DIGroupArchitecture
ARCHITECTURE FOR CHANGE

ADDENDUM NO. 1

Renovations to:
Gerald Green Parking Garage
Project No.: 25.022

Addendum Date:
12-04-2025

Project Dated: 11-03-2025

The original specifications and drawings, for the project noted above have been amended as noted in this Addendum. Receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Form of Proposal.

I. THIS ADDENDUM CONSISTS OF THE FOLLOWING :

Number of Pages: **49 pages** (Including the cover page, and description of Addendum)

Included:

- Addendum Cover Memo: Descriptions Pertaining to Sketches, and descriptions of Specification modifications — 3 pages
- Sketches — 2 pages
- Specifications — 42 pages
- Pre-Bid Conference Sign-In Sheet — 1 page
- Return Email Confirmation Sheet — 1 page

II. **SKETCHES:**

Pertaining to Sketches:

1. Sketch SKA-101.1: dated 12/05/2025 which describes demolition of an existing guard booth assembly, and also supply and installation of a new prefabricated guard booth that shall be included in the Base Bid scope of work of this project for the General Contractor to furnish and install.
2. Sketch SKE-201.1: dated 12/05/2025 which describes the electrical scope in regards to the guard booth that shall be included in the Base Bid scope of work of this project for the General Contractor to furnish and install.

SPECIFICATIONS:

Pertaining to Specifications:

1. The following technical specification section has been revised and is attached herein. Replace this spec. section originally issued on 11/03/2025 with the corresponding new version, dated 12/05/2025:
   A. BID PROPOSAL/SCHEDULE OF PRICES (6 pages), dated 12/05/2025, clarifying:
   Additional Alternate Bid number 7 is now listed for the Bidders to quote.
   Additional Unit Prices numbers 9, 10, 11, & 12 are now listed for the Bidders to quote.

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2. The following technical specification section has been revised and is attached herein. Replace this spec. section originally issued on 11/03/2025 with the corresponding new version, dated 11/21/2025:
   A. 01 22 00 Unit Prices (3 pages), dated 11/21/2025, clarifying: Additional Unit Prices numbers 9, 10, 11, & 12 are now listed for the Bidders to quote.

3. The following technical specification section has been revised and is attached herein. Replace this spec. section originally issued on 11/03/2025 with the corresponding new version, dated 12/05/2025:
   A. 01 23 00 Alternates (2 pages), dated 12/05/2025, clarifying: Additional Alternate Number 7 is now listed for the Bidders to quote.

4. The following technical specification section has been revised and is attached herein. Replace this spec. section originally issued on 11/03/2025 with the corresponding new version, dated 11/21/2025:
   A. Section 04 01 10 FAÇADE CLEANING (5 pages), is revised as follows:
      i. Remove the following text from this section:
      CLEANERS FOR METAL SUBSTRATES: REFER TO ABOVE ARTICLE 3.01 PROTECTION OF THIS SPECIFICATION, AND PROTECT METAL SURFACES AGAINST DAMAGE FROM EXPOSURE CHEMICAL CLEANING SOLUTIONS. UTILIZE SOFT BRISTLE BROOM OR BRUSH + LOW PRESSURE WATER SPRAY. WIPE THE AREA WITH A SOFT BRISTLE BRUSH TO REMOVE DRY SOILING. RINSE WITH MEDIUM PRESSURE WATER SPRAY.
      ii. Replace the above-noted text with the following text:
      CLEANERS FOR METAL SUBSTRATES: REFER TO ABOVE EXECUTION: PROTECTION: ARTICLE OF THIS SPECIFICATION SECTION 04 01 10, AND PROTECT METAL SURFACES AGAINST DAMAGE FROM EXPOSURE CHEMICAL CLEANING SOLUTIONS. UTILIZE SOFT BRISTLE BROOM OR BRUSH + LOW PRESSURE POTABLE WATER SPRAY TO CLEAN METAL SUBSTRATES. WIPE THE AREA WITH A SOFT BRISTLE BRUSH TO REMOVE DRY SOILING. RINSE WITH MEDIUM PRESSURE POTABLE WATER SPRAY.

5. New technical specifications section 131290 Prefabricated Metal Buildings And Shelters (6 pages), dated 11/21/2025 is attached herein and has been added for inclusion in the Project Manual. This new spec. section stipulates the technical specifications of the Prefabricated Aluminum Guard Booth assembly that shall be included in the Base Bid scope of work of this project for the General Contractor to furnish and install.

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6. New technical specifications section 312000 Earthwork (8 pages), dated 11/21/2025 is attached herein and has been added for inclusion in the Project Manual. This new spec. section stipulates the technical specifications of Preparation of Subgrades (for slabs-on-grade, walks, pavements, drainage course for slabs-on-grade) as well as for Subbase Course (for concrete walks and pavements), and for Subbase and Base Course (for asphalt paving) that shall be included in the Base Bid scope of work of this project for the General Contractor to furnish and install.

7. New technical specifications section 321313 Concrete Pavement (12 pages), dated 11/21/2025 is attached herein and has been added for inclusion in the Project Manual. This new spec. section stipulates the technical specifications of Exterior Cement Concrete Pavement that shall be included in the Base Bid scope of work of this project for the General Contractor to furnish and install.

End of Addendum Description

☒ Attachments: Specifications Sections: BID PROPOSAL/SCHEDULE OF PRICES (6-pages); 012200 UNIT PRICES (3-pages); 012300 ALTERNATES (2-pages); 040110 FAÇADE CLEANING (5-pages); 131290 PREFABRICATED METAL BUILDINGS AND SHELTERS (6-pages); 312000 EARTHWORK (8-pages); 321313 CONCRETE PAVEMENT (12-pages); Sketches: SKA-101.1 (1-page), SKE-201.1 (1-page); Pre-Bid Meeting Sign-In Sheet (1 -page).

Signed by: Paul Graebener Date: 12-03-2025

Copies: ☒ Owner ☒ Consultant ☒ Contractor ☒ Const. Manager ☐ ☒ File

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PLEASE SIGN & RETURN BY EMAIL THIS ACKNOWLEDGEMENT SHEET TODAY TO

dschmeling@digrouparchitecture.com

ADDENDUM #1 Received: ☐ **Please Check Box**

Dated: _____ **No. of Pages:** _____

Company Name: _____

Contact Name: _____

EXHIBIT C-1

BID PROPOSAL/SCHEDULE OF PRICES

NAME OF BIDDER: _____

THE BIDDER IS DOING BUSINESS AS (Indicate "An Individual", "A Firm or Partnership", "A Corporation, "A Limited Liability Company", "A Joint Venture"):

_____

MAILING ADDRESS FOR NOTICES TO BIDDER:

_____

_____

STREET ADDRESS FOR COURIER DELIVERY OF NOTICES TO BIDDER:

_____

TELEPHONE NUMBER OF BIDDER:

(Business #) _____
(Telefax #) _____
(Emergency #) _____
(Email) _____

"AUTHORIZED REPRESENTATIVE OF BIDDER"[1]:

NAME _____

TITLE _____

ADDRESS _____

_____

AGENT WITHIN NEW JERSEY UPON WHOM SERVICE SHALL BE MADE IN THE EVENT OF LITIGATION:

NAME _____

_____

[1] The Authorized Representative of Bidder is any member, committee, officer, or representative of the Bidder duly authorized to execute the Contract on behalf of the Bidder. If the Bid is made by an individual, then the Authorized Representative shall be the individual; if made by a firm or partnership, the Authorized Representative shall be any of the general partners; if made by a corporation, the Authorized Representative shall be an official authorized by the corporation as evidenced by Corporate Resolution; if made by a Joint Venture, the Authorized Representative of the Joint Venture shall be the Authorized Representative of each member of the Joint Venture as indicated above for each entity

ADDRESS _____

_____

TELEPHONE _____

DESIGNATED BIDDER'S REPRESENTATIVE FOR QUESTIONS, PROBLEMS, PROCEDURAL REQUIREMENTS AND CONTRACT MATTERS:

NAME _____

ADDRESS _____

TELEPHONE #: _____

The above referenced Bidder offers and agrees, if this Bid is accepted, to enter into an agreement with the Authority to furnish all Work for the Contract Price set forth below and within the Contract Term indicated in the RFB and in accordance with the Contract Documents.

Bidder declares that no person or persons other than those named herein are interested in this Bid; that this Bid is made without collusion with any other person, firm or corporation; and that no person or persons acting in any official capacity for the Authority are directly or indirectly interested in this Bid, or in any portion of the profit thereof.

Bidder further agrees as follows: 1) that this Bid shall remain open and may not be withdrawn as set forth in the RFB; 2) that the Bidder accepts all of the terms and conditions set forth in the RFB including, without limitation, those dealing with the disposition of Bidder's Bid Security; 3) and that, upon acceptance of this Bid, Bidder will execute the Contract and will make all other submissions and furnish the required Contract Security within the time period(s) set forth in the Specifications and Contract Documents.

In accordance with the above understandings and agreements, Bidder will furnish the Work for the unit prices or prices set forth below:

BID PROPOSAL

1. The undersigned Bidder declares:

- That this Bid Proposal is made, without collusion with any other person, firm or corporation;
- That the Bidder has carefully examined the RFB, Addenda, and all other Contract Documents;
- That the Bidder has carefully examined the locations, conditions and classes of material for the proposed Work;
- That it will provide all necessary design services, machinery, tools, apparatus and other means of construction and will do all Work and furnish all the materials called for in the Contract Documents in the manner therein prescribed; and
- That this Bid Proposal includes all applicable insurance expenses and policy costs allocated to the on-site activities of the Project as respects Workers' Compensation, Employer's Liability, Commercial General Liability, Owners Contractors Protective Liability, and Excess/Umbrella Liability.

2. In submitting this Bid Proposal, the Bidder agrees:

- That the Authority has the right to reject this Bid Proposal in accordance with the terms of the RFB.
- To hold this Bid Proposal open for a period of sixty (60) calendar days from the Bid Due Date, unless this time period is extended by mutual agreement of the Bidder and the Authority.
- To accomplish the Scope of Work at the Bid Proposal, in accordance with the Contract Documents.

3. The Bid Proposal shall include:

- Total amount for the furnishing of all design and construction administration services, labor, materials, services, equipment and appliances required in connection with and properly incidental to all Work, in conformance with all Contract Documents. The price of allowances listed in the Specifications and/or by Addenda (um) must be included in the Bidder's Total Lump Sum Bid Proposal. The Bidder understands that the use of the allowance shall be only as directed by the Authority for Authority purposes and only by Change Order that indicates the amounts to be charged to the allowance. Bidders shall refer to Drawings and Specification Section 012100 for additional allowance information.

  In case of a discrepancy between the amount shown in words and the amount shown in figures, the amount shown in words shall govern.

TOTAL LUMP SUM BID PROPOSAL:
The Total Lump Sum Bid Proposal Amount shall include $500,000.00 in Allowances

_____
(In Words)

$_____
(In Figures)

IN WITNESS WHEREOF, the Bidder has caused this instrument to be signed, attested to and sealed.

Bidder:_____
(Legal Firm Name)

By:_____ _____
(Signature) (Print or Type Name)

Title:_____

Address:_____

_____

Telephone No.:_____

Fax No.:_____

Date:_____

Witness:_____

Print or Type Name of Bidder:_____

Date:_____

ALTERNATES

Alternate No. 1: Sheet metal counter flashing at slab to precast joint (in lieu of sealant replacement)

Cost: $ _____

Alternate No. 2: Clean and paint all structural steel in the garage.

Cost: $ _____

Alternate No. 3: Install aluminum shoring beams in lieu of slab replacement. Include a 50% increase of the noted quantities for topside crack repairs, topside erosion repairs and topside spall/subsurface delamination repairs required at areas of existing filigree slab to remain tat are not otherwise documented in the base bid.

Cost: $ _____

Alternate No. 4: Install thermal sprayed cathodic protection system (with slab replacement).

Cost: $ _____

Alternate No. 5: Install thermal sprayed cathodic protection system (without slab replacement).

Cost: $ _____

Alternate No. 6: Install 100 slab to precast spandrel reinforcing angles per Repair # 11.

Cost: $ _____

Alternate No. 7: Demolish and remove existing Guard Booth assembly; supply and install new pre-fabricated Guard Booth assembly, in accordance with specification section 13 12 90, and sketches SKA-101.1 & SKE-201.1.

Cost: $ _____

UNIT PRICES

Bidders shall refer to Drawings and Specification Section 012200 for additional Unit Price information. Provide price to furnish and install, as a base line for changes that deviate from the Project Specifications, not for purposes for determining the low bid:

UNIT PRICE BREAKDOWN:

Unit Price No. 1: Topside crack repairs

Per Linear Foot: $ _____

Unit Price No. 2: CMU wall crack repairs

Per Linear foot: $ _____

Unit Price No. 3: Topside concrete surface erosion repair

Per Square Foot: $ _____

Unit Price No. 4: Topside concrete spall or subsurface delamination repair

Per Square Foot: $ _____

Unit Price No. 5: Steel cleaning and painting

Per Square Foot: $ _____

Unit Price No. 6: Slab to precast spandrel reinforcing angles per Repair # 11

Each: $ _____

Unit Price No. 7: 10 Linear feet of expansion joint assembly replacement at existing precast concrete spandrel panels, performed in accordance with typical spandrel panel expansion joint repair details on Sheet A-010.

Per 10 linear feet: $ _____

Unit Price No. 8: 10 Linear feet of masonry linear crack repair at existing masonry partitions, performed in accordance with typical masonry repair details on Sheet A-011.

Per 10 linear feet: $ _____

Unit Price No. 9: Furnish & install 1 Linear foot of new Concrete Curb(including removal and disposal of existing curb and preparation of site for new curb).

Per 1 Linear Foot: $ _____

Unit Price No. 10: Furnish & install 10 Square feet of new Concrete Sidewalk (includes removal and disposal of existing sidewalk and preparation of site for new sidewalk).

Per 10 Square Feet: $ _____

Unit Price No. 11: 1 Linear foot of 4" Wide Painted Line Striping and Pavement Markings.

Per 1 Linear Foot: $ _____

Unit Price No. 12: Furnish & install 4" Diameter, Galvanized, Painted, Schedule-40 Steel Bollard (8'-0" Tall with 4'-0" embedment), filled w/ Concrete and embedded in 24" Diameter Class-B 4500-PSI Concrete, reinforced with Type 6x6 W2.9xW2.9 Welded Wire Mesh in 18" Dia. Circle (includes excavation and backfill, and removal and repair of 4 square feet of existing pavement assembly surrounding new bollard).

Per Unit: $ _____

AUTHORIZED SIGNATORY OF BIDDER:

_____ _____

Print Name and Title of Authorized Signatory

_____ _____

Signature of Bidder's Authorized Signatory

_____ _____

Date

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.01 DEFINITIONS

A. Unit Price: An amount proposed by a bidder as a price per unit of measurement for a material or service.

B. Estimated Quantity: The anticipated amount of work in the units of measurement for a material or service.

C. Extended Price: The arithmetic product of the Unit Price and the Estimated Quantity.

D. Unit Price Schedule: A portion of the Bid Form that includes Unit Prices for Estimated Quantities of work for materials or services, and Extended Prices.

1.02 PROCEDURES

A. The purpose of unit prices is to establish prices for work for which the specific quantity is not known at the time of bid.

B. A unit price shall include all costs for material, labor, equipment, overhead, insurance, taxes, delivery fees, and any other costs associated with the work, as well as profit.

C. There are two types of unit prices.

1. A unit price may be for work fully-anticipated to be part of the contract, but for which the actual quantity is not known at the time of bid. This type of unit price has an estimated quantity of one (1) or more. The estimated quantity represents the University's best estimate of the amount of that particular work to be required. The Extended Price will be included as part of bid evaluation, and the Extended Price will be part of the contract price at time of contract award. This type of unit price also establishes a basis for payment, and a basis for equitable adjustment to the contract price in the event that the actual quantity of work is different than the estimated quantity of work.

2. A unit price may be for work not necessarily anticipated to be part of the contract, but which may be required during the contract. This type of unit price is based on a quantity of one (1), or a quantity that represents a commonly-accepted base quantity used in purchasing or installing that item if a quantity of one (1) is very small, and this type of unit price will not have an Extended Price. This unit price will not be included as part of bid evaluation, and this unit price will not be a part of the contract price at time of award. This type of unit price establishes a basis for equitable adjustment to the contract price in the event that the work is required. Unit prices of this type will be individually or wholly accepted or rejected at time of award.

D. For Unit Prices identified in paragraph 1.02 C. 1. above, the following apply.

1. If on the bid form submitted by the Contractor there is a discrepancy in correlation between a unit price and an extended price, the unit price shall govern.

2. If the actual quantity required during the contract is different from the estimated quantity, a change in the contract price shall be executed. The change to the contract may include an increase or decrease in the contract time, if appropriate. If the difference between the actual and estimated quantities is significant enough such that the unit price no longer represents a

fair and reasonable price for the actual quantity, an adjustment to the unit price may be negotiated upon request of either party.

3. The Contractor will be paid for unit price work on the basis of actual measured quantities of work satisfactorily performed. Quantities of work different than the estimated quantity shall be ordered in writing by the University.

E. For Unit Prices identified in paragraph 1.02 C. 2.. above, the following apply.

1. Although the unit price is based on an estimated quantity of one (1), or on a commonly-accepted base quantity, the actual work may involve significantly more units.

2. If the work is required, a change to the contract price shall be executed. The change to the contract price shall be established by the unit price, if accepted, and the actual quantity. For any unit price work for which there is not an accepted unit price, that unit price shall be negotiated prior to or at the time of the change order. The change to the contract may include an increase or decrease in the contract time, if appropriate.

3. The Contractor will be paid for unit price work on the basis of actual measured quantities of work ordered in writing by the Owner and satisfactorily performed.

F. In all cases, the following apply.

1. The Owner reserves the right to reject the Contractor's measurement of work associated with unit priced work, and may have the work measured by an independent agent acceptable to the Contractor at the University's expense.

2. Refer to Technical Specification sections for methods of measurement and payment for unit priced work, if applicable.

1.1 LIST OF UNIT PRICES

UNIT PRICES

Provide units prices to furnish and install the following items. These prices will be the agreed upon basis for potential additional work to be performed via change order as requested by and approved by the Owner. All Unit Prices include all costs associated with the work and includes overhead & profit

The cost per additional item will be calculated based on the unit prices indicated below and provided with the contractors bid submission.

Unit Price No. 1: Topside crack repairs

Per Linear Foot: $ _____

Unit Price No. 2: CMU wall crack repairs

Per Linear foot: $ _____

Unit Price No. 3: Topside concrete surface erosion repair

Per Square Foot: $ _____

Unit Price No. 4: Topside concrete spall or subsurface delamination repair

Per Square Foot: $ _____

Unit Price No. 5: Steel cleaning and painting
Per Square Foot: $ _____

Unit Price No. 6: Slab to precast spandrel reinforcing angles per Repair # 11
Each: $ _____

Unit Price No. 7: 10 Linear feet of expansion joint assembly replacement at existing precast concrete spandrel panels, performed in accordance with typical spandrel panel expansion joint repair details on Sheet A-010.
Per 10 Linear Feet: $ _____

Unit Price No. 8: 10 Linear feet of masonry linear crack repair at existing masonry partitions, performed in accordance with typical masonry repair details on Sheet A-011.
Per 10 Linear Feet: $ _____

Unit Price No. 9: Furnish & install 1 Linear foot of new Concrete Curb (including removal and disposal of existing curb and preparation of site for new curb)
Per 1 Linear Foot: $ _____

Unit Price No. 10: Furnish & install 10 Square feet of new Concrete Sidewalk (includes removal and disposal of existing sidewalk and preparation of site for new sidewalk)
Per 10 Square Feet: $ _____

Unit Price No. 11: 1 Linear foot of 4" Wide Painted Line Striping and Pavement Markings
Per 1 Linear Foot: $ _____

Unit Price No. 12: Furnish & install 4" Diameter, Galvanized, Painted, Schedule-40 Steel Bollard (8'-0" Tall with 4'-0" embedment), filled w/ Concrete and embedded in 24" Diameter Class-B 4500-PSI Concrete, reinforced with Type 6x6 W2.9xW2.9 Welded Wire Mesh in 18" Dia. Circle (includes excavation and backfill, and removal and repair of 4 square feet of existing pavement assembly surrounding new bollard)
Per Unit: $ _____

END OF SECTION 012200

SECTION 012300 – ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Execute accepted alternates under the same conditions as other work of the Contract.

C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ADD ALTERNATES

Alternate No. 1: Sheet metal counter flashing at slab to precast joint (in lieu of sealant replacement)

Cost: $ _____

Alternate No. 2: Clean and paint all structural steel in the garage.

Cost: $ _____

Alternate No. 3: Install aluminum shoring beams in lieu of slab replacement. Include a 50% increase of the noted quantities for topside crack repairs, topside erosion repairs and topside spall/subsurface delamination repairs required at areas of existing filigree slab to remain tat are not otherwise documented in the base bid.

Cost: $ _____

Alternate No. 4: Install thermal sprayed cathodic protection system (with slab replacement).

Cost: $ _____

Alternate No. 5: Install thermal sprayed cathodic protection system (without slab replacement).

Cost: $ _____

Alternate No. 6: Install 100 slab to precast spandrel reinforcing angles per Repair # 11.

Cost: $ _____

Alternate No. 7: Demolish and remove existing Guard Booth assembly; supply and install new pre-fabricated Guard Booth assembly, in accordance with specification section 13 12 90, and sketches SKA-101.1 & SKE-201.1.

Cost: $ _____

END OF SECTION 012300

SECTION 04 01 10
FACADE CLEANING

PART 1 - GENERAL

1.01. SCOPE OF WORK

A. Provide all labor, equipment and materials necessary to complete the following:

1. Pre-cast concrete surfaces.

1.02 DEFINITIONS

A. Very Low-Pressure Spray: Under [100 psi (690 kPa)].

B. Low-Pressure Spray: [100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)].

C. Medium-Pressure Spray: [400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)].

D. High-Pressure Spray: [800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)].

1.03 PRE-INSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at the Gerry B. Green Plaza Garage. Attendees shall include Contractor, Construction Manager, AE, and Owner/Facilities Manager.

1. Review methods and procedures related to cleaning the facade including, but not limited to, the following:

a. Verify cleaning equipment and facilities needed to make progress and avoid delays.
b. Materials, material application, and sequencing.
c. Cleaning program.
d. Coordination with building occupants.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include material descriptions and application instructions.
2. Include test data substantiating that products comply with requirements.

1.05 QUALITY ASSURANCE

A. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing pre-cast concrete cleaners that have been used for similar applications with successful results, and with factory-authorized service representatives who are available for consultation and Project-site inspection, preconstruction product testing, and on-site assistance.

B. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used; protection of surrounding materials; and control of runoff during operations. Include provisions for supervising worker performance and preventing damage.

1. If materials and methods other than those indicated are proposed for any phase of cleaning work, add a written description of such materials and methods, including evidence of successful use on comparable projects and demonstrations to show their effectiveness for this Project.

C. Mockups: Prepare mockups of cleaning on existing surfaces to demonstrate aesthetic effects and to set quality standards for materials and execution.

1. Clean an area [approximately 10 sq. ft. (2.3 sq. m)] for each type of surface condition, with each specified product and cleaning method.

a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not test cleaners and methods known to have deleterious effect.
b. Allow a waiting period of no fewer than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.

2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Owner specifically approves such deviations by Change Order.

1.06 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit pre-cast concrete-cleaning work to be performed in accordance with product manufacturers' written instructions and specified requirements.
B. Clean pre-cast concrete surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least seven days after completion of cleaning.

PART 2 - PRODUCTS

2.01 CLEANING MATERIALS

A. Water: Potable.

B. Cleaner for Pre-cast Concrete, Substrates:

1. Basis of Design: Artisan NO PANE Restoration Cleaner, as manufactured by Chemiquie, Inc., Moorestown, NJ.
2. Acceptable equivalent meeting the following criteria:

a. Will not etch glass or metal.
b. Discharge during cleaning has a pH higher than 5.5 and lower than 12.
i. This may require additional dilution of the cleaning product.
c. It’s designed for cleaning of pre-cast concrete facades.

3. Acceptable Alternatives:

    a. SafRestorer by Prosoco, Lawrence, KS
    b. Acceptable equivalent

PART 3 - EXECUTION

3.01 PROTECTION

A. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless products being used will not damage adjacent surfaces. Use protective materials that are waterproof and UV resistant. Apply masking agents in accordance with manufacturer's written instructions. Do not apply liquid strippable masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
2. Do not apply chemical solutions during winds of enough force to spread them to unprotected surfaces.
3. Neutralize alkaline and acid wastes before disposal.
4. Dispose of runoff from operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.02 CLEANING PRE-CAST CONCRETE, GENERAL

A. Cleaning Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 20 ft. (6 m) away by AE.

B. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water do not wash over dry, cleaned surfaces.

C. Use only those cleaning methods indicated for each pre-cast concrete material and location.

1. Brushes: Do not use wire brushes or brushes that are not resistant to chemical cleaner being used.
2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at nozzle. Adjust pressure and volume to ensure that cleaning methods do not damage surfaces, including joints.

    a. Equip units with pressure gauges.
    b. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with nozzle having a cone-shaped spray.
    c. For water-spray application, use fan-shaped spray that disperses water at an angle of 25 to 50 degrees.

d. For high-pressure water-spray application, use fan-shaped spray that disperses water at an angle of at least 40 degrees.

D. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging pre-cast concrete surfaces. Keep wall wet below area being cleaned to prevent streaking from runoff.

E. Perform additional general cleaning, paint and stain removal, and spot cleaning of small areas that are noticeably different when viewed in accordance with "Cleaning Appearance Standard" Paragraph, so that cleaned surfaces blend smoothly into surrounding areas.

F. Chemical-Cleaner Application Methods: Apply chemical cleaners to pre-cast concrete surfaces in accordance with chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not spray apply at pressures exceeding 50 psi (345 kPa). Do not allow chemicals to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.

G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.

1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 5.5 and 12.

H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

3.03 PRELIMINARY CLEANING

A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from pre-cast concrete surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing remaining growth to dry as long as possible before removal. Remove loose soil and

3.04 CLEANING Pre-cast Concrete

A. Cleaners for Pre-cast Concrete Substrates:

1. Apply liberally onto a dry surface starting from the bottom and work up, with a brush or low pressure spray.
2. Let solution stand for 10-30 minutes.
3. Agitate with a stiff brush.
4. Rinse thoroughly with clean water using a medium pressure spray.
5. Repeat steps if necessary.

B. Cleaners for Metal Substrates:

1. Refer to above *EXECUTION: PROTECTION* article of this specification, and protect metal surfaces against damage from exposure to chemical cleaning solutions.

2. Soft bristle broom or brush + low pressure potable water spray to clean metal surfaces.

    a. Wipe the area with a soft bristle brush to remove dry soiling.
    b. Rinse with medium pressure potable water spray.

3.05 FINAL CLEANING

A. Clean adjacent non-pre-cast concrete surfaces of spillage and debris. Use non-damaging detergent and soft brushes or cloths.

B. Remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.

C. Remove masking materials, leaving no residues that could trap dirt.

END OF SECTION

SECTION 13 12 90 – PREFABRICATED METAL BUILDINGS AND SHELTERS

1.1 SECTION INCLUDES

A. Prefabricated Aluminum Buildings.

1.2 RELATED SECTIONS

A. Division 16 - Electrical: Electrical power service and wiring connections.

1.3 REFERENCES

A. ASTM A 513 - Standard Specification for Electric-Resistance-Welded Carbon And Alloy Steel Mechanical Tubing.

B. ASTM A 653/A - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

C. ASTM A 1008/A - Standard Specification for Steel Bars, Carbon and Alloy, Cold-Finished.

D. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.

E. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

F. ASTM B 632/B 632M - Standard Specification For Aluminum-Alloy Rolled Tread Plate.

G. ASTM C-578 - Standard Specification For Rigid, Cellular Polystyrene Thermal Insulation.

H. ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass - Kind Hs, Kind Ft Coated and Uncoated Glass.

I. ASCE 7 - Minimum Design Loads for Buildings and Other Structures

J. APA PRP-108 or PFS PRP-133 - Performance Standards and Policies for Structural-Use Panels.

K. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities.

L. NFPA 70 - National Electric Code.

M. UL 752 - Standard for Bullet Resisting Equipment.

N. IBC - International Building Code.

O. NIJ National Institute of Justice (NIJ) Standard 0101.04 (Ballistic Resistance of Personal Body Armor).

1.4 DESIGN REQUIREMENTS

A. Provide factory built, prefabricated structures and shelters capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.

B. Wind Loads: Determine loads based on the following minimum design wind

pressures:
1. Wind Load:
   a. Buildings: 120 mph (2000 IBC Exp. C). (standard).
2. Snow Loads: 50 lbf/sq ft. (standard).

C. Seismic Performance: Provide factory built, prefabricated structures and shelters capable of withstanding the effects of earthquake motions determined according to:
1. ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 9, "Earthquake Loads".

D. Thermal Movements: Provide factory built, prefabricated structures and shelters that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

E. Electrical Devices: Devices UL listed with wiring bearing UL classification and conforming to the current NEC,

1.5 PERFORMANCE REQUIREMENTS

A. Cooperate with regulatory agency or authority and provide data as requested by authority having jurisdiction.

1.6 SUBMITTALS

A. Submit under provisions of Section 013300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Preparation instructions and recommendations.
3. Storage and handling requirements and recommendations.
4. Installation methods.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work; shop drawings must be signed and sealed by the qualified professional engineer responsible for their preparation. Engineer must be licensed in the State of New Jersey.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Certificates: Product certificates signed by the manufacturer certifying material compliance with specified performance characteristics and criteria, and physical requirements.

F. Warranty documents specified herein.

G. Delegated Design Submittal: For metal buildings or shelters, include analysis data signed and sealed by the qualified professional engineer responsible for their preparation. Engineer must be licensed in the State of New Jersey.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing prefabricated structures and shelters with a minimum documented experience of twenty years and with a quality assurance program utilizing an independent third party quality control firm with a 5-stage, 35 step, quality inspection for each system.

B. Qualification Data: For professional engineer's experience with providing delegated design engineering services of the kind indicated, including documentation that engineer is licensed in New Jersey.

C. Preinstallation Meetings: Conduct meetings to verify project requirements, substrate conditions, utility connections, manufacturer's installation instructions, and warranty requirements. Comply with Division 1 requirements.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Protect all components and accessories from corrosion, deformation, damage and deterioration when stored at job site. Keep materials free from dirt and foreign matter.

1.9 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.10 WARRANTY

A. Provide the manufacturer's 5 year limited warranty on anodized aluminum surfaces against oxidation and the manufacturers 20 year limited warranty against peeling, flaking and chipping of deck and fascia when properly maintained.

B. Provide manufacturer's warrantees on all accessory items provided such as, but not limited to, air conditioning, lights, and heating units.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis Of Design: 8’ Long x 8’ Wide x 7.75’ Tall (+/-) prefabricated guard-booth, model: “*ALB68A1FBAC*” as manufactured by: Austin Mohawk and Company, Inc., located at: 2175 Beechgrove Place ; Utica, NY 13501; Toll Free Tel: 800-765-3110; Tel: 315-793-3000; Fax: 315-793-9370; Email: info@austinmohawk.com; Web: www.austinmohawk.com

B. Or approved equivalent.

2.2 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish specified, and as follows:
1. Sheet: ASTM B 209.
2. Extruded Shapes: ASTM B 221.
3. Rolled Tread Plate: ASTM B 632/B 632M, Alloy 6061-T4 or 6061-T6.

B. Cold-Rolled Steel Sheet: ASTM A 1008/A, Commercial Steel (CS), Type B.

C. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A, commercial quality, G60 (Z275) coating designation; mill phosphatized.

D. Aluminum Treadplate: 1/8-inch aluminum plate conforming to ASTM B 209.

E. Steel Mechanical Tubing: ASTM A 513, welded steel mechanical tubing.

F. Expanded Polystyrene (EPS) Core: Minimum of .95 pcf complying with ASTM C-578 Type 1.

G. Oriented Strand Board (OSB): Standard Grade; minimum physical properties conforming to APA PRP-108.

H. Clear Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Class 1, Quality q3.

I. Ballistics-Resistant Glazing: Comply with requirements of UL 752 and/or NIJ.

J. Anchorages: Anchor bolts, in accordance with the prefabricated building manufacturer's recommendations.

2.3 PREFABRICATED ALUMINUM BUILDINGS

A. Size:
1. 8 feet by 8 feet.

B. Height: Nominal outside height 90 to 93 inches (229 to 236 mm). Interior floor to ceiling height 83 inches (2108.2 mm).

C. Prefabricated all aluminum building with snap-together extruded 6036-T6 aluminum alloy framing system. All connections internally fastened with no exposed fasteners on building exterior.
1. Doors:
   a. Swinging door.
2. Windows:
   a. Fixed windows and three (3) sliders with insect screens and positive locking devices.
   b. Glazing:
      1) 3/4 inch (19 mm) thick, insulated, tempered safety glass with grey tint.
3. Roof Type:
   a. Flat Deck Roof with 3 inch (76 mm) high overlapping deck pans
4. Roof Overhang:
   a. 4 inch overhang (standard).

D. Frame Construction: Provide snap together type structural framing of 6063-T6 aluminum alloy extrusions. Connections shall be fastened internally to framing systems using concealed mechanical fasteners or MIG welded where necessary. Exposed fasteners on building exterior are not acceptable. Members shall have a manufacturer's finish as follows:
1. Custom color as selected by the Architect.

E. Base/Floor: Overall thickness of panel shall be 3 inches (76.2 mm) with an exterior face of manufacturers standard .032 aluminum, a 3 inch (76.2 mm) standard R12 insulation core and a .032 interior aluminum face, and finished floor of nonskid aluminum tread plate. Floor is mounted to 2 inch to 4 inch (51 mm to 102 mm) tube/channel steel base frame.

F. Wall Panel: Overall thickness of panel shall be 3 inches (76.2 mm) with an exterior

face of manufacturers standard .032 aluminum, a 3 inch (76.2 mm) standard R12 insulation core and a .032 interior aluminum face.

1. Finish: Interior and exterior panel faces shall have a manufacturer's finish as follows:
    a. Custom color as selected by the Architect.

G. Interior Ceiling Panels: Prefinished steel, 24 gauge painted white with a 3 inch (76.2 mm) standard R12 expanded polystyrene core providing a smooth flat interior.

H. Roof: Galvanized steel, 20 to 24 gauge, G-60 zinc coating, interlocking pan sections, 3 inches (76.2 mm) high varying widths and capable of supporting a minimum 40 psf (1915 Pa) live load. Roof drains into full perimeter gutter system.

2.4 BUILDING ACCESSORIES

A. Swinging Doors: 1-3/4 inches (44 mm) thick, tubular-frame design.
1. Commercial Grade Aluminum Swing Door 36 inches by 80 inches (914 mm by 2032 mm) Half Glass with mortised, laminated bolt lock with removable cylinder capable of being keyed.

B. Electrical Power Service: Provide in accordance with NEC Standards.
1. 30A, 120/208VAC, single-phase, 3-wire service with 8-16 circuit breaker panel.
2. Use copper wiring in surface mounted 1/2-inch (12.5 mm) minimum EMT conduit.
3. Provide one (1) 120-V GFCI duplex power receptacle with tester in weatherproof, lockable enclosure at the exterior of the building.
4. Provide five (5) 120-V GFCI duplex power receptacle with tester and including one (1) USB-A and one (1) USB-C receptacle each at the interior of the building.
5. Circuit each duplex power receptacle independently.

C. Indoor Lighting Fixtures:
1. Ceiling-mounted LED light fixture(s): (2) at 48 inches (1200 mm) long.
2. Provide single-pole switch with occupancy-sensor mounted adjacent to door to control lighting fixtures.

D. Outdoor Lighting Fixtures:
1. Hi Abuse, exterior rated LED fixture light, with motion activated sensor; locate light above door.

E. Thru-wall Heating/Air Conditioning:
1. 8000 btu (cooling) with 4200 btu (electric heating), 115V.
2. Friedrich model #CEW08B11B with slide-out chassis (Basis of Design)
3. Or approved equivalent.

F. Workbench / countertop:
1. Provide twenty-four inch (24”) deep (min). stainless-steel, full-length workbench / countertop, continuous on thee (3) walls of guard booth.
2. Provide two inch (2”) diameter holes in countertop w/ wire-management grommets; locate one hole above each under-counter power receptacle.

G. Storage Drawers:
1. Two (2) locking stainless-steel storage drawers, workbench mounted, 6-5/8 inches high, 20 inches deep, 17-1/4 inches wide.

2.5 FABRICATION

A. Fabricate factory built, prefabricated structures and shelters completely in factory.

B. Preglaze windows and doors at factory.

C. Prewire factory built, prefabricated structures and shelters at factory, ready for connection to service at Project site.

D. Separate dissimilar materials using nonconductive tape, paint, or other material not visible in finished work.

E. Fabricate factory built, prefabricated structures and shelters for forklift unloading under base of booth with forklift pockets in base of booth or welded in place concealed lifting lugs at roof that are suitable for placement of the structure on prepared foundations.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine supporting foundations for compliance with manufacturer's requirements, including installation tolerances and other conditions affecting performance of supporting members.

B. Check installed anchor bolts for accuracy. Verify that bearing surfaces are ready to receive the work.

C. Verify the rough-in of required electrical services prior to placement of the structure.

D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Separate dissimilar materials using nonconductive tape, paint, or other material not visible in finished work.

C. Place on prepared concrete foundations and slabs provided.

D. Anchor securely in place, allowing for required movement, including expansion and contraction.

E. Connect electrical services as specified in Division 16.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 312000 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:
1. Preparing subgrades for slabs-on-grade, walks, pavements, landscaping, lawns and plantings.
2. Drainage course for slabs-on-grade.
3. Subbase course for concrete walks and pavements.
4. Subbase and base course for asphalt paving.

1.3 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.
1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations. This work shall include the removal of the existing rock and fill material as required to construct the proposed improvements, including the building, walls, utilities, foundations, roadways, sidewalk and all other structures that are constructed below existing grade.

G. Fill: Soil materials used to raise existing grades.

H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. Yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,090 lbf and stick-crowd force of not less than 18,650 lbf; measured according to SAE J-1179.
2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp flywheel power and developing a minimum of 48,510-lbf breakout force with a general-purpose bare bucket; measured according to SAE J-732.

I. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D 1586, exceeds a standard penetration resistance of 100 blows / 2 inches.

J. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

K. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

L. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

M. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. Samples: For the following:
1. Forty (40) pound bag samples of each material to be used as backfill and bedding shall be submitted to the Soils Engineer two (2) weeks minimum prior to commencing fill operations. This material shall not be used as a compacted fill until approved by the Engineer. By submitting samples of this material, the Contractor agrees and guarantees that the fill material used for construction will conform with the samples (s) supplied. Final acceptance of fill material rests with the Engineer, whose decision shall be final and binding upon the Contractor. However, the acceptance of any material by the Engineer shall not relieve the Contractor of his responsibility to have the fill material used conform to the sample(s) approved by the Engineer.
2. The Contractor shall supply data on the compaction equipment to the Engineer not less than two (2) weeks prior to the intended use of the equipment and the equipment shall be approved by the Engineer prior to commencing compaction operations.
3. 12-by-12-inch sample of drainage fabric.
4. 12-by-12-inch sample of separation fabric

B. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
1. Classification and grain size analysis according to ASTM D 2487 and ASTM D 422 of each on-site or borrow soil material proposed for fill and backfill.
2. Laboratory compaction curve according to ASTM D 1557 for each on-site or borrow soil material proposed for fill and backfill.

C. Blasting will not be permitted.

1.5 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548 and responsible to provide the necessary testing and approval determinations as the soils engineer.

B. Preexcavation Conference: Conduct conference at Project site to comply with requirements in specifications.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by the owner and then only after arranging to provide temporary utility services according to requirements indicated.
1. Notify owner not less than two days in advance of proposed utility interruptions.

2. Do not proceed with utility interruptions without Owner's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

B. The contractor shall be responsible to import fill and place in a controlled manner as required to perform his work in accordance with the requirements of the plans and specifications.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils:

1. Fill Classification:

a. Type "S" Fill – shall be structural fill consisting of clean sand and gravel to be used in general, for the support of foundations and new structures. This fill shall be imported from off the site and shall meet the following gradation requirement.

U.S. Standard Sieve Size Percent Finer By Weight

1 inch	100
3/8 inch	65-100
No. 10	40-85
No. 30	20-65
No. 60	10-45
No. 200	5-12

b. Type "G" Fill – shall be a granular fill consisting of a clean sand and gravel to be used, in general, for backfilling around and between structures and underneath paved areas, pipelines and utilities. This fill shall be imported from off the site and shall meet the gradation requirements as listed below. If suitable Type "G" materials are found on the site and is accepted by the Engineer, it shall be stored for use.

U.S. Standard Sieve Size Percent Finer By Weight

2 inch	100
1 inch	80-100
3/8 inch	70-100
No. 10	50-100
No. 30	30-85
No. 60	15-65
No. 200	5-15

c. Type "W" Fill – shall be a structural fill consisting of clean stone conforming to New Jersey Department of Transportation coarse aggregate size No. 57, used to facilitate dewatering while providing a firm workmat subgrade onto which foundations may be constructed as well as providing a drainage blanket and pipe bedding. The fill material shall be imported from off-site and shall meet the following gradation requirements.

U.S. Standard Sieve Size Percent Finer By Weight

1 1/2 inch	100
1 inch	95-100
1/2 inch	25-60
No. 4	0-10
No. 8	0-5

Unsatisfactory soils include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."

C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Soil Erosion and Sediment Control", during earthwork operations.

D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
2. Install a dewatering system, specified in Division 2 Section "Dewatering", to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 SUBGRADE INSPECTION

A. Notify Engineer when excavations have reached required subgrade.

B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 5 mph.

2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed, without additional compensation.

D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Owner.

1. Fill unauthorized excavations under other construction or utility pipe as directed by Engineer.

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.9 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.10 FILL

A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions and deleterious materials from ground surface before placing fills.

B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

C. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under future building slabs, use engineered fill.
5. Under future footings and foundations, use engineered fill.

3.11 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Compacting of prepared subgrade under Type "S", Type "G", and Type "W" Fills – after excavation to the required subgrade, the subgrade shall be compacted by approved equipment and methods to develop to a depth of at least twelve (12) inches below ground surface at least 95% of maximum dry density as determined by the Engineer in conformance with ASTM Standard D1557. Any soft or weak spots detected during the compaction operation or proof-rolling of subgrade must be removed and replaced with controlled fill as directed by the Engineer. The compaction shall be checked by the Engineer and lean concrete or fill shall not be placed until compaction of the existing subgrade is approved by the Engineer.

B. Placement of Type "S", "G", and "W" Fills – No backfill shall be placed until the excavation and subgrade has been approved by the Engineer and until backfill materials to be used are approved by the Engineer, and no backfill shall be placed on frozen or thawing ground. Fill shall be placed in uniform horizontal layers not more than twelve (12) inches in thickness and shall be compacted with a high energy self-propelled vibratory roller. Lift thickness may be adjusted in the field by the Engineer if required soil density is not being achieved.

C. Compaction of Types "S", "G", and "W" Fills – the backfill shall be compacted near optimum moisture content by means of vibratory compactors to not less then 95% of the maximum density determined in accordance with ASTM Standard D1557. The Engineer shall check the obtained in-place density of the compacted fill using the method of ASTM Standards D 1556 or D 2922 for in place density tests. Should the obtained density of the compacted fill be less than specified, the Contractor shall recompact the area until the required maximum density is reached. Only hand held compaction equipment shall be used within four (4) feet of foundation walls and structures.

D. Moisture Control – the moisture-density curve for the fill used shall be used as a guide in controlling moisture to achieve the required degree of compaction. If, in the opinion of the Engineer, fill material becomes too wet for the required compaction, the fill shall be dried by a method approved by the Engineer prior to commencing or continuing compaction operations. Likewise, if the opinion of the Engineer, the fill material becomes too dry for the required compaction, the fill shall be moistened by a method approved by the Engineer prior to commencing or continuing compaction operations

E. Drainage of the Site – at all times, Contractor shall maintain and operate proper and adequate surface and subsurface drainage in order to keep the construction site dry and in such condition that placement and compaction of fill may proceed unhindered by saturation of the area.

F. Backfill of Excavations – any excavation (e.g., utilities, walls, footings, etc.) made within the compacted fill areas shall be backfilled with the same type of fill as removed and in accordance with Specifications herein. Where compacted fill is placed adjacent to walls, if the difference in elevation of the top of the fill on either side of the wall is more than one (1) foot, the wall is to be adequately braced. Any excavation made in virgin material shall be backfilled with Type "G" fill as herein specified unless otherwise shown on the Contract Drawings or directed by the Engineer.

G. Final Approval – immediately before the Contractor shall place foundations or floor slabs on compacted fills or virgin soil, the Engineer will inspect the foundation and floor slab subgrade. The Contractor shall remove any soft fill and replace with properly compacted material. The pouring of foundations or floor slab shall commence within twenty-four (24) hours of approval. Rain, frost and other factors (which in the opinion of the Engineer are potentially damaging to the fill or virgin material), occurring after the final approval, but before or during pouring, shall require an additional inspection of

the compacted fill or virgin material for approval by the Engineer. The Contractor shall correct any deficiencies found at this time, at his own expense.

H. Maintenance of Fills – all vehicles passing over the fill areas shall use diverse routes to insure uniform compaction of the fill.

I. Before shutdown of the work for any cause, and at the conclusion of work for the day, fill shall be bladed to a grade which will insure drainage away from the unfinished surface of the fill.

J. Excess materials shall be stored as directed by the Owner, and following completion of the work shall be removed from the site.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
1. Lawn or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1 inch.
3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.14 SUBBASE AND BASE COURSES

A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase and base course under pavements and walks as follows:
1. Place base course material over subbase course under.
2. Shape subbase and base course to required crown elevations and cross-slope grades.
3. Place subbase and base course 6 inches or less in compacted thickness in a single layer, unless otherwise directed.
4. Place subbase and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
5. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

C. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.15 DRAINAGE COURSE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
1. Place drainage course 6 inches or less in compacted thickness in a single layer, unless otherwise noted.

2. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
3. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.16 FIELD QUALITY CONTROL

A. Testing Agency: The Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing and approval determinations as the soils engineer. The contractor is to cooperate with the soils consultant in all respects and shall provide samples of each type of fill material used so that various tests may be performed to ascertain compliance with the specifications.

B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect/Engineer.

D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than 3 tests.
2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each 100 feet or less of wall length, but no fewer than 2 tests.
3. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 2 tests.

E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained with no additional compensation from the owner.

3.17 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including excess topsoil unsatisfactory soil, excess materials, trash, and debris, and legally dispose of it off Owner's property.
1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 312000

SECTION 321313 – CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes exterior cement concrete pavement for the following:
1. Driveways and roadways.
2. Parking lots.
3. Curbs and gutters.
4. Walkways.

B. Related Sections include the following:

1. Division 31 Section "Earthwork" for subgrade preparation, grading, and subbase course.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, expansive hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

1.4 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

C. Samples: 10-lb (4.5-kg) sample of exposed aggregate.

D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:

E. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
1. Cementitious materials and aggregates.
2. Steel reinforcement and reinforcement accessories.
3. Admixtures.
4. Curing compounds.
5. Applied finish materials.
6. Bonding agent or adhesive.
7. Joint fillers.

F. Minutes of preinstallation conference.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed pavement work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

1. Manufacturer must be certified according to the National Ready Mix Concrete Association's Plant Certification Program.

C. Testing Agency Qualifications: The Contractor is responsible for providing an independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.

D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.

E. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by the requirements of the Contract Documents.

F. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixes.

G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1. Before submitting design mixes, review concrete pavement mix design and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with concrete pavement to attend, including the following:
   a. Contractor's superintendent.
   b. Independent testing agency responsible for concrete design mixes.
   c. Ready-mix concrete producer.
   d. Concrete subcontractor.

1.6 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, smooth exposed surfaces.

1. Use flexible or curved forms for curves of a radius 100 feet (30.5 m) or less.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

A. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

B. Deformed-Steel Welded Wire Fabric: ASTM A 497, flat sheet.

C. Epoxy-Coated Welded Wire Fabric: ASTM A 884/A 884M, Class A, plain steel.

D. Reinforcement Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

E. Epoxy-Coated Reinforcement Bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars.

F. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars; assembled with clips.

G. Plain Steel Wire: ASTM A 82, as drawn.

H. Epoxy-Coated Wire: ASTM A 884/A 884M, Class A coated, plain steel.

I. Joint Dowel Bars: Plain steel bars, ASTM A 615/A 615M, Grade 60 (Grade 420). Cut bars true to length with ends square and free of burrs.

J. Epoxy-Coated Joint Dowel Bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60 (Grade 420), plain steel bars.

K. Tie Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

L. Hook Bolts: ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6), internally and externally threaded. Design hook-bolt joint assembly to hold coupling against pavement form and in position during concreting operations, and to permit removal without damage to concrete or hook bolt.

M. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement bars, welded wire fabric, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:

1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
2. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer coated wire bar supports.

N. Epoxy Repair Coating: Liquid two-part epoxy repair coating, compatible with epoxy coating on reinforcement.

2.3 CONCRETE MATERIALS

A. General: Use the same brand and type of cementitious material from the same manufacturer throughout the Project.

B. Portland Cement: ASTM C 150, Type I or II.

1. Fly Ash: ASTM C 618, Class F or C.
2. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

C. Aggregate: ASTM C 33, uniformly graded, from a single source, with coarse aggregate as follows:

1. Class: 4S.
2. Maximum Aggregate Size: 1 inch (25 mm) nominal.
3. Do not use fine or coarse aggregates containing substances that cause spalling.

D. Exposed Aggregate: Selected, hard, and durable; washed; free of material that reacts with cementitious material or causes staining; from a single source, with gap graded coarse aggregate as follows:

1. Aggregate Sizes: 1/2 to 3/4 inch (13 to 19 mm) nominal.

E. Water: ASTM C 94.

2.4 ADMIXTURES

A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures.

B. Air-Entraining Admixture: ASTM C 260.

C. Water-Reducing Admixture: ASTM C 494, Type A.

D. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.

Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.

F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

E. Clear Solvent-Borne Liquid-Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

F. Clear Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.

G. White Waterborne Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B.

H. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

I. Evaporation Retarder:
1. Cimfilm; Axim Concrete Technologies.
2. Finishing Aid Concentrate; Burke Group, LLC (The).
3. Spray-Film; ChemMasters.
4. Aquafilm; Conspec Marketing & Manufacturing Co., Inc.
5. Sure Film; Dayton Superior Corporation.
6. Eucobar; Euclid Chemical Co.
7. Vapor Aid; Kaufman Products, Inc.
8. Lambco Skin; Lambert Corporation.
9. E-Con; L&M Construction Chemicals, Inc.
10. Confilm; Master Builders, Inc.
11. Waterhold; Metalcrete Industries.
12. Rich Film; Richmond Screw Anchor Co.
13. SikaFilm; Sika Corporation.
14. Finishing Aid; Symons Corporation.
15. Certi-Vex EnvioAssist; Vexcon Chemicals, Inc.

J. Clear Solvent-Borne Liquid-Membrane-Forming Curing Compound:
1. AH Curing Compound #2 DR; Anti-Hydro International, Inc.
2. Res-X Cure All Resin; Burke Group, LLC (The).
3. RX Cure; Conspec Marketing & Manufacturing Co., Inc.
4. Day-Chem Rez Cure; Dayton Superior Corporation.
5. Kurez DR; Euclid Chemical Co.

6. Nitocure S; Fosroc.
7. #64 Resin Cure; Lambert Corporation.
8. L&M Cure DR; L&M Construction Chemicals, Inc.
9. 3100-Clear; W. R. Meadows, Inc.
10. Seal N Kure FDR; Metalcrete Industries.
11. Rich Cure; Richmond Screw Anchor Co.
12. Resi-Chem C309; Symons Corporation.
13. Horncure 30; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
14. Uni Res 150; Unitex.
15. Certi-Vex RC; Vexcon Chemicals, Inc.

K. Clear Waterborne Membrane-Forming Curing Compound:
1. AH Curing Compound #2 DR WB; Anti-Hydro International, Inc.
2. Aqua Resin Cure; Burke Group, LLC (The).
3. Safe-Cure Clear; ChemMasters.
4. W.B. Resin Cure; Conspec Marketing & Manufacturing Co., Inc.
5. Day Chem Rez Cure (J-11-W); Dayton Superior Corporation.
6. Nitocure S; Fosroc.
7. Aqua Kure-Clear; Lambert Corporation.
8. L&M Cure R; L&M Construction Chemicals, Inc.
9. 1100 Clear; W. R. Meadows, Inc.
10. Resin Cure E; Nox-Crete Products Group, Kinsman Corporation.
11. Rich Cure E; Richmond Screw Anchor Co.
12. Resi-Chem Clear Cure; Symons Corporation.
13. Horncure 100; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
14. Hydro Cure; Unitex.
15. Certi-Vex Enviocure; Vexcon Chemicals, Inc.

L. White Waterborne Membrane-Forming Curing Compound:
1. AH Curing Compound #2 WB WP; Anti-Hydro International, Inc.
2. Aqua Resin Cure; Burke Group, LLC (The).
3. W.B. Resin Cure; Conspec Marketing & Manufacturing Co., Inc.
4. Thinfilm 450; Kaufman Products, Inc.
5. Aqua Kure-White; Lambert Corporation.
6. L&M Cure R-2; L&M Construction Chemicals, Inc.
7. 1200-White; W. R. Meadows, Inc.
8. White Pigmented Resin Cure E; Nox-Crete Products Group, Kinsman Corporation.
9. Rich Cure White E; Richmond Screw Anchor Co.
10. Resi-Chem High Cure; Symons Corporation.
11. Horncure 200-W; Tamms Industries Co., Div. of LaPorte Construction Chemicals North America, Inc.
12. Hydro White 309; Unitex.

2.6 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

B. Pavement-Marking Paint: Alkyd-resin type; ready mixed; complying with FS TT-P-115, Type I,or AASHTO M 248, Type N.

C. Glass Beads: AASHTO M 247.

D. Wheel Stops: Precast, air-entrained concrete; 2500-psi (17.2-MPa) minimum compressive strength; approximately 6 inches (150 mm) high, 9 inches (225 mm) wide, and 84 inches (2130 mm) long. Provide chamfered corners and drainage slots on underside, and provide holes for dowel-anchoring to substrate.

1. Dowels: Galvanized steel, diameter of 3/4 inch (19 mm), minimum length 10 inches (254 mm).

E. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery with emery aggregate containing not less than 50 percent aluminum oxide and not less than 25 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

F. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

G. Rock Salt: Sodium chloride crystals, kiln dried, coarse gradation with 100 percent passing 3/8-inch (9.5-mm) sieve and 85 percent retained on a No. 8 (2.36-mm) sieve.

H. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class and grade to suit requirements, and as follows:

1. Type: Class I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
2. Type: Class IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.7 CONCRETE MIXES

A. Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the trial batch method.

1. Do not use Owner's field quality-control testing agency as the independent testing agency.

C. Proportion mixes to provide concrete as indicated on plans with the following properties:

1. Compressive Strength (28 Days): 4500 psi (Class B).
2. Compressive Strength (28 Days): 4000 psi (Class C).
3. Slump Limit at point of placement: 3 inches

D. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements for concrete exposed to deicing chemicals.

E. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content of 2.5 to 4.5 percent.

F. Coloring Agent: Add coloring agent to mix according to manufacturer's written instructions.

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Comply with requirements and with ASTM C 94 and ASTM C 1116.

1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Comply with requirements and measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixers of 1 cu. yd. (0.76 cu. m) or smaller capacity, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.

2. For mixers of capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added.

PART 3 - EXECUTION

3.1 PREPARATION

A. Proof-roll prepared subbase surface to check for unstable areas and verify need for additional compaction. Proceed with pavement only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.
1. Apply epoxy repair coating to uncoated or damaged surfaces of epoxy-coated reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

D. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch (50-mm) overlap to adjacent mats.

3.4 JOINTS

A. General: Construct construction, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
1. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour, unless pavement terminates at isolation joints.
1. Provide preformed galvanized steel or plastic keyway-section forms or bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.

2. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
3. Provide tie bars at sides of pavement strips where indicated.
4. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
5. Use epoxy bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
1. Locate expansion joints at intervals of 20 feet, unless otherwise indicated.
2. Extend joint fillers full width and depth of joint.
3. Terminate joint filer less than 1/2 inch (12 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.
4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
6. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

D. Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.

E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to the following radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
a. Radius: 1/4 inch (6 mm).
b. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.

F. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to the following radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.
1. Radius: 1/4 inch (6 mm).

3.5 CONCRETE PLACEMENT

A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcement steel, and items to be embedded or cast in. Notify other trades to permit installation of their work.

B. Remove snow, ice, or frost from subbase surface and reinforcement before placing concrete. Do not place concrete on frozen surfaces.

C. Moisten subbase to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at the required finish elevation and alignment.

D. Comply with requirements and with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.

E. Do not add water to concrete during delivery, or during placement.

F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

G. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.

1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.

H. Place concrete in two operations; strike off initial pour for entire width of placement and to the required depth below finish surface. Lay welded wire fabric or fabricated bar mats immediately in final position. Place top layer of concrete, strike off, and screed.

1. Remove and replace portions of bottom layer of concrete that have been placed more than 15 minutes without being covered by top layer, or use bonding agent if approved by Architect.

I. Screed pavement surfaces with a straightedge and strike off. Commence initial floating using bull floats or darbies to form an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading dry-shake surface treatments.

J. Curbs and Gutters: When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.

K. Slip-Form Pavers: When automatic machine placement is used for pavement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce pavement to required thickness, lines, grades, finish, and jointing as required for formed pavement.

1. Compact subbase and prepare subgrade of sufficient width to prevent displacement of paver machine during operations

L. When adjoining pavement lanes are placed in separate pours, do not operate equipment on concrete until pavement has attained 85 percent of its 28-day compressive strength.

M. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
2. Do not use frozen materials or materials containing ice or snow.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.

N. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover reinforcement steel with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.

3. Fog-spray forms, reinforcement steel, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.6 CONCRETE FINISHING

A. General: Wetting of concrete surfaces during screeding, initial floating, or finishing operations is prohibited. Finish shall be a fine smooth surface.

3.7 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and follow recommendations in ACI 305R for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.

D. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
   a. Water.
   b. Continuous water-fog spray.
   c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.8 PAVEMENT TOLERANCES

A. Comply with tolerances of ACI 117 and as follows: ACI 117 ESTABLISHES FEW PAVEMENT TOLERANCES. BELOW ARE BASED ON ACI 330.1.

1. Elevation: 1/4 inch (6 mm).
2. Thickness: Plus 3/8 inch (9 mm), minus 1/4 inch (6 mm).
3. Surface: Gap below 10-foot- (3-m-) long, unleveled straightedge not to exceed 1/4 inch (6 mm).
4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch (25 mm).
5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch (6 mm).
6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch (13 mm).
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches (6 mm per 300 mm).
8. Joint Spacing: 3 inches (75 mm).
9. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
10. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.9 FIELD QUALITY CONTROL

A. Testing Agency: The contractor is responsible to engage a qualified independent testing and inspection agency to sample materials, perform tests, and submit test reports during concrete placement according to requirements specified in this Article.

1. Testing Services: Testing shall be performed according to the following requirements:
2. Sampling Fresh Concrete: Representative samples of fresh concrete shall be obtained according to ASTM C 172, except modified for slump to comply with ASTM C 94.
3. Slump: ASTM C 143; one test at point of placement for each compressive-strength test, but not less than one test for each day's pour of each type of concrete. Additional tests will be required when concrete consistency changes.
4. Air Content: ASTM C 231, pressure method; one test for each compressive-strength test, but not less than one test for each day's pour of each type of air-entrained concrete.
5. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each set of compressive-strength specimens.
6. Compression Test Specimens: ASTM C 31/C 31M; one set of four standard cylinders for each compressive-strength test, unless otherwise indicated. Cylinders shall be molded and stored for laboratory-cured test specimens unless field-cured test specimens are required.
7. Compressive-Strength Tests: ASTM C 39; one set for each day's pour of each concrete class exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m). One specimen shall be tested at 7 days and two specimens at 28 days; one specimen shall be retained in reserve for later testing if required.
8. When frequency of testing will provide fewer than five compressive-strength tests for a given class of concrete, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
9. When total quantity of a given class of concrete is less than 50 cu. yd. (38 cu. m), Architect may waive compressive-strength testing if adequate evidence of satisfactory strength is provided.
10. When strength of field-cured cylinders is less than 85 percent of companion laboratory-curedcylinders, current operations shall be evaluated and corrective procedures shall be provided for protecting and curing in-place concrete.
11. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive compressive-strength test results equal or exceed specified compressive strength and no individual compressive-strength test result falls below specified compressive strength by more than 500 psi (3.4 MPa).

B. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 24 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type and class, location of concrete batch in pavement, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

C. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as the sole basis for approval or rejection.

D. Additional Tests: Testing agency shall make additional tests of the concrete when test results indicate slump, air entrainment, concrete strengths, or other requirements have not been met, as directed by Engineer. Testing agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

3.10 REPAIRS AND PROTECTION

A. Remove and replace concrete pavement that is broken, damaged, or defective, or does not meet requirements in this Section.

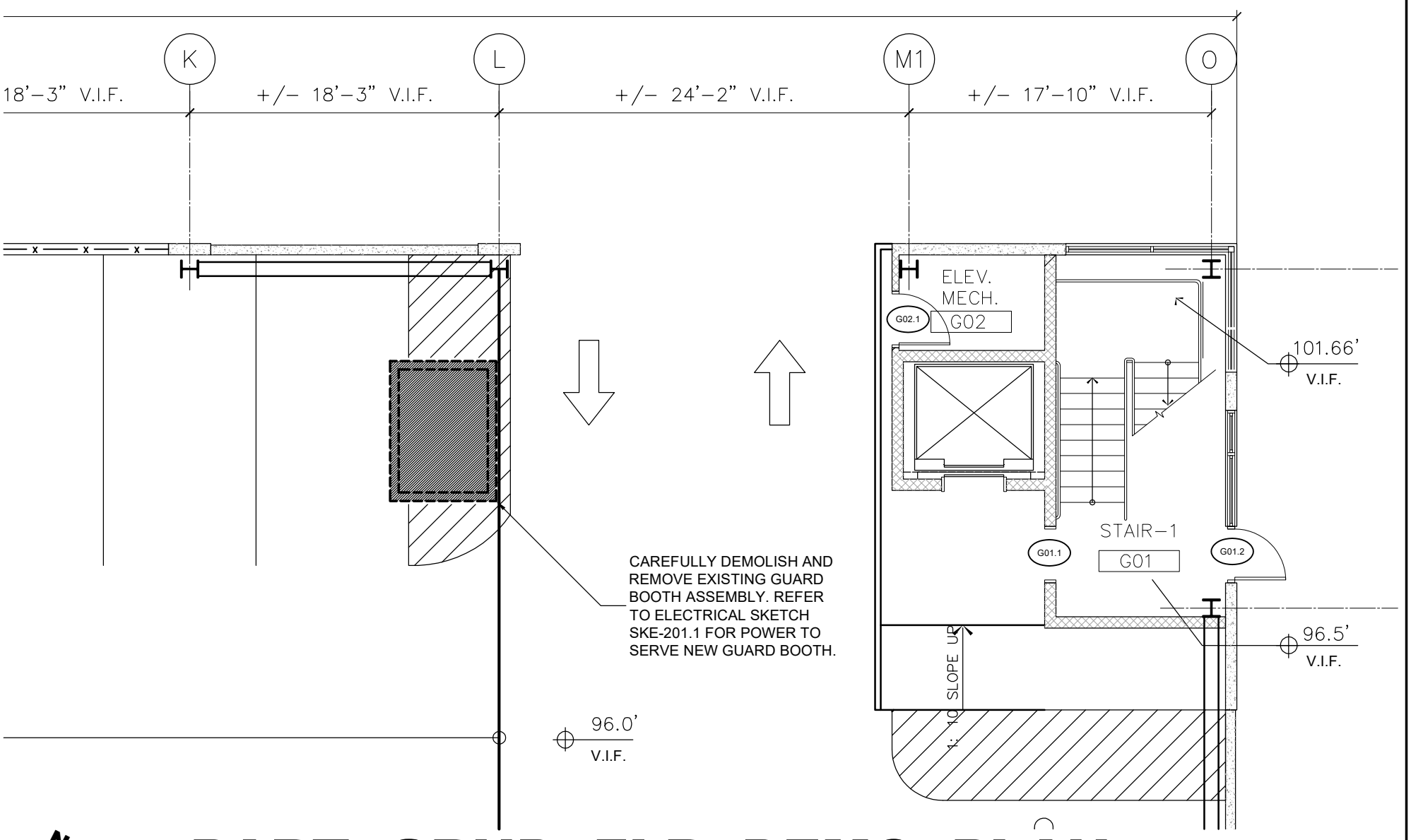
B. Drill test cores where directed by Architect when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

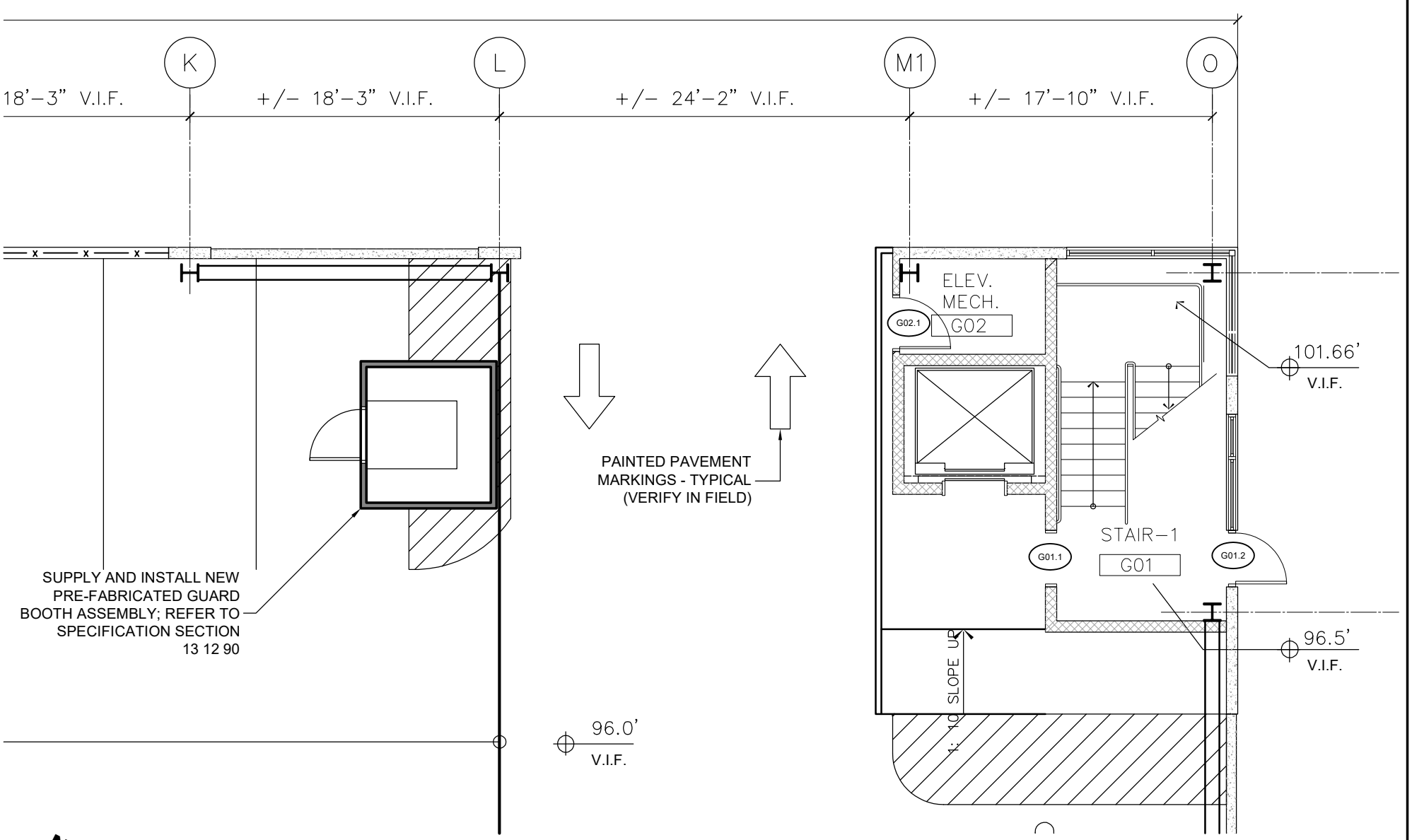
ADDENDUM #1



1 PART. GRND. FLR. DEMO. PLAN

SCALE: 1/8" = 1'-0"

ADDENDUM #1



2 PART. GRND. FLR. NEW WORK PLAN

SCALE: 1/8" = 1'-0"

DIGroupArchitecture
ARCHITECTURE FOR CHANGE
15 Bethany Street, New Brunswick, NJ 08901 732.249.6242
digrouparchitecture.com

Project:
GERRY B. GREEN PARKING GARAGE REPAIRS
BLOCK-246 / LOT-1
200 WEST 2ND STREET, PLANFIELD, NJ 07063

Owner:
UNION COUNTY IMPROVEMENT AUTHORITY
10 ELIZABETHTOWN PLAZA - 5TH FLOOR
ELIZABETH, NJ 07207

Ref. Dwg.:	Project no.:	Chkd. by:	Date:
A-101	25.022	PG	12/05/2025
	Scale: 1/8" = 1'-0"	Dwn. by: PG	Dwg. No.: SKA-101.1

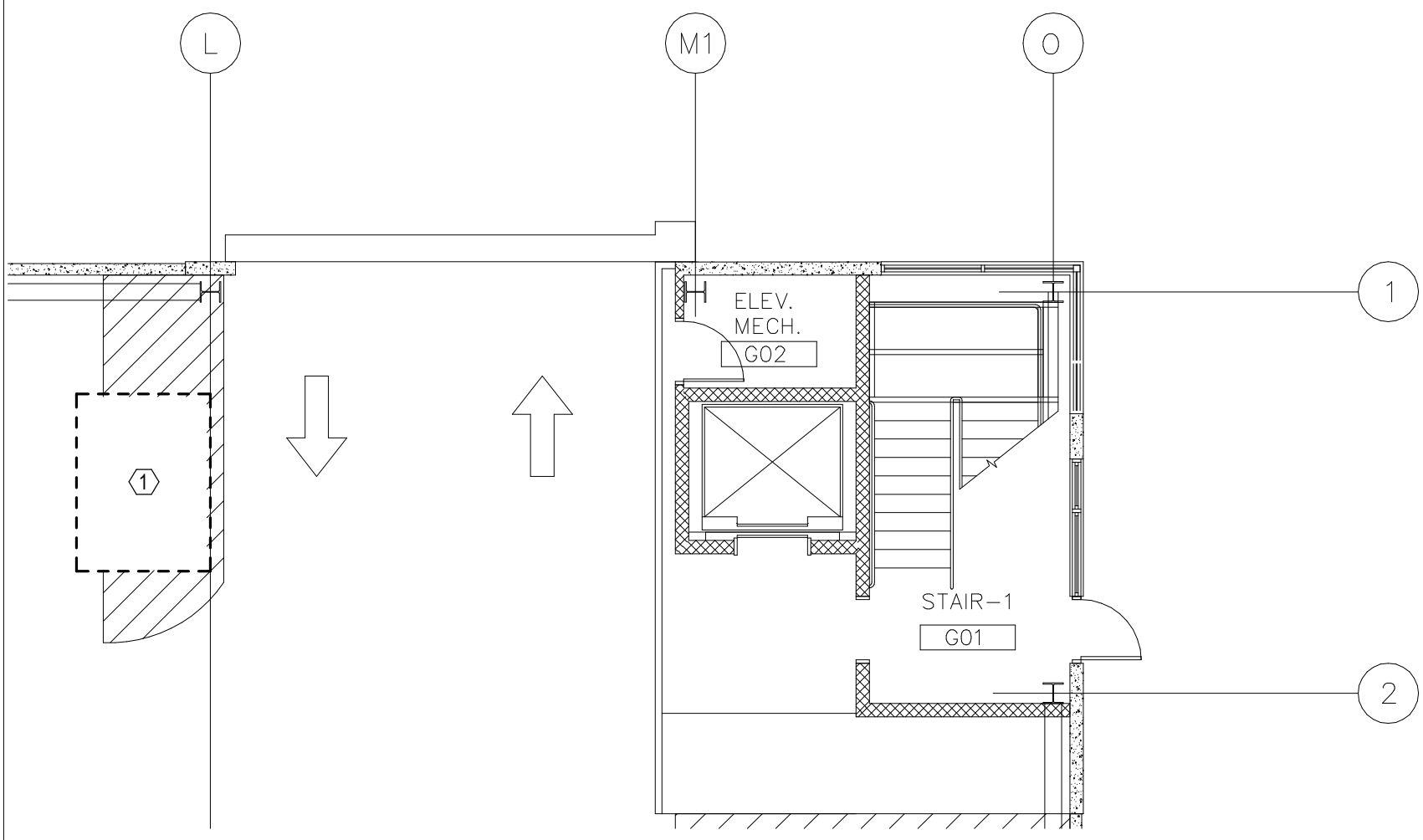
ADDENDUM #1

KEYNOTES

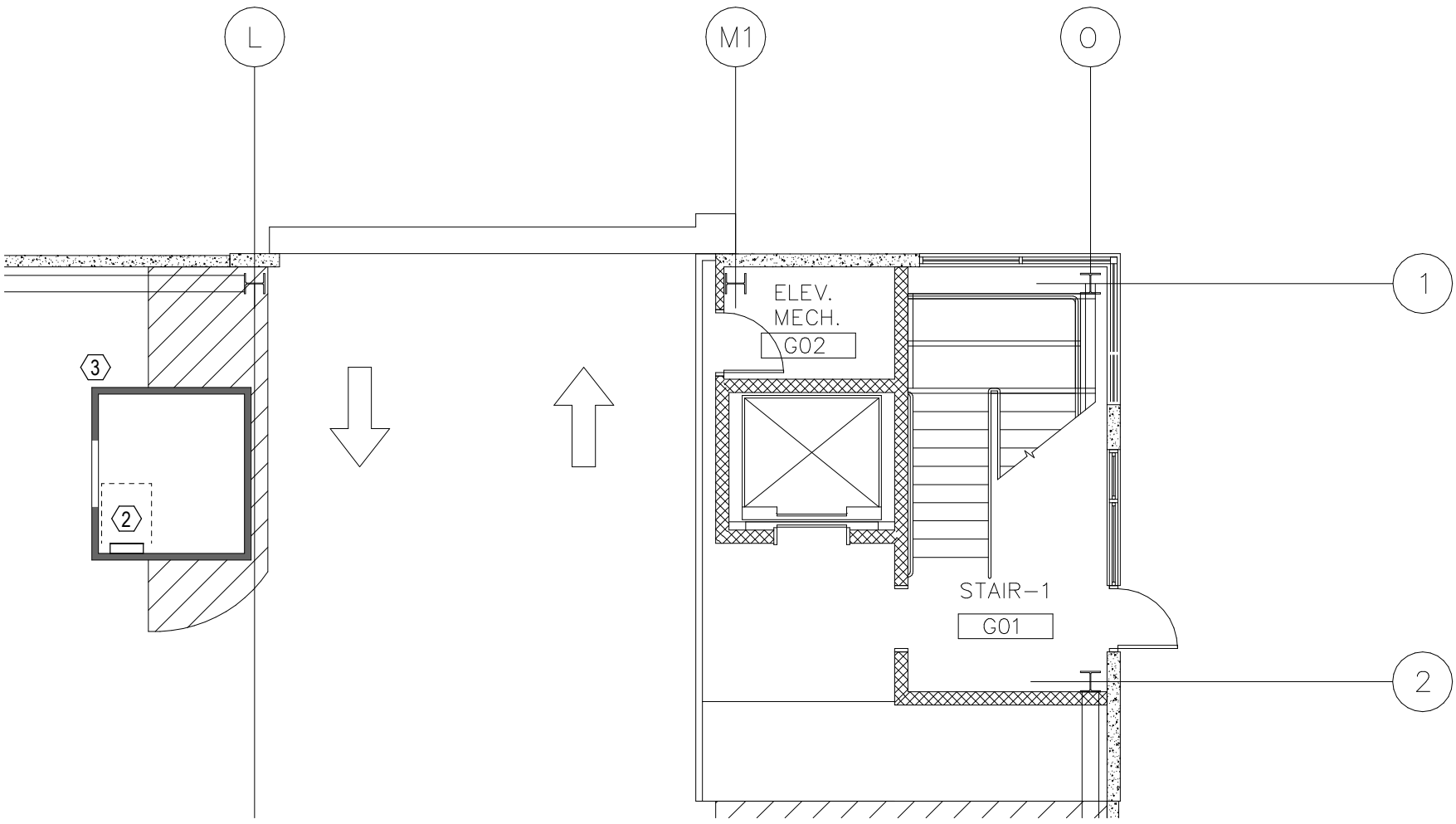
1 EXISTING GUARD BOOTH TO BE DEMOLISHED. DISCONNECT AND REMOVE EXISTING BRANCH CIRCUIT WIRING AND ASSOCIATED CONDUIT SERVING EXISTING GUARD BOOTH BACK TO SOURCE OF SUPPLY.

2 UTILIZE EXISTING 30A/2P BREAKER IN EXISTING "RP" PANEL IN ELECTRICAL ROOM. PROVIDE 3/4" GALVANIZED EMT CONDUIT WITH 2#8 & 1#10G. CONDUIT SHALL BE SURFACE MOUNTED OVERHEAD. PROVIDE LABEL IN PANEL INDICATING SOURCE OF FEED.

3 PROVIDE #8 AWG COPPER GROUNDING ELECTRODE CONDUCTOR FROM NEW GUARD BOOTH PANEL TO THE EXISTING GROUNDING ELECTRODE SYSTEM. INSTALL IN ACCORDANCE WITH NEC 250 AND CONNECT TO NEAREST GROUNDING POINT. PROVIDE ANY REQUIRED GROUNDING ELECTRODES. ALL GROUNDING CONNECTIONS SHALL BE LISTED, MECHANICALLY SECURE, AND SUITABLE FOR OUTDOOR CONDITIONS. COORDINATE GROUNDING REQUIREMENTS WITH THE GUARD BOOTH MANUFACTURER AND ENSURE BONDING OF ALL ASSOCIATED METALLIC RACEWAYS AND EQUIPMENT.



2 SKE-201.1 GROUND FLOOR DEMO PLAN - GUARD BOOTH
1/8" = 1'-0"



1 SKE-201.1 GROUND FLOOR NEW WORK PLAN - GUARD BOOTH
1/8" = 1'-0"

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Ref. Dwg.:	Project no.:	Chkd. by:	Date:
E201	25.022	JR	12/05/2025
	Scale:	Dwn. by:	Dwg. No.:
	1/8" = 1' 0"	SR	SKE-201.1

M&M CONSTRUCTION

UCIA
10 Elizabethtown Plaza 5th Floor
Elizabeth, NJ 07207

SIGN IN SHEET

PROJECT: **Gerald Green Parking Garage Renovations**

Pre Bid Meeting

MEETING DATE: Tuesday November 25, 2025 10:00am
LOCATION: 200 West 2nd Street, Plainfield, NJ 07060

INITIAL	NAME	COMPANY	PHONE	EMAIL
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RM	Rich Martucci	M&M	908 346-5668	rmartucci@m-mnj.com
MP	Mark Piccolo	Hall	732 938-4255	pegan@hallgc.com
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JA	John Ala	6 Brothers Contractors	973-260 9068	broscinc@hotmail.com
GJC	[illegible]	Atlantic Concrete	973-634-71..	aguarino@atlanticconc...
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