

## PROJECT MANUAL

# SOUTH WAKE LAND FILL

ENTRANCE IMPROVEMENTS FOR CC#2  
6300 OLD SMITHFIELD ROAD, APEX, NC

2025-010

**RFB#25-071**



### Owner:

Paulo Lopez  
Wake County Facilities Design and Construction  
336 Fayetteville St, Suite 1115  
Raleigh, NC 27603  
919.856.6351

### Landscape Architect:

Caleb J. Robinson, PLA  
Timmons Group  
5410 Trinity Road  
Raleigh, NC 27607  
919.532.3269



The following Sections **outlined in red** shall replace the previously issued Project Manual Sections. All other sections shall remain part of the Contract Documents.

## TABLE OF CONTENTS

### Division 00 - Procurement and Contracting Documents

|   |
|---|
| Section 000001 – Table of Contents  |
| Section 000107 – Certification  |
| Section 001000 – Notice to Bidders  |
| Section 001100 – Instructions to Bidders  |
| Section 001101 – Notice of Wake County Electronic Contracting Processes for Construction Agreements |
| Section 001102 – Bid Proposal   |
| Section 001103 – Bid Bond Form  |
| Section 007000 – Construction Agreement   |
| Section 007200 – General Conditions   |
| Section 007300 – Payment and Performance Bonds Formal Agreement                                     |
| Appendix A: Dispute Resolution Process and Mediator List  |
| Appendix B: Contractor's Sales Tax Report   |
| Appendix C: MBE 6 Form  |

### Division 01 – General Requirements

|   |
|---|
| Section 011000 – Summary                                    |
| Section 012100 – Allowances                                 |
| Section 012200 – Unit Prices                                |
| Section 012300 – Alternates                                 |
| Section 012600 – Contract Modification Procedures           |
| Section 012900 – Payment Procedures                         |
| Section 013100 – Project Management and Coordination        |
| Section 013200 – Construction Progress Documentation        |
| Section 013300 – Submittal Procedures                       |
| Section 014000 – Quality Requirements                       |
| Section 014200 – References                                 |
| Section 015000 – Temporary Facilities and Controls          |
| Section 017700 – Execution                                  |
| Section 017700 – Closeout Procedures                        |
| Section 017839 – Project Record Documents                   |
| Section 017419 – Construction Waste Management and Disposal |

### Division 02 – Existing Conditions

|                                       |
|---------------------------------------|
| Section 024119 – Selective Demolition |
|---------------------------------------|

### Division 31 – Earthwork

|                                   |
|-----------------------------------|
| Section 311000 – Site Clearing    |
| Section 312000 – Earth Moving     |
| Section 312200 – Erosion Controls |

### Division 32 – Exterior Improvements

|   |
|---|
| Section 321700 – Pavement Marking, Signs and Specialties  |
| Section 323113 – Chain Link Fences and Gates (Galvanized) |
| Section 321216 – Asphalt Paving                           |
| Section 321313 – Concrete Paving                          |
| Section 329200 – Turf and Grasses                         |

### Division 33 – Utilities

|                                 |
|---------------------------------|
| Section 334100 – Storm Drainage |
|---------------------------------|

**NOTICE TO BIDDERS**

South Wake Land Fill Entrance Improvements for CC#2 - RFB# 25-071

Sealed proposals will be received by Wake County Procurement Services, in Suite 2900, Wake County Justice Center, 301 McDowell Street, Raleigh, NC 27601, up to **2:00 p.m., Thursday, August 7, 2025**, and immediately thereafter publicly opened and read for providing labor, material and equipment entering into the construction of South Wake Landfill Entrance Improvements for CC#2.

The Project Consists of, but is not limited to:

Construction of drive aisles, concrete curb and gutter, curb-cuts, sidewalk ramps, asphalt paving, regrading, and drainage improvements.

Bids will be received under the Single-Prime bidding method only. Bids must be on the standard form provided in the Project Manual. No bid may be withdrawn for sixty (60) days after the scheduled closing time for bids.

An electronic copy of the contract documents (PDF) may be obtained from the Timmons Group by sending an email request to Katie Warrner at [Katie.Warrner@timmons.com](mailto:Katie.Warrner@timmons.com). Printed copies may be purchased from Accent Imaging by contacting Accent Imaging at <https://www.planscope.com/>. **Printed copies may be purchased from Accent Imaging by contacting Brent Johnson or Troy Garner at [production@accentimaging.com](mailto:production@accentimaging.com)**. Complete contract documents will also be open for inspection in the offices of the Timmons Group.

Bidders will be required to show evidence that they are licensed to perform the work in the Bidding Documents as required by North Carolina General Statute, Chapter 87 and the Instructions to Bidders. Bid Security in the amount of five percent of the Bid must accompany each Bid and shall be subject to the conditions provided in the Instructions to Bidders.

The Owner is an Equal Opportunity Employer and encourages bidding by small, minority and female contractors and does not discriminate on the basis of disadvantaged status. Bids from quality minority and/or woman-owned business enterprises (M/WBE) are encouraged.

Wake County reserves the right to reject any or all bids and to waive informalities and irregularities.

Signed: Wake County Facilities Design & Construction

By: *Paulo Lopez*  
Paulo Lopez, PE  
Project Manager | Wake County

DESIGNER: Caleb Robinson, PLA / Project Manager, Timmons Group

## SOUTH WAKE LANDFILL ENTRANCE IMPROVEMENTS FOR CC#2

RFB No. 25-071

**BID PROPOSAL FORM**

**(USE THIS FORM ONLY. Bids submitted on anything other than the form(s) provided may be considered non-responsive and subject to rejection)**

SINGLE PRIME GENERAL CONSTRUCTION WORK  
FORMAL CONTRACT

BIDDERS NAME

\_\_\_\_\_ License Number: \_\_\_\_\_

BASE BID PROPOSAL

The undersigned, as Bidder, hereby declares that the only person or persons interested in this Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a Bid or Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the specifications for the work and the Contract Documents relative thereto, including addenda, if any, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this Proposal is accepted to contract with the County of Wake with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and Contract Documents, for the sum of:

Base Bid \_\_\_\_\_  
(In written words)

\$ \_\_\_\_\_ (Dollars).  
(In numerals)

SUBCONTRACTOR LISTING

(SUBCONTRACTOR)

Name: \_\_\_\_\_ License Number: \_\_\_\_\_

\$ \_\_\_\_\_

(SUBCONTRACTOR)

Name: \_\_\_\_\_ License Number: \_\_\_\_\_

\$ \_\_\_\_\_

(SUBCONTRACTOR)

Name: \_\_\_\_\_ License Number: \_\_\_\_\_

\$ \_\_\_\_\_

(SUBCONTRACTOR)

Name: \_\_\_\_\_ License Number: \_\_\_\_\_

\$ \_\_\_\_\_

ALTERNATES

Should any of the alternates as described in the specifications be accepted, the amount written below shall be the amount to "add to" or "deduct from" the Base Bid. If to be "deducted from" Base Bid, put minus sign (-) in parentheses at head of alternate and plus sign (+) in parentheses if to be added. Refer to bid alternate notes on plans for description of alternates.

## ALTERNATES FOR THIS PROJECT:

1. Deductive Alternate No.01: Speed Humps

\_\_\_\_\_ Dollars (\$) \_\_\_\_\_ )  
 (in written words) (in numerals)

2. Deductive Alternate No.02: All work related to lowering the intake rim and paving the curve.

\_\_\_\_\_ Dollars (\$) \_\_\_\_\_ )  
 (in written words) (in numerals)

**UNIT PRICES**

Unit prices are complete for labor, equipment, material, overhead and profit. Additional items not included in current bid set, if necessary, will use unit prices below.

| <b>Description</b>                          | <b>Unit Price</b> | <b>Unit Measure</b> |
|---|-------------------|---------------------|
| Unsatisfactory soil removal                 |                   | Per CuYd            |
| Fill ABC placement                          |                   | Per CuYd            |
| Suitable soil placement                     |                   | Per CuYd            |
| Bulk rock removal                           |                   | Per CuYd            |
| Standard concrete paving, per details       |                   | Per S.F.            |
| Heavy duty asphalt paving removal           |                   | Per S.F.            |
| Heavy duty asphalt replacement, per details |                   | Per S.F.            |
| Concrete curb & gutter removal              |                   | Per L.F.            |
| Concrete curb & gutter replacement          |                   | Per L.F.            |
| Tree removal (3-10" DBH)                    |                   | Each                |
| Tree removal (11-20" DBH)                   |                   | Each                |
| Tree removal ( > 21" DBH)                   |                   | Each                |

**ALLOWANCES**

Include in the base bid proposal the following allowances as specified in Division 01 Allowances.

Allowance No. 1: Lump-Sum Allowance: Include the sum of \$20,000 for Owner's contingency.

**CERTIFICATION OF PROPOSER:**

The Bidder further proposes and agrees hereby to commence work under his Contract on a date to be specified in a written order of Wake County and shall fully complete all work thereunder within the number of consecutive calendar days stipulated in the Supplementary General Conditions. Applicable liquidated damages shall be as stated in Supplementary General Conditions.

The undersigned acknowledges receipt of the following addenda issued during the time of bidding and includes the changes therein in this Proposal:

Addendum Number \_\_\_\_\_, Dated \_\_\_\_\_, Acknowledge Receipt (Initial) \_\_\_\_\_

Addendum Number \_\_\_\_\_, Dated \_\_\_\_\_, Acknowledge Receipt (Initial) \_\_\_\_\_

Addendum Number \_\_\_\_\_, Dated \_\_\_\_\_, Acknowledge Receipt (Initial) \_\_\_\_\_

The undersigned agrees that this Proposal will not be withdrawn for a period of sixty (60) days.

The undersigned agrees to comply with the E-Verify requirements of the General Statutes of North Carolina, all contractors, including any subcontractors employed by the contractor(s), by submitting a bid, proposal or any other response, or by providing any material, equipment, supplies, services, etc., attest and affirm that they are aware and in full compliance with Article 2 of Chapter 64, (NCGS64-26(a)) relating to the E-Verify requirements.

The undersigned agrees not to discriminate in any manner on the basis of race, natural hair or hairstyles, ethnicity, creed, color, sex, pregnancy, marital or familial status, sexual orientation, gender identity or expression, national origin or ancestry, marital or familial status, pregnancy, National Guard or veteran status, religious belief or non-belief, age, or disability with reference to the subject matter of this Contract. The Parties agree to comply with the provisions and intent of Wake County Ordinance SL 2017-4. This anti-discrimination provision shall be binding on the successors and assigns of the Parties with reference to the subject matter of this Contract.

The undersigned further agrees that in the case of failure on his part to execute the said Contract and the Bond within ten (10) consecutive calendar days after written notice being given of the award of the Contract, the check, cash or Bid Bond accompanying this Bid shall be paid into the funds of Owner's Account set aside for this Project, as liquidated damages for such failure; otherwise the check, cash or Bid Bond accompanying this Proposal shall be returned to the undersigned.

## SECTION 012200 - UNIT PRICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 014000 "Quality Requirements" for general testing and inspecting requirements.

#### 1.3 DEFINITIONS

- A. Unit price is **an amount incorporated in the Agreement, applicable during the duration of the Work as** a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

#### 1.4 PROCEDURES

- A. Unit prices include all necessary material, and cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### **3.1 SCHEDULE OF UNIT PRICES**

- A. Unit Price 1: Unsatisfactory soil removal
  - 1. Description: Unsatisfactory soil excavation and disposal off site, as required and directed by geotechnical engineer, according to Section 312000 "Earth Moving."
  - 2. Unit of Measurement: Cubic yard (CY) of soil excavated, based on survey of volume removed.
- B. Unit Price No. 2: Unsuitable soils replacement with off-site Aggregate Base Course (ABC) stone.
  - 1. Description: Unsuitable soil excavation to be replaced with ABC.
  - 2. Unit of Measurement: Cubic yard (CY)
- C. Unit Price No. 3: Suitable soil placement
  - 1. Description: Placement of suitable soils.
  - 2. Unit of Measurement: Cubic Yard (CY)
- D. Unit Price No. 4: Bulk rock removal
  - 1. Description: Removal of rock to reach proposed subgrade. Refer to Section 312000 – Earth Moving
  - 2. Unit of Measurement: Cubic Yard (CY)
- E. Unit Price No. 5: Standard Concrete Paving
  - 1. Description: Additional concrete paving according to Section 321313 - Concrete Paving not otherwise indicated in the Contract Documents. Also refer to details.
  - 2. Unit of Measurement: Square Foot (SF)
- F. Unit Price No. 6: Heavy Duty Asphalt Paving Removal
  - 1. Description: Removal of additional heavy-duty asphalt paving according to Section 321216 – Asphalt Paving not otherwise indicated in the Contract Documents. Also refer to details.
  - 2. Unit of Measurement: Square Foot (SF)
- G. Unit Price No. 6: Heavy Duty Asphalt Paving
  - 1. Description: Additional heavy-duty asphalt paving according to Section 321216 – Asphalt Paving not otherwise indicated in the Contract Documents. Also refer to details.

2. Unit of Measurement: Square Foot (SF)
- H. Unit Price No. 7: Curb and Gutter Removal
1. Description: Removal of additional curb and gutter not otherwise indicated in the Contract Documents. Also refer to details.
  2. Unit of Measurement: Linear Foot (LF)
- I. Unit Price No. 7: Curb and Gutter Replacement
1. Description: Replacement of additional curb and gutter not otherwise indicated in the Contract Documents. Also refer to details and drawings.
  2. Unit of Measurement: Linear Foot (LF)
- J. Unit Price No. 8: Tree Removal
1. Description: Removal of individual trees, including stump grinding to 12" below final grade unless otherwise noted. Unit prices shall reflect the following sizes of trees as measured by diameter at breast height (DBH)
    - a. 3" – 10" DBH
    - b. 11" – 20" DBH
    - c. 21" DBH or greater
  2. Unit of Measurement: Each (EA)

**END OF SECTION 012200**

## SECTION 012300 - ALTERNATES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.
- B. Related Requirements:
  - 1. Section 014000 "Quality Requirements" for general testing and inspecting requirements.

#### 1.3 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 **deducted from the base bid amount** if the Owner decides to accept a corresponding change either in the amount construction to 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 credit for each alternate is the net **deduction from** the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

#### 1.4 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 Part 3 "Schedule of Alternates" Article 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 ALTERNATES****A. Alternate No. 1 DEDUCT: Speed Humps**

1. Alternate Deduct: Remove all speed humps from Contract Sum.

**B. Alternate No. 2 DEDUCT: Paving Curve and Lowering Intake Rim**

Alternate Deduct: Remove all work related to lowering the intake rim and paving the curve. Work includes, but is not limited to: required erosion control, removing and replacing paving markings, milling and replacing existing asphalt curve, modifications to curb, gutter, flume and rip-rap, and work related to lowering the storm water collector's rim, sump and replacing its grate.

**END OF SECTION 012300**

## **SECTION 014000 - QUALITY REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, Commissioning Authority, or authorities having jurisdiction are not limited by provisions of this Section.

#### **1.3 DEFINITIONS**

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
  - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

- D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
  - 1. Mockups are used for one or more of the following:
    - a. Verify selections made under Sample submittals.
    - b. Demonstrate aesthetic effects.
    - c. Demonstrate the qualities of products and workmanship.
    - d. Demonstrate successful installation of interfaces between components and systems.
    - e. Perform preconstruction testing to determine system performance.
  - 2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
  - 3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect[ or Construction Manager].

#### 1.4 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract

Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

## 1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
  1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
  2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

F. Reports: Prepare and submit certified written reports and documents as specified.

G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

## 1.7 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.

B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may also serve as Project superintendent.

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:

1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.

Wake County Facilities  
South Wake Landfill – Entrance Improvements for CC#2

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3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by Commissioning Authority.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

## 1.8 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  1. Date of issue.
  2. Project title and number.
  3. Name, address, telephone number, and email address of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
  1. Name, address, telephone number, and email address of technical representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.

6. Statement of whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement of whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.

## 1.9 QUALITY ASSURANCE

- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
  1. Requirements of authorities having jurisdiction supersede requirements for specialists.

Wake County Facilities  
South Wake Landfill – Entrance Improvements for CC#2

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- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups of size indicated.
  - 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
  - 3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
  - 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
  - 5. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
    - a. Allow seven days for initial review and each re-review of each mockup.
  - 7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
  - 8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 10. Demolish and remove mockups when directed unless otherwise indicated.

#### 1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

Wake County Facilities  
South Wake Landfill – Entrance Improvements for CC#2

Timmons Group

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Engage a qualified testing agency to perform quality-control services.
    - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, Commissioning Authority, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

- F. **Manufacturer's Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. **Contractor's Associated Requirements and Services:** Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Delivery of samples to testing agencies.
  - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  - 7. Security and protection for samples and for testing and inspection equipment at Project site.
- H. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

#### 1.11 SPECIAL TESTS AND INSPECTIONS

- A. **Special Tests and Inspections:** Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
  - 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures, and reviewing the completeness and adequacy of those procedures to perform the Work.
  - 2. Notifying Architect, Commissioning Authority, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
  - 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority with copy to Contractor and to authorities having jurisdiction.
  - 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
  - 5. Interpreting tests and inspections, and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
  - 6. Retesting and reinspecting corrected Work.

## PART 2 - EXECUTION

### 2.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's, Commissioning Authority's, and authorities' having jurisdiction]reference during normal working hours.
  - 1. Submit log at Project closeout as part of Project Record Documents.

### 2.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000