

**BID FORM**

**North Woodmere Park Remedial Pool Repairs  
CONTRACT NO. S41858-02G**

NAME OF BIDDER: \_\_\_\_\_

TO BE COMPLETED BY BIDDER SUBMITTING BID ON  
NORTH WOODMERE PARK REMEDIAL POOL REPAIRS  
CONTRACT NO. S41858-02G

ITEM NO.	TYPE	DESCRIPTION	Quantity	UOM		
1S	Unit Price	Job Information Sign	1	EA	\$	
1M/F	Unit Price	Mobilization with Field Office	1	LS	\$	
2	Unit Price	Unclassified Excavation	200	CY	\$	
4B	Unit Price	Cement Concrete Breaking (Structure)	158	CY	\$	
5D	Unit Price	Selected Granular Fill	100	CY	\$	
10A-1	Unit Price	Excavation Protection System	4,300	SF	\$	
12H	Unit Price	Cleaning Existing Drainage System	2,100	LF	\$	
12S40-1.5 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 1.5” Diameter – Modified	50	LF	\$	
12S40-2 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 2” Diameter – Modified	250	LF	\$	
12S40-3	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 3” Diameter – Modified	122	LF	\$	
12S40-4 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 4” Diameter – Modified	50	LF	\$	
12S40-6 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 6” Diameter – Modified	250	LF	\$	
12S40-8 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 8” Diameter – Modified	130	LF	\$	
12S40-10 Mod	Unit Price	Schedule 40 PolyvinylChloride (PVC) Drain Pipe – 10” Diameter – Modified	20	LF	\$	
17A	Unit Price	Class A Concrete for Structures	190	CY	\$	
33	Unit Price	Bar Reinforcement	20,700	LBS	\$	
34	Unit Price	Miscellaneous Metals	3,200	LBS	\$	
58RPC	Unit Price	Saw Cutting Existing Roadway Pavement & Concrete	1,000	LF	\$	
81	Unit Price	Structural Steel	10,000	LBS	\$	

**FOR INFORMATIONAL USE ONLY-DO NOT USE FOR BIDDING PURPOSES**

141B	Unit Price	Silt Protection for Surface Inlet Drainage Structures	23	EA	\$	
142A	Unit Price	Structural Steel Painting, Paint System A	1	LS	\$	
143	Unit Price	Epoxy Injection of Structures	500	LF	\$	
701	Unit Price	Surge Trench Pipe Removal and Resetting	850	LF	\$	
702	Unit Price	Concrete Patch Repairs	1,300	SF	\$	
703	Unit Price	Pool Floor and Trench Lining	29,950	SF	\$	
704	Unit Price	Pool Joint Reconstruction	740	LF	\$	
705	Unit Price	Main Drain Valve Repairs	10	EA	\$	
706	Unit Price	Low Density Cellular Concrete Fill	300	CY	\$	
707	Unit Price	5'-Wide GPM "T"-Bar Grating	132.5	LF	\$	
708	Unit Price	2'-Wide GPM "T"-Bar Grating	620	LF	\$	
709	Unit Price	2" x 4" x 8' Pressure Treated Southern Pine Lumber	450	EA	\$	
710	Unit Price	4" x 4" x 8' Pressure Treated Southern Pine Lumber	70	EA	\$	
711	Unit Price	Bilco Type J-AL Sidewalk Door	3	EA	\$	
712	Allowance	Repair Allowances for Utilities	1	LS	\$50,000	00
713	Unit Price	CCTV Inspection	1	LS	\$	
714	Unit Price	Marine Adhesive	400	LF	\$	

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**NOTE TO BIDDER:** Include a separately sealed envelope containing a list of all subcontractors the bidder will use to perform (a) plumbing and gas fitting, (b) heating, ventilating and air conditioning, and (c) electric wiring and standard illuminating fixtures; and the respective agreed-upon amount to be paid to each subcontractor. Write on the outside of the envelope the bidder's name, the contract number, and the words "List of Subcontractors".

# **NORTH WOODMERE PARK REMEDIAL POOL REPAIRS**

**North Woodmere Park - 750 Hungry Harbor Rd, North Woodmere, NY 11581**

Prepared for:



Nassau County Department of Public Works  
1194 Prospect Avenue,  
Westbury, NY 11590-2723

Prepared by:



LiRo Engineers, Inc.  
3 Aerial Way  
Syosset, NY 11791

February 2024

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## LIST OF ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officers
ACI	American Concrete Institute
ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AWS	American Welding Society
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
NCDH	Nassau County Department of Health
NCFM	Nassau County Fire Marshal
NEC	National Electrical Code
NFPA	National Fire Protection Association
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
PPE	Personal Protective Equipment
SPOTS	Spill Prevention Operations Technology Series
STARS	Spill Technology and Remediation Series
SVOCs	Semi-Volatile Organic Compounds
UL	Underwriter's Laboratories, Inc.
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

**NO TEXT ON THIS PAGE**

## SECTION 011000

### SUMMARY OF WORK

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK:

This Section includes a brief description of the major work components covered under this Contract. A more complete description of the work is provided in individual sections of these Specifications and on the Drawings. The Contractor shall furnish all equipment, labor and materials, health and safety, quality control services, and execution of all work necessary to complete the work for final acceptance.

##### 1.02 LOCATION AND SITE CONDITIONS:

The work involves reconstruction of the exterior surge trench wall around the main pool and dive pool, the existing fiberglass liner shall be removed and resealed with an epoxy liner within the main pool and dive pool, and adjacent drainage structures and drainage lines are to be CCTV inspected at the following sites:

Facility

North Woodmere Park

Address

750 Hungry Harbor Rd, Valley Stream, NY 11581

##### 1.03 STATUTES, REGULATIONS, CODES AND POLICIES:

All work included in this Contract shall be conducted in strict compliance with all applicable federal, state, and local statutes, regulations, codes, and policies. Compliance assurance shall be the responsibility of the Contractor.

##### 1.04 PERMITS AND LICENSES:

All permits or licenses required to do work shall be obtained by the Contractor. Determination of license and permit requirements shall be the responsibility of the Contractor. In addition, the Contractor shall obtain and pay for all costs associated with required permits and variances as necessary to perform all phases of the work including but not limited to the following:

A. Nassau County Health Department

1. The Work Permits will be obtained by the Contractor after the job is awarded.

B. Nassau County Fire Marshal (If necessary)

1. License to install tanks and/or piping issued by the Nassau County Fire Marshal.

2. Certificate of fitness to test underground and aboveground flammable and combustible liquid storage tanks and piping issued by the Nassau County Fire Marshal.
  3. Permits and approvals as required by Nassau County Fire Prevention Ordinance Article III.
- C. Nassau County
- The Contractor shall obtain all required permits.
- D. The Contractor shall obtain all required permits from the following entities:
- Town of Hempstead
- E. Dewatering
- If at the determination of the Construction Manager and Contractor dewatering is needed, the Contractor shall obtain all necessary permits from the New York State Department of Conservation and others as necessary to perform dewatering activities.
- F. Any others needed, by the Contractor.
- At the completion of work, the Contractor shall file with the relevant agencies all required signoffs and paperwork necessary for project closeout.

#### **1.05 WORK TO BE PERFORMED:**

The work to be performed at the facility includes, but is not limited to, the following:

##### North Woodmere Park

- A. Clear and safeguard the construction area as required by construction drawings and County Specifications. Mark out utilities and establish excavation limits.
- B. Remove surge trench grating and take inventory of existing pipes and pipe locations within the surge trench.
- C. Coordinate with facilities to shut down pool water. When pipes have been recorded and logged, remove pipes from surge trench, protect, and store on site.
- D. Perform surge trench reconstruction operations as indicated on plan.
- E. Perform CCTV inspection operations as indicated on plan. Record and present any deteriorations to the EIC and/or owner.
- F. Perform main drain valve repairs.
- G. Remove pool wall and floor fiberglass liner. Coordinate with EIC to make any necessary repairs to prep the surface for new epoxy liner.



- H. Cold weather applications and procedures shall be in place during all operations as required by material and specifications.
- I. Apply new surface application to all walls and floors as specified in contract documents.
- J. Install new pipe supports and re-install existing piping.
- K. Install new surge trench grating.
- L. Coordinate with facilities and necessary agencies to re-open the pool.

#### **1.06 CONTRACT DRAWINGS:**

The Contract Drawings which accompany and form part of the documents bear the general titles North Woodmere Park Remedial Pool Repairs for the Nassau County Department of Public Works. The drawings are numbered separately and titled as shown on the table titled "List of Drawings" at the end of this section.

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

#### **PART 3 - EXECUTION**

##### **3.01 UTILITIES:**

The Contractor shall mark-out and protect utility lines or appurtenances that are to remain. Utility lines shown on the Contract Drawings are shown at approximate locations. It is the Contractor's responsibility to locate all existing utilities on site. Any damage shall be repaired by the Contractor at no expense to the County. The Contractor shall notify the Construction Manager 3 days in advance of working at the site.

##### **3.02 DAMAGE TO PROPERTY:**

The Contractor shall repair or replace, at his expense, any property damaged as a result of the work being performed under this Contract.

##### **3.03 SEQUENCE OF CONSTRUCTION:**

The Contractor's construction sequence shall be submitted and approved by the Construction Manager. The Contractor shall coordinate his work in such a way that it will minimize disruption of facility activities.

##### **3.04 TRANSPORTATION, HANDLING AND STORAGE:**

The Contractor shall coordinate with suppliers and shippers to insure that incoming materials are properly identified with Contractor's name, Contract number and project title, and have a designated individual to receive shipments. The County will designate an open storage area for the Contractor's use if available.

##### **3.05 TRAFFIC CONTROL:**

The Contractor shall be responsible for controlling traffic around the construction area(s). The proper use of barricades, warning lights, and flagmen shall be used to safely re-route traffic disrupted by construction activities. The Contractor shall conduct construction operations to limit

traffic disruption to the best of his abilities. The Contractor shall obtain and pay for all permits for roadway lane/sidewalk closures as necessary to conduct the work. A Traffic Control Plan shall be provided to the Construction Manager upon request.

### **3.06 CLEAN-UP AND DISPOSAL OF DEBRIS:**

At the end of each work day, the Contractor shall clean the work area to the satisfaction of the Construction Manager. The Contractor shall remove demolition materials from County property. All excavations, or otherwise dangerous construction, shall be barricaded and covered to prevent accidents of unwary pedestrians or vehicular traffic. Upon completion of each phase of the work, the Contractor shall insure that all dirt, trash, and debris resulting from construction operations be removed from the work area. Disposal of debris shall be made by the Contractor at his expense and all nonhazardous debris shall be delivered to a State-approved sanitary landfill.

### **3.07 FIRE PROTECTION REQUIREMENTS:**

The Contractor shall comply with local fire regulations and NFPA 241 Safeguarding Building Construction and Demolition Operations. Fire extinguishers rated and approved by the National Fire Protection Association of sufficient size, type, and quantity to cope with all known hazard, shall be provided by the Contractor at the construction site during the execution of this Contract.

### **3.08 EXISTING FEATURES:**

The Contractor shall protect and maintain survey and grid stakes, fences, and roads against damage from equipment and vehicular traffic. Any and all damage shall be repaired by the Contractor at no expense to the County.

### **3.09 MATERIALS AND EQUIPMENT:**

Materials and equipment shall be adequate in capacity for the required usage, must not create unsafe conditions, and shall meet requirements of all applicable codes and standards and the approval of the Engineer.

### **3.10 EROSION CONTROL:**

A soil erosion and sediment control plan shall be provided to the Engineer upon request. Surface drainage within the construction limits and work areas whether or not completed, shall be graded to control erosion and plugging of existing storm sewers. Temporary control measures shall be provided and maintained until permanent drainage facilities are completed and operative. The Contractor shall control storm water run-off from the site in accordance with the Nassau County Storm Water Management Plan.

### **3.11 LIST OF DRAWINGS:**

#### **North Woodmere Park Remedial Pool Repairs**

<u>Sheet No.</u>	<u>Title</u>
1	Cover
2	General Notes - 1
3	General Notes - 2
4	General Notes - 3
5	Main Pool – Existing Plan
6	Diving Pool – Existing Plan

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7	Main Pool – Demolition Plan
8	Diving Pool – Demolition Plan
9	Site Piping Existing Sections & Details - 1
10	Site Piping Existing Sections & Details - 2
11	Main Pool – Existing Hydraulic Schematic
12	Diving Pool – Existing Hydraulic Schematic
13	Main Pool – Construction Plan
14	Diving Pool – Construction Plan
15	Site Piping Proposed Sections & Details – 1
16	Site Piping Proposed Sections & Details - 2
17	Site Piping Proposed Sections & Details - 3
18	Site Piping Proposed Sections & Details - 4
19	Site Piping Proposed Sections & Details - 5
20	Site Piping Proposed Sections & Details - 6
21	Typical Hatch Sections and Details
22	Main Pool – Proposed Hydraulic Schematic
23	Diving Pool – Proposed Hydraulic Schematic
24	Utility Plan

## END OF SECTION

**NO TEXT ON THIS PAGE**

## **SECTION 013100**

### **PROJECT MANAGEMENT AND COORDINATION**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section describes 1) the conferences required after the Notice to Proceed but prior to the start of construction activities, and 2) the Project Progress Meetings required during the execution of work. The Contractor shall coordinate the work with facility personnel, and with the Construction Manager and County.

##### **1.02 DESCRIPTION OF WORK:**

The minimum supervising requirements necessary for coordination of work on the project to be fulfilled by the Contractor include, but are not necessarily limited to, the following:

1.02.1 Meetings: The Construction Manager will call as many meetings with the Contractor as are necessary to resolve any conflicts that become apparent. Meetings and conferences shall take place at the Project Site, the Construction Manager's Office, or some other location satisfactory to both the Construction Manager and the Contractor.

1.02.2 All meetings called by the Construction Manager shall be attended by the following personnel:

- A. The Construction Manager
- B. The Engineer
- C. The Contractor's superintendent
- D. Contractor's Quality Control supervisor
- E. Contractor's Site Safety and Health Officer
- F. Subcontractor's as appropriate to the agenda
- G. Suppliers as appropriate to the agenda
- H. Others as appropriate or as requested by the Construction Manager

1.02.3 Minutes of the Meeting: The Construction Manager shall be responsible for recording the minutes of all meetings and shall include all significant proceedings and decisions. The Construction Manager shall reproduce and issue minutes of the meeting within one week of each meeting to each participant in the meeting and to parties affected by decisions made at the meeting.

1.02.4 Pre-construction Conference: Within 10 working days of issuance of the Notice to Proceed, the Contractor shall meet with representatives of the Nassau County Department of Public Works and the Construction Manager for a pre-construction conference. The Construction Manager shall provide the date, time, and agenda for the meeting. The purpose of this conference is to review

submittal procedures, the schedule, health and safety plans, payrolls and labor relations, environmental protection procedures, progress schedules, the procurement of materials, and to coordinate site activities. The principal features of work shall also be reviewed and any questions regarding the Contract and work site shall be addressed. Attendance by the Contractor's Project Manager, Superintendent, quality control personnel, safety personnel, and any major Subcontractor's representative shall be required.

- 1.02.5 Pre-work Conference: Within 30 working days of issuance of the Notice to Proceed and prior to starting on-site construction, a pre-work conference shall be held between the Construction Manager and the Contractor. Attendance by the Contractor's Superintendent, quality control personnel, safety personnel, and any major Subcontractor's superintendents will be required.
- 1.02.6 At least five (5) working days prior to the pre-work conference, the Contractor shall submit three (3) copies of the following:
  - A. Contractor Quality Control Plan (CQCP)
  - B. Site Safety and Accident Prevention Plan
  - C. Construction Schedule and Progress Chart
  - D. Spill Prevention and Control Plan
  - E. Site Security Plan
  - F. Materials Handling Plan
  - G. Fire Fighting Plan
- 1.02.7 The purpose of this conference is to further define the Quality Control System, to thoroughly review the CQCP, and to develop a mutual understanding of the specific requirements established by the Contract. The specifics of the Contractor's other submittals also shall be discussed so the emergency procedures and health and safety requirements are understood by all those directly related to the site work. The other Contractor procedures also will be discussed and any required modifications will be explained.
- 1.02.8 The above-listed items will be reviewed briefly to provide the Construction Manager with a general understanding of the Quality Control System. The Contractor's schedule, particularly for the initial start-up period, shall be discussed. Questions concerning the administrative requirements outlined during the Pre-construction Conference or any other aspect of the project also may be addressed.
- 1.02.9 Progress Meetings: The Construction Manager shall schedule and administer progress meetings at a minimum of bi-monthly and such additional meetings as deemed necessary to raise significant questions, establish new guidelines, introduce new aspects to the project or other items that will affect the progress of work if requested by either the Construction Manager or the Contractor.
- 1.02.10 The Construction Manager shall administer the following general requirements for the progress meetings:
  - A. Prepare agenda for meetings

- B. Make physical arrangements for meetings
- C. Preside at meetings
- D. Record the minutes; include significant proceedings and decisions
- E. Distribute previous meeting minutes

1.02.11 The following is a suggested agenda for Progress Meetings:

- A. Review and approval of minutes of previous meeting
- B. Review of work progress since previous meeting
- C. Field observations, problems, and conflicts
- D. Problems which impede the schedule and proposed corrective actions
- E. Review of offsite delivery schedules
- F. Corrective measures and procedures to regain projected schedule
- G. Revisions to project schedule
- H. Projected progress during succeeding work period
- I. Coordination of schedules
- J. Review of submittal schedules; expedite as required
- K. Maintenance of quality and safety standards
- L. Pending changes and substitutions
- M. Review of proposed changes for effect on construction schedule and on completion date
- N. Other business as appropriate

1.02.12 Pre-installation conference: Prior to starting installation of each major work component, a pre-installation conference will be held, attended by each entity involved or affected by the planned installation, and technical representatives of product manufacturers and others recognized as expert or otherwise capable of influencing success of the installation.

1.02.13 Installation, General: The Contractor shall install work during time and under conditions which will ensure best possible results, coordinated with required inspection and testing.

**PART 2 – PRODUCTS - (Not Used)**

**PART 3 – EXECUTION - (Not Used)**

**END OF SECTION**

**NO TEXT ON THIS PAGE**



## **SECTION 013200**

### **CONSTRUCTION PROGRESS DOCUMENTATION**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section covers the requirements for preparing and updating the construction schedule for all project work.

##### **1.02 RELATED WORK:**

SECTION 011000: SUMMARY  
SECTION 013100: PROJECT MANAGEMENT AND COORDINATION  
SECTION 013300: SUBMITTAL PROCEDURES

##### **1.03 GENERAL REQUIREMENTS:**

The Contractor shall be responsible for developing a schedule in graphic form identifying all major activities and operations, the order and interdependence of the activities or operations, and the anticipated duration of each activity or operation.

##### **1.04 CONTRACTOR TO SCHEDULE WORK:**

- 1.04.1 The Contractor shall keep the Construction Manager informed one week in advance of the times and places at which he intends to work so that the work can be measured and recorded with minimum inconvenience and delay to both the Construction Manager and the Contractor.
- 1.04.2 If the schedule of work is such that it restricts engineering control, the Contractor shall terminate his operations at the particular location in sufficient time to allow the Construction Manager to complete the work during normal working hours. Any expense to the Contractor arising from this temporary termination shall be considered as incidental to the construction and included as such in various bid items of the Contract.
- 1.04.3 If the latest computed completion time does not coincide with the time allowed by the Contract, the sequence of activities and/or time for performance of activities shall be revised by means of concurrent operations, additional manpower, additional shifts, overtime, etc. expediting procedures necessary to meet the Contract completion date at no additional cost to the County.

##### **1.05 FORM OF SCHEDULE:**

- 1.05.1 The Contractor shall prepare the construction schedule for each separate work item in the form of a horizontal bar-chart. There will be a separate distinct horizontal bar column for each trade or work activity. The schedule shall present each item of work chronologically indicating the beginning date and duration for each item. It will show interdependency with each item of work.
- 1.05.2 Horizontal Time Scale: The schedule shall be prepared with a 1-week time scale. The first day of each week shall be identified.

## **1.06 CONTENTS OF THE SCHEDULE:**

- 1.06.1 The schedule shall show the complete sequence of construction activity associated with each work activity.
- 1.06.2 The schedule shall show dates for beginning and completion of each element of construction with intermediate milestones if necessary. The schedule shall indicate shop drawing submittal, fabrication and delivery dates for all major equipment.
- 1.06.3 All work shall be identified in phases or other logically grouped activities.
- 1.06.4 Subschedule used to define critical portions of the entire schedule with mandatory completion dates shall be indicated or highlighted.
- 1.06.5 Percentage completion for each item of work shall be projected to the first day of each month.

## **1.07 UPDATING AND CHANGES:**

The Contractor shall submit information biweekly to update the project schedule. An updated schedule shall contain the following:

- A. All changes occurring since previous submission of an updated schedule.
- B. Progress of each activity, showing completion dates, including:
  - 1. Major changes in schedule
  - 2. Activities modified since previous updating
  - 3. Revised activity schedules due to changes
  - 4. Other identifiable changes

## **PART 2 - PRODUCTS**

(Not Used)

## **PART 3 - EXECUTION**

(Not Used)

**END OF SECTION**

## **SECTION 013300**

### **SUBMITTAL PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

- A. This section covers the requirements and procedures for submittals to be provided by the Contractor during the execution of this Contract.
- B. No portion of the work requiring a shop drawing, working drawing, or catalog data shall be started or shall any materials be fabricated, installed, or used on this site prior to the written approval or qualified approval of such an item by the Construction Manager or Engineer. The Contractor shall be held responsible and shall make good at his own expense any damage, seen or unforeseen, caused by the Contractor for work performed without an approved submittal.

##### **1.02 SUBMITTAL CLASSIFICATION:**

Engineer's approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Engineer.

##### **1.03 APPROVED SUBMITTALS:**

The approval of submittals by the Engineer shall not be construed as a complete check, but shall indicate only that the general method of construction, materials, detailing, and other information is in conformance with the Contract Documents. Approval shall not relieve the Contractor of the responsibility for any error which may exist. The Contractor, under the Contractor's Quality Control requirements of this Contract, is responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work. After submittals have been approved by the Engineer, no resubmittal for the purpose of substituting materials or equipment will be given consideration, unless accompanied by an explanation as to why a substitution is necessary.

##### **1.04 DISAPPROVED SUBMITTALS:**

The Contractor shall make all corrections required by the Engineer and promptly furnish a correctional submittal in the form and number of copies as specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the Contract, notice shall be given promptly to the Engineer.

##### **1.05 SUBMITTAL REQUIREMENTS:**

###### **1.05.1 General Requirements**

Submittal requirements shall be as required in the individual sections of these specifications and as required by the Contract Drawings. Submittals may be required prior to, during, and after construction.

1.05.2 The Contractor shall refer to the General Conditions for additional requirements.

**1.06 SUBMITTALS FOR OR-EQUAL STATUS FOR SPECIFIED MATERIAL:**

Substitutions, or-equals, or arrangement changes shall not be proposed on shop drawings. A separate proposal must be made. The proposal shall state that it is a request for approval of a substitution or an or-equal for material or equipment or a change in arrangement specified in the Contract Documents. The request shall include justification, calculations and other evidence supporting the sufficiency of the proposal. All requests shall be accompanied by supporting analysis.

The analysis may include the following items:

- A. Materials of construction
- B. Maintainability
- C. Points of contact and phone numbers of three Manufacturers having satisfactory experience with the product(s) for at least three years under similar conditions
- D. Warrantees/guarantees
- E. Effects on other equipment and the overall design system
- F. Any other salient features deemed important by the manufacturer to support the substitution
- G. A comparison of dimensions of the specified material/equipment to the dimensions of the proposed substitute
- H. Drawings showing all changes to the approved Working Drawings or sketches which the proposed substitute would make necessary
- I. Cost analysis with an itemized schedule of labor, equipment & material unit prices

*\*\*\*Two rejections for lack of sufficient support may end any further consideration of the substitution.*

**1.07 SHOP DRAWINGS AND PRODUCT DATA:**

- 1.07.1 Shop Drawings, as defined in the Contract clauses, and as specified in individual sections include, but are not necessarily limited to, fabrication and erection/installation drawings, scheduled information, setting diagrams, details, and coordination drawings/schedules, as applicable to the work.
- 1.07.2 All details on Shop Drawings submitted for approval shall show clearly the elevations of the various parts to the main members and lines of the structure, especially where correct fabrication of the work depends upon field measurements. Such measurements shall be made and noted on the Drawings prior to submittal for approval.

- 1.07.3 Product data includes standard prepared data for manufactured products (sometimes referred to as catalog cuts), such as the manufacturer's product specifications, installation instructions, manufacturer's printed statements of compliance and applicability, product photographs, production or quality control inspection and test reports, and certifications.

#### **1.08 CONTRACTOR'S RESPONSIBILITIES:**

- 1.08.1 The Contractor shall review all Shop Drawings and product data prior to submission to determine and verify the following:
- A. Field measurements
  - B. Field construction criteria
  - C. Catalog data and similar information
  - D. Conformance with these Specifications, Protocol, and Contingency Plans.
- 1.08.2 The Contractor shall notify the Engineer in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.
- 1.08.3 The review and approval of Shop Drawings or catalog data by the Engineer will not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor. The Engineer will have no responsibility thereof.
- 1.08.4 No portion of the work requiring a Shop Drawing, working drawing, or catalog data shall be started or shall any materials be fabricated, installed, or used on this site prior to the written approval or qualified approval of such an item. The Engineer will not be liable for any expense or delay due to the corrections of remedies required to accomplish conformity.
- 1.08.5 Project work, materials, and installation shall conform with approved Shop Drawings, working drawings, and catalog data.

#### **1.09 WITHHOLDING OF PAYMENT:**

Payment for materials incorporated in the work will not be made if required approvals have not been obtained from the Engineer.

### **PART 2 - PRODUCTS**

(Not Used)

### **PART 3 - EXECUTION**

#### **3.01 GENERAL:**

The Contractor shall submit all items identified in these Specifications. The Engineer may request submittals in addition to those listed when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals

shall be the same as those used in the Contract Drawings. Submittals shall be made in the required number of copies. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with Contract Requirements. Incomplete submittals shall be returned without review. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each submittal shall be stamped, signed, and dated by the CQC representative certifying that the accompanying submittal complies with the Contract requirements. Proposed deviations from the Contract requirements shall be clearly identified. Submittals shall include these items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to), diagrams; test reports; test cylinders; certifications; warranties; and other such required submittals. Submittals requiring approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby.

### **3.02 SCHEDULING:**

Submittals covering component items of a system, or items that are interrelated, shall be coordinated and submitted concurrently. Certifications shall be submitted with the pertinent drawings. A minimum of 10 working days, exclusive of mailing time, shall be allowed for review and approval of all submittals. No delays, damages, or time extensions will be allowed for time lost in late submittals.

### **3.03 SUBMITTAL PROCEDURE:**

- 3.03.1 The Contractor shall submit for approval three (3) copies of all submittals. The mailing address for these submittals shall be obtained at the pre-construction conference.
- 3.03.2 Submittals which include proposed deviations requested by the Contractor shall include, in writing, the reason for the deviation and shall annotate the deviation on the submittal. The Engineer reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

### **3.04 CONTROL OF SUBMITTALS:**

The Contractor shall be responsible for ensuring that each individual submittal is made on or before the Contractor's scheduled submittal date.

### **3.05 APPROVAL OF SUBMITTALS:**

- 3.05.1 Upon completion of review of submittals requiring approval, the submittals will be identified as having received review by being so stamped and dated. Two (2) copies of the submittal will be retained by the Engineer, and one (1) copy of the submittal will be returned to the Contractor.
- 3.05.2 Approved: When a shop drawing is satisfactory to the Engineer, the shop drawings will be stamped "No Exceptions", will be dated, and the shop drawings will be returned to the Contractor.
- 3.05.3 Approved as Noted: When the Engineer requires minor corrections, the shop drawings will be stamped "Revise as Noted", will be dated, and the shop drawing will be returned to the Contractor. The Contractor shall then make the corrections on the Shop Drawing. Resubmission of shop drawings stamped "Revise as Noted" is required.

- 3.05.4 Disapproved: When the Engineer requires major corrections, the shop drawings will be stamped “Amend and Resubmit”, will be dated and will be returned to the Contractor. No items may be fabricated and/or no work pertaining to the shop drawing shall be performed. The Contractor shall make the required corrections and resubmit the shop drawing for review.
- 3.05.5 Rejected: When the shop drawings is not in accordance with the Contract, requires too many corrections or is otherwise unsatisfactory to the Engineer, the shop drawing will be stamped “Rejected”, will be dated and will be returned to the Contractor. No items may be fabricated and/or no work pertaining to the shop drawing shall be performed. The shop drawing shall be corrected and a new shop drawing shall be resubmitted; such resubmittals of “Rejected” shop drawings shall be considered as an original submittal.

### **3.06 INFORMATION-ONLY SUBMITTALS:**

Normally, submittals for information-only will not be returned. Approval of the Engineer is not required on information-only submittals. The Engineer reserves the right to require the Contractor to resubmit any item found not to comply with the Contract. This does not relieve the Contractor from the obligation to furnish material conforming to the Plans and Specifications and will not prevent the Engineer from requiring removal and replacement of nonconforming material if incorporated in the work. This does not relieve the Contractor of the requirement to furnish samples for testing by the Engineer’s laboratory, nor does it relieve the Contractor of the responsibility of checking the testing performed by the Engineer in those instances where the technical specifications so prescribe.

**END OF SECTION**

**NO TEXT ON THIS PAGE**



## SECTION 013523

### HEALTH, SAFETY, AND ACCIDENT PREVENTION

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK:

This section describes the minimum health, safety, and emergency response requirements for the activities at the site. Site activities may involve worker exposure to potentially hazardous materials. Most petroleum storage tank cleaning will involve flammable vapors from products stored in the tank and from accumulated residues left in the tank even after it has been pumped dry. Accordingly, the Contractor shall implement health and safety criteria and practices sufficient to protect onsite personnel, the public, and the environment from physical and chemical hazards particular to each site.

##### 1.02 APPLICABLE REFERENCES:

The publications listed below form part of this Specification to the extent referenced. The publications are referred to by basic designation only and shall be the latest published versions.

###### 1.02.1 American Petroleum Institute (API)

API Publ 2015	Cleaning Petroleum Storage Tanks
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###### 1.02.2 OSHA Standards and Regulations, CFR:

29 CFR 1910	OSHA Standards; General Industry
29 CFR 1910.120	OSHA Standards; Hazardous Waste Operations and Emergency Response
29 CFR 1926	OSHA Standards; Construction Industry

###### 1.02.3 DOT Standards and Regulations, CFR

49 CFR 171	Hazardous Materials Regulations; General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Tables and Military Standards

###### 1.02.4 Other Publications

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, ACGIH

Guide to Occupational Exposure Values, ACGIH

*\*\*\*NOTE: Where conflicts arise between requirements of the above-listed regulatory requirements, the most restrictive of the requirements shall be followed.*

### **1.03 SITE HEALTH AND SAFETY PLAN:**

- 1.03.1 The Contractor shall develop a Site Health and Safety Plan with the assistance of a Certified Industrial Hygienist (CIH). The plan shall be submitted as part of the Plan of Operations and shall include, but not be limited to, the information in the following paragraphs.
- 1.03.2 Practices and Procedures: Site-specific health and safety practices, procedures, and equipment required to protect employees involved in site activities. The procedures and practices specified shall be followed by all Contractor and Subcontractor personnel during the course of this project.
- 1.03.3 The Contractor shall identify an individual who shall serve as the Site Safety Officer for this project. The individual shall:
  - A. Have a working knowledge of pertinent federal, state, and local health and safety regulations, program development and implementation, and air monitoring techniques.
  - B. Be certified as having completed training in first aid and CPR by a recognized, approved organization, such as the American Red Cross.
  - C. Be continuously onsite during all operations covered by this Contract.
  - D. Be familiar with the Site Health and Safety Plan and its requirements and be responsible for the Plan's implementation.
  - E. The Site Safety Officer may designate an alternate to assist him, provided his alternate meets all of the above requirements. The Contractor shall submit the name, qualifications (education summary and documentation), and work experience of the Site Safety Officer, and any alternates to the Construction Manager prior to commencement of work at the site.
- 1.03.4 Personnel Qualifications (CIH): The Contractor shall identify an individual who shall serve as the CIH for this project. This individual shall:
  - A. Be familiar with all applicable OSHA, USEPA, and NYSDEC standards.
- 1.03.5 Personnel Protection: The Contractor shall provide all onsite personnel with appropriate personal protective equipment (PPE), and shall ensure that all safety equipment and protective clothing is kept clean and well maintained.
- 1.03.6 Accident Prevention: An Accident Prevention Plan and description of work-phase safety plan shall be developed. Each phase of the Accident Prevention Plan shall include a description of the work activity, probable hazards related to the work, and positive precautionary measures to be taken to safeguard against and reduce or eliminate each particular hazard. In the event of an accident/injury, the Contractor shall immediately notify the Construction Manager. Within two

working days of any reportable accident, the Contractor shall complete and submit to the Construction Manager an Accident Report.

- 1.03.7 The Accident Prevention Plan shall be developed and written by a CIH. The Site Safety Officer shall be responsible for review of Contractor's operations to ensure the plan is implemented.
- 1.03.8 Confined Space Entry: The Contractor shall include descriptions of all procedures, safety precautions, special equipment, etc. used for confined space entry in the Site Health and Safety Plan. The Contractor shall also include under what circumstances confined space entry will be allowed.
- 1.03.9 The Contractor shall state the storage and disposal criteria of PPE and decontamination water.

## **PART 2 - PRODUCTS**

(Not Used)

## **PART 3 - EXECUTION**

### **3.01 MEDICAL SURVEILLANCE:**

Physical examinations for personnel working onsite shall be provided prior to project start-up. The examinations shall address the chemical and physical hazards to which the employees will be exposed. The medical examination results shall be evaluated by a physician practicing occupational medicine to determine that the individual is medically qualified to wear a respirator and is physically fit for the work to be performed. The physician must certify that no physical condition or disease could be aggravated by exposure to the identified hazards. The results of the medical surveillance program shall be provided to the Construction Manager upon request.

### **3.02 PERSONNEL TRAINING:**

Personnel employed to sample tank residuals or soil, perform tank cleaning, and supervisors shall be trained and thoroughly familiar with the safety precautions, procedures, and equipment required for controlling the potential hazards associated with this project. This training shall be documented in detail and recorded in the project's records.

### **3.03 FIRST AID AND EMERGENCY RESPONSE EQUIPMENT AND PROCEDURES:**

The Contractor shall provide for appropriate emergency first aid equipment (including ANSI-approved eye wash stations, a portable stretcher, and an industrial-type first aid kit) suitable for treatment of exposure to site physical and chemical hazards. Additionally, two ABC-rated fire extinguishers shall be maintained on site as well as absorbent material of sufficient quantity to collect any spill which might occur during this project. A listing of emergency phone numbers and points of contact for fire, hospital, police, ambulance, and other necessary contacts shall be posted at the Contractor's site. A route map detailing the directions to the nearest hospital also shall be posted.

### **3.04 HEAT AND COLD STRESS:**

The Contractor shall monitor all personnel for signs of heat or cold stress, as dictated by weather conditions. In addition, all field personnel shall be instructed to observe for symptoms of heat or cold stress in themselves and fellow workers and methods to control them. The Contractor shall adhere to guidelines provided in the Threshold Limit Values and Biological Exposure Indices published by the ACGIH for heat and cold extremes.

### **3.05 ILLUMINATION:**

Work areas shall be illuminated to a minimum of 10 footcandles. Lighting shall be sufficient to determine whether material spills have occurred.

### **3.06 ELECTRICAL SAFETY:**

All electrical services must be grounded and equipped with and use ground fault circuit interrupter (GFCI) protected outlets. Portable lights used outside the tank in the path of possible vapor travel shall be suitable for hazardous locations and shall be connected to extension cords equipped with connectors or switches approved for hazardous locations. Such equipment, when used, shall be inspected to ensure it will not be a source of ignition. All air monitoring instrumentation shall be rated as intrinsically safe for Class I, Division I, Group D atmospheres.

### **3.07 SITE CONTROL AND WORK ZONES:**

Personnel not directly involved with this project shall not be permitted to enter the work zone. For purposes of this Contract, the "work zone" shall be established by the Contractor to provide a reasonable set back between the public and the work area. The work zone shall be established based on the safety of the public, the actual site conditions, and the uses of the areas surrounding the work. The proposed work zone limits shall be reviewed by the Construction Manager to make certain the work zone is compatible with the operations of the site. The Contractor's site office, parking area, and other support facilities shall be located outside this boundary. The initial minimum level of PPE shall be in accordance with these Specifications. The boundary of the work zone shall be demarcated and posted clearly by the Contractor.

### **3.08 AIR MONITORING AND SURVEILLANCE:**

When personnel are working within trenches/excavations, the Contractor shall implement routine air surveillance and monitoring for LEL and oxygen levels. Air monitoring and surveillance shall be required whenever personnel enter a trench/excavation, every 15 minutes during tank decontamination, or whenever site conditions indicate that fuel vapors are present. Air monitoring, when conducted, shall be performed in the breathing zone of the personnel. Air monitoring and surveillance equipment shall be described in the Site Health and Safety Plan.

### **3.10 ACTION LEVELS:**

Based upon published results of air monitoring and surveillance for combustible gas/oxygen monitoring for similar projects, the following action levels are recommended.

#### **3.10.1 Combustible Gas Monitoring**

A. 0 to 10% LEL: Normal operations, continue monitoring

B. Greater than 10% LEL: Shut down operations and equipment; ventilate area

### 3.10.2 Oxygen Monitoring

- A. 19.5% to 23% Oxygen: Normal operations, continue monitoring
- B. Less than 19.5% oxygen: Shut down operations and ventilate area
- C. Greater than 23% oxygen: Shut down operations and ventilate area

### 3.11 EXCAVATION SAFETY:

All demolition and excavating work shall be conducted in strict conformance with, at a minimum, 29 CFR 1926.650 through 29 CFR 1926.653, including requirements for sloping or shoring found in 29 CFR 1926.652. If the excavation must remain open during periods when the work site is unoccupied (i.e., overnight, over a weekend, and other similar off periods) barricades shall be placed around the excavation in such a manner to alert personnel to the danger and prevent them from falling into the trench (i.e. using road plates and barriers.)

### 3.12 CONFINED SPACE ENTRY:

If any person is required to enter the tank or an excavation greater than 4 feet, it is considered a confined space entry. The medical surveillance shall ensure that the worker is capable of entering a confined space. Workers required to enter confined space shall have the specialized training required under CFR 1910.146 (Vol. 58, No. 9, January 14, 1993).

### 3.13 EATING, DRINKING, AND SMOKING:

No eating, drinking, smoking, chewing of tobacco or gum, or other hand-to-mouth activities shall be permitted in any of the work areas during the course of this project.

### 3.14 IGNITION SOURCES:

Ignition sources (e.g., cigarette lighters, matches, or other flame producing items) not required for the completion of the project, *shall not be permitted* in the work zones. Before any work is done that might release vapors, work areas shall be barricaded and posted, and burning or other work shall be eliminated from the area where flammable vapors may be present or may travel. This area shall be kept free of all sources of ignition from the time tank safining starts until the tank is gas-free and any residues have been removed. Signs shall be posted warning that vehicles and other sources of ignition shall be kept out of the area. No work shall be done if the direction of the wind might carry vapors into areas where they might produce a hazardous condition, or when an electrical storm is threatening the site of work. Sparks caused by friction of electrostatic effects also may be a source of ignition in flammable atmospheres, especially at low humidity. Proper grounding of metal objects and/or electrical equipment, together with the use of sparkless tools and localized adjustment of humidity, may reduce this hazard.

### 3.15 BREAK AREA AND SUPPORT ACTIVITIES:

All eating, drinking, smoking, and break facilities, as well as the Contractor's equipment storage, parking, and office shall be located outside the work zones as determined by the Site Safety Officer and approved by the Construction Manager.

### 3.16 SANITATION:

The Contractor shall ensure that all onsite personnel have ready access to soap and clean water for washing and toilet facilities.

### **3.17 UNFORSEEN HAZARDS:**

Should any unforeseen or site-specific safety-related factor, hazard, or condition become evident during the performance of work at this site, it shall be the Contractor's responsibility to bring such conditions to the attention of the Construction Manager both verbally and in writing as quickly as possible, for resolution. In the interim, the Contractor shall take prudent action to establish and maintain working conditions and to safeguard employees, the public, and the environment.

### **3.18 TERMINATION:**

Any disregard for the provisions of these Specifications shall be deemed just and sufficient cause for termination of the Contractor or any Subcontractor without compromise or prejudice to the rights of the Contractor.

**END OF SECTION**

## **SECTION 013543**

### **SPILL PREVENTION AND CONTROL**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section covers the Contractor's responsibilities with respect to spill prevention and control.

##### **1.02 APPLICABLE REFERENCES:**

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to by basic designation only and shall be the latest published versions.

###### **1.02.1 United States Environmental Protection Agency (USEPA):**

EPA/625/6-B5/006 Remedial Action at Waste Disposal sites

###### **1.02.2 Code of Federal Regulations (CFR):**

40 CFR Part 300 National Oil and Hazardous Substances Pollution Contingency Plan

40 CFR Protection of Environment

###### **1.02.3 American Society for Testing and Materials (ASTM):**

ASTM E119 Fire Resistance Directory

##### **1.03 SUBMITTALS:**

A Spill Prevention and Control Plan shall be provided to the Engineer, upon request, in accordance with Section 013300: SUBMITTAL PROCEDURES.

##### **1.04 GENERAL REQUIREMENTS:**

1.04.1 The Contractor shall prepare and implement a Spill Prevention and Control Plan and maintain appropriate containment and/or diversionary structures, materials and equipment to prevent and control the maximum spillage of any specific item within the Scope of Work. All materials and equipment used in connection with this project shall be included. The plan shall include inspection and test procedures performed to ensure compliance.

1.04.2 Laws and Regulations: The Contractor shall not pollute any area with any manmade or natural harmful materials. It is the sole responsibility of the Contractor to investigate and comply with all applicable federal, state, county, and municipal laws and regulations concerning the Spill Prevention and Control Plan.

1.04.3 A Project Telephone Directory shall be incorporated into the plan.

- 1.04.4 Written Discussions: In addition to the minimal prevention standards listed, the Plan shall include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures, or if more stringent, with the State rules, regulations and guidelines.
- A. Facility drainage
  - B. Bulk storage
  - C. Facility transfer operations, pumping, and conveying materials
  - D. Truck loading/unloading rack
- 1.04.5 Design and Specifications: The Contractor shall provide a Spill Prevention and Control Plan with the following designs and specifications:
- A. Appropriate containment and/or diversionary structures or equipment to prevent discharge of materials to the environment
  - B. Dikes sufficiently impervious to contain spill materials
  - C. Curbing
  - D. Culverts, gutters, or other drainage systems
  - E. Weirs, booms, or other barriers
  - F. Sorbent materials
  - G. Curbing drip pans
  - H. Sumps and collection systems
- 1.04.6 Inspections and Records: Inspections required by this Scope of Work shall be in accordance with written procedures developed for the facility by the Contractor. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, shall be part of the Spill Control and Prevention Plan, and shall be maintained during the project and submitted to the Construction Manager for final closeout.
- 1.04.7 Facility Lighting: Facility lighting shall be commensurate with the type and location of the facility. Consideration shall be given to: 1) Discovery of spills, occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (security personnel, the general public, local police, etc.); and 2) prevention of spills occurring through acts of vandalism.

## **PART 2 - PRODUCTS**

(Not Used)

## **PART 3 - EXECUTION**

### **3.01 GENERAL:**



- 3.01.1 If materials are released, the Contractor shall provide a written description of the event, corrective action taken, and plans for preventing a recurrence, as well as a written commitment of manpower, equipment, and materials required to expedite control and removal of any harmful quantity of materials released.
- 3.01.2 The Contractor shall notify the New York State Department of Environmental Conservation, Nassau County Department of Health, Nassau County Department of Public Works, and the Construction Manager within two hours of the release or spill.

### **3.02 TRAINING:**

- 3.02.1 Personnel Training and Spill Prevention Procedures: The Contractor shall be responsible for properly instructing his personnel regarding applicable pollution control laws, rules, and regulations; and in the operation and maintenance of equipment to prevent the discharge of materials.
- 3.02.2 Briefings: The Contractor shall schedule and conduct Spill Prevention Briefings for its operating personnel at intervals frequent enough to assure adequate understanding of the Spill Prevention and Control Plan for this project. Such briefings shall highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.
- 3.02.3 Evacuation Routes shall be marked on the project site.

### **3.03 TESTING:**

Facility communication or alarm systems and spill control equipment must be tested and maintained by the Contractor as necessary to assure proper operation in time of emergency.

**END OF SECTION**

**NO TEXT ON THIS PAGE**

## **SECTION 014000**

### **QUALITY REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

The Contractor shall provide all labor, material, and equipment necessary for required inspection and testing services to determine compliance of the work with the requirements specified or indicated.

Tests and inspections required include, but are not limited to, the following:

- A. Nassau County Health Department;
- B. Tests for materials such as backfill, concrete, masonry block, steel reinforcement, etc. as indicated in respective sections.

The Contractor shall refer to the General Conditional for additional requirements.

##### **1.02 DEFINITIONS:**

- 1.02.1 Quality Control services include inspections, tests, reports and related actions performed by independent agencies, governing authorities, or the Contractor. These services do not include Contract enforcement activities performed directly by the Engineer.
- 1.02.2 Specific Quality Control requirements for individual units of work may be found in the sections of these Specifications that detail the individual element of the work. These requirements, including inspections and tests, cover both production of standard products, and fabrication of customized work. These requirements also cover quality control of the installation procedures.
- 1.02.3 Inspections, tests, and related actions specified in this section and elsewhere in the Contract Documents are not intended to limit the Contractor's own quality control procedures which facilitate overall compliance with requirements of the Contract Documents.
- 1.02.4 Requirements for the Contractor to provide Quality Control Services as required by the Engineer, Nassau County, or other authorized entities are not limited by the provisions of this section.

##### **1.03 RESPONSIBILITIES:**

- 1.03.1 It shall be the Contractor's responsibility, except where specifically indicated as being the Construction Manager's responsibility, or where provided by another identified entity, to perform inspections, tests, and similar Quality Control Services specified to be performed by independent agencies and not directly by the Construction Manager. Costs for these services shall be included in the Contract Sum. The Contractor, after approval by the Construction Manager, shall employ and pay an independent agency, testing laboratory, or other qualified firm to perform the Quality Control Services specified.
- 1.03.2 The Contractor shall plan and conduct his operations to permit taking of field samples and test specimens, as required, and to allow adequate time for laboratory tests by the County. The collection, field preparation and storage of field samples and test specimens shall be as directed by the County and Construction Manager, and shall be the responsibility of the Contractor.

- 1.03.3 Retest Responsibility: Where results of required inspection, tests, or similar services prove unsatisfactory and do not indicate compliance of related work with the requirements of the Contract Documents, the retests are the responsibility of the Contractor, regardless of whether the original test was or was not the Contractor's responsibility. Retesting of work revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original work.
- 1.03.4 Responsibility for Associated Services: The Contractor is required to cooperate with the independent agencies performing required inspections, tests, and similar services. The Contractor shall provide such auxiliary services as are reasonably requested. The Contractor shall notify the testing agency sufficiently in advance of operation to permit assignment of personnel. These auxiliary services include, but are not limited to, the following:
- A. Providing access to the work
  - B. Taking samples or providing assistance with taking samples
  - C. Delivery of samples to testing laboratories
  - D. Security and protection of samples and test equipment at the project site
- 1.03.5 Coordination: The Contractor and each independent agency engaged to perform inspections, tests, and similar services for the Project shall coordinate the sequence of their activities so as to accommodate required services with a minimum delay in the progress of the work. In addition, the Contractor and each independent testing agency shall coordinate their work so as to avoid the necessity of removing and replacing work to accommodate inspections and tests. The Contractor is responsible for scheduling times for inspections, tests, taking of samples, and similar activities.
- 1.03.6 Testing and Inspection: It is the intention of these Specifications that all materials shall be tested, inspected, and approved before incorporation in the work. Tests shall be made in such a manner and in such number as hereinafter specified. In addition to specific tests called for, all materials shall be tested and examined at a level of detail that demonstrates the materials' compliance with these Specifications. Tests shall satisfy the Engineer's requirements.

#### **1.04 QUALITY ASSURANCE:**

Except as otherwise indicated, the Contractor shall engage inspection and testing service agencies, including independent testing laboratories, which are recognized in the industry as specializing in the types of inspections and tests to be performed.

#### **1.05 SUBMITTALS:**

- 1.05.1 General: Refer to Section 013300: SUBMITTAL PROCEDURES for the general requirements on submittals. The Contractor shall submit a certified written report of each inspection, test, or similar service, conducted by the Contractor or the Contractor's independent testing laboratory, directly to the Engineer.
- 1.05.2 Written reports of each inspection, test, or similar service shall include, but not be limited to, the following:
- A. Name of testing agency or testing laboratory
  - B. Dates and locations of samples and tests or inspections

- C. Names of individuals making the inspection or test
- D. Designation of the work and test method
- E. Complete inspection of test data
- F. Test results
- G. Interpretations of test results
- H. Notation of significant ambient conditions at the time of sample-taking and testing
- I. Comments or professional opinion as to whether inspected or tested work complies with requirements of the Contract Documents
- J. Recommendations on retesting, if applicable

1.05.3 All materials delivered to the job site shall be accompanied by a manufacturer's certification that the material:

- A. Conforms to the applicable specifications for this project
- B. Is from a lot that has been tested as specified and the test report and results have been accepted by the Engineer
- C. Identifies the lot and test reports applicable to this shipment
- D. Is identified by project name/contract number, description of material and quantity of same

Copies of this certification shall be given to the Engineer by the Contractor. Work using material that does not possess acceptable certifications shall not be accepted for payment. Such material shall not be incorporated into the work of this Contract.

## **PART 2 - PRODUCTS**

(Not Used)

## **PART 3 - EXECUTION**

### **3.01 REPAIR AND PROTECTION:**

Upon completion of inspection, testing, sample-taking, and similar services performed on the work, the Contractor shall repair damaged work, and restore substrates and finishes to eliminate deficiencies, including deficiencies in the visual qualities of exposed finishes. The Contractor shall protect work exposed by or for quality control service activities, and protect repaired work. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

**END OF SECTION**

**NO TEXT ON THIS PAGE**

## **SECTION 015000**

### **TEMPORARY FACILITIES AND CONTROLS**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

- 1.01.1 The Contractor shall furnish all labor, materials, equipment, and services necessary to maintain and operate temporary facilities and for removal of these facilities upon completion of the project.
- 1.01.2 The Contractor shall supply those temporary facilities as needed for successful completion of the project. Temporary facilities may include but not be limited to the following:
  - A. Security and communications
  - B. Contractor's office
  - C. Emergency medical facilities
  - D. Equipment storage
  - E. Parking, site access roads, and staging areas
  - F. Water and snow removal
  - G. Utilities; i.e., Electric and lighting, sanitary facilities
  - H. Existing Owner's utilities

##### **1.02 RELATED WORK:**

SECTION 015700: MAINTENANCE AND PROTECTION OF TRAFFIC

##### **1.03 APPLICABLE REFERENCES:**

The publication listed below forms a part of this Specification to the extent referenced. The publication is referred to by basic designation only and shall be the latest published version.

29 CFR 1910.120 OSHA Standards; Hazardous Waste operations and Emergency Response

##### **1.04 DESCRIPTION OF REQUIREMENTS:**

- 1.04.1 The Contractor shall anticipate that routing of truck traffic, equipment, and deliveries will be restricted.
- 1.04.2 The Contractor, with the approval of the Construction Manager, shall provide and maintain temporary roads and parking and storage areas within the site boundaries.

- 1.04.3 Throughout the period of construction operations, the Contractor shall not obstruct, leave foreign materials, or otherwise restrict the free flow of traffic on any public or private roadway or temporary onsite road, except with written permission from the Construction Manager. Any disruption of traffic required by the Contractor's operations shall be in accordance with Section 015700: MAINTENANCE AND PROTECTION OF TRAFFIC.
- 1.04.4 On-site Parking: The Contractor shall be advised that parking of construction vehicles shall be strictly limited to designated areas as approved by the Construction Manager. Personnel vehicles of the Contractor or Contractors employees shall not park on-site without permission of the Construction Manager.
- 1.04.5 Material Deliveries: Deliveries shall be made at only those locations approved by the Construction Manager. Deliveries of major materials, components or items shall be coordinated with the Construction Manager. The Construction Manager will make provisions for on-site open storage. Protection of delivered materials is the responsibility of the Contractor.

#### **1.05 JOB CONDITIONS:**

- 1.05.1 General: The Contractor shall establish and initiate the use of each temporary facility required for proper performance of the total work of the project.
- 1.05.2 Conditions of Use: The Contractor shall operate, maintain, and protect temporary facilities in a manner which will be safe, non-hazardous, sanitary, and protective of persons and property. The Contractor shall obtain permission from the Owner prior to the use of any of the Owner's facilities or utilities.

#### **1.06 SUBMITTALS:**

The following information shall be provided to the Engineer upon request.

- A. Structures: floor plans, fixtures, materials of construction, and siting locations.
- B. Electrical supply and lighting: source point, layout locations, fixtures, and materials.
- C. Water supply and sanitary facilities: source point, layout locations, fixtures, materials and methods of disposal.

#### **1.07 REQUIREMENTS OF REGULATORY AGENCIES:**

- 1.07.1 Electric and lighting shall be in accordance with federal, state, and local regulations as well as local utility company requirements. All work shall be in accordance with the NYS Building Code.
- 1.07.2 Sanitary facilities and disposal of sanitary wastes shall be in accordance with federal, state, and local regulations. The Contractor shall dispose of sanitary waste off site at his own expense.

#### **1.08 LOCATION AND SOURCE:**

All facilities specified shall be located on site, within the easements or as approved by the Construction Manager. The Contractor shall meter and purchase utilities at the site by entering into a utility service contract with the necessary utilities.



## **1.09 MATERIALS:**

All materials shall be suitable for their intended use and shall conform to applicable codes and standards. Manufacturer's requirements shall be strictly adhered to. Materials may be reused provided that they are sound and capable of performing the intended function and approved by the Construction Manager.

## **1.10 ELECTRIC AND LIGHTING:**

- 1.10.1 Temporary electric service for the project site shall be provided where required. It shall be the responsibility of the Contractor to coordinate electrical service installation. The Contractor is responsible for determining actual power requirements and arranging with the local utilities for installation and service of transformer(s) with associated wiring and electrical equipment, as necessary to perform site work. The Contractor is responsible for ensuring that the system is adequate for all power needs.
- 1.10.2 Service shall be brought to the project site by buried conduit or from conventional above ground poles. All electrical work shall be completed by personnel familiar with code requirements and qualified to perform the work. The Contractor shall install circuit and branch wiring with area distribution boxes located so that power and lighting are available throughout the construction site, through the use of construction-type power cords.
- 1.10.3 Lighting shall be provided for all work areas for security purposes, night work, and where natural light is inadequate to perform the work safely. Work areas shall be lighted to not less than the minimum illumination intensities listed in OSHA Standard 29 CFR 1910.120.
- 1.10.4 Project Completion: The Contractor shall be responsible for disconnecting and removing all temporary electrical and lighting systems at the completion of the work.

## **1.11 SANITARY WASTE SYSTEM:**

- 1.11.1 Separate male and female sanitary facilities shall be provided at the work site. Temporary toilet facilities shall be chemical type or flush toilets. All temporary toilet facilities shall comply with health codes and regulations.

## **1.12 CLEANING AND TRASH DISPOSAL:**

The Contractor shall be responsible for daily cleaning of spillage and debris resulting from the Contractor's operations and from those of his Subcontractors; and shall be responsible for complete and proper removal and disposal of waste materials. The Contractor shall provide containers at grade, sufficient for the depositing of non-hazardous/non-toxic waste materials, and shall remove such waste materials from the project site at least weekly during cold weather (daily high temperatures below 50°F) and at least twice weekly during mild and warm weather or as directed by the Construction Manager. The Contractor shall remove burnable debris more frequently from the site.

## **1.13 PROTECTION OF WORK:**

- 1.13.1 Fire protection and prevention during the construction period shall be provided by the Contractor as required by the local fire department.

- 1.13.2 Water Protection: The Contractor shall protect the project area from breaking-up of drains and sewers, and all other water service. The Contractor shall provide all pumps, equipment, and enclosures necessary to ensure protection.
- 1.13.3 Weather Protection. The Contractor shall provide protection against weather, rain, wind, storms, frost or heat to maintain the work materials, apparatus, and fixtures free from injury or damage. Work likely to be damaged shall be covered by the Contractor at the end of each day's work.
- 1.13.4 Damage. Any work damaged by failure to provide the above required protection shall be removed and replaced with new work at the Contractor's expense.
- 1.13.5 Public Utilities. The Contractor shall take suitable care of all public utilities encountered in connection with the work. The Contractor shall send notices, make all necessary arrangements, and provide all services required for the care of gas mains, water pipes, sewer pipes, telephone and telegraph conduits, cables, service entry of electrical conduits and cable and other equipment or property, assuming all responsibility and paying all costs for which the County may be liable. The Contractor shall consult all of the available records of all different utilities to fully inform himself of the locations and extent of all utilities.
- 1.13.6 General. The Contractor shall take efficient and effective measures to protect, maintain and keep clean all streets, pavements, curbs, stairs, landings, platforms, signs, sidewalks, fire hydrants, utility poles, buildings, underground cables and utilities, etc., on and adjacent to the site. The Contractor shall take efficient and effective means to protect existing trees and shrubbery on and adjacent to the site.

## **PART 2 - PRODUCTS**

(Not Used)

## **PART 3 - EXECUTION**

(Not Used)

**END OF SECTION**

## **SECTION 015400**

### **SECURITY**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

The Contractor shall provide all labor, materials, and equipment required to implement site security in the work area 24 hours a day, 7 days a week including holidays throughout the duration of the Contract. The Contractor shall be responsible for the control of all persons, equipment and vehicles entering and leaving the work area.

##### **1.02 SUBMITTALS:**

The Contractor shall, upon request, submit the security plan to the Construction Manager for his review and approval. This plan will include:

- A. Description of proposed daily security operation
- B. Provisions for conducting security checks including method and frequency
- C. Provisions for photo identification of Contractor personnel
- D. Background, experience and references of the security personnel themselves

#### **PART 2 - PRODUCTS**

(Not Used)

#### **PART 3 - EXECUTION**

##### **3.01 GENERAL:**

- 3.01.1 The Contractor shall safely guard all work, materials, equipment, and property from loss, theft, damage, and vandalism.
- 3.01.2 The Contractor shall employ security guards as needed to provide the required security and prevent unauthorized entry.
- 3.01.3 If existing fencing or barriers are breached or removed for purposes of construction, the Contractor shall provide and maintain temporary security fencing equal to the existing and in a manner satisfactory to the Construction Manager.
- 3.01.4 The Contractor shall be responsible for maintaining a log of all security incidents. This log shall be furnished to the Construction Manager upon request. All security incidents shall be reported immediately to the Construction Manager.
- 3.01.5 The Contractor shall repair all damage to property of the Owner and others arising from failure to provide adequate security.

- 3.01.6 The Contractor shall make no claim against the Owner, County or the Construction Manager for property damage or personnel injury resulting from trespassing.
- 3.01.7 The Contractor shall be solely responsible for all damage and claims resulting from personnel injury to all personnel, both authorized and unauthorized on the work site.
- 3.01.8 Vehicular access to the site shall be restricted to authorized vehicles only.
- 3.01.9 The Contractor shall require all personnel and visitors having access to the work area to sign in and out, and shall keep a record of all site access.

**3.02 TRANSPORTATION AND DELIVERIES TO JOB SITE:**

- 3.02.1 A Construction Control Point shall be established through which transportation and deliveries of materials and equipment will enter and leave the job site.

**3.03 JOB SITE:**

- 3.03.1 The Contractor and his employees shall remain within the limits of the project work area and/or within the fenced area of such project. The Contractor and his employees shall not, without specific, proper authorization, move, trespass, or enter into any other area on the site.
- 3.03.2 The Contractor and his employees shall not burn trash or materials on the site. They shall not dump refuse, debris or rubble on the site.

**END OF SECTION**

## **SECTION 015700**

### **MAINTENANCE AND PROTECTION OF TRAFFIC**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

The Contractor shall provide all labor, materials, and equipment required for furnishing, installing, relocating, and removing all temporary barricades, barriers, decking, painting, signing, etc. as required by the Construction Manager for the maintenance and protection of traffic.

##### **1.02 REFERENCED STANDARDS:**

Work shall conform to the requirements of NYSDOT Standard Specifications for Construction and Materials.

##### **1.03 SUBMITTALS:**

1.03.1 Submittals shall comply with the provisions of Section 013300: SUBMITTAL PROCEDURES.

1.03.2 The Contractor shall submit a detailed construction sequence and maintenance of traffic plan to the Construction Manager for review and approval.

##### **1.04 MEETINGS AND NOTIFICATIONS:**

The Contractor shall give advance notice of start of construction to the Construction Manager and to the various County/Village agencies and to commercial business, as required. In the event that a Contractor's operations will require disruption of traffic flow, written permission shall be obtained from the County and the Construction Manager at least five days in advance of beginning that portion of the work.

##### **1.05 SNOW REMOVAL:**

The Contractor shall provide all snow plowing and removal within the Contract limits and as necessary to perform the work. The costs of such services shall be deemed included in the Contractor's lump sum price. Snow removal shall begin immediately upon approval by the Construction Manager.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS:**

2.01.1 General: Except as otherwise specified or indicated, all materials shall comply with the requirements of the appropriate sections of NYSDOT Standard Specifications for Construction and Materials.

2.01.2 For each item, the Contractor shall submit certifications of compliance with NYSDOT Standard Specifications for Construction and Materials.

## **PART 3 - EXECUTION**

### **3.01 GENERAL:**

The unlimited access of emergency vehicles (fire apparatus, ambulances, etc.) shall take priority over all other vehicles and/or work or other operations.

### **3.02 TRAFFIC CONTROL:**

The Contractor shall provide traffic control in accordance with the New York State Manual of Uniform Traffic Control Devices and NYSDOT Standards. The Contractor shall provide a sufficient number of competent flagmen in areas where construction equipment is operating in potential conflict with public traffic, regardless of volume of traffic or the sight distance. Flagmen shall wear orange caps or hats and vest in conformance with the NYSDOT Standard Specification for Construction and Materials and shall direct traffic in conformance with the Specifications.

### **3.03 DRAINAGE:**

The Contractor shall devote particular attention to all drainage facilities, keeping them fully operative at all times. Provisions shall be made at all times to adequately drain the traveled way and the remainder of the work areas.

### **3.04 DELINEATION AND GUIDING DEVICES:**

The Contractor shall furnish, erect, move and remove delineation and guiding devices as required by the Construction Manager. Drums or containers, 30 to 55-gallon capacity, set on end, may be used as delineators, provided they are properly painted and reflectorized in accordance with the NYSDOT Standard Specifications for Construction and Materials. They shall be kept clean at all times. Other markers or delineators may be circular or rectangular in shape and shall be constructed of reflective sheeting having a minimum area of 20 square inches or of reflective buttons having a minimum diameter of 3 in. All reflective delineators or markers shall conform to the requirements of the NYSDOT Standard Specifications for Construction and Materials.

### **3.05 CONSTRUCTION BARRICADES AND LIGHTING FOR CONSTRUCTION BARRICADES:**

- 3.05.1 The Contractor shall furnish, erect, and remove construction barricades and lighting for construction barricades, as approved by the Construction Manager.
- 3.05.2 Where indicated by the Construction Manager, construction barricades shall be supplemented either by approved flashing or steady burning lights.
- 3.05.3 Steady burning or flashing barricade lights shall have a minimal nominal diameter of 7 in. and shall emit yellow light. Steady burning lights may be used to supplement other channelizing devices to delineate the traveled way. Flashing lights shall not be used for delineation or channelizing purposes.

**3.06 ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES:**

- 3.06.1 Free access must be maintained to every fire hydrant, fire alarm box, and standpipe connection. When required, hydrants shall be extended by suitable tube or piping to an accessible point as approved by the Construction Manager. No obstruction will be allowed at any time within 15 ft. of any fire hydrant.
- 3.06.2 Where materials are placed in the vicinity of a fire hydrant or a fire alarm box, and to such height as to prevent the same from being readily seen, the position of such hydrant or fire alarm box shall be indicated by suitable signals, both day and night.

**END OF SECTION**

**NO TEXT ON THIS PAGE**



## **SECTION 015750**

### **MAINTENANCE OF ON-SITE FACILITIES**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section covers all labor, equipment, and materials required to maintain, protect, and secure all on-site facilities.

##### **1.02 SUBMITTALS:**

1.02.1 The Contractor shall submit product specifications and other data as necessary to prove compliance with the requirements specified herein.

1.02.2 The Contractor shall submit layout drawings of barricades and enclosures required to protect on-site facilities upon request by the Construction Manager.

#### **PART 2 - MATERIALS**

Fireproof lumber or galvanized iron sheets, studs, sills, plates, required nailing strips, 20-gauge galvanized iron, and other materials shall be used for protection of on-site facilities.

#### **PART 3 - EXECUTION**

##### **3.01 GENERAL:**

The Contractor shall make use of such methods of work as are best adapted to preserve the safety and stability of all parts of the on-site facilities. The Contractor shall prevent any disturbance or damage at his own cost, and shall make good any damage which, in the course of construction, may be done to any part of the on-site facilities.

##### **3.02 WORK AFFECTING THE ON-SITE FACILITIES:**

The on-site facilities will be in continuous operation during the performance of the work hereunder. This Contract contemplates that the work hereunder shall be done without interruption of, or change in, the regular schedule of operations of the on-site facilities. No work shall be done on or affecting the on-site facilities until the Contractor has secured written permission to proceed from the Construction Manager. In addition, the Contractor shall submit for approval a weekly schedule of work he intends to perform in or about the on-site facilities for the following week. The schedule shall list the details of work proposed. Such weekly work schedules shall be submitted for approval a minimum of five (5) working days before the work shall be actually performed.

##### **3.03 ELECTRICAL WORK:**

The Contractor shall maintain and protect existing panel boards, conduits, boxes, lighting fixtures, wire, cable and other associated electrical equipment. The Contractor shall relocate designated electrical conduits and cables in the on-site facilities. In order to provide space for the

new construction, the Contractor shall remove the existing supports of the designated conduits and cables, lower these conduit and cables (providing temporary supports) and reinstall the conduits and cables once the new construction has been completed. This work shall be accomplished in an approved sequence, inasmuch as these circuits presently may be operational. Equipment to be temporarily relocated and reinstalled shall include, but not be limited to: remote control cable and conduit with terminal box, telephone cable, compressor piping, sheath drain protection cables, compressor power supply and any associated equipment required or specified elsewhere in the Specifications, or as indicated on the Contract Drawings, or as approved by the Engineer. No additional costs shall be incurred by the County for such relocation work.

**3.04 TEMPORARY PROTECTION:**

Temporary protection shall be provided to keep buildings watertight and weathertight at all times. Protection also shall be supplied when necessary to prevent vandalism and unauthorized entry.

**3.05 LAWN MAINTENANCE:**

The Contractor shall be responsible for performing landscaping, grass cutting and other services as directed by the Construction Manager for all landscaped and lawn areas within or adjacent to the Contractors work area.

**3.06 FACILITY DEBRIS MAINTENANCE:**

The Contractor shall be responsible for cleaning up any debris both on-site and off-site that result from the Contractors operations. Debris maintenance shall be performed as directed by the Construction Manager.

**END OF SECTION**

## **SECTION 015800**

### **WARRANTY OF CONSTRUCTION**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section covers the warranties of construction including requirements for equipment, materials, and workmanship.

##### **1.02 GENERAL REQUIREMENTS:**

- 1.02.1 In addition to any other warranties set out elsewhere in the Contract, the Contractor warrants that work performed under this Contract conforms to the Contract requirements and is free of any defect of equipment, material or design furnished, or workmanship by the Contractor or any of his Subcontractors or suppliers.
- 1.02.2 All work shall be warranted by the Contractor for at least one year from the date of final acceptance of the work.
- 1.02.3 The Contractor shall remedy at his own expense any failure to conform or any such defect. In addition, the Contractor shall remedy at his own expense any damage to County-owned or controlled real or personal property, when that damage is the result of the Contractor's failure to conform to Contract requirements or any such defect of equipment, material, workmanship, or design.
- 1.02.4 The Contractor shall restore any work damaged in fulfilling the terms and conditions of this Section. The Contractor's warranty with respect to work repaired or replaced hereunder will run for one year from the date of such repair or replacement.

##### **1.03 NOTICE OF FAILURE:**

The County will notify the Contractor in writing within a reasonable time after the discovery of any failure, defect, or damage.

##### **1.04 CONTRACTOR'S LIABILITY:**

Should the Contractor fail to remedy any failure, defect, or damage within a reasonable time after receipt of notice thereof, the County or the Construction Manager will have the right to replace, repair, or otherwise remedy such failure, defect, or damage at the Contractor's expense.

##### **1.05 OTHER WARRANTIES:**

In addition to the other rights and remedies provided by this section, all Subcontractors', manufacturers', and suppliers' warranties expressed or implied, respecting any work or materials shall, at the direction of the County, be enforced by the Contractor for the benefit of the Department. In such case if the Contractor's warranty under Subsection 1.02: GENERAL REQUIREMENTS has expired, any suit directed by the County to enforce a Subcontractors', manufacturers', or suppliers' warranty will be at the expense of the County. The Contractor shall

obtain any warranties which the Subcontractors, manufacturers, or suppliers would give in normal commercial practice.

**1.06 ENDORSEMENT OF OTHER WARRANTIES:**

If approved by the Construction Manager, the Contractor shall require any such warranties to be executed in writing to the County.

**1.07 CONTRACTOR'S LIABILITY EXCLUSIONS:**

Notwithstanding any other provision of this Section, unless such a defect is caused by the negligence of the Contractor or his Subcontractors or suppliers at any time, the Contractor shall not be liable for the repair of any defects of material or design furnished by the County or for the repair of any damage which results from any such defect in County-furnished material or design.

**1.08 NASSAU COUNTY ADDITIONAL RIGHTS:**

The warranty specified herein shall not limit the Counties rights under this Contract with respect to latent defects, gross mistake, or fraud.

**1.09 BRAND NAME WARRANTIES:**

Defects in design or manufacture of equipment specified by the Department on a "Brand name and Model" basis, shall not be included in this warranty. The Contractor shall require all Subcontractors, manufacturers, and suppliers thereof to execute their warranties in writing directly to the County.

**PART 2 - PRODUCTS**

(Not Used)

**PART 3 - EXECUTION**

(Not Used)

**END OF SECTION**

## **SECTION 017700**

### **PROJECT CLOSEOUT**

#### **PART 1 - GENERAL**

##### **1.01 SCOPE OF WORK:**

This section identifies the activities necessary to close out the Contract. The work shall consist of completing all contract work items and punchlists, cleaning the project site, inspection, administrative provisions for substantial completion, submittal of the Record Documents, and for final acceptance by the Construction Manager and by Nassau County.

##### **1.02 DEFINITIONS:**

1.02.1 PROJECT CLOSEOUT is the term used to describe certain collective project requirements, indicating completion of the work that is to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the work by the County, as well as final payment to the Contractor and the normal termination of the Contract.

1.02.2 TIME OF CLOSEOUT is directly related to “Substantial Completion”; therefore, the time of closeout may be either a single time period for the entire work or a series of time periods for individual elements of the work that have been certified as substantially complete at different dates. This time variation, if any, shall be applicable to the other provisions of this section.

##### **1.03 PREREQUISITES TO SUBSTANTIAL COMPLETION:**

1.03.1 General: The Contractor shall complete the following before requesting the Construction Manager’s inspection for certification of substantial completion, either for the entire work or for portions of the work. The Contractor also shall list known exceptions in the request.

- In the progress payment request that coincides with, or is the first request following, the date substantial completion is claimed, the Contractor shall show either 100% completion for the portion of the Work claimed as “Substantially Complete”, or list incomplete items, the value of incomplete work, and reasons for the work being incomplete. The Contractor shall include supporting documentation for completion as indicated in these Contract Documents.
- The Contractor shall submit a statement showing an accounting of charges to the Contract sum.
- The Contractor shall advise the County of pending insurance change-over requirements.
- The Contractor shall submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications, and similar documents.
- The Contractor shall obtain and submit releases enabling the County’s full, unrestricted use of the work and access to services and utilities. Where required, the Contractor shall include occupancy permits, operating certificates, and similar releases.

- The Contractor shall deliver tools, spare parts, extra stock of material, and similar physical items to the County.
- The Contractor shall make the final change-over of locks and transmit the keys to the County. The Contractor shall advise the Construction Manager's personnel of the change-over in security provisions.
- The Contractor shall complete start-up testing of systems and instruction of the County's operation and maintenance personnel. The Contractor shall discontinue or change over and remove temporary facilities and services from the project site, along with construction tools and facilities, mockups, and similar elements.
- The Contractor shall complete final clean up requirements, including touch-up painting of marred exposed surfaces.

1.03.2 Inspection Procedures: Upon receipt of the Contractor's Request for Inspection, the Construction Manager either will proceed with the inspection or advise the Contractor of unfilled prerequisites.

- Following the initial inspection, the Construction Manager will either prepare the Certificate of Substantial Completion, or will advise the Contractor of work which must be performed before the certificate shall be issued. The Construction Manager will repeat the inspection when requested and when assured that the work has been substantially completed.
- Results of the completed inspection will form the initial "punch-list" for final acceptance.

#### **1.04 PREREQUISITES TO FINAL ACCEPTANCE:**

1.04.1 General: The Contractor shall complete the following before requesting the Construction Manager's final inspection for Certification of Final Acceptance, and final payment as required by the General Conditions. The Contractor shall list known exceptions, if any, in the request.

- The Contractor shall submit the final payment request with final releases and supporting documentation not previously submitted and accepted. The Contractor shall include certificates of insurance for products and completed operations where required.
- The Contractor shall submit an updated final statement, accounting for final additional charges to the Contract sum.
- The Contractor shall submit a certified copy of the Construction Manager's final punch- list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Construction Manager.
- The Contractor shall submit final meter readings for utilities, a measured record of stored fuel, and similar data either as of the date of substantial completion, or else when the County took possession of and responsibility for corresponding elements of the work.
- The Contractor shall submit consent of surety.

- The Contractor shall submit a final liquidated damages settlement statement acceptable to the County.
- The Contractor shall submit evidence of final, continuing insurance coverage complying with insurance requirements.

1.04.2 Reinspection Procedure: The Construction Manager will reinspect the work upon receipt of the Contractor's notice that the work, including punch-list items resulting from earlier inspections, has been completed, except for those items whose completion has been delayed because of circumstances that are acceptable to the Construction Manager.

- Upon completion of reinspection, the Construction Manager either will prepare a Certificate of Final Acceptance, or will advise the Contractor of work that is incomplete or of obligations that have not been fulfilled, but are required for final acceptance.
- If necessary, the reinspection procedure will be repeated.

#### **1.05 REINSPECTION FEES:**

Should the Construction Manager perform reinspection due to failure of the work to comply with the claims of status of completion made by the Contractor, the Construction Manager shall deduct from the final payment to the Contractor, the total compensation amount required to perform any re-inspections.

#### **1.06 RECORD DOCUMENT SUBMITTALS:**

1.06.1 General: Specific requirements for Record Documents are indicated in the individual sections of these Specifications. Other requirements are indicated in the General Conditions. General submittal requirements are indicated in the various "submittals" subsections.

1.06.2 The Contractor shall not use Record Documents for construction purposes. The Contractor shall protect the record document from deterioration and loss in a secure, fire-resistive location. The Contractor shall provide access to Record Documents for the Construction Manager's reference during normal working hours.

1.06.3 Record Drawings: The Contractor shall maintain a record set of blue or black line white-prints of Contract Drawings and Shop Drawings in a clean, undamaged condition. The Contractor shall mark-up the set of Record Documents to show the actual installation where the installed work varies substantially from the work as originally shown. The Contractor shall mark whichever drawing is most capable of showing the actual "field" condition fully and accurately, however, where shop drawings are used for mark-up, record a cross-reference at the corresponding location on the working drawings. The Contractor shall give particular attention to concealed work that would be difficult to measure and record at a later date. The Contractor shall:

- Mark record sets with red erasable pencil and, where feasible, use other colors to distinguish between variations in separate categories of work.
- Mark-up new information which is known to be important to the County, but for some reason was not shown on either Contract Drawings or Shop Drawings.
- Note related change-order numbers where applicable.

- Organize Record Drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
  - After the work of the Contract is substantially completed, the Record Drawings shall be submitted to the Engineer for review and comments and safe-keeping by the County. Any changes required by the Engineer shall be made and re-submitted accordingly.
- 1.06.4 Record Specifications: The Contractor shall maintain one complete copy of the Project Specifications including addenda, and one copy of other written construction documents such as change orders and similar modifications and addenda issued in printed form during construction. The Contractor shall mark these documents to show substantial variations in the actual work performed in comparison with the text of the Specifications and modifications as issued. The Contractor shall give particular attention to substitutions, selection of options and similar information on work where it is concealed or otherwise cannot be readily discerned at a later date by direct observation. Note related Record Drawing information and product data, where applicable. Upon completion of the work, the Contractor shall submit record specifications to the Engineer for the County's records.
- 1.06.5 Miscellaneous Record Submittals: The Contractor shall refer to other sections of these Specifications for requirements of miscellaneous record keeping and submittals in connection with the actual performance of the work. Immediately prior to the date or dates of substantial completion, the Contractor shall complete miscellaneous records and place in good order, properly identified, and bound or filed, ready for continued use and reference. The Contractor shall submit all records to the Engineer for the County's records.
- 1.06.6 Operation and Maintenance Manuals (O & M Manuals). (3 required) The Contractor shall organize operation and maintenance data into suitable sets of manageable size. The Contractor shall bind data into individual binders properly identified and indexed. The Contractor shall bind each set of data in a heavy-duty 3-ring vinyl-covered binder of suitable size, with pocket folders for folded sheet information. The Contractor shall mark the appropriate identification on both front and spine of each binder.

The Contractor shall include the following types of information in the O & M Manuals:

- Emergency instructions
- Spare parts listing
- Copies of warranties
- Wiring diagrams
- Recommended "turn-around" cycles
- Inspection procedures
- Shop drawings and product data
- Service agreement including address and phone



- Routine maintenance and operations instructions
  - Start-up and shut-down operations
- 1.06.7 Facility Personnel Training: The Contractor shall introduce all shifts of the facility personnel, to the layout of the components of the new tank systems. The Contractor shall prepare a checklist explaining the primary functions, components and usage of the new tank inventory monitoring system. The Contractor shall submit all checklists for each facility to the Construction Manager.
- 1.06.8 Warranties and Bonds: The Contractor shall assemble and submit 5 original signed copies to the Construction Manager, for review and transmittal to the County, of all warranties, bonds, and service and maintenance contracts executed by each of the respective manufacturers, suppliers, and Contractors. The submittals shall contain the following:
- Table of Contents: Neatly typed, in orderly sequence, providing complete information for each item:
    1. Product or work item
    2. Firm, address and telephone number, and name of principal
    3. Scope
    4. Date of beginning of warranty, bond, or service and maintenance contract
    5. Duration of warranty, bond, or service and maintenance contract
    6. Provide information for County's personnel:
      - a. Proper procedure in case of failure
      - b. Instances which might affect the validity of warranty or bond
    7. Contractor, address and telephone number, and name of responsible principal
  - Format of Submittals:
    1. Size: 8½" x 11", punched sheets for standard 3-ring binder. Fold larger sheets to fit into binder.
    2. Cover: Identify each packet with types or printed title "WARRANTIES AND BONDS" and list the following:
      - a. Title of Project
      - b. Name of Contractor
    3. Binder: Commercial quality, 3-ring with durable and cleanable plastic covers.
  - Time of Submittals:
    1. For equipment or component parts of equipment put into service during progress of construction, submit within ten days after inspection and acceptance.

2. Otherwise make submittals within 10 days after Date of Substantial Completion, prior to final request for payment.
3. For items of work, where acceptance is delayed materially beyond the Date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

#### **1.07 FINAL ADJUSTMENT OF ACCOUNTS:**

1.07.1 The Contractor shall submit a final statement of accounting to the Construction Manager.

1.07.2 Statement shall reflect all adjustments to the Contract sum, including:

- The original contract sum
- Additions and deductions resulting from:
  1. Previous change orders
  2. Allowances
  3. Deductions for uncorrected work
  4. Penalties and bonuses
  5. Deductions for liquidated damages
  6. Deductions for reinspection payments
  7. Overruns/underruns
  8. Other adjustments
- Total Contract sum, as adjusted
- Previous payments
- Sum remaining due

1.07.3 The Construction Manager will prepare a final change order, reflecting approved adjustments to the Contract sum which were not previously made by change orders.

#### **1.08 FINAL APPLICATION FOR PAYMENT:**

The Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the conditions of the Contract.

### **PART 2 - PRODUCTS**

(Not Used)

### **PART 3 - EXECUTION**

#### **3.01 FINAL CLEANING:**

The final cleaning work shall include the following:

- A. Removal of all wastes, i.e. excess construction material, wood, debris and other foreign material
- B. Disconnection of all temporary utilities to the site
- C. Removal of temporary site facilities and utilities
- D. Removal of all Contractor constructed access roads and parking areas
- E. Cleaning as required in the appropriate sections of Divisions 02 through 33

**END OF SECTION**

**NO TEXT ON THIS PAGE**

## **ITEM NO. 701 – SURGE TRENCH PIPE REMOVAL AND RESETTING**

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### **1. DESCRIPTION**

Under this item, the Contractor shall remove, store and protect, and reset the existing surge trench piping. Additional pipe to be supplied as necessary due to surge trench expansion as required to complete the installation.

### **2. MATERIALS**

Materials for the work shall be the existing schedule 80 PVC piping (if in serviceable condition). Piping that is in poor condition and must be replaced is to be paid under Item 12S40-1.5 Mod, Item 12S40-2 Mod, Item 12S40-3 Mod, Item 12S40-4 Mod, Item 12S40-6 Mod, Item 12S40-8 Mod and Item 12S40-10 Mod. All pipe support struts, pipe support clamps and anchor bolts necessary for construction are to be paid under Item 81 and Item 34 respectively.

### **3. METHOD**

The Contractor has the option to remove, store, and reset the existing piping in a workman-like manner by any method which is suitable for this project and is approved by the County.

The removal, storage, and resetting procedure shall be conducted so that all piping will be kept clean and free of damage by the operation. Any pipes that are damaged by the operations of the Contractor shall be replaced at the expense of the Contractor in accordance with Item 12S40-1.5 Mod, Item 12S40-2 Mod, Item 12S40-3 Mod, Item 12S40-4 Mod, Item 12S40-6 Mod, Item 12S40-8 Mod and Item 12S40-10 Mod.

The piping shall be stored at a location approved by the Engineer, above the ground surface on platforms, skids or other supports. The contractor shall supply all materials necessary to adequately store the components.

The Contractor shall notify the Engineer of any existing piping that is considered to be unsatisfactory for reuse and shall be replaced if the Engineer concurs. Damaged piping are to be replaced in accordance with Item 12S40-1.5 Mod, Item 12S40-2 Mod, Item 12S40-3 Mod, Item 12S40-4 Mod, Item 12S40-6 Mod, Item 12S40-8 Mod and Item 12S40-10 Mod.

### **4. METHOD OF MEASUREMENT**

Payment for Item 701 will be made on the number of linear feet of surge trench where piping will be removed.

### **5. BASIS OF PAYMENT**

The unit price bid shall include the cost of the removal, storage and resetting of the existing piping, as well as any equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## ITEM NO. 702 – CONCRETE PATCH REPAIRS

---

### 1. **DESCRIPTION**

Under this item, the work shall consist of repairing concrete in existing structures. This work includes, but is not limited to, developing a concrete mixture and/or submitting a concrete patching compound that satisfies the provisions of NYSDOT Items 582.05, 582.06 and 582.07, identifying and repairing spalled and deteriorated areas on existing concrete structures, preparing the surfaces to which patching materials will be applied to (as required to ensure the patch adheres), and applying proper curing techniques to ensure that the concrete patch reaches the necessary strength. All work shall be done at the locations indicated by the Engineer.

### 2. **MATERIALS**

The materials and composition for miscellaneous patching shall meet the requirements specified in NYSDOT Items 582.05, 582.06 and 582.07. Concrete shall be Class A or Class D concrete for structures, and patching materials shall conform to NYSDOT section 701-08 and be on NYSDOT's Approved Materials List.

### 3. **METHOD**

The Contractor is to perform all concrete patch repairs in accordance with the provisions of NYSDOT Items 582.05, 582.06 and 582.07. This includes the composition of the patch material, the method of installation, and the curing technique used. Locations and extent of patch repair(s) is to be identified by the Contractor and then be confirmed with the engineer.

The choice of replacement material will be determined by the Engineer, or determined by the Contractor. The Contractor's determinations shall be made in accordance with the criteria of this subsection, and only in the absence of directions from the plans, or the Engineer. The Contractor's determinations shall be approved by the Engineer prior to the actual performance of the work.

Prior to applying any concrete patch compound, the Contractor shall remove any delaminated and unsound material to a sound surface as determined by the Engineer. The minimum depth of removal shall be the greater of a depth no less than 1 ½ inches from the rear most point of reinforcement to sound concrete, and the depth necessary to reach sound concrete. Should the removal depth exceed 6 inches, the Engineer may order supplementary anchoring as part of the replacement procedure. The sides of the cavity shall be made at a slight angle, so that the width of the base of the cavity is greater than the opening at the surface, thereby providing a key. Care shall be exercised while removing the unsound concrete so as not to damage materials which are to remain in place. The Contractor shall clean the surface of any dust/debris, and clean the reinforcement of all oxidation and scale. Reinforcement that has lost more than 25% of its cross section shall be replaced or lapped, as ordered by the engineer, and paid for under Item 33.

Class A concrete shall be placed only at locations where removals depths average greater than 5 inches and Class D concrete shall be placed only at locations where removals depths average between 1 ½ and 5 inches. Average depth shall be determined by a measurement.

procedure acceptable to the Engineer. Before placement, the Contractor shall air clean the surface with oil-free compressed air. After the surface preparation has been accepted, every effort should be made to thoroughly wet the concrete surface, and all porous surfaces to be in contact with new concrete, for 12 hours. This may be accomplished by continuous wetting with soaker hoses or the use of burlap/burlene/etc. where moisture can be maintained. If, in the opinion of the Engineer, conditions or the situation prohibits this, then the surfaces should be wetted for as long as possible. Surfaces must be wetted by a means acceptable to the Engineer using potable water. The Contractor shall remove any puddles of free-standing water with oil-free compressed air, and protect the surfaces from drying, so the existing concrete remains in a clean, saturated surface dry condition until placement of the new concrete. No material shall be placed if the ambient air, or concrete surface temperature is at, or below 45-degree Fahrenheit.

If formwork configuration, or clearances between formwork, steel and existing concrete are such that Class A, or D, concrete cannot be placed without voids, or honeycombing, the Contractor may, with the Engineer's permission, use an approved high range water reducer to increase the concrete's workability. Approved high range water reducers appear on the Department's Approved List. The high range water reducer shall be added at the work site only and shall be dispersed uniformly throughout the plastic concrete. The Engineer shall approve the Contractor's dispersal methods and devices prior to their actual use. The high range water reducer shall be added only after the concrete has reached the proper slump and contains the required quantity of air. No more than two additions of the admixture shall be made, and the manufacturer's maximum dosage rate shall not be exceeded. After the admixture has been added, the concrete shall be mixed an additional 30 revolutions. The second admixture addition shall be made only after the 30 revolutions required for the first addition have been completed. It is the responsibility of the Contractor to ensure that concrete slump does not exceed 9 inches, and air content remains within specification requirements. Plastic concrete mixes failing to meet the foregoing requirements will be subject to rejection. Replacement will be done at the Contractor's expense. The Engineer may allow high range water reducer to be added at the concrete batching facilities. Consideration for this procedure will be undertaken only after the Contractor has clearly demonstrated the capability of providing concrete which meets the requirements of this subsection.

Forms shall be removed from thin concrete placements 24 hours after placement has been completed unless the Engineer determines the concrete is not strong enough to withstand damage. For purposes of this subsection, a thin concrete placement begins at the outermost surface of the new concrete and generally terminates at, or before, the midpoint of the main reinforcing steel. Concrete may be removed and replaced completely around one or two main reinforcing steel members to a depth no greater than 1 inch from the innermost surface of those members and still be considered a thin concrete placement. Main reinforcing steel members include reinforcing bars, but not spiral reinforcement or stirrups. Curing procedures shall be implemented immediately upon form removal.

Curing shall be performed in accordance with NYSDOT Standard Specification Section 555-3.08

**4. SUBMITTALS**

Contractor shall submit a mix design and/or concrete patching compound for approval by the engineer.

**5. METHOD OF MEASUREMENT**

Payment for Item 702 shall be made out to the number of square feet of concrete that have been patched and repaired.

**6. BASIS OF PAYMENT**

The unit price bid for all concrete patch repairs shall include the cost of the concrete material, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*



## ITEM NO. 703 – POOL FLOOR AND TRENCH LINING

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### 1. **DESCRIPTION**

Under this item, the work shall consist of removing the existing fiberglass lining of a pool and surge trench floor and walls, safely disposing the removed material, and re-lining the pool and surge trench floor and walls with a waterproof epoxy coating.

### 2. **MATERIALS**

The following recommended materials shall be submitted for approval:

Spall repair compound for pool floor and walls:

- Enecrete Duraquartz by Enecon
- Or approved equal

Primary Waterproofing:

- *MiraPrime* Aqua-Blok XL by MiraCote
- Or approved equal.

Pool Seal Coat:

- *MiraFlex Membrane C<sup>TM</sup>* by MiraCote
- Or approved equal.

### 3. **METHOD**

Provide the Engineer with written details of how the work is to be progressed a minimum of 10 days prior to starting. Include lining manufacturer's instructions. Installation shall follow manufacturer recommendations, concrete surface must be coarsened with sandblasting, shotblasting, or a similar and approved mechanical method prior to coating. Lining must be applied using a trowel, squeegee, texture gun or air-assisted spray. Multiple coats may be necessary depending on the product used.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Spall Repair Compound for pool floor and walls
- Primary Waterproofing compound.
- Pool Seal Coat Compound.

### 5. **METHOD OF MEASUREMENT**

Payment for Item 703 will be made on the square feet of epoxy lining needed to complete construction.

## ITEM NO. 703 – POOL FLOOR AND TRENCH LINING

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*(Continued)*

### 6. **BASIS OF PAYMENT**

The unit price bid for the pool floor and trench lining shall include the cost of removing and disposing the existing lining, the epoxy lining material, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## ITEM NO. 704 – POOL JOINT RECONSTRUCTION

---

### 1. **DESCRIPTION**

Under this item, the work shall consist of repairing concrete expansion joints for a pool, specifically replacing all concrete expansion joint material.

### 2. **MATERIALS**

The following recommended materials shall be submitted for approval:

Epoxy Repair Compound around Joint:

- *Rezi-Weld LV – Low Viscosity Injection Epoxy* by W.R. Meadows
- Or approved equal

Backer Rod:

- *Kool-Rod – Backer Rod for Cold-Applied Sealants* by W.R. Meadows
- Or approved equal.

Joint Sealant:

- *Deck-O-Seal – Two-Part, Elastomeric, Polysulfide-Based Joint Sealant* by Deck-O-Seal
- Or approved equal.

### 3. **METHOD**

Joint material is not to be applied below 40 °F unless following specific instructions for cold weather caulking. Joint material is not to exceed 95 °F surface temperature. Joint material is not to be applied when rain or other precipitation is imminent. Follow all other provisions suggested by the chosen manufacturer and provide the Engineer with the manufacturer's method of installation sheet.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Epoxy Repair Compound
- Backer Rod
- Joint Sealant

### 5. **METHOD OF MEASUREMENT**

Payment for Item 704 is to be made under the number of linear feet of construction joints that are repaired and reconstructed under the project guidelines.

## ITEM NO. 704 – POOL JOINT RECONSTRUCTION

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*(Continued)*

### 6. **BASIS OF PAYMENT**

The unit price bid for the pool joint reconstruction shall include the expansion joint material itself, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## **ITEM NO. 705 – MAIN DRAIN HYDROSTATIC RELIEF VALVE REPLACEMENT**

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### **1. DESCRIPTION**

Under this item, the work to be done includes the replacement of hydrostatic relief valves.

### **2. MATERIALS**

The Contractor shall field verify and submit the replacement hydrostatic relief valve in kind.

### **3. METHOD**

The Contractor shall access the existing hydrostatic relief valve, confirm the part, and remove and replace in kind.

### **4. SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Hydrostatic Relief Valve

### **5. METHOD OF MEASUREMENT**

Payment for Item 705 will be made on the number of main drain valves that need to be replaced to complete construction.

### **6. BASIS OF PAYMENT**

The unit price bid for each main drain valve repair shall include the cost of all materials, installation, and all other equipment and labor necessary to complete the work.

*END OF SECTION*

## **ITEM NO. 706 – LOW DENSITY CELLULAR CONCRETE FILL**

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### **1. DESCRIPTION**

Under this item, the work shall consist of providing a non-pervious, Low Density Cellular Concrete (LDCC) to fill structures at the location(s) shown in the plans in accordance with the details in the plans and these specifications.

### **2. MATERIALS**

The following recommended materials shall be submitted for approval:

Low Density Cellular Concrete Fill:

- *Low Density Cellular Concrete for Filling Abandoned Pipes & Structures* by Geofill LD
- Or approved equal

The concrete fill must have a minimum compressive strength (28 days) of 40 pounds per square inch and a minimum flow consistency of 7 inches (per ASTM D6107). The density of the concrete fill is to be no more than 30 pounds per cubic foot.

### **3. METHOD**

The Contractor shall follow manufacturer specifications for submittals, production, and installation, quality control and quality assurance, and testing.

### **4. SUBMITTALS**

Contractor shall submit the following specifications for the approval of the Engineer:

- Low Density Cellular Concrete Fill Mix Design

### **5. METHOD OF MEASUREMENT**

Payment for Item 706 is to be made under the number of cubic yards of low density cellular concrete fill that is poured in order to meet the project guidelines.

### **6. BASIS OF PAYMENT**

The unit price bid for the low density cellular concrete fill shall include the concrete material itself, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## ITEM NO. 707 – 5'-WIDE GPM "T"-BAR GRATING

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### 1. **DESCRIPTION**

Under this item, 5'-wide GPM (marine-grade polymer) "T"-Bar grating is to be installed above the surge trench.

### 2. **MATERIALS**

5'-Wide *GPM "T"- Bar Grating<sup>TM</sup>* produced by the Natre Corporation, or equal or greater equivalent (to be approved by the Engineer). The grating must be able to withstand live loads of 75 pounds per square foot without exceeding deflection over L/240.

### 3. **METHOD**

The Contractor shall install the grating in accordance with the manufacturer specifications above the trench at all locations designated on the construction plans and in accordance with the details shown on the construction plans.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- T-Bar Grating

### 5. **METHOD OF MEASUREMENT**

Payment for Item 707 will be made on the number of linear feet of 5'-wide grating needed to complete construction.

### 6. **BASIS OF PAYMENT**

The unit price bid shall include the cost of the grating itself, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## ITEM NO. 708 – 2'-WIDE GPM "T"-BAR GRATING

---

### 1. **DESCRIPTION**

Under this item, 2'-wide GPM (marine-grade polymer) "T"-Bar grating is to be installed above the surge trench.

### 2. **MATERIALS**

2'-Wide *GPM "T"- Bar Grating™* produced by Natre Corporation, or equal or greater equivalent (to be approved by the Engineer). The grating must be able to withstand live loads of 75 pounds per square foot without exceeding deflection over L/240.

### 3. **METHOD**

The Contractor is to install the grating in accordance with the manufacturer specifications above the trench at all locations designated on the construction plans and in accordance with the details shown on the construction plans.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- T-Bar Grating

### 5. **METHOD OF MEASUREMENT**

Payment for Item 708 will be made on the number of linear feet of 2'-wide grating needed to complete construction.

### 6. **BASIS OF PAYMENT**

The unit price bid shall include the cost of the grating itself, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*



## **ITEM NO. 709 – 2" x 4" x 8' PRESSURE TREATED SOUTHERN PINE LUMBER**

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### **1. DESCRIPTION**

Under this item, 2"x4"x8' pressure treated southern pine lumber (No. 2 grade or greater) shall be cut to the necessary length for construction, treated with a water repellent sealer, and used in accordance with the requirements of the contract documents. The 2"x4" lumber shall be cut into pieces to span across the 2'-wide surge trench and seat on the shelf angles attached to the surge trench concrete side walls as shown on the drawing details. The 2"x4" lumber will support the 2'-wide trench grating.

### **2. MATERIALS**

The materials required for this item include:

- 2"x4"x8' pressure treated southern pine lumber
- Silane/Siloxane Penetrating Water Repellent: Clear

An equal or greater equivalent can be used in lieu of the materials listed above with approval by the Engineer.

### **3. METHOD**

The Contractor shall cut the lumber to the appropriate length (either 2'-0" or 7'-0", depending on the location as specified in the contract documents), and then apply the water repellent sealer to the entire surface area of every piece of lumber as specified in the water repellent sealer manufacturer's instructions. The Contractor shall ensure that the lumber has a smooth finish and is suitable to be exposed in a public area. The Contractor shall lay the lumber down at the locations necessary in accordance with the details shown on the contract documents.

### **4. SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Lumber
- Water Repellent Sealant

### **5. METHOD OF MEASUREMENT**

Payment for Item 709 will be made on the number of 2"x4"x8' pressure treated southern pine lumber needed to complete construction. There is to be no difference in lumber that is installed for structural purposes versus aesthetic purposes.

### **6. BASIS OF PAYMENT**

The unit price bid for Item 709 shall include the cost of all the materials, preparation, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## **ITEM NO. 710 – 4" x 4" x 8' PRESSURE TREATED SOUTHERN PINE LUMBER**

---

### **1. DESCRIPTION**

Under this item, 4"x4"x8' pressure treated southern pine lumber (No. 2 grade or greater) shall be cut to the necessary length for construction, treated with a water repellent sealer, and used in accordance with the requirements of the contract documents. The 4"x4" lumber shall be cut into pieces to span across the 5-foot-wide surge trench and seat on the shelf angles attached to the surge trench concrete side walls as shown on drawing details. The 4"x4" lumber will support the 5-foot-wide trench grating.

### **2. MATERIALS**

The materials required for this item include:

- 4"x4"x8' pressure treated southern pine lumber
- Silane/Siloxane Penetrating Water Repellent: Clear

An equal or greater equivalent can be used in lieu of the materials listed above with approval by the Engineer.

### **3. METHOD**

The Contractor shall cut the lumber to the appropriate length (as specified in the contract documents), and then apply the water repellent sealer to the entire surface area of every piece of lumber as specified in the water repellent sealer manufacturer's instructions. The Contractor shall ensure that the lumber has a smooth finish and is suitable to be exposed in a public area. The Contractor shall lay the lumber down at the locations necessary in accordance with the details shown on the contract documents.

### **4. SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Lumber
- Water Repellent Sealant

### **5. METHOD OF MEASUREMENT**

Payment for Item 710 will be made on the number of 4"x4"x8' pressure treated southern pine lumber planks needed to complete construction.

### **6. BASIS OF PAYMENT**

The unit price bid for Item 710 shall include the cost of the all the materials, preparation, installation, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*

## ITEM NO. 711 – BILCO TYPE J-AL SIDEWALK DOOR

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### 1. **DESCRIPTION**

Under this item, a Bilco Type J-AL sidewalk door is to be installed above a trench where indicated on plans.

### 2. **MATERIALS**

*Bilco Type J-AL H20™* sidewalk door produced by The BILCO Company, or an equal or greater equivalent (to be approved by the Engineer). The floor access door shall be single leaf and pre-assembled from the manufacturer. The sidewalk door must be able to withstand live loads of 75 pounds per square foot without exceeding deflection over L/240.

### 3. **METHOD**

The Bilco Type-J-AL sidewalk door is to be 2'-6" x 2'-6" in plan dimensions and is to be installed by the Contractor as shown in the details on the construction plans. Any attachments to the sidewalk door, such as a drain, are to be removed as necessary.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Bilco Type-J-AL

### 5. **METHOD OF MEASUREMENT**

Payment for Item 711 will be made on the number of Bilco Type J-AL sidewalk doors needed to complete construction.

### 6. **BASIS OF PAYMENT**

The unit price bid for each Bilco Type J-AL sidewalk door shall include the cost of the sidewalk door itself, installation, and all other equipment, labor, and materials necessary to complete the work. The structure which the Bilco Type J-AL sidewalk door is mounted and supported by shall be paid separately under Item 81.

*END OF SECTION*

## ITEM NO. 712 – REPAIR ALLOWANCES FOR UTILITIES

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### 1. **DESCRIPTION**

Under this item, the Contractor shall be reimbursed for additional work not specified in the plans associated with water and/or electrical connections. Work shall be coordinated and approved by the Owner's representative prior to starting.

The provisions in all items relevant to the task previously included in the project shall apply.

### 2. **MATERIALS**

The provisions in all items relevant to the task previously included in the project shall apply.

### 3. **METHOD**

The provisions in all items relevant to the task previously included in the project shall apply.

### 4. **METHOD OF MEASUREMENT**

Payment for Item 712 will be made on a lump sum basis for work satisfactorily completed in accordance with the Contract documents and as directed by the Owner's representative.

### 5. **BASIS OF PAYMENT**

Monthly payments will be made in proportion to the amount of work performed under this item as determined by the Engineer. This payment will be made at the contract price to furnish all materials, labor and equipment necessary to satisfactorily complete the work as specified.

*END OF SECTION*

## ITEM NO. 713 – CCTV INSPECTIONS

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### 1. **DESCRIPTION**

Under this item, the Contractor is to use CCTV cameras to inspect and record storm drain structures and pipe lines as called out on the plans.

### 2. **MATERIALS**

The Contractor is to provide the CCTV cameras and all necessary equipment to support the recording task.

### 3. **METHOD**

The Contractor is to record the storm drain line indicated in the plans in accordance with the requirements listed. The Contractor shall submit to the county a CCTV inspection report notifying any deteriorations and structure/pipe failures.

### 4. **METHOD OF MEASUREMENT**

Payment for Item 713 will be made on a lump sum basis for work satisfactorily completed in accordance with the Contract documents and as directed by the Owner's representative.

### 5. **BASIS OF PAYMENT**

This payment will be made at the contract price to furnish all materials, labor and equipment necessary to satisfactorily complete the work as specified.

*END OF SECTION*

## ITEM NO. 714 – MARINE ADHESIVE

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### 1. **DESCRIPTION**

Under this item, a marine adhesive that meets the requirements outlined below is to be used as specified on the plans and the product specifications.

### 2. **MATERIALS**

*Sikaflex-291™* general all-purpose fast cure marine adhesive and sealant produced by SIKA, or an equal or greater equivalent (to be approved by the Engineer). Any alternative adhesive must be generally resistant to freshwater exposure and have adequate bond to both lumber and steel. Since this adhesive is non-structural, there are no ASTM standards that must be met and approval is determined only by the interpretation of the Engineer.

The lumber and steel used in association with this adhesive shall be paid for separately.

### 3. **METHOD**

The marine adhesive shall be used to attach the pressure treated southern pine lumber to the HSS beam by the Contractor as shown in the details on the construction plans. The surface of the steel and lumber shall be cleaned, dried and free from grease, oil and dust before application of the adhesive. The surface shall be prepared in accordance with the product guidelines, and the adhesive shall be applied in accordance with the manufacturer's instructions. The Contractor shall take care to ensure that the adhesive is applied in accordance with the manufacturer's recommended application temperature range.

### 4. **SUBMITTALS**

Contractor shall submit the following catalog cuts and specifications for the approval of the Engineer:

- Marine adhesive

### 5. **METHOD OF MEASUREMENT**

Payment for Item 714 will be made on the number of linear feet of marine adhesive used to adhere the lumber to the HSS beam.

### 6. **BASIS OF PAYMENT**

The unit price bid for marine adhesive shall include the cost of the marine adhesive itself, application of the adhesive to the designated surfaces, and all other equipment, labor, and materials necessary to complete the work.

*END OF SECTION*