASTM A 653, G 90 coating.
        13. Steel Type: Aluminum-zinc alloy-coated steel sheet, ASTM A 792, Grade 33, AZ 50.
        14. Steel Shapes: ASTM A 36.
        15. Shear Connectors: Headed stud type, ASTM A 108.
        16. Sheet Metal Accessories: ASTM A 653, G 60, commercial quality, galvanized.
        17. Galvanizing: ASTM A 653, G60.
        18. Galvanizing Repair: ASTM A 780.
        19. Paint: Rust-inhibitive paint.
        20. Auxiliary Materials:
            1. Metal cover plates.
            2. Metal closure strips.
            3. Roof sump pans.
            4. Flexible closure strips.
            5. Acoustic sound barrier closures. PART 3 EXECUTION
  5. INSTALLATION
     1. Form to span at least 3 supports and with 2 inch laps. Place deck flat, square and with cells aligned. Anchor deck securely in place following manufacturer's directions and approved shop drawings.
     2. Cut and fit neatly around penetrations; provide additional framing, reinforcement and closure pieces to maintain structural continuity. Anchor closure strips at ends, edges, and penetrations.
     3. Touch-up damaged coatings with primer or galvanized repair paint.

END OF SECTION

SECTION 05 40 00

COLD-FORMED METAL FRAMING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide cold-formed metal framing.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
     3. Engineering Certification: Submit for approval engineering certification of deflection criteria.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: AISI, Specification for Design of Cold-Formed Steel Structural Members.
     3. Deflection Criteria for Exterior Masonry Veneer: L/600.
     4. Fabrication Tolerances: 1/8 inch in 10 feet.
     5. Erection Tolerances: 1/16 inch from true position. PART 2 PRODUCTS
  4. MATERIALS
     1. Cold-Formed Metal Framing:
        1. Manufacture[rs:Fortress Framing Products](https://www.arcat.com/arcatcos/cos51/arc51263.html)[;MBA Metal Framing](https://www.arcat.com/arcatcos/cos48/arc48069.html)[;Steel Stud](https://www.arcat.com/arcatcos/cos41/arc41600.html)  [Manufacturers Association (SSMA)](https://www.arcat.com/arcatcos/cos41/arc41600.html)[;Super Stud Building Products](https://www.arcat.com/arcatcos/cos46/arc46575.html)[;Supreme Steel](https://www.arcat.com/arcatcos/cos53/arc53179.html)  [Framing System Association - SSFSA](https://www.arcat.com/arcatcos/cos53/arc53179.html)[;Telling Industries, LLC.](https://www.arcat.com/arcatcos/cos43/arc43441.html) Or Owner approved equal
        2. Application: Exterior load-bearing steel-stud walls.
        3. Application: Interior load-bearing steel-stud walls.
        4. Application: Exterior nonload-bearing steel-stud curtain walls.
        5. Application: Steel joists.
        6. Application: Steel trusses.
        7. Wall Framing: C-shaped load-bearing steel studs.
        8. Joist Framing: C-shaped load-bearing steel joists.
        9. Units 16 gauge (.0598 inch) and heavier: ASTM A 653, yield point 50,000.
        10. Units 18 gauge (.0358 inch): ASTM A 653, yield point 37,000 psi.
        11. Units 20 gauge (.0329 inch): ASTM A 653, yield point 33,000 psi.
        12. Finish: Galvanized, ASTM A 653, G60.
        13. Framing Accessories:
            1. Supplementary framing.
            2. Bracing, bridging, and solid blocking.
            3. Web stiffeners.
            4. Gusset plates.
            5. Deflection track and vertical side clips.
            6. Stud kickers and girts.
            7. Joist hangers and end closures.
            8. Reinforcement plates.
            9. Anchors, clips, and fasteners. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
     2. Comply with requirements of ASTM C 1007 for installation of steel studs and accessories and Metal Lath/Steel Framing Association Lightweight Steel Framing Systems Manual.
     3. Restore damaged components. Protect work from damage.

END OF SECTION

SECTION 05 50 00 METAL FABRICATIONS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide metal fabrications.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Manufacturers:
        1. Metal Fastening[s:Centerline Brackets](https://www.arcat.com/arcatcos/cos53/arc53029.html)[;Lakeside Construction Fasteners](https://www.arcat.com/arcatcos/cos49/arc49581.html)[;Rakks](https://www.arcat.com/arcatcos/cos35/arc35076.html)  [Architectural Shelving and Hardware.](https://www.arcat.com/arcatcos/cos35/arc35076.html)
        2. Metal Ladde[rs:ALACO Ladder Co.](https://www.arcat.com/arcatcos/cos30/arc30245.html)[;Kattsafe](https://www.arcat.com/arcatcos/cos48/arc48709.html)[;Panel Built Inc.](https://www.arcat.com/arcatcos/cos45/arc45639.html)[;Precision Ladders,](https://www.arcat.com/arcatcos/cos34/arc34924.html)  [LLC](https://www.arcat.com/arcatcos/cos34/arc34924.html)[;UPNOVR, Inc..](https://www.arcat.com/arcatcos/cos47/arc47852.html)
        3. Rooftop Solar Collector Supports:
     2. Metal Fabrication Applications:
        1. Application: Rough hardware.
        2. Application: Elevator pit ladders.
        3. Application: Rooftop ladders.
        4. Application: Ladder safety cages.
        5. Application: Ship's ladders.
        6. Application: Loose bearing and leveling plates.
        7. Application: Loose steel lintels.
        8. Application: Shelf and relieving angles.
        9. Application: Miscellaneous framing and supports for overhead doors and grilles.
        10. Application: Miscellaneous framing and supports for suspended toilet partitions.
        11. Application: Miscellaneous framing and supports for suspended operable partitions.
        12. Application: Miscellaneous framing and supports for elevator hoisting machines and sheaves.
        13. Application: Miscellaneous framing and supports for elevator door sills.
        14. Application: Steel framing and supports for countertops.
        15. Application: Prefabricated building columns.
        16. Application: Miscellaneous steel trim.
        17. Application: Steel angle corner guards.
        18. Application: Edgings.
        19. Application: Loading dock edge angles.
        20. Application: Structural steel door frames.
        21. Application: Floor plate and supports.
        22. Application: Tread plate and supports.
        23. Application: Cast nosings, treads, and thresholds.
        24. Application: Extruded nosings and treads.
        25. Application: Pipe guards.
        26. Application: Wheel guards.
        27. Application: Pipe bollards.
        28. Application: Security bars.
        29. Application: Remodeling of existing metal fabrications.
        30. Application: Rooftop solar collector supports.
     3. Ferrous Materials:
        1. Steel Plates, Shapes and Bars: ASTM A 36.
        2. Rolled Steel Floor Plates: ASTM A 786.
        3. Steel Tubing: ASTM A 500 or A 501.
        4. Uncoated Structural Steel Sheet: ASTM A 611 or A 570.
        5. Uncoated Steel Sheet: ASTM A 366 or A 569.
        6. Galvanized Steel Sheet: ASTM A 653, G90.
        7. Steel Pipe, Black Finish: ASTM A 53.
        8. Steel Pipe, Galvanized Finish: ASTM A 53.
        9. Gray Iron Castings: ASTM A 48, Class 30.
        10. Malleable Iron Castings: ASTM A 47, Grade 32510.
        11. Reinforcing Bars: ASTM A 615, Grade 60.
        12. Brackets, Flanges, and Anchors: Cast or formed metal.
        13. Concrete Inserts: Threaded or wedge type.
        14. Welding Rods and Bare Electrodes: AWS specifications.
        15. Zinc-Coating: Hot-dip galvanized coating for materials in exterior assemblies or exterior walls.
     4. Stainless Steel Materials:
        1. Bar Stock: ASTM A 276, Type 302 or 304.
        2. Plate: ASTM A 666, Type 302 or 304.
        3. Rolled-Steel Floor Plate: ASTM A 786.
     5. Aluminum Materials:
        1. Extruded Bars and Shapes: ASTM B 221 aluminum alloy.
        2. Rolled Tread Plate: ASTM B 632 aluminum alloy.
        3. Rivets: ASTM B 316, aluminum alloy.
        4. Sheet for Expanded Aluminum Grating: ASTM B 209.
        5. Fasteners: ASTM A 153.
        6. Finish: Clear anodized.
     6. Bronze Materials:
        1. Bronze Plate, Sheet, Strip, and Bars: ASTM B 36, Alloy UNS No. C28000.
        2. Bronze Extrusions: ASTM B 455, Alloy UNS No. C38500 84400 (leaded semi red brass).
     7. Fasteners:
        1. Bolts and Nuts: Hexagon head type, ASTM A 307, Grade A.
        2. Lag Bolts: Square head, FS FF-B-561.
        3. Machine Screws: Cadmium plated steel, FS FF-S-92.
        4. Wood Screws: Flat head carbon steel, FS FF-S-111.
        5. Plain Washers: Round carbon steel, FS FF-W-92.
        6. Drilled-In Expansion Anchors: FS FF-S-325.
        7. Toggle Bolts: Tumble-wing type, FS FF-B-588.
        8. Lock Washers: Spring type carbon steel, FS FF-W-84.
        9. Zinc-Coating: Fasteners in exterior assemblies or exterior walls.
     8. Auxiliary Materials:
        1. Nonshrink Metallic Grout: ASTM C 1107.
        2. Nonshrink Nonmetallic Grout: ASTM C 1107.
        3. Interior Anchoring Cement: Hydraulic expansion cement.
        4. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
        5. Shop Primer: Fast curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79, compatible with topcoats.
        6. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
        7. Galvanizing Repair Paint: SSPC - Paint 20.
        8. Bituminous Paint: Asphalt mastic, SSPC - Paint 12. PART 3 EXECUTION
  2. INSTALLATION
     1. Take field measurements prior to preparation of shop drawings and fabrication. Do not delay job; allow for cutting and fitting if field measurement not practical.
     2. Form work true to line with sharp angles and edges. Weld continuously, grind flush and make smooth on exposed surfaces.
     3. Install work plumb and level with hairline joints and ground flush welds.
     4. Lintels: Provide sizes indicated with 8" bearing at each end.
     5. Touch-up damaged coatings with shop primer and galvanize repair paint.
     6. Paint items scheduled in accordance with painting section.

END OF SECTION

SECTION 05 51 00 METAL STAIRS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide metal stair systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
        1. Shop drawings shall be prepared and stamped by a qualified engineer licensed in the jurisdiction of the project.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Structural Performance: In accordance with applicable Building Code. PART 2 PRODUCTS
  4. MATERIALS
     1. Metal Stairs:
        1. Manufacture[rs:Access Products / Ecoglo](https://www.arcat.com/arcatcos/cos45/arc45269.html)[;Kattsafe](https://www.arcat.com/arcatcos/cos48/arc48709.html)[;Pacific Stair Corporation](https://www.arcat.com/arcatcos/cos44/arc44803.html)[;Panel Built](https://www.arcat.com/arcatcos/cos45/arc45639.html)  [Inc.](https://www.arcat.com/arcatcos/cos45/arc45639.html)[;Precision Ladders, LLC](https://www.arcat.com/arcatcos/cos34/arc34924.html)[;Safe-T-Nose](https://www.arcat.com/arcatcos/cos50/arc50627.html)[;Safety Rail Company](https://www.arcat.com/arcatcos/cos47/arc47628.html)[;Wooster Products,](https://www.arcat.com/arcatcos/cos36/arc36612.html)  [Inc.](https://www.arcat.com/arcatcos/cos36/arc36612.html). Or Owner approved equal.
        2. Application: Interior stairs.
        3. Application: Exterior stairs.
        4. Treads: Steel plate treads.
        5. Treads: Concrete filled treads.
        6. Auxiliary Materials:
           1. Steel Plates, Shapes, and Bars: ASTM A 36.
           2. Cold-Formed Steel Tubing: ASTM A 500.
           3. Hot-Formed Steel Tubing: ASTM A 501.
           4. Steel Pipe: ASTM A 53, standard weight (Schedule 40).
           5. Rolled Steel Floor Plate: ASTM A 786.
           6. Cold-Rolled Structural Steel Sheet: ASTM A 611, Grade A.
           7. Hot-Rolled Structural Steel Sheet: ASTM A 570, Grade 30.
           8. Cold-Rolled Steel Sheet: ASTM A 366.
           9. Hot-Rolled Steel Sheet: ASTM A 569.
           10. Galvanized Steel Sheet: ASTM A 653, G 90; Grade A coating designation.
           11. Expanded Metal, Carbon Steel: ASTM F 1267, Class 1 (uncoated).
           12. Woven-Wire Mesh: Intermediate-crimp, 2-inch wire complying with ASTM A 510.
           13. Fasteners: Plated fasteners, ASTM B 633, zinc-coated.
           14. Abrasive Nosings: Cast units with an integral abrasive grit.
           15. Abrasive Nosings: Extruded aluminum units with abrasive filler in epoxy-resin binder.
           16. Grout: Factory-packaged, nonshrink, nonmetallic, ASTM C 1107. PART 3 EXECUTION
  5. INSTALLATION
     1. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
     2. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
     3. Stairs: Control access to and use of stair systems. Do not permit use of stairs until stairs and railing systems are complete and ready to assume design loading. Do not permit overloading of stair systems. Make connections lightproof tight by welding or bolting; conceal fastenings as much as possible. Grind flush and smooth all exposed welds. Fill pans with 3000 psi concrete with welded wire fabric and provide broom finish.
     4. Railings: provide sizes, profiles and dimensions indicated. Provide mitered joints at 90 degree turns and smooth sweeps at bends. Provide wall returns, end caps, brackets, fittings, and toe boards.
     5. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 52 00 METAL RAILINGS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide pipe and tube handrails and railing systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Handrail and Railing Structural Performance: In accordance with applicable Building Code. PART 2 PRODUCTS
  4. MATERIALS
     1. Metal Railings:
        1. Manufacturers, Handrails and Railings:[American Access, Inc.](https://www.arcat.com/arcatcos/cos50/arc50108.html)[;Feeney Inc. (CableRail,](https://www.arcat.com/arcatcos/cos38/arc38341.html)  [DesignRail®);](https://www.arcat.com/arcatcos/cos38/arc38341.html)[INKAN Ltd.](https://www.arcat.com/arcatcos/cos33/arc33272.html)[;Kattsafe](https://www.arcat.com/arcatcos/cos48/arc48709.html)[;Panel Built Inc.](https://www.arcat.com/arcatcos/cos45/arc45639.html)[;PRL Glass Systems, Inc.](https://www.arcat.com/arcatcos/cos48/arc48090.html)[;Safety](https://www.arcat.com/arcatcos/cos47/arc47628.html)  [Rail Company](https://www.arcat.com/arcatcos/cos47/arc47628.html)[;Tractel Ltd..](https://www.arcat.com/arcatcos/cos36/arc36094.html)
        2. Manufacturers, Portable Railing Systems:
        3. Manufacturers, Portable Roof Fall Protection Syste[m:Kattsafe](https://www.arcat.com/arcatcos/cos48/arc48709.html)[;Safety Rail Company.](https://www.arcat.com/arcatcos/cos47/arc47628.html)
        4. Manufacturers, Rooftop Safety Syste[ms:Kattsafe](https://www.arcat.com/arcatcos/cos48/arc48709.html)[;Kee Safety, Inc.](https://www.arcat.com/arcatcos/cos33/arc33541.html)[;Safety Rail](https://www.arcat.com/arcatcos/cos47/arc47628.html)  [Company](https://www.arcat.com/arcatcos/cos47/arc47628.html)[;Tie Down.](https://www.arcat.com/arcatcos/cos51/arc51441.html)
        5. Application: Exterior metal railings.
        6. Application: Interior metal railings.
        7. Aluminum Pipe and Tube Railing Systems:
           1. Extruded Bar and Tube: ASTM B 221, alloy 6063 T5/T52.
           2. Extruded Structural Pipe and Tube: ASTM B 429, alloy 6063 T5/T52.
           3. Drawn Seamless Tube: ASTM B 210, alloy 6063 T832.
           4. Plate and Sheet: ASTM B 209, alloy 6061 T6.
           5. Die and Hand Forgings: ASTM B 247, alloy 6061 T6.
           6. Castings: ASTM B 26, alloy A356 T6.
        8. Aluminum Finish: Mill finish.
        9. Aluminum Finish: Clear anodized.
        10. Aluminum Finish: Color anodized.
        11. Aluminum Finish: Baked enamel.
        12. Aluminum Finish: Fluoropolymer, 2-coat.
        13. Stainless Steel Pipe and Tube Railing Systems:
            1. Tubing: ASTM A 554, Grade TP 304 or TP 316.
            2. Pipe: ASTM A 312, Grade TP 304 or TP 316.
            3. Castings: ASTM A 743, Grade CF 8 or CF 20.
            4. Plate: ASTM A 666, Type 304 or 316.
        14. Stainless Steel Finish: 180 grit polished.
        15. Stainless Steel Finish: 320 grit polished.
        16. Stainless Steel Finish: AISI No. 4 bright directional polish.
        17. Steel Pipe and Tube Railing Systems:
            1. Steel Pipe, Black Finish: ASTM A 53.
            2. Steel Pipe, Galvanized Finish: ASTM A 53.
            3. Steel Tubing: ASTM A 500 or A 501.
            4. Steel Plates, Shapes and Bars: ASTM A 36.
            5. Gray Iron Castings: ASTM A 48, Class 30.
            6. Malleable Iron Castings: ASTM A 47, Grade 32510.
        18. Steel Finish: Primed.
        19. Steel Finish: Baked enamel.
        20. Steel Finish: Galvanized.
        21. Steel Finish: Galvanized and shop primed.
        22. Auxiliary Materials:
            1. Nonshrink Nonmetallic Grout: CE CRD-C621.
            2. Interior Anchoring Cement: Hydraulic expansion cement.
            3. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
            4. Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79, compatible with topcoats.
            5. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
            6. Galvanizing Repair Paint: SSPC - Paint 20.
            7. Bituminous Paint: Asphalt mastic, SSPC - Paint 12. PART 3 EXECUTION
  5. INSTALLATION
     1. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
     2. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
     3. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
     4. Restore damaged finishes and protect work.

END OF SECTION

SECTION 05 70 00 ORNAMENTAL METAL

PART 1 GENERAL

* 1. SUMMARY
     1. Provide ornamental metalwork.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship. PART 2 PRODUCTS
  4. MATERIALS
     1. Ornamental Metalwork:
        1. Manufacturers, Custom Metal Fabrications: TBD.
        2. Manufacturers, Metal Column Cove[rs:Nelson Industrial Inc.](https://www.arcat.com/arcatcos/cos42/arc42037.html)[;SAF.](https://www.arcat.com/arcatcos/cos42/arc42387.html)
        3. Manufacturers, Ornamental Metal Grille[s:Archer Douglas](https://www.arcat.com/arcatcos/cos53/arc53295.html)[;Architectural](https://www.arcat.com/arcatcos/cos30/arc30593.html)  [Grille](https://www.arcat.com/arcatcos/cos30/arc30593.html)[;CityScapes International Inc.](https://www.arcat.com/arcatcos/cos40/arc40042.html).
        4. Manufacturers, Ornamental Metal:[Archer Douglas.](https://www.arcat.com/arcatcos/cos53/arc53295.html)
        5. Application: Ornamental railings fabricated from custom shapes.
        6. Application: Ornamental window grilles.
        7. Application: Ornamental mechanical grilles and frames.
        8. Application: Clad metal doors and frames.
        9. Application: Custom door pulls.
        10. Application: Combination hall push-button stations.
        11. Application: Metal reveals at wood paneling.
        12. Application: Cast-metal rosettes at marble joints.
        13. Application: Stainless-steel wire rope and fittings.
        14. Application: Closures and trim.
        15. Application: Window stools.
        16. Application: Pockets for window treatment.
        17. Application: Filler panels.
        18. Application: Column covers.
        19. Application: Lighting troughs.
        20. Application: Heating-cooling unit enclosures.
        21. Aluminum:
            1. Extruded Bar and Tube: ASTM B 221, alloy 6063 T5/T52.
            2. Extruded Structural Pipe and Tube: ASTM B 429, alloy 6063 T5/T52.
            3. Drawn Seamless Tube: ASTM B 483, alloy 6063 T832.
            4. Plate and Sheet: ASTM B 209, alloy 6061 T6.
            5. Die and Hand Forgings: ASTM B 247, alloy 6061 T6.
            6. Castings: ASTM B 26, alloy A356 T6.
        22. Aluminum Finish: Mill finish.
        23. Aluminum Finish: Clear anodized.
        24. Aluminum Finish: Color anodized.
        25. Aluminum Finish: Baked enamel.
        26. Aluminum Finish: Fluoropolymer, 2-coat.
        27. Aluminum Finish: Fluoropolymer, 3-coat.
        28. Copper Alloys:
            1. Extruded Shapes: ASTM B 455, architectural bronze.
            2. Plates and Bars: Muntz metal.
            3. Seamless Pipe: ASTM B 43, red brass.
            4. Seamless Tube: ASTM B 135, red brass.
            5. Composition Bronze Castings: ASTM B 62, leaded red brass.
            6. Sand Castings: ASTM B 62, and B 584, leaded red brass.
        29. Copper Alloys Finish: Natural satin finish, lacquered.
        30. Copper Alloys Finish: Statuary coating over satin finish.
        31. Copper Alloys Finish: Patina conversion coating over satin finish.
        32. Stainless Steel:
            1. Tubing: ASTM A 554, Grade MT 301, 302 or 304.
            2. Pipe: ASTM A 312, Grade TP 304.
            3. Castings: ASTM A 743, Grade CF 8 or CF 20.
            4. Plate: ASTM A 666, Type 301, 302 or 304.
            5. Wire Rope: ASTM A 492, Type 316.
        33. Stainless Steel Finish: AISI No. 2B, bright unpolished.
        34. Stainless Steel Finish: AISI No. 4, bright directional polish.
        35. Stainless Steel Finish: AISI No. 6, satin directional polish.
        36. Stainless Steel Finish: AISI No. 7, satin reflective directional polish.
        37. Stainless Steel Finish: AISI No. 8, mirror-like reflective nondirectional polish.
        38. Steel:
            1. Steel Tubing: ASTM A 500 or A 501.
            2. Steel Plates, Shapes and Bars: ASTM A 36.
        39. Steel Finish: Primed.
        40. Steel Finish: Baked enamel.
        41. Steel Finish: Galvanized.
        42. Steel Finish: Galvanized and shop primed.
        43. Iron:
            1. Malleable Iron Castings: ASTM A 47.
            2. Gray Iron Castings: ASTM A 48, Class 30.
        44. Auxiliary Materials:
            1. Nonshrink Nonmetallic Grout: ASTM C 1107.
            2. Welding Electrodes and Filler Metal: AWS specifications.
            3. Fasteners, Anchors, and Inserts: Non-corrosive.
            4. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.
            5. Zinc-Rich Primer: Comply with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
            6. Galvanizing Repair Paint: SSPC - Paint 20.
            7. Bituminous Paint: Asphalt mastic, SSPC - Paint 12. PART 3 EXECUTION
  5. INSTALLATION
     1. Take field measurements prior to fabrication. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
     2. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
     3. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
     4. Restore damaged finishes and protect work.

END OF SECTION

SECTION 06 10 00 ROUGH CARPENTRY

PART 1 GENERAL

* 1. SUMMARY
     1. Provide rough carpentry.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard and inspection agency grade stamps.
     3. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction and Industrial Plywood; APA PRP-108.
     4. Wood Framing Standards: NFPA House Framing Manual.
        1. Exterior Wall Framing: 2 inch by 6-inch nominal (38 mm by 140 mm actual) studs, 24 inches (61 cm) on center.
        2. Exterior Wall Framing: 2 inch by 4-inch nominal (38 mm by 89 mm actual) studs, 16 inches (40 cm) on center.
        3. Interior Wall Framing: 2 inch by 4-inch (38 mm by 89 mm actual) studs, 16 inches (40 cm) on center.
     5. Preservative Treatment: AWPA C2 for lumber and AWPA C9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.
     6. Fire-Retardant Treatment: AWPA C20 for lumber and AWPA C27 for plywood; noncorrosive type. Provide at building interior where required by code.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Rough Carpentry Applications:
        1. Manufacturers, Dimensional Lumber: The product shall meet the following performance criteria:
        2. Manufacturers, Pressure-Treated Wood Product[s:Allweather Wood](https://www.arcat.com/arcatcos/cos53/arc53728.html)[;Viance - Treated](https://www.arcat.com/arcatcos/cos31/arc31403.html)  [Wood Solutions.](https://www.arcat.com/arcatcos/cos31/arc31403.html)
        3. Manufacturers, Fire-Retardant Treated Wood Products[:Fire Retardant Coatings of](https://www.arcat.com/arcatcos/cos49/arc49898.html)  [Texas, LLC](https://www.arcat.com/arcatcos/cos49/arc49898.html)[;Viance - Treated Wood Solutions.](https://www.arcat.com/arcatcos/cos31/arc31403.html)
        4. Manufacturers, Mold Prevention Treatment: Refer to[www.arcat.com/divs/sec/sec06100.html](https://www.arcat.com/divs/sec/sec06100.shtml)
        5. Application: Framing with dimension lumber.
        6. Application: Rooftop equipment bases and support curbs.
        7. Application: Wood grounds, nailers, and blocking.
        8. Application: Wood furring.
        9. Application: Backing panels.
        10. Application: Building wrap.
        11. Dimension Lumber:
            1. Light Framing: Stud, No. 3 or Standard grade.
            2. Structural Framing: No. 1 grade.
            3. Species: Any species of grade indicated.
            4. Exposed Framing: Appearance grade.
        12. Building Paper:
            1. Material: Asphalt-saturated organic felt, ASTM D 226, Type I, No. 15 felt, unperforated.
        13. Building Wrap:
            1. Material: Air-retarder sheeting made from polyolefins; cross-laminated films, woven strands, or spun-bonded fibers; coated or uncoated; with or without perforations; ASTM E 1677, Type I.
        14. Sill Sealer Gaskets:
            1. Material: Glass fiber strip resilient insulation.
        15. Framing Anchors and Fasteners:
            1. Material: Non-corrosive, suitable for load and exposure. Drywall screws are not acceptable.

PART 3 EXECUTION

* 1. INSTALLATION
     1. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.
     2. Plywood: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial"
     3. Provide nailers, blocking and grounds where required. Set work plumb, level and accurately cut.
     4. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.
     5. Comply with manufacturer's requirements for cutting, handling, fastening and working treated materials.
     6. Restore damaged components. Protect work from damage.

END OF SECTION

SECTION 07 13 00 SHEET WATERPROOFING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide sheet membrane waterproofing.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
        1. Warranty Period: 5 years.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Testing: Flood testing of horizontal applications. PART 2 PRODUCTS
  4. MATERIALS
     1. Foundation Wall Waterproofing:
        1. Manufacture[rs:Polyguard Products, Inc.](https://www.arcat.com/arcatcos/cos34/arc34870.html)[;Term by Bodyguard Products Inc.](https://www.arcat.com/arcatcos/cos50/arc50451.html) or owner approved equal
        2. Type: Self-adhering rubberized asphalt and polyethylene sheet membrane, 60 mils thick, and tensile strength 250 psi.
        3. Accessories: Primers, surface conditioners, termination bars, and protection board. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with other work.
     2. Restore damaged components and test waterproofing for leaks. Clean and protect work from damage.

END OF SECTION

SECTION 07 21 00 THERMAL INSULATION

PART 1 GENERAL

* 1. SUMMARY
     1. Provide thermal insulation and vapor retarders.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Submit for approval test reports.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Board Insulation:
        1. Manufacture[r:Kingspan Insulation LLC](https://www.arcat.com/arcatcos/cos49/arc49893.html)[;Rmax, A Business Unit of the Sika](https://www.arcat.com/arcatcos/cos35/arc35207.html)  [Corporation](https://www.arcat.com/arcatcos/cos35/arc35207.html)[;TimberHP.](https://www.arcat.com/arcatcos/cos53/arc53864.html)or Owner Approved Equal
        2. Application: Exterior cavity walls, outboard of sheathing.
        3. Type: Extruded polystyrene, rigid.
           1. Standard: ASTM C 578.
        4. Type: Unfaced, slag-wool-/rock-wool-fiber.
           1. Standard: ASTM C 612, semi-rigid or rigid, ASTM C 612.
           2. Accessories: Mechanical anchors.
     2. Blanket/Batt Insulation:
        1. Manufacture[r:TimberHP.](https://www.arcat.com/arcatcos/cos53/arc53864.html)
        2. Application: Thermal insulation in studs in exterior walls.
     3. Roof and Deck Insulation:
        1. Manufacture[r:Kingspan Insulation LLC.](https://www.arcat.com/arcatcos/cos49/arc49893.html)
        2. Application: Exterior roofs and decks.
        3. Type: Polyisocyanurate.
     4. Radiant Barriers:
        1. Manufacture[r:Armatherm](https://www.arcat.com/arcatcos/cos51/arc51487.html).
        2. Application: Exterior walls.
        3. Interior Radiation Control Coating: Surface emittance value of 0.1 or less per ASTM C 1371.
        4. Sheet Radiant Barriers: ASTM C 1313.
     5. Roof Insulation Adhesive:
        1. Manufacturer: Refer to[www.arcat.com/divs/sec/sec07210.html](https://www.arcat.com/divs/sec/sec07210.shtml)
        2. Application: Roof insulation adhesive.
        3. Type: Two-component polyurethane froth adhesive.
     6. Vapor Retarder (Not Integral with Insulation):
        1. Manufacture[r:Wolf Home Products](https://www.arcat.com/arcatcos/cos52/arc52495.html).
        2. Application: Exterior walls.
        3. Type: Reinforced 2-ply polyethylene, 6 to 10 mils.
           1. Accessories: Seam tapes. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide full thickness in one layer over entire area, tightly fitting around penetrations.
     2. Pour loose insulation into cavities indicated; provide uniform coverage at correct density and thickness.
     3. Install vapor retarder over entire area of inside face of exterior walls and elsewhere as indicated. Seal all seams and around perimeter and penetrations with duct tape to form a continuous vapor retarder free of holes.
     4. Protect installed insulation and vapor retarder.

END OF SECTION

SECTION 07 25 00 WEATHER BARRIERS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide air and moisture barriers.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction at foundation, walls, roof, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Air and Moisture Barriers:
        1. Manufacture[rs:Custom Building Products](https://www.arcat.com/arcatcos/cos40/arc40625.html)[;Griffolyn, Division of Reef Industries,](https://www.arcat.com/arcatcos/cos32/arc32859.html)  [Inc.](https://www.arcat.com/arcatcos/cos32/arc32859.html)[;KARNAK](https://www.arcat.com/arcatcos/cos33/arc33521.html)[;Kingspan Insulation LLC](https://www.arcat.com/arcatcos/cos49/arc49893.html)[;National Shelter Products, Inc..](https://www.arcat.com/arcatcos/cos43/arc43989.html) or Owner Approved Equal
        2. Type: Self-adhering, vapor retarding, 40 mils.
        3. Transition Materials: Silicone sheet. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Install over entire area, tightly fitting around penetrations and at perimeters.
     2. Protect installed air and moisture barriers.

END OF SECTION

SECTION 07 46 00 SIDING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide exterior clapboard siding.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Fiber-Cement Siding:
        1. Manufacture[rs:Alside](https://www.arcat.com/arcatcos/cos49/arc49250.html)[;Carolina Colortones;](https://www.arcat.com/arcatcos/cos49/arc49676.html)[Cement Board Fabricators](https://www.arcat.com/arcatcos/cos42/arc42275.html)[;James Hardie](https://www.arcat.com/arcatcos/cos33/arc33418.html)  [Building Products, Inc.](https://www.arcat.com/arcatcos/cos33/arc33418.html)[;NewTechWood America Inc.](https://www.arcat.com/arcatcos/cos52/arc52279.html).or Owner Approved Equal
        2. Standard: ASTM C 1186, Type A, Grade II, factory primed.
        3. Surface Texture: Smooth.
        4. Finish: Shop-applied primer and finish. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Allow for expansion and contraction. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged components. Clean and protect work from damage.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

* 1. SUMMARY
     1. Provide flashing and sheet metal.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Flashing and Sheet Metal:
        1. Manufacture[rs:Term by Polyguard Products Inc..](https://www.arcat.com/arcatcos/cos50/arc50451.html) or Owner Approved Equal
        2. Application: Metal counterflashing and base flashing.
        3. Application: Exterior wall flashing and expansion joints.
        4. Application: Exposed metal trim and fascia units.
        5. Application: Elastic roof and wall expansion joint systems.
        6. Metal: Sheet aluminum.
           1. Standard: ASTM B 209, alloy 3003, prefinished 2-coat 70% fluoropolymer, 20 gauge (.0359 inch).
        7. Metal: Extruded aluminum.
           1. Standard: 6063-T52, prefinished 2-coat 70% Fluoropolymer, 0.080 inches for primary legs of extrusion.
        8. Flexible Sheet Membrane Flashing: Nonreinforced flexible black elastic sheet, 50 to 65 mils thick, synthetic rubber.
        9. Laminated Composition Sheet Flashing: 5 ounce copper sheet laminated between 2 layers of bituminous impregnated Kraft paper or saturated fabric.
        10. Elastic Expansion Joints: Factory-fabricated metal-flanged edges to fit curbs and curb substrate.
        11. Soffit Vents: Continuous aluminum strip soffit vents
        12. Ridge Vents: Baffled ridge vent suitable for direct application of shingles.
        13. Auxiliary Materials:
            1. Solder compatible with metal.
            2. Bituminous isolation coating.
            3. Mastic and elastomeric sealants.
            4. Epoxy seam sealer.
            5. Rosin-sized building paper slip sheet.
            6. Polyethylene underlayment.
            7. Reglets and metal accessories.
            8. Gutter and conductor head guards.
            9. Asphaltic roofing cement. PART 3 EXECUTION
  2. INSTALLATION
     1. Follow recommendations of SMACNA Sheet Metal Manual. Allow for expansion. Isolate dissimilar materials.
     2. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     3. Restore damaged components and finishes. Clean and protect work from damage.

END OF SECTION

SECTION 07 71 00 ROOF SPECIALTIES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide manufactured roof specialties.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Insurance Requirements: FM approval or acceptance. PART 2 PRODUCTS
  4. MATERIALS
     1. Roof Drains:
        1. Material: Aluminum.
     2. Vent Stack Flashing:
        1. Material: Aluminum. PART 3 EXECUTION
  5. INSTALLATION
     1. Comply with accessory manufacturers' instructions and recommendations. Coordinate installation with roofing system to ensure weathertight performance. Anchor securely to structure to withstand inward and outward loads.
     2. Isolate dissimilar metals to prevent galvanic corrosion.
     3. Test and operate units; clean, lubricate and adjust moving parts.

END OF SECTION

SECTION 07 81 00 APPLIED FIREPROOFING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide applied fireproofing.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Fire Performance: ASTM E 119, UL requirements and local regulations. PART 2 PRODUCTS
  4. MATERIALS
     1. Concealed Sprayed-On Fireproofing, Mineral Fiber:
        1. Manufacturers: The product shall meet the following performance criteria
        2. Type: Standard density with sealer.
        3. Auxiliary Materials: Primers, adhesive, lath, and reinforcing fabric. PART 3 EXECUTION
  5. INSTALLATION
     1. Schedule and coordinate sequence of work to prevent damage from both weather and other work, to minimize time building is unprotected and to permit adequate observation, testing and inspection before being concealed by other work.
     2. Examine substrates, report in writing all unsatisfactory conditions; beginning work means acceptance of substrate.
     3. Clean, prime and prepare substrates. Comply with manufacturer's instructions and recommendations.
     4. Provide all auxiliary materials necessary and provide reinforcement wherever joint movement is expected.
     5. Provide material thicknesses necessary to provide fire-resistance ratings indicated or required by authorities having jurisdiction.
     6. Owner may employ independent field testing agency. Cooperate and provide samples as requested. Contractor shall pay all costs relating to repair/replacement/retesting of non-

complying work.

* + 1. Remove overspray, repair or replace damaged areas and protect installed fireproofing from damage.

END OF SECTION

SECTION 07 92 00 JOINT SEALANTS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide joint sealers and fillers.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
        1. Include manufacturers full range of color and finish options if additional selection is required.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Field-Constructed Mock-Ups: Each joint type. PART 2 PRODUCTS
  4. MATERIALS
     1. Exterior Joints in Vertical Surfaces, Preformed Compression Seals:
        1. Manufacturers: The product shall meet the following performance criteria
        2. Materials: Preformed precompressed foam sealant.
     2. Exterior Joints in Horizontal Surfaces, Urethane:
        1. Manufacture[rs:Sherwin-Williams](https://www.arcat.com/arcatcos/cos35/arc35477.html).
        2. Materials: Self-leveling urethane sealant, ASTM C 920.
     3. Exterior Paving Joint Fillers, Bituminous:
        1. Manufacturers:
        2. Materials: Bituminous fiber. PART 3 EXECUTION
  5. INSTALLATION
     1. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.
     2. Provide sealants in colors as selected from manufacturer's standards.
     3. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints, and install bond breakers, backer rods and sealant as recommended by manufacturers.
     4. Depth shall equal width up to 1/2 inch wide; depth shall equal 1/2 width for joints over 1/2 inch wide.
     5. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

END OF SECTION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide steel doors and frames.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: ANSI/SDI-100, Recommended Specifications for Standard Steel Doors and Frames.
     3. Performance Standards:
        1. Fire-Rated Assemblies: NFPA 80, and acceptable testing agency listing.
        2. Thermal-Rated Assemblies at Exterior: ASTM C 236 or ASTM C 976.
        3. Sound-Rated Assemblies at Mechanical Rooms: ASTM E 1408, and ASTM E 413. PART 2 PRODUCTS
  4. MATERIALS
     1. Exterior Steel Doors:
        1. Manufacture[rs:AMBICO LIMITED](https://www.arcat.com/arcatcos/cos40/arc40356.html)[;Galaxy Metal Products](https://www.arcat.com/arcatcos/cos48/arc48404.html)[;Novatech Group](https://www.arcat.com/arcatcos/cos51/arc51586.html)[;THERMA-](https://www.arcat.com/arcatcos/cos41/arc41444.html)  [TRU DOORS](https://www.arcat.com/arcatcos/cos41/arc41444.html).or Owner Approved equal.
        2. Material: Minimum 16 gauge galvanized steel sheet.
        3. Door Thickness: 1-3/4 inches, thermally insulated.
        4. Finish: Factory primed and field painted.
        5. Finish: Factory finished.
        6. Accessories:
           1. Sightproof stationary louvers.
           2. Glazing stops.
           3. Silencers.
     2. Exterior Steel Frames:
        1. Manufacture[rs:AMBICO LIMITED](https://www.arcat.com/arcatcos/cos40/arc40356.html)[;Dunbarton Corporation](https://www.arcat.com/arcatcos/cos32/arc32085.html)[;Galaxy Metal](https://www.arcat.com/arcatcos/cos48/arc48404.html)  [Products](https://www.arcat.com/arcatcos/cos48/arc48404.html)[;THERMA-TRU DOORS.](https://www.arcat.com/arcatcos/cos41/arc41444.html) or Owner Approved equal
        2. Material: Minimum 14 gauge galvanized steel sheet.
        3. Corners: Mitered or coped.
        4. Type: Welded.
        5. Type: Knockdown.
        6. Finish: Factory primed and field painted.
        7. Finish: Factory finished.

PART 3 EXECUTION

* 1. INSTALLATION
     1. Fabricate work to be rigid, neat and free from seams, defects, dents, warp, buckle, and exposed fasteners. Install doors and frames in compliance with SDI-100, NFPA 80, and requirements of authorities having jurisdiction.
     2. Provide thermally improved doors with maximum U-value of 0.24 BTU/hr./sq. ft. degree F (ASTM C 236) for all exterior doors and elsewhere as noted.
     3. Provide acoustically improved doors with minimum STC of 33 (ASTM E 90 and ASTM E

413) where indicated.

* + 1. Hardware: Prepare doors and frames to receive hardware on final schedule. Provide for 3 silencers on single doorframes; 2 on double doorframes.
    2. Shop Finish: Clean, treat and prime paint all work with rust-inhibiting primer comparable with finish paint specified in Division 9 section. Provide asphalt emulsion sound deadening coating on concealed frame interiors.
    3. Touch-up damaged coatings ready to receive finish painting.

END OF SECTION

SECTION 08 14 00 FLUSH WOOD DOORS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide flush wood doors.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
     3. Warranty: Submit manufacturers standard warranty. Include labor and materials to repair or replace defective materials.
        1. Solid-Core Exterior Doors: 5 years.
        2. Solid-Core Interior Doors: Life of installation.
        3. Hollow-Core Interior Doors: 2 years.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Quality Standards: [NWWDA I.S.1-A, 'Architectural Wood Flush Doors.'] [AWI's 'Architectural Woodwork Standards.'].
     3. Fire Rated Wood Doors: Meet NFPA 80 requirements. PART 2 PRODUCTS
  4. MATERIALS
     1. Interior Flush Wood Doors:
        1. Manufacturers: The product shall meet the following performance criteria:
        2. Type: Solid core.
        3. Thickness: 1-3/8 inches thick.
        4. Grade: Economy.
        5. Frames: Metal.
        6. Face: Birch veneer.
        7. Finish: Transparent.
        8. Finish Application: Factory finished.
        9. Auxiliary Materials:
           1. Glazed panels.
           2. Transom panels.
           3. Louvered panels. PART 3 EXECUTION
  5. INSTALLATION
     1. Comply with NWMA I.S. 1A and specified quality standard.
     2. Prefit doors to frames. Premachine doors for hardware listed on final schedules. Factory bevel doors.
     3. Install doors with not more than 1/8 inch clearance at top and sides, 1/4 inch at bottom. Comply with NFPA 80 for rated assemblies.
     4. Adjust, clean, and protect.

END OF SECTION

SECTION 08 41 13 ENTRANCES AND STOREFRONTS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide entrances and storefront.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
        1. Warranty Period: 5 years.
     4. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Aluminum Entrances and Storefront:
        1. Door Style: Thin stile and rail doors.
        2. Storefront Style: Aluminum framed.
        3. Glass and Glazing: Insulating glazing, tempered.
        4. Glazing Color: Clear with Low-e coating.
        5. Door Hanging Devices: Ball bearing butts.
        6. Closers: Concealed mounted.
        7. Closer Operation: Single acting closers.
        8. Aluminum Finish: Clear anodized.
        9. Aluminum Finish: Fluoropolymer, 2-coat. PART 3 EXECUTION
  2. INSTALLATION
     1. Take field measurements before fabrication where possible; do not delay job progress.
     2. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     3. Anchor securely in place; install plumb, level and in true alignment. Isolate dissimilar

materials to prevent corrosion.

* + 1. Coordinate with glass and glazing work; install hardware and adjust for smooth, proper operation.
    2. Clean and protect completed system; repair damage.

END OF SECTION

SECTION 08 41 26 ALL-GLASS ENTRANCES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide all-glass entrances and storefront.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
        1. Warranty Period: 5 years.
     4. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. All-Glass Entrances:
        1. Glass Color: Clear.
        2. Door Fittings: Aluminum, clear anodized.
           1. Standard: ASTM B 221, alloy 6063 T5. PART 3 EXECUTION
  2. INSTALLATION
     1. Comply with door manufacturer's instructions and recommendations. Provide concealed reinforcing as necessary.
     2. Install framing and trim units level, plumb and true to line.
     3. Install glass to avoid direct metal-to-glass contact. Provide weathertight installations.
     4. Adjust operating hardware for smooth, proper operation.
     5. Protect and clean work.

END OF SECTION

SECTION 08 51 13 ALUMINUM WINDOWS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide aluminum windows.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
     4. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
        1. Warranty Period: 5 years.
     5. Maintenance Data: Submit manufacturer's maintenance data, including maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
     3. Performance: Comply with AAMA/NWWDA 101/I.S.2 for grade of window required. PART 2 PRODUCTS
  4. MATERIALS
     1. Aluminum Windows:
        1. Window Operation: Fixed windows.
        2. Grade: Commercial.
           1. Standard: AAMA/NWWDA 101/I.S. 2, Grade 40.
        3. Glazing: Insulating glass with low-e coating.
        4. Glazing Color: Clear glass.
        5. Aluminum Finish: Clear anodized. PART 3 EXECUTION
  5. INSTALLATION
     1. Fabricate windows to conform to AAMA standards and accept glass specified.
     2. Install materials and systems in accordance with manufacturer's instructions and approved

submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

* + 1. Operation: Provide locking units with manual operation; provide pole for out of reach hardware.
    2. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide gypsum board assemblies.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Tolerances: Not more than 1/16-inch difference in true plane at joints between adjacent boards before finishing. After finishing, joints shall be not be visible. Not more than 1/8 inch in 10 feet deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.
     3. Fire Resistance for Fire-Rated Assemblies: ASTM E 119.
     4. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship and level of finish.
     5. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Gypsum Board:
        1. Application: Interior walls, partitions, and ceilings with tape and joint compound finish.
     2. Glass-Mat Water-Resistant Gypsum Backing Board:
        1. Manufacturers: Gold Bold or Owner Approved Equal
        2. Material Standard: ASTM C1178.
        3. Type: Regular and fire-resistant as required.
           1. Typical Thickness: 1/2 inch.
           2. Typical Thickness: 5/8 inch. PART 3 EXECUTION
  2. INSTALLATION
     1. Install gypsum board for tape and 3-coat joint compound finish in compliance with ASTM C 840 and GA 216, Level 4 finish. Install gypsum board assemblies true, plumb, level and in proper relation to adjacent surfaces.
     2. Provide fire-rated systems where indicated and where required by authorities having

jurisdiction.

* + 1. Install boards vertically. Do not allow butt-to-butt joints and joints that do not fall over framing members.
    2. Where new partitions meet existing construction, remove existing cornerbeads to provide a smooth transition.
    3. Provide insulation full height and thickness in partitions at conference rooms, toilet rooms, between different occupancies, and where required.
    4. Provide acoustical sealant at both faces at top and bottom runner tracks, wall perimeters, openings, expansion and control joints.
    5. Install trim in strict compliance with manufacturer's instructions and recommendations.
    6. Repair surface defects. Leave ready for finish painting or wall treatment.

END OF SECTION

SECTION 09 22 16

NON-STRUCTURAL METAL FRAMING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide non-structural metal framing for gypsum board assemblies.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Tolerances: Not more than 1/8 inch in 10 feet deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.
     3. Fire Resistance for Fire-Rated Assemblies: ASTM E 119.
     4. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship and level of finish.
     5. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Steel Framing for Walls and Partitions:
        1. Manufacture The product shall meet the following performance criteria:
        2. Material Standard: ASTM C645.
        3. Stud Thickness: 22 gauge (.0276 inch).
        4. Stud Depth, Typical: 3-5/8 inches.
        5. Stud Depth, Typical: 6 inches.
        6. Furring Channel Thickness: 20 gauge (.0329 inch).
        7. Auxiliary Framing Components: Furring brackets, resilient furring channels, Z-furring members, and non-corrosive fasteners.
     2. Steel Framing for Suspended and Furred Ceilings:
        1. Attachment: Standard.
        2. Stud Thickness: 25 gauge (.0179 inch). PART 3 EXECUTION
  2. INSTALLATION
     1. Provide fire-rated systems where indicated and where required by authorities having jurisdiction.
     2. Where new partitions meet existing construction, remove existing cornerbeads to provide a smooth transition.
     3. Provide acoustical sealant at both faces at top and bottom runner tracks, wall perimeters, openings, expansion and control joints.

END OF SECTION

SECTION 09 30 00 TILING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide tile.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
        1. Include manufacturers full range of color and finish options if additional selection is required.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Tile: ANSI A 137.1.
     3. Tile Setting Materials: ANSI A 118 series standard specifications.
     4. Tile Installation: ANSI 108 series standard specifications and Tile Council of America, Handbook for Ceramic Tile Installation.
     5. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship. PART 2 PRODUCTS

2.1 MATERIALS

|  |  |  |
| --- | --- | --- |
| A. | Tile: |  |
|  | 1. | Application: Interior wall tile over tile backer board at wet areas. |
|  | 2. | Application: Interior floor tile over concrete slab. |
|  | 3. | Type: Porcelain tile. |

1. Setting Materials:
   1. Manufacture : Floor and Décor or Owner Approved Equal
   2. Model: Prado Gray or Owner shall select tile
   3. Mortar setting bed.
      1. Latex additive.
   4. Thin-set mortar.
      1. Dry-set Portland cement mortar.
      2. Latex-Portland cement mortar.
      3. Conductive dry-set mortar.
      4. Chemical-resistant epoxy adhesive.
      5. Chemical-resistant furan mortar.
      6. Modified epoxy emulsion mortar.
   5. Organic adhesive.
   6. Grout.
      1. Sand-Portland cement grout.
      2. Dry-set grout.
      3. Latex-Portland cement grout.
      4. Chemical-resistant epoxy grout.
      5. Chemical-resistant furan resin grout.
      6. Silicone rubber elastomeric grout for pregrouted sheets.
   7. Waterproofing membrane under tile.
      1. ANSI A 118.10.
   8. Crack suppression membrane under tile.
      1. ANSI A 118.10.
   9. Elastomeric sealants.
   10. Stone thresholds. PART 3 EXECUTION
   11. INSTALLATION
       1. Comply with Tile Council of America and ANSI Standard Specifications for Installation for substrate and installation required. Comply with manufacturer's instructions and recommendations.
       2. Install waterproof membrane in accordance with manufacturer's instructions and recommendations.
       3. Lay tile in grid pattern with alignment grids. Layout tile to provide uniform joint widths and to minimize cutting; do not use less than 1/2 tile units.
       4. Provide sealant joints where recommended by TCA and approved by Architect.
       5. Grout and cure, clean and protect.
   12. SCHEDULE
       1. Tile Schedule: [Insert here -- following are examples only]
          1. Toilet Room Walls: Glazed ceramic mosaic tile over tile backer board with thin-set latex-modified cement mortar and latex-Portland cement grout.
          2. Toilet Room Floors: Unglazed ceramic mosaic tile over concrete slab with latex- Portland cement mortar and latex-Portland cement grout.

END OF SECTION

SECTION 09 51 00 ACOUSTICAL CEILINGS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide acoustical ceilings and suspension systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
     3. Extra Stock: Submit extra stock equal to 2 percent of amount installed.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities. Acoustical performance based on project requirements.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Manufacturer: Armstrong or Owner Approved Equal
     2. Model: canyon
     3. Mineral Fiber Acoustical Ceilings:
        1. Panel Size: 24 by 24 inches.
        2. Panel Edge: Reveal.
        3. Grid: Exposed flush grid.
        4. Suspension System: Intermediate duty. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and suspension systems in accordance with manufacturer's instructions and recommendations, and ASTM C 636. Coordinate installation with location of mechanical and electrical work to ensure proper locations and anchorage.
     2. Level ceiling to within 1/8 inch in 10 feet in both directions. Scribe and cut panels to fit accurately. Measure and layout to avoid less than half panel units.
     3. Removal and reinstallation at existing ceilings: Remove and store materials for reuse when allowed. Handle with white gloves and avoid damaging corners and edges. Clean tiles and grid system, which have been removed. Provide additional materials to complete the work and to replace damaged existing materials. New materials shall match existing materials as approved.
     4. Adjust, clean, and touch-up all system components.

END OF SECTION

SECTION 09 65 00 RESILIENT FLOORING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide resilient flooring and floor preparation.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
     3. Extra Stock: Submit extra stock equal to 2% of total used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Performance: Fire performance meeting requirements of building code and local authorities. PART 2 PRODUCTS
  4. MATERIALS
     1. Luxury Vinyl Tile Flooring:
        1. Manufacture: Daltile
        2. Model:Halsatt
        3. Type: Vinyl Composition Tile: ASTM F 1066, Class 2 through-pattern.
        4. Size: 6 by 48 inches.
        5. Thickness: 3/32 inch.
        6. Auxiliary Materials:
           1. Edge strips and terminations.
           2. Leveling compound. PART 3 EXECUTION
  5. INSTALLATION
     1. Comply with manufacturer's instructions and recommendations. Install in proper relation to adjacent work.
     2. Prepare surfaces by cleaning, leveling and priming as required. Test adhesive for bond before general installation. Level to 1/8' in 10' tolerance.
     3. Tile Flooring: Install tile with tight joints and with one-way pattern. Layout to prevent less than 1/2 tile units.
     4. Sheet Flooring: Install flooring with tight joints and pattern in adjoining areas running in the same direction. Layout to minimize seams as approved.
     5. Clean, polish, and protect.

END OF SECTION

SECTION 09 65 13 RESILIENT BASE AND ACCESSORIES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide resilient wall base and accessories.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
     3. Submit extra stock equal to 2% of total used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Performance: Fire performance meeting requirements of building code and local authorities. PART 2 PRODUCTS
  4. MATERIALS
     1. Resilient Wall Base:
        1. Type: TV (vinyl).
        2. Group: I (solid, homogeneous)
        3. Style: Straight.
        4. Thickness: 0.125 inch
        5. Height: 4 inches. PART 3 EXECUTION
  5. INSTALLATION
     1. Comply with manufacturer's instructions and recommendations. Install in proper relation to adjacent work.
     2. Install base and accessories to minimize joints. Install base with joints as far from corners as practical.
     3. Clean, polish, and protect.

END OF SECTION

SECTION 09 91 00 PAINTING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide painting and surface preparation.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
        1. Include manufacturers full range of color and finish options if additional selection is required.
     3. Extra Stock: Submit 2 unopened gallons of each paint and color used in the project.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Regulations: Compliance with VOC and environmental regulations.
     3. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.
        1. Provide 4 foot x 4 foot mock-ups of each type of surface. PART 2 PRODUCTS
  4. MATERIALS
     1. Painting:
        1. Application: Interior unfinished surfaces.
        2. Primary Coating Type: Latex based paints.
        3. Primary Paint Systems: Primer plus two finish coats. PART 3 EXECUTION
  5. INSTALLATION
     1. Inspect surfaces, report unsatisfactory conditions in writing; beginning work means acceptance of substrate.
     2. Comply with manufacturer's instructions and recommendations for preparation, priming and coating work. Coordinate with work of other sections.
     3. At existing areas to be repainted, remove blistered or peeling paint to sound substrates. Remove chalk deposits and mildew and wash all surfaces with mild detergent. Perform related minor preparation including caulk and glazing compounds. Spot prime bare areas before priming and painting as specified.
     4. Match approved mock-ups for color, texture, and pattern. Re-coat or remove and replace work which does not match or shows loss of adhesion. Clean up, touch up and protect work.
  6. PAINT SCHEDULE
     1. Gypsum Drywall Walls:
        1. Gloss:
           1. Semi
        2. System:
           1. 1 coat latex primer
           2. 2 coats latex finish
     2. Gypsum Drywall Walls and Ceilings in Bathrooms, Kitchens and Wet Areas:
        1. Gloss:
           1. Semi
        2. System:
           1. 1 coat latex primer
           2. 2 coats latex finish
     3. Gypsum Drywall Ceilings:
        1. Gloss:
           1. Flat
        2. System:
           1. 1 coat latex primer
           2. 2 coats latex finish
     4. Wood for Painted Finish:
        + 1. High
        1. System:
           1. 1 coat latex enamel
           2. 2 coats latex enamel

END OF SECTION

SECTION 10 14 00 SIGNAGE

PART 1 GENERAL

* 1. SUMMARY
     1. Provide signage.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Interior Signage:
        1. Material: Plastic.
        2. Copy: Applied die-cut vinyl lettering.
     2. Exterior Panel Signs, Post Mounted:
        1. Type: Framed single-sheet panels.
        2. Copy: Applied.
        3. Material: Fiberglass.
        4. Frame: Extruded aluminum.
        5. Post: Structural aluminum tubing. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 10 21 13 TOILET COMPARTMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide toilet partitions and screens.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Toilet Compartments:
        1. Compartments: Floor-anchored.
        2. Screens: Wall-hung.
        3. Style: Standard privacy style.
        4. Material: Solid phenolic.
           1. High-pressure melamine surface fused to solid phenolic core. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Limit openings between panels, doors and pilasters to less than 1/2".
     3. Adjust hardware, clean, and protect work.

END OF SECTION

SECTION 10 26 00

WALL AND DOOR PROTECTION

PART 1 GENERAL

* 1. SUMMARY
     1. Provide wall corner and door protection systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Performance: Fire performance meeting code requirements. PART 2 PRODUCTS
  4. MATERIALS
     1. Corner Guards:
        1. Type: Resilient plastic corner guards, surface mounted.
     2. Door Protection Systems:
        1. Type: Door surface protection, kick/armor plates. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes. Clean and protect work from damage.

END OF SECTION

SECTION 10 28 13 TOILET ACCESSORIES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide toilet, bath and laundry accessories.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Toilet and Bath Accessories:
        1. Accessory: Paper towel dispensers.
        2. Accessory: Toilet tissue dispensers, single roll.
        3. Accessory: Combination towel dispenser/waste receptacle units.
        4. Accessory: Grab bars.
        5. Accessory: Soap dispensers, wall mounted.
        6. Accessory: Electric hand dryers.
        7. Finish: Chromium plated brass or steel. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 10 30 00 FIREPLACES AND STOVES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide fireplaces and stoves.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Prefabricated Fireplaces:
        1. Manufacturer: FirePlace
        2. Model: Model 4415 HO See-Thru: Top Vent 44 inches wide by 15 inches high glass, linear gas fireplace No. 98500333 or Owner Approved Equal
        3. Fuel: Natural Gas.
        4. Construction: Sheet metal, firebrick lined.
        5. Style: Contemporary, one-sided.
     2. Chimney:
        1. Flue: Insulated, double wall hot-dip galvanized.
        2. Cap: Cage. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 12 20 00 WINDOW TREATMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide window treatments.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Horizontal Louver Blinds:
        1. Slats: Vinyl.
        2. Slat Width: 2 inches. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 12 35 30 RESIDENTIAL CASEWORK

PART 1 GENERAL

* 1. SUMMARY
     1. Provide prefabricated modular kitchen and bathroom casework and countertops.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards: KCMA A161.11. PART 2 PRODUCTS
  4. MATERIALS
     1. Residential Casework:
        1. Application: Kitchens.
        2. Application: Bathrooms.
        3. Materials: Veneer plywood.
        4. Face Style: Reveal overlay.
        5. Frame Fabrication: Face frame.
        6. Finish: Paint.
        7. Finish Application: Factory-finished.
     2. Residential Countertops:
        1. Application: Kitchens.
        2. Application: Bathrooms.
        3. Materials: Solid-surfacing material ANSI Z124.3 with plywood substrate.
        4. Front Profile: Beveled.
        5. Backsplash: Applied, square profile. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes and test for proper operation. Clean and protect work from damage.

END OF SECTION

SECTION 21 03 00 FIRE SUPPRESSION

PART 1 GENERAL

* 1. SUMMARY
     1. Provide fire suppression systems.
     2. Maintain fire alarm system in operation during construction.
     3. Coordinate with Owner's room uses to provide adequate system for all contract areas.
     4. Coordinate location of fire protection systems to avoid interference with location of designated lighting fixture locations. Notify Owner prior to construction of conflicts, which cannot be resolved.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Provide complete sprinkler coverage per NFPA 13. PART 2 PRODUCTS
  4. MATERIALS
     1. Fire Suppression Systems:
        1. Application: Water-based system.
        2. Application: Sprinkler system.
        3. Type: Building fire-suppression water-service piping.
           1. Building fire hydrants.
           2. Fire-department connections.
        4. Type: Fire-suppression sprinkler systems.
           1. Wet-pipe.
           2. Dry pipe.
           3. Preaction.
           4. Combined dry pipe and preaction.
           5. Deluge.
           6. Water spray fixed system.
           7. Sprinkler heads and fittings. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and building code requirements.
     2. Center ceiling-mounted elements in center of ceiling tiles as applicable.
     3. Clearly label all valves and components.
     4. Restore damaged finishes. Test all systems for proper operation in accordance with NFPA 13, 14, and 20. Clean and protect work from damage.
     5. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 22 03 00 PLUMBING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide plumbing systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Coordinate with Owner's room uses to provide adequate system for all contract areas.
     3. Coordinate location of plumbing systems to avoid interference with location of structure and other building systems. Notify Owner prior to construction of conflicts, which cannot be resolved.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Plumbing Systems:
        1. Application: Facility water distribution.
        2. Type: Plumbing pipes and pumps.
           1. Water distribution piping.
           2. Domestic water piping.
           3. Sanitary sewerage.
           4. Storm drains.
           5. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with

applicable regulations and building code requirements.

* + 1. Support piping properly. Pitch to drain points. Install with pipe expansion loops, mechanical expansion joints, and anchors.
    2. Install shutoff valves on each piece of equipment on both hot and cold water supply.
    3. Clearly label all valves and components.
    4. Sterilize water distribution system. Flush and test all systems for proper operation. Adjust system to prevent water hammer.
    5. Restore damaged finishes. Clean and protect work from damage.
    6. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 22 40 00 PLUMBING FIXTURES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide plumbing fixtures and trim.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Standards:
        1. Materials, Products, and Installation: ASME B31.9.
        2. Plastic Piping Components: NSF 14.
     3. Compliance: ANSI A117.1 and local regulations.
     4. Accessibility Requirements: ADAAG and local requirements. PART 2 PRODUCTS
  4. MATERIALS
     1. Plumbing Fixtures:
        1. Manufacturer: See Finish Schedule
        2. Application: Locations indicated.
        3. Sustainable Design: Utility efficient equipment and fixtures.
        4. Sustainable Design: Commissioning.
        5. Plumbing Fixtures:
           1. Water Closets: Suitable for service required.
           2. Urinals: Suitable for service required.
           3. Lavatories: Suitable for service required.
           4. Sinks: Suitable for service required.
           5. Service Sinks: Suitable for service required.
           6. Mop Basins: Materials and fittings suitable for service required.
           7. Bathtubs: Materials and fittings, including shower suitable for service required.
           8. Showers: Enclosure material, receptor material, shower door, fittings.
           9. Whirlpools: Materials, fittings suitable for service required.
           10. Drinking Fountains: Wall hung and pedestal mounting, fittings.
           11. Water Coolers: ARI 100, type, capacity, and fittings suitable for service required.
           12. Wash Fountains: Type, mounting, fittings suitable for service required.
           13. Bidets: Material, floor and wall mounting, fittings suitable for service required.
           14. Outlet Boxes: Hose bibb shutoff, recessed wall-mounting, fittings.
           15. Emergency Equipment: Eyewash and shower stations.
           16. Toilet Seats: Compatible with water closet.
           17. Flushometers: Water closet and urinal types.
           18. Bedpan Washers: Hand-control and foot-control types.
           19. Commercial Faucets: Cast-brass faucets.
           20. Commercial/Residential Faucets: Cast-brass and cast-brass underbody faucets.
           21. Residential/Light Commercial Faucets: Nonmetal underbody faucets.
           22. Bath/Shower Pressure Balance Faucets: Single-lever type.
           23. Bath/Shower Thermostatic Mixing Valve Faucets: Single-lever type.
           24. Shower Receptors: Terrazzo or molded stone type.
           25. Sensor-Operated Faucets and Devices: Automatic operating units.
           26. Fittings, Except Faucets: Supplies, stops, traps, wastes, and escutcheons. aa. Supports: ASME A112.6.1M.

bb. Hot Water Dispensers: ASSE 1023 instant on-off control.

cc. Disposers: Continuous feed type food waste disposer, UL 430. dd. Water Filters: Replaceable cartridge type.

PART 3 EXECUTION

* 1. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and code requirements. Provide proper clearances for servicing.
     2. Support piping properly. Pitch to drain points. Install with pipe expansion loops, mechanical expansion joints, and anchors.
     3. Maintain indicated fire ratings of walls, partitions, ceilings and floors at penetrations. Seal with firestopping to maintain fire rating.
     4. Clearly label and tag all components.
     5. Test and balance all systems for proper operation.
     6. Restore damaged finishes. Clean and protect work from damage.
     7. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 23 00 00

HEATING, VENTILATING, AND AIR CONDITIONING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide heating, ventilating, and air conditioning systems.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Heating, Ventilating, and Air Conditioning:
        1. Manufacturers, Piping, Valves and Fitting: The product shall meet the following performance criteria:
        2. Manufacturers, Small Duct HVAC Systems: Trane
        3. Application: Central heating, ventilating and air-conditioning systems.
        4. Sustainable Design: Energy efficient equipment and fixtures.
        5. Sustainable Design: Energy modeling.
        6. Sustainable Design: Commissioning.
        7. Type: HVAC piping and pumps.
           1. Refrigerant piping.
        8. Type: HVAC air distribution.
           1. HVAC metal and non-metal ducts and casings.
           2. Air-distribution ceiling plenums.
           3. Diffusers, registers, and grilles. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and building code requirements.
     2. Support piping properly. Pitch to drain points. Install with pipe expansion loops, mechanical expansion joints, and anchors.
     3. Install shutoff valves on each piece of equipment on both hot and cold water supply.
     4. Install ductwork in accordance with SMACNA recommendations. Seal duct seams with sealer. Provide splitters and balancing dampers. Provide fire dampers and automatic smoke and fire dampers where required. Provide flexible connectors and inlet and

discharge connections. Clean before testing and balancing.

* + 1. Clearly label and tag all components.
    2. Test and balance all systems for proper operation.
    3. Restore damaged finishes. Clean and protect work from damage.
    4. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 PRODUCTS

* 1. MATERIALS
     1. Common Work Results for Electrical:
        1. Medium-Voltage Cables:
           1. Single and Multiple Conductor Types: UL 1072.
           2. Cable: Cross-linked polyethylene, XLP, insulated, NEMA WC 7.
           3. Cable: Ethylene propylene rubber, EPR, insulated, NEMA WC 8.
           4. Conductors: Class B stranded, annealed copper.
           5. Conductors: Class B stranded, aluminum.
           6. Cable Jacket: PVC.
           7. Cable Jacket: PVC extruded over metal armor.
           8. Cable Jacket: Cross-linked polyolefin.
           9. Metallic Shielding: Copper shielding tape.
           10. Metallic Shielding: Solid copper wires.
           11. Cable Voltage Rating: 15 kV phase to phase.
           12. Insulation Thickness: Corresponding to referenced standard.
           13. Circuit Identification: Color-coded tape.
           14. Three-Conductor Cable Assembly: Shield conductors with grounding conductor.
           15. Type MC Cable Armor: Aluminum interlocked armor.
           16. Type MC Cable Armor: Galvanized steel interlocked armor.
           17. Splices, Terminations, Kits, Cable Seals, Junctions: Suitable for service.
           18. Arc-Proofing Materials: UL fireproofing intumescent tape.
           19. Fault Indicators: Manual reset fault indicator to clamp to cable sheath.
        2. Low-Voltage Cables:
           1. Armored Cable: UL Types AC.
           2. Metal-Clad Cable in Cable Trays: UL Type MC.
           3. Nonmetallic-Sheathed Cable for Lighting Wiring: UL Type NM and NMC.
           4. Aboveground Service Entrance Cable: UL Type SE.
           5. Underground Service Entrance Cable: UL Type USE.
           6. Underground Feeder and Branch-Circuit Cable: UL Type UF.
           7. Portable Cord for Flexible Pendant Leads to Outlets and Equipment: UL Type S.
           8. Control/Signal Transmission Media: Single conductor coaxial type.
           9. Flat Cabling System for Power Under Carpet Tile: Factory-laminated assembly.
           10. Flat Cabling System for Tel/Data Transmission Under Carpet Tile: Flat cable.
           11. Fiber Optic Cables: Single channel low-loss glass type.
           12. 7.Wire Components:
           13. Conductors, No. 10 AWG and Smaller: Solid.
           14. Conductors, No. 8 AWG and Larger: Stranded.
           15. Insulation: THW, THHN/THWN or XHHW as applicable.
           16. Jackets: Factory-applied nylon or PVC.
           17. Conductor Material: Copper.
           18. Conductor Material: Copper-clad aluminum.
           19. Conductor Material: Aluminum.
        3. Nonmetallic Conduit and Ducts:
           1. Electrical Nonmetallic Tubing (ENT): NEMA TC 13.
           2. Rigid Nonmetallic Conduit (RNC): NEMA TC 2 and UL 651, PVC.
           3. Underground PVC and ABS Plastic Utilities Duct: NEMA TC 6.
           4. PVC and ABS Plastic Utilities Duct Fittings: NEMA TC 9.
           5. Liquidtight Flexible Nonmetallic Conduit and Fittings: UL 1660.
        4. Boxes and Fittings:
           1. Cabinet Boxes: UL 50, sheet steel, NEMA 1.
           2. Pull and Junction Boxes: UL 50, steel boxes.
           3. Metal Outlet, Device and Small Wiring Boxes: UL 514A and OS 1.
           4. Nonmetallic Outlet, Device and Small Wiring Boxes: NEMA OS 2.
        5. Raceway Accessory Materials:
           1. Conduit Bodies: NEC requirements.
           2. Wireways: NEC requirements.
           3. Surface Raceways, Metallic: Galvanized steel, with snap-on covers.
           4. Surface Raceways, Nonmetallic: Rigid PVC, UL 94.

END OF SECTION

SECTION 26 51 00 INTERIOR LIGHTING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide interior lighting.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Compliance: NFPA 70 "National Electrical Code." PART 2 PRODUCTS
  4. MATERIALS
     1. Interior Lighting:
        1. Manufacture: Cooper.
        2. Application: Locations indicated.
        3. Sustainable Design: Utility efficient equipment and fixtures.
        4. Sustainable Design: Commissioning.
        5. Components: Suitable for service.
           1. Fluorescent Fixtures: UL 1570; ballasts, UL 935, energy saving.
           2. High Intensity Discharge (HID) Fixtures: UL 1572; ballasts, UL 1029.
           3. Incandescent Fixtures: UL 1571.
           4. LED Fixtures: UL 844.
           5. LED Light Source: UL 8750.
           6. Fixtures for Hazardous Locations: UL 844.
           7. Track Lighting Systems: UL 1574.
           8. Exit Signs: UL 924, self-powered battery type and luminous source type.
           9. Emergency Lighting Units: UL 924.
           10. Emergency Fluorescent Power Supply: UL 924.
           11. Lamps: ANSI Standards, C78 series.
           12. Suspended Fixture Support Components: Stem, rod, and hook hangers. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Provide proper clearances for servicing.
     2. Maintain indicated fire ratings of walls, partitions, ceilings and floors at penetrations. Seal with firestopping to maintain fire rating.
     3. Test all systems for proper operation. Label circuits in electrical panels.
     4. Restore damaged finishes. Clean and protect work from damage.
     5. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 26 56 00 EXTERIOR LIGHTING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide exterior lighting.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Compliance: NFPA 70 "National Electrical Code." PART 2 PRODUCTS
  4. MATERIALS
     1. Exterior Lighting:
        1. Manufacture: Cooper Lighting or Owner Approved Equal.
        2. Application: Area and site lighting.
        3. Application: Parking garage lighting.
        4. Application: Wall mount lighting.
        5. Application: Architectural floodlighting.
        6. Application: Industrial floodlighting.
        7. Application: Accent and pathway lighting.
        8. Application: Locations indicated.
        9. Sustainable Design: Utility efficient equipment and fixtures.
        10. Sustainable Design: Commissioning.
        11. Exterior Lighting Components:
            1. Fluorescent Fixtures: UL 1570; ballasts, UL 935, energy-saving.
            2. High Intensity Discharge (HID) Fixtures: UL 1572; ballasts, UL 1029.
            3. Incandescent Fixtures: UL 1571.
            4. LED Fixtures: UL 844.
            5. LED Light Source: UL 8750.
            6. Lamps: ANSI Standards, C78 series.
        12. Fixture Support Poles, Mast Arms and Brackets:
            1. Steel tubing.
            2. Aluminum.
            3. Fiberglass.
            4. Laminated wood.
            5. Pressure-treated wood.
            6. Prestressed concrete. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and code requirements. Provide proper clearances for servicing.
     2. Clearly label and tag all components.
     3. Test and balance all systems for proper operation.
     4. Restore damaged finishes. Clean and protect work from damage.
     5. Instruct Owner's personnel in proper operation of systems.

END OF SECTION

SECTION 31 20 00 EARTH MOVING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide earthwork operations.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Test Reports: Submit for approval test reports, list of materials and gradations proposed for use.
  3. QUALITY ASSURANCE
     1. Compaction:
        1. Under structures, building slabs, steps, pavements, and walkways, 95 percent maximum density, ASTM D 1557.
        2. Under lawns or unpaved areas, 90 percent maximum density, ASTM D 1557.
     2. Grading Tolerances Outside Building Lines:
        1. Lawns, unpaved areas, and walks, plus or minus 1 inch.
        2. Pavements, plus or minus 1/2 inch.
     3. Grading Tolerance for Fill Under Building Slabs: Plus or minus 1/2 inch measured with 10- foot straightedge.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Earthwork:
        1. Manufacturers: The product shall meet the following performance criteria:
        2. Application: Excavation, filling, compacting and grading operations both inside and outside building limits as required for below-grade improvements and to achieve grades and elevations indicated. Provide trenching and backfill for mechanical and electrical work and utilities.
        3. Application: Suitable fill from off-site if on-site quantities are insufficient or unacceptable, and legal disposal of excess fill off-site.
        4. Subbase Material: Graded gravel or crushed stone.
        5. Bedding Course: Graded crushed gravel and sand.
        6. Borrow Soil: Off-site soil for fill or backfill.
        7. Drainage Fill: ashed gravel or crushed stone.
        8. Common Fill: Mineral soil free from unsuitable materials.
        9. Structural Fill: Graded gravel.
        10. Impervious Fill: Gravel and sand mixture. PART 3 EXECUTION
  2. INSTALLATION
     1. Excavation is unclassified and includes excavation to subgrade regardless of materials encountered. Repair excavations beyond elevations and dimensions indicated as follows:
        1. At Structure: Concrete or compacted structural fill.
        2. Elsewhere: Backfill and compact as directed.
     2. Maintain stability of excavations; coordinate shoring and bracing as required by authorities having jurisdiction. Prevent surface and subsurface water from accumulating in excavations. Stockpile satisfactory materials for reuse, allow for proper drainage and do not stockpile materials within drip line of trees to remain.
     3. Compact materials at the optimum moisture content as determined by ASTM D 1557 by aeration or wetting to the following percentages of maximum dry density:
        1. Structure, Pavement, Walkways: Subgrade and each fill layer to 95% of maximum dry density to suitable depth.
        2. Unpaved Areas: Top 6" of subgrade and each fill layer to 90% maximum dry density.
     4. Place acceptable materials in layers not more than 8" loose depth for materials compacted by heavy equipment and not more than 4" loose depth for materials compacted by hand equipment to subgrades indicated as follows:
        1. Structural Fill: Use under foundations, slabs on grade in layers as indicated.
        2. Drainage Fill: Use under designated building slabs, at foundation drainage and elsewhere as indicated.
        3. Common Fill: Use under unpaved areas.
        4. Subbase Material: Use under pavement, walks, steps, piping and conduit.
     5. Grade to within 1/2" above or below required subgrade and within a tolerance of 1/2" in 10'.
     6. Protect newly graded areas from traffic and erosion. Recompact and regrade settled, disturbed and damaged areas as necessary to restore quality, appearance, and condition of work.
     7. Control erosion to prevent runoff into sewers or damage to sloped or surfaced areas.
     8. Control dust to prevent hazards to adjacent properties and vehicles. Immediately repair or remedy damage caused by dust including air filters in equipment and vehicles. Clean soiled surfaces.
     9. Dispose of waste and unsuitable materials off-site in a legal manner.

END OF SECTION

SECTION 32 12 16 ASPHALT PAVING

PART 1 GENERAL

* 1. SUMMARY
     1. Provide hot-mixed asphalt paving.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Test Reports: Submit for approval test reports.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Construction Tolerances:
        1. Base Course Thickness: Within 1/2 inch.
        2. Surface Course Thickness: Within 1/4 inch.
        3. Base Course Surface Smoothness: Within 1/4 inch.
        4. Surface Course Surface Smoothness: Within 3/16 inch. No ponding acceptable.
        5. Crowned Surfaces: Within 1/4 inch from template. PART 2 PRODUCTS
  4. MATERIALS
     1. Hot-Mixed Asphalt Paving:
        1. Manufacturers: The product shall meet the following performance criteria:
        2. Application: Roadways.
        3. Application: Sidewalks.
        4. Application: Base for pavers.
        5. Asphalt-Aggregate Mixture: Plant-mixed, hot-laid asphalt-aggregate mixture, ASTM D 3515, complying with local DOT and DPW regulations.
        6. Prime Coat: Cut-back asphalt, ASTM D 2027.
        7. Tack Coat: Emulsified asphalt, ASTM D 977.
        8. Herbicide Treatment: EPA registered chemical for weed control.
        9. Marking Paint: Alkyd-resin type, lead and chromate free, white or yellow.
        10. Wheel Stops: Precast, concrete. PART 3 EXECUTION
  5. INSTALLATION
     1. Asphalt/Aggregate Mixture: Comply with local DOT or DPW Standard Specifications for Highways and Bridges. Class as required by loading and use.
     2. Remove loose material from compacted subbase. Proof roll and check for areas requiring additional compaction. Report unsatisfactory conditions in writing. Beginning of work means acceptance of subbase.
     3. Apply prime coat to prepared subbase. Apply tack coat to previous laid work and adjacent in-place concrete surfaces.
     4. Place asphalt concrete at minimum temperature of 225 degrees F in strips not less than 10' wide overlapping previous strips. Complete entire base course before beginning surface course.
     5. Construct curbs to dimensions indicated or if not indicated to standard shapes. Provide tack coat between curb and pavement.
     6. Begin rolling when pavement can withstand weight of roller. Roll while still hot to obtain maximum density and to eliminate roller marks.
     7. Provide 4' lane and striping paint in uniform, straight lines. Provide wheel stops where indicated and securely dowel into pavement. Protect work from traffic and damage.
     8. Test in-place asphalt work for thickness and smoothness. Remove and replace defective work and patch to eliminate evidence of patching

END OF SECTION

SECTION 32 30 00 SITE IMPROVEMENTS

PART 1 GENERAL

* 1. SUMMARY
     1. Provide site improvements and amenities.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Site Improvements:
        1. Type: Site lighting, pole mounted fixtures. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Restore damaged finishes and test for proper function. Clean and protect work from damage.

END OF SECTION

SECTION 32 92 00 TURF AND GRASSES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide turf and grasses.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
     2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
     3. Maintenance Data: Submit maintenance data, including maintenance schedule.
     4. Notices: Submit 48-hour written notice prior to turnover to Owner for watering and maintenance.
     5. Warranty: Warrant turf and grasses for a period of one year after date of Substantial Completion, against defects including death and unsatisfactory growth and except for defects resulting from neglect by Owner, abuse by others, or natural phenomena. Replace unsatisfactory turf and grass material at end of warranty period at no additional expense to the Owner. One replacement is required.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
     2. Testing: Laboratory testing for suitable soil amendments and fertilizer. PART 2 PRODUCTS
  4. MATERIALS
     1. Turf and Grasses:
        1. Application: Turf and grasses. PART 3 EXECUTION
  5. INSTALLATION
     1. Install materials in accordance with approved submittals. Install landscape work in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
     2. Prepare topsoil by mixing fertilizer with loam. Apply fertilizer at a rate of 2 pounds of actual nitrogen per 1000 sq. ft. for plant beds and 2 pounds per inch of trunk for tree pits.
     3. Install soil mix to a depth of 18' in plant beds.
     4. For seeded lawns, apply seed at rate of 5 pounds per 1000 square feet.
     5. For lawns with sod, place sod tightly, with grain in same direction.
     6. Provide maintenance and watering until turnover to Owners for maintenance and watering. Replace damaged materials and dead or unhealthy turf and grasses prior to turnover to Owner.

END OF SECTION

SECTION 33 40 00 STORM DRAINAGE UTILITIES

PART 1 GENERAL

* 1. SUMMARY
     1. Provide subdrainage systems for foundations and slabs.
  2. SUBMITTALS
     1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
  3. QUALITY ASSURANCE
     1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

PART 2 PRODUCTS

* 1. MATERIALS
     1. Storm Drainage Systems:
        1. Manufacture: The product shall meet the following performance criteria:
        2. Application: Water detention chambers and infiltration systems.
        3. Application: Geotextile membranes and geogrid.
        4. Application: Water retention cells.
        5. Application: Pond and reservoir liners.
        6. Pipe and Fittings: Perforated clay pipe.
        7. Pipe and Fittings: Perforated concrete pipe.
        8. Pipe and Fittings: Porous concrete pipe.
        9. Pipe and Fittings: Clay drain tile.
        10. Pipe and Fittings: Concrete drain tile.
        11. Pipe and Fittings: Cast-iron pipe.
        12. Pipe and Fittings: Polyethylene pipe.
        13. Pipe and Fittings: PVC pipe.
        14. Pipe and Fittings: Perforated PVC pipe.
        15. Pipe and Fittings: ABS plastic pipe.
        16. Geotextile: Nonwoven membrane.
        17. Water Storage Cells: Injection molded plastic panels.
        18. Accessories:
            1. Open-joint screening, asphalt-or coal tar saturated roofing felt, copper mesh, or woven geotextile filter fabric.
            2. Pipe couplings.
            3. Cleanouts.
            4. Sleeves.
            5. Drainage conduits.
            6. Prefabricated drainage panels with drainage core and filter fabric.
            7. Composite drainage panels with insulating drainage core and filter fabric. PART 3 EXECUTION
  2. INSTALLATION
     1. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide cleanouts.
     2. Connect to above-grade and below-grade drainage systems. Drain system to approved location. Test for proper operation. Clean system out and protect work from damage.

END OF SECTION