

# Great Lakes Water Authority

Water Supply System

## CONTRACT NO. GLWA-LH-046

CONTRACT DOCUMENTS

FOR

### Removal, Dewatering, Transportation and Disposal of Alum Sludge from Lagoons at the Lake Huron Water Treatment Plant

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## **SECTION 01030**

### **SUMMARY OF WORK**

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

- 1.1 **SCOPE.** Remove, handle, dewater, process, load, transport, and dispose of sludge from dewatering lagoons on an as-needed basis as ordered by GLWA. The Work includes, but is not necessarily limited to, planning, developing, engineering, designing, and building the Contractor's program (means and methods) necessary to execute the sludge removing, handling, dewatering, processing, loading, transporting and disposal operations; and mobilizing, setting up and establishing temporary facilities used by the Contractor at the site each time GLWA orders the Contractor to the Lake Huron Water Treatment Plant to conduct a sludge removal and disposal operation. Once each such sludge removal and disposal operation is completed by the Contractor, he shall demobilize his labor, materials, tools, equipment, facilities, and incidentals from the site. Contractor is required to re-mobilize labor, materials, tools, equipment, facilities and incidentals, and setup and establish its temporary facilities at the site each time GLWA orders a sludge removal and disposal operation at the plant. The summary of the scope of work to be performed on this Project includes:
- A. Mobilize all labor, equipment, facilities, materials, tools, and incidentals to the site.
  - B. Apply for and obtain all necessary regulatory permits, transporter and disposal facility approvals that may be required on this Project in order to complete the Work in every respect. Contractor is responsible for identifying, applying for, and obtaining all such permits and approvals. Contractor is responsible for all permit fees, approval fees and all related costs necessary to obtain and secure all permits and approvals.
  - C. Collect and analyze sludge samples (and any other media samples) that the transporter and disposal facility(ies) require in order to obtain and secure permits and approvals to transport and dispose the sludge throughout the duration of this Contract.
  - D. Design, engineer, setup, install, operate, and maintain all necessary sludge processing, conveying and handling systems that the Contractor selects to use as his means and methods to remove, handle, dewater, process, transport, and dispose sludge.
  - E. Design, engineer, setup, install, operate, and maintain all necessary sludge processing systems that the Contractor selects to use as his means and methods to remove water from the lagoon and its contents to the degree necessary to render the material suitable for disposal at the waste disposal facility.

- F. In preparation for sludge removal, remove all water that is on top of the sludge in the lagoon. Contractor shall discharge this water into the decant structure for that lagoon or other structure as mutually agreed to by GLWA and Contractor.
- G. Discharge to “waters of the State” as defined by applicable Michigan laws will not be allowed unless Contractor, at their sole liability and expense, secures and complies with all federal, state and local discharge requirements and permits as may be applicable. Any costs associated with permitting, testing, sampling, violations, fines, and compliance with orders from authorities having jurisdiction shall be the responsibility of the Contractor and will not be reimbursed by GLWA.
- H. Contractor acknowledges that these lagoons are open to the environment and will manage precipitation and groundwater infiltration as necessary to conduct the work.
- I. Contractor may discharge any water generated from Contractor’s on-site sludge processing operations into the wash water treatment system provided it meets ALL of the following conditions:
  - 1) the water is sufficiently free of solids so as to not cause any blockage of the associated gravity drains, structures, pumps or piping; and
  - 2) the water is sufficiently free of solids so as to not cause any operational problems or regulatory violations at the waste washwater treatment facility; and
  - 3) the water contains no chemicals or other materials that would cause or potentially cause a violation of the plant’s NPDES permit; and
  - 4) the volume of water discharged by the Contractor is controlled and managed in coordination with plant personnel so that the waste washwater treatment facility maintains all operations in accordance with NPDES requirements; and
  - 5) Contractor acknowledges that failure to comply with all of these conditions may result in fines levied by federal, state, and local authorities having jurisdiction and that Contractor will be responsible for all fines, penalties and legal costs to the extent their failure to comply or negligence resulted in such costs.
- J. Contractor is responsible for applying for, obtaining and complying with the necessary soil erosion, traffic, discharge, waste acceptance and other permits associated with conducting this work. Contractor is responsible for all associated sampling, analytical, application, permit fees, discharge fees and surcharge costs.
- K. Remove, handle, dewater, process, load, transport, and dispose sludge from the designated lagoon(s) at the Lake Huron Water Treatment Plants during normal working hours at the Lake Huron Water Treatment Plant except that no

- water discharges will be allowed during the sedimentation basin cleaning work performed by GLWA twice each year as follows:
- 1) Two consecutive weeks to be scheduled during the months of April and/or May; and
  - 2) Two consecutive weeks to be scheduled during the months of October and/or November.
- L. The sludge shall be disposed at a licensed solid waste landfill in compliance with all applicable federal, state and local laws, rules and regulations. Contractor acknowledges that it understands that St. Clair County has enacted a solid waste management plan and all waste disposed under this project must be in full compliance with the plan. Contractor further acknowledges that waste generated in the county must be disposed at the Smiths Creek Landfill unless otherwise permitted under the plan.
- M. Perform all Work in compliance with all local, county, State of Michigan, and federal laws, rules, regulations, codes, and ordinances.
- N. Contractor is solely responsible for obtaining and securing approvals from the transporters and disposal facilities to transport and dispose the sludge throughout the duration of this Contract, including all associated fees and costs again throughout the duration of this Contract.
- O. Contractor is responsible for its means and methods in the execution and completion of the Work of this Project in every respect.
- P. Contractor is responsible for its safety programs and for the health and safety of its employees and subcontractors. The Contractor shall, at all times, provide a safe work environment and comply with all applicable federal OSHA and MIOSHA regulations.
- Q. Contractor is responsible for complying with local ordinances in the execution of this Work, including but not limited to dust control, noise control, off-site traffic routing and control, truck loading limits, working hours, working days, and parking.
- R. Contractor is responsible for legally transporting the sludge to the disposal facility throughout the Contract, including periods of frost laws and truck load limits imposed by federal, state, county, and local transportation departments, authorities and road commissions.
- S. Contractor shall coordinate his Work on this project with GLWA's on-going operation and maintenance of the facility. The Lake Huron Water Treatment Plant is an active drinking water treatment plant responsible for treating and delivering potable water to residential, commercial and industrial customers. As such, the Contractor's operations shall not interfere with GLWA's operation and maintenance of the plant.
- T. Contractor shall coordinate his Work on this Project with other contracts being conducted at the plant through GLWA.

- U. Demobilize labor, materials, equipment, facilities, tools, and incidentals from the site after the contract sludge removal and disposal operation is satisfactorily completed, and all work, including final reporting and restoration of the lagoon, is approved by GLWA.

## 1.2 GUARANTEE OF QUANTITIES OF UNIT PRICE WORK

- A. Contractor will guarantee the minimum quantity of sludge to be removed in accordance with the bid quantities established in the contract documents. Additional quantities of sludge may be removed upon the direction and mutual agreement of Contractor and GLWA up to the established contract not-to-exceed upper limit. No reimbursement above the contract not-to-exceed upper limit will be allowed.

## 1.3 NATURE OF SLUDGE

- A. The sludge that the Contractor is responsible for removing and disposing under this Contract is a by-product of the aluminum sulfate (alum) coagulation, flocculation and sedimentation operations for turbidity (particulates and colloidal matter) removal as part of GLWA's drinking water treatment process. GLWA uses aluminum sulfate (commonly referred to as alum) as its primary coagulant. Polymer is occasionally used as a settling aid at the Lake Huron Water Treatment Plant along with the alum to remove turbidity. In addition, powdered activated carbon (PAC) may have historically been added for taste and odor control and may be a component of lagoon sludge.

## 1.4 ALLOWABLE ON-SITE WORKING PERIODS

- A. The Contractor shall be capable of removing, handling, dewatering, processing, loading, transporting, and disposing sludge from all lagoons as identified in the contract documents. Contractor shall have access to the lagoons from 7 AM to 7 PM during normal GLWA work days (Monday through Friday, except national holidays). Contractor is required to satisfactorily complete the Work regardless of the actual quantities of Work performed.

## 1.5 LOCATION OF THE WORK

- A. The Work of this Contract will be performed at the GLWA Lake Huron Water Treatment Plant located at 3993 Metcalf Road, Fort Gratiot, Michigan 48059. The disposal landfill is located at 6779 Smiths Creek Rd, Smiths Creek, Michigan 48074.

## 1.6 SCHEDULE.

- A. Time is of the essence in completion each sludge removal and disposal operation.
- B. Complete within 45 days of the Notice-to-Proceed: the project initiation Work specified in Section 02145 so that the Contractor is ready to perform the sludge removal and disposal Work.
- C. Contractor shall conform to the following time constraints for each and every sludge removal and disposal operation ordered by GLWA:
  - a. Commence sludge removal and disposal operations at the site within 2 weeks of receiving GLWA's written approval to conduct the sludge removal and disposal operation.
  - b. Complete sludge removal and disposal operations at the site within 10 weeks of receiving GLWA's written approval to conduct the sludge removal and disposal operation.
  - c. Restore the excavated area, demobilize all labor, equipment, materials, facilities, tools, and incidentals from the site within 2 weeks of the last shipment of sludge for offsite disposal.

#### 1.7 COORDINATION OF WORK.

- A. Contractor shall maintain overall coordination for the execution of the Work.
- B. Contractor shall communicate with GLWA daily during sludge removal and disposal operations, and be available to meet with GLWA at any time during these operations.

#### 1.8 SITE CLEANING.

- A. Contractor shall keep the work site free and clean of all trash and debris, and shall promptly remove from the site, or from property adjacent to the site of the Work, all trash and debris.
- B. Contractor shall conduct the Work so that the Contractor's designated work areas are orderly, neat, free of hazards, safe, and clean.

#### 1.9 PERMITS.

- A. Contractor is responsible for obtaining all permits required for execution of the Work, including but not limited to regulatory permits for sludge transportation and disposal, traffic control, dust control, noise control, soil and erosion control and all permits associated with this work. Fees for required permits shall be paid by the Contractor.



#### 1.10 POWER.

- A. Contractor is responsible for providing its own power service for its facilities and operations throughout the duration of the Contract.

#### 1.11 UTILITY CLEARANCE.

- A. The Contractor is notified that the locations of existing utilities shown on the Drawings are approximate, and are based on available information, and that the GLWA has not verified the locations. GLWA makes no claim as to the accuracy of the location of existing utilities or whether all utilities are shown on the Drawings. Contractor shall identify and protect all utilities as appropriate for this work.

#### 1.12 TRAFFIC CONTROL.

- A. Contractor shall comply with all authorities having jurisdiction. Requirements for haul routes, traffic control for the ingress to and egress from the site, shipments of materials and equipment to and from the site, etc. shall be identified with the authorities having jurisdiction and Contractor will comply with all conditions set forth by the authorities and as required to maintain safe ingress and egress from the site and work areas.

#### 1.13 BARRICADES AND SAFETY PERSONNEL.

- A. Contractor shall supply, erect and maintain barricades, caution tape and sufficient safeguards around all confined space openings and obstructions; shall provide suitable warning lights on or near work areas and keep them lighted at night or other times when visibility is limited; and shall employ safety personnel as necessary for the protection of GLWA's employees, agents, and other contractors working at the site.
  
- B. The Contractor shall provide a completely equipped first aid kit at the site of each location where the Work is progressing. The Contractor shall designate a responsible member of the organization for administering first aid at all times while the Work is in progress.

#### 1.14 PROHIBITED CHEMICALS.

- A. No chemicals shall be added to the sludge or water in the lagoon without the written approval of GLWA and the Michigan Department of Environmental Quality.

1.15 PROTECTION OF GLWA FACILITIES.

- A. The Work of this Project is being performed in an operating drinking water treatment plant. The Contractor must conduct its Work with care and in a manner that causes no damage to the existing structures, facilities and equipment at the plants. Any damage to existing facilities caused by the Contractor shall be repaired or replaced with new facilities at the Contractor's sole expense. GLWA will be the sole decision maker on whether or not a facility damaged by the Contractor gets repaired or replaced with new, and on the quality and extent of the repairs and replacement facilities.

1.16 CONTRACTING METHOD

- A. The Work on this Project shall be constructed under one, single-prime Contract.

1.17 CONTRACTOR'S USE OF SITE AND PREMISES.

- A. Contractor shall schedule and coordinate the Work and his operations with GLWA's use of the site so that the operation of the active plant facilities are kept in service throughout the duration of the work.

1.18 WORK TO CONFORM.

- A. Contractor is responsible for verifying existing conditions at the site to confirm that his selected means and methods, plan his execution of the Work, and design his procedures and facilities used to satisfactorily perform and complete the Work in every respect.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

End of Section

## **SECTION 01040**

### **CONTROL OF WORK**

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

1.1 SCOPE. The Contractor shall provide competent field supervision, project management, site control, coordination, and related services in the prosecution of the Work. The Contractor is responsible for controlling the site and work at all times.

#### 1.2 GENERAL.

1.2.01 Coordination. The Contractor shall furnish personnel, equipment and construction aids that will be efficient, appropriate, and sufficient to secure a satisfactory quality of work and a rate of progress that will ensure the completion of the Work within the time stipulated in the Contract Documents.

If at any time, Contractor's resources appear to the GLWA to be inefficient, inappropriate, or insufficient to achieve the required quality or rate of progress of the Work, the GLWA may direct the Contractor to increase the efficiency, change the character, or increase the number of personnel and equipment, and the Contractor shall comply. Failure of the GLWA to give such a direction shall in no way relieve the Contractor of its obligations to secure the required quality or rate of progress of Work.

1.2.02 Hours of Work. The Contractor work at the site is limited to 6:00 a.m. until 9:00 p.m. Monday through Saturday, excluding the following holidays: Memorial Day, Independence Day, Labor Day, Election Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, New Year's Eve, New Year's Day, Martin Luther King's Birthday, and Good Friday.

1.2.03 Work at the Site. The Contractor shall conduct its work so as to not create a public nuisance or disturb the peace. However, should the Contractor be stopped, by order of a public authority, Federal authority, or State authority, from working at times that are contrary to or in violation of any law, ordinance, permit, or license, the Contractor shall not be entitled to an extension of time due to such stoppages. The Contractor shall conduct its work within the limits of work shown on the Drawings, including those areas shown for staging and storage of materials and equipment.

1.3 PRIVATE LAND. The Contractor shall not enter or occupy private land outside of the designated construction area or property limits, except as specified in the Contract Documents.

## **PART 2 – PRODUCTS**

NOT USED

## **PART 3 - EXECUTION**

3.1 PREPARATION. Contractor shall consult with the GLWA, review site conditions and factors that will affect the Contractor's means and methods, procedures, and identify necessary construction aids. Determine if adjacent properties, private residences, commercial establishments and public facilities will be affected by execution of the Work and develop strategies to prevent adverse impacts.

3.2 WORK CONTROL AIDS. Contractor shall install work control aids, where required, and use in accordance with OSHA/MIOSHA requirements and regulations.

3.3 REMOVAL. Completely remove temporary facilities, materials, equipment, and services when sludge removal and disposal operations are completed for each ordered event. Clean and repair any damage caused by installation or use of temporary facilities. Restore permanent facilities used for temporary purposes to original condition unless otherwise specified.

END OF SECTION

## **SECTION 01050**

### **PROGRESS SCHEDULES AND PAYMENT SUBMITTALS**

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

##### **1.1 GENERAL.**

1.1.01 Progress Schedules. Submit a project schedule within 10 days of receipt of the Notice to Proceed (Start Work Notice) that details the schedule for execution and completion of project mobilization, planning, engineering, setup, establishment of facilities, and sludge removal and disposal Work.

1.1.02 Detailed Cost Breakdown (DCB). Prepare and submit a detailed cost breakdown (DCB) that breaks down and schedules the value of the entire work into work items suitable for submitting progress (monthly) payments. The DCB shall be provided in sufficient detail that enables a clear understanding and review and approval of the Contractor's progress payment requests. The DCB will be approved by GLWA. No progress payment requests will be accepted or reviewed by GLWA until the DCB is approved by GLWA.

1.1.03 Payment Submittals. The Contractor shall submit Payment Submittals monthly to the Engineer in accordance with the Agreement between Owner and Contractor. GLWA will establish schedule and cutoff dates for Progress Payment periods.

Payment Submittals shall be typed on Application for Payment forms approved by the Owner, containing the same information and format as specified by AIA Document G702 and G703 or GLWA approved alternate. All sheets shall be on printed on 8 1/2-inch x 11-inch (216mm x 279mm) white paper sheets and provided electronically as a Microsoft Excel spreadsheet.

Provide format, schedules, line items and values as accepted by the GLWA in the Schedule of Values. Fill in the required information, including that for Change Orders executed prior to date of submittal of application. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets. Execute certification with signature of a responsible officer of Contract firm.

On continuation sheets, fill in total list of all scheduled component items of work, with item number and scheduled dollar value for each item. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to nearest cent, or as specified for Schedule of Values. List each Change Order executed prior to date of submission at the end of the continuation sheets. List Change Order by number and description as for an original

component item of work.

To receive approval for payment on component material stored on site, submit copies of the original paid invoices with the application for payment.

Contractor is to submit a Surety Acknowledgement of Payment Requests letter showing amount of progress payment which the Contractor is requesting and unconditional partial waiver of liens from major subcontractors and vendors through last Progress Payment issued to Contractor.

The Payments Submittals shall be based on the Detailed Cost Breakdown.

1.1.04 Progress Payments. Payment Submittals shall be submitted to the Engineer and a Progress Meeting held within five days after the end of each 30-day Progress Payment period. Progress Payments are initiated by the Engineer based on the Contractor's Payment Submittal (as modified at the Progress Meeting review). The Owner will process the final Progress Payment for payment to the Contractor within approximately 30 days of receipt from Engineer.

No Progress Payment will be finalized by the Engineer until he reviews and approves the DCB.

1.1.05 Substantiation of Progress. The Contractor is to maintain all documentation specified in Section 02145 to document the actual quantity of sludge removal and disposal work satisfactorily completed each month. As a prerequisite for monthly progress payments, the Contractor shall compile and submit all documentation to GLWA for its review and approval.

1.1.06 Progress Meetings. Progress meetings shall be held as requested by GLWA.

## **PART 2 - PRODUCTS**

Not Used

## **PART 3 - EXECUTION**

Not Used

End of Section

## **SECTION 01070**

### **PROJECT COORDINATION AND MEETINGS**

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

1.1 SCOPE. Contractor shall coordinate his Work with jurisdictional authorities involved in the Work as applicable and with GLWA operation and maintenance activities at the site.

Certain meetings are also defined in this section that need to be held on a recurring basis to track progress, resolve problems, and coordinate work.

#### 1.2 GENERAL.

1.2.01 Coordination. The Contractor shall cooperate with GLWA in allocation of mobilization areas onsite for access, traffic, storage areas and parking facilities.

Coordinate sequence of Work to accommodate GLWA's use of the site and operation and maintenance of the plant at all times throughout the duration of the Contract.

In addition to Progress Meetings, hold pre-work conferences and Coordination Meetings with personnel and sub-contractors to assure coordination of Work.

1.3 PROJECT MEETINGS. Project meetings shall be held as requested by GLWA to review project progress, to ensure correct interpretation of these documents, and to maintain general coordination of GLWA's personnel to Contractor's project personnel.

1.3.01 Pre-Work Conference. Following Contract award, the GLWA will schedule a pre-work conference.

Attendees shall include GLWA and any of its representatives, Contractor, Superintendent, subcontractors, suppliers, utilities, and others as appropriate.

1.4 SUBMITTALS. Submit requests for interpretation of Contract Documents in a timely fashion to ensure no disruptions with the Work as scheduled. Obtain instructions through the Engineer to resolve all queries.

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

Not used.

**PART 3 - EXECUTION**

Not used.

End of Section



## **SECTION 01080**

### **PROJECT SUBMITTALS**

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

1.1 SCOPE. The Contractor shall prepare and manage submittals in accordance with this section.

#### 1.2 GENERAL.

1.2.01 Overview. Submittals are required documents that must be submitted by the Contractor to the Engineer for review and approval before the work or related activity can proceed.

The Contractor shall not proceed with the work until submittals have been reviewed and approved by Engineer. The Contractor shall be responsible for and bear all cost of damages which may result from proceeding with work that is not approved.

The Engineer's approval will be for the purpose of minimizing changes and project delays in the field, and shall in no way relieve the Contractor of full responsibility for providing a complete, safe, reliable, and fully coordinated project which is in compliance with these Contract Documents.

#### 1.3 SUBMITTALS.

1.3.01 Product Data. Product data shall include all catalog cuts, performance curves, test reports, equipment lists, material lists, diagrams, pictures, and descriptive material. All product data shall be submitted on either 8.5 x 11 inch (216 mm x 279 mm) or folded 11 x 17 inch (279 mm x 432 mm) size paper of 20 lb. weight. The product information shall cover but is not limited to all items including mechanical devices, mounting components, wiring, terminal strips, connectors, accessories, and spare parts. The submittal information shall show standard and optional product features, as well as performance data and specifications. The product information described in Subsection 1.4.12 below shall be marked on all product data sheets. Do not submit general catalogs; only items to be installed or delivered.

Submit a minimum of 10 copies to GLWA of each product information data sheet for review and approval.

Submit electronic (pdf format) copies of all submittals. Maintain an electronic record of all submittals, Engineer's response, and approvals. Provide a hard drive of all submittals upon completion of the work.

1.3.02 Submittal Quality: All submittals shall be submitted in a readable and legible quality. Any submittal which the Engineer considers not of acceptable quality will be returned to the Contractor for replacement without review.

Facsimile (fax) transmittals or copies of fax transmittals are not acceptable as submittals.

Xerographic copies must be of good quality (3<sup>rd</sup> generation copy shall be clear and legible) and at least one copy of manufacturer's original product data sheets must be included with each submittal. All copies shall be on 20 lb (9.1 kg) white bond paper.

1.4 CONTRACTORS REVIEW. Coordinate the timely submittal of all necessary information to keep the project on or ahead of schedule. All drawings, product data, lists, samples, test reports, manuals, and other required information shall be submitted in sufficient time to allow the Engineer twenty (20) to forty five (45) days of review time. The Contractor's submittal review process includes any necessary correlation and checking of related and interdependent parts of the work. Scheduling of submittals shall allow time for review, correction, resubmittal, and final review prior to the ordering of equipment, fabrication of materials, or actual construction, assembly, or erection. No claim for extra cost, damage, or extension of time shall be made because of a failure to submit said information sufficiently in advance.

Submit information on all portions of the work irrespective of their being specifically mentioned.

Review submittal prior to transmitting to the Engineer. Check the completeness of the information submitted. Verify field measurements, coordination of all component parts of work, conformance of all materials, methods, and equipment to Contract Documents. Stamp, sign, and date acceptable submittals before transmitting to the Engineer.

Do not perform any work covered by submittal(s) prior to approval of all related submittals by the Engineer.

No claim shall be made for costs incurred, damages or extension of time required to modify or replace any equipment, materials, or structures in order to conform to submittals as approved by the Engineer.

No alterations shall be made to drawings previously approved by the Engineer without his written consent.

1.5 RESUBMITTALS. Make resubmittals under the same procedure specified for initial submittals.

Verify that all corrections, equipment/system coordination, and field verifications required by Engineer during the initial review have been made, all additional information requested has been supplied, and any other comments made by the Engineer have been addressed in the resubmittal.

Identify all changes made on the submittal since the previous review. Designate drawings with a revision number; letter and the date revised.

## **PART 2 - PRODUCTS**

Not Used

## **PART 3 - EXECUTION**

3.1 SUBMITTALS PROCEDURES. All documentation submitted by the Contractor to the Engineer shall be accomplished by a letter of transmittal. The submittal shall be submitted in a sequence that allows the Engineer to have all of the information necessary for checking and approving a particular document at the time of submittal. Each document shall be identified by a document number, contract number, contract name, location, specification section and subsection numbers and submittal date. To permit rapid location of the revision, additional notation shall be made in the manual opposite the line or area where the change was made, and identified by the corresponding revision number.

3.2 SUBMITTALS APPROVAL. Submittals are reviewed to verify conformance with the contractual requirements and check the accuracy of documentation to prevent costly mistakes and delays to construction. Approval of Contractor's documents by Engineer shall not relieve the Contractor of the responsibility to meet all of the requirements of the Contract Documents. The Contractor shall have no claim for additional costs or extension of time on account of delays due to revisions of the documents which are necessary for ensuring compliance with the contract.

Approval of documentation shall be the functional level. Any detailed design done prior to approval at the functional level shall be at the Contractor's risk.

Engineer will return documents to Contractor stamped "approved", "approved as noted", "revise and resubmit; or "rejected".

Approved. The document may proceed with the work covered by the drawings or document.

Approved As Noted. The Contractor may proceed with work after making

changes marked on returned drawing or documents.

Revise and Resubmit. The Contractor may not proceed with work until drawing or document is resubmitted to the Engineer and returned to the Contractor with approved stamp. Any drawing marked "revise and resubmit" must be resubmitted or letter written explaining why document was not resubmitted.

Rejected. The Contractor must not proceed with any construction relating to any "rejected" document. Any drawing marked "rejected" must have a new document resubmitted or letter written explaining why document was not resubmitted.

Returned Unreviewed. When the submittal is incomplete or is not applicable or necessary to the project, the submittal may be returned unreviewed.

Information. The documents have been accepted for the record and have not been reviewed as defined above.

Record Print. When documents are submitted after construction has been completed to comply with section Contract Closeout.

Only the Engineer shall utilize the color "red" in marking Shop Drawings and Submittal Documents.

The Engineer will review a submittal or resubmittal a maximum of 3 times, after which the cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's full cost.

No partial submittals will be reviewed. An incomplete submittal or resubmittal will be returned to the Contractor for resubmittal.

When the shop drawings or document have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance with such drawings and shall make no further changes except upon written instruction from the Engineer.

3.2.01 Testing of Samples. The Engineer may require laboratory tests on samples submitted or may approve materials on the basis of data submitted with the samples. The Engineer shall determine the testing methods and number of tests.

If tested samples indicate a material does not conform to the Contract requirements, the Contractor will be notified of the rejection and given the basic reasons for such rejection. The Engineer will not furnish copies of all the test data or results.

3.3 SUBMITTALS TRACKING. A control procedure shall be established by the Contractor to track submittal approval and revision for all documents and drawings. The Schedule of Submittals should be the foundation for tracking submittals approvals and revisions. The Contractor shall maintain his procedure from Contract award through completion of the final project acceptance, and shall provide the Engineer with up to six (6) hard copies and submit electronically the initial Configuration Control Document updated monthly as appropriate, for document drawing submittals or approval procedures.

End of Section

## **SECTION 01140**

### **SOIL EROSION AND SEDIMENTATION CONTROL**

#### **PART 1 – GENERAL**

1.1 SCOPE. This work includes the installation and maintenance of erosion and sedimentation controls required to prevent or minimize soil erosion and sedimentation from impacting the water resources of the State of Michigan and adjacent properties.

#### 1.2 GENERAL.

1.2.01 Coordination. The Contractor shall conduct the work so that all soil, fuels, oils, bituminous materials, chemicals, sanitary sewage, debris and other unsuitable materials, resulting from his means and methods used in the execution of the Work are confined within the right-of-way and project limits. These materials shall be properly disposed of to prevent them from leaving the project site and from entering drains, catch basins, roads, walks, and into any structures at the site.

#### 1.2.02 Governing Standards.

Act 451 of 1994, Natural Resources and Environmental Protection Act, Part 91, Michigan Soil Erosion and Sedimentation Control (formerly PA 347 of 1972, as amended).

Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

St. Clair County Health Department, Division of Environmental Health, Soil Erosion and Sedimentation Control Permit

1.3 QUALITY ASSURANCE. Soil Erosion and Sedimentation Control measures shall be installed and maintained in accordance with the requirements of all Federal, State and Local laws and regulations regarding soil erosion and sedimentation control.

Failure by the Contractor to install and maintain adequate soil erosion controls may result in project shutdown and/or possible fines from the MDEQ. The Contractor is required to obtain an Act 451, Part 91 permit from the local soil erosion agency, as applicable and all other applicable Federal, State and local permits. A soil erosion permit is always required when the work disturbs more than 1 acre (4047 m<sup>2</sup>) of land

or is within 500 feet (152.4 m) of a lake or stream. Local Agency Act 451, Part 91 requirements may be more restrictive.

When conflict exists the more stringent requirement shall govern unless it adversely conflicts with agency having jurisdiction for which Engineer shall make the final determination.

1.4 SUBMITTALS. Even if a soil erosion permit is not required, Act 451, Part 91 requires a Soil Erosion and Sediment Control Plan be prepared as a part of the overall plan that will effectively reduce soil erosion and off-site sedimentation. The soil erosion and sedimentation control plan shall be implemented prior to commencing work at the site.

The Soil Erosion and Sediment Control Plan shall be in accordance with both the MDOT Standard Specifications for Construction and requirements of Agency having jurisdiction.

Contractor shall be responsible for proper implementation of erosion control measures with regard to construction timing and sequence of operations. Erosion control measures shall be repeated as often as necessary to satisfy permit conditions, Agency having jurisdiction and Engineer's requirements.

## **PART 2 – PRODUCTS**

Not Used

## **PART 3 – EXECUTION**

3.1 SERVICE CONDITIONS. Work operations shall be conducted to prevent or minimize erosion and sedimentation. Temporary or permanent erosion and sedimentation controls shall be constructed and maintained as specified by agency having jurisdiction prior to commencing any construction operations including clearing. Temporary erosion and sedimentation controls shall be installed to minimize potential problems, to correct conditions which develop during the work, or to stabilize inactive work areas. The Contractor shall minimize the area of unstabilized land surface over which storm water must flow.

Provide suitable sedimentation control measures at affected connections to existing or new storm drains, to minimize deposition of sediment in the storm drains during the work period.

Pumped water from any facility or work area shall not discharge onto unstabilized areas. Such discharge shall be conveyed by pipe, hose or stabilized channel, to a

designated sewer or other structure in accordance with all applicable federal, state and local regulations and permits.

### 3.2 CONSTRUCTION OF EROSION AND SEDIMENTATION CONTROLS.

Construction of temporary or permanent erosion and sedimentation controls shall meet the requirements as specified on the plans or as directed by Engineer.

If approved by the Engineer, and not prohibited by permit, broken concrete may be used for erosion and sedimentation controls provided all the reinforcing steel has been removed or flush cut. The use of bituminous material for checkdams, weirs or riprap is prohibited.

3.2.01 Silt Fence. This work shall consist of furnishing, erecting, maintaining, removing, and disposing of a silt fence. Silt fencing consists of a post supported geotextile. Installation, including proper entrenching, shall be accomplished as specified or approved according to the manufacturer's published recommended practice. Sections of silt fence shall be overlapped at least 3.3 ft (1 m). In areas where water ponds are located behind the silt fence, a stone filter may be needed to outlet the water and prevent failure.

3.2.02 Sediment Traps and Basins. This work shall consist of excavating, maintaining and filling in if directed, a sediment trap 176 ft<sup>3</sup> (5 m<sup>3</sup>) or less in size or a sediment basin greater than 176 ft<sup>3</sup> (5 m<sup>3</sup>) as shown on the plans or where directed.

3.3 MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS. The Contractor shall maintain all temporary erosion and sedimentation controls during the period that the temporary controls are required and all permanent erosion controls until the contract has been completed and accepted. Such maintenance shall consist of the repair of all damaged areas, replacement of lost facilities and periodic removal of sediment. Sediment traps and basins shall be cleaned out when they are half full or as directed. Sediment or debris shall be removed from in front of silt fence when it has accumulated to one half of the fence height. The removed sediment shall be disposed of according to MDOT 2012 Standard Specifications for Construction.

Any accumulation of sediment affecting the efficient operation of the erosion controls should be removed and stockpiled in a stabilized area so as to prevent the material from eroding back into the drainage course.

### 3.4 REMOVAL OF EROSION AND SEDIMENTATION CONTROL FACILITIES.

Temporary erosion and sedimentation controls shall be removed or obliterated when the permanent controls are in place and approved, unless ordered to be left in place by the Engineer. Temporary controls adjacent to lakes, watercourses, or wetlands



shall be left in place until the adjacent slopes have turf establishment. Mulch placed for temporary erosion control shall be incorporated into the slope, or removed, prior to placement of topsoil, permanent seeding and fertilizing operations. Care shall be exercised during removal of erosion controls to minimize erosion or sedimentation into watercourses. Any damage caused during the removal operations shall be repaired at the Contractor's expense.

After the upstream construction is completed and vegetation or a permanent lining has been established in the waterway, the sediment pit shall be filled, the sediment trap removed and the side slope area formerly occupied by the sediment trap sodded or ripped, as directed by the Engineer.

After vegetation or a permanent lining has been successfully established in the ditches and/or swales, the check dams shall be removed and the area formerly occupied by the check dam shall be sodded as applicable.

After construction is completed and the waterway channel restored, the weirs shall be removed and the area formerly occupied by the weir shall be restored.

After vegetation or a permanent lining has been successfully established in the ditches or swales, the stone or gravel filter at inlet shall be removed and the area formerly occupied by the filter shall be sodded.

Sand filled bags must be disposed of at an upland site or as approved. If approved, stone from stone filled bags may be placed in the bottom of the watercourse if the stream hydraulics are not changed.

End of Section

## **SECTION 01155**

### **JOB SUBMITTALS**

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

1.1 SCOPE. Prepare and submit the job submittals (in accordance with the requirements specified in Section 01080) for this project that documents the Work performed on the Project.

1.1.01 Job Submittals. During the Contract period, Contractor shall maintain the job submittals specified in this Section and in Section 02145 for submittal to GLWA as specified herein, in Section 02145, and at any other times during the progress of work as ordered by GLWA. In addition, the job submittals shall be submitted monthly to GLWA and used as part of the Contractor's payment application review process. The job submittals include the following documents:

- Weigh Scale Tickets
- Waste Manifests
- Disposal Facility Approvals
- Transporter Approvals
- Sludge Sample Testing Results
- Permit Applications
- Approved Permits
- Operating Permits for Disposal Facilities
- Valid Driver's Licenses for Truck Drivers
- Current State Registration for Trucks

#### **1.2 MAINTENANCE OF JOB SUBMITTALS.**

Maintain documents in a clean, dry, legible condition and in good order.

Documents shall be available at all times for inspection by the Engineer. As a prerequisite for milestone progress payments, the Contractor shall submit the current job submittals for review by GLWA.

1.4 SUBMITTAL. On completion of the Work, and prior to final payment by GLWA, the Contractor shall arrange the job submittals and all other submittals specified

elsewhere in order to match the Specifications Sections of the Project/Contract, bind them together, index them, and deliver them to GLWA. A separate binder (submittal package) is required for each GLWA treatment plant.

Accompany each submittal with transmittal letter in triplicate, containing:

Date

Project title and number

Contractor's name and addresses

Plant name and location

Signature of Contractor or its authorized representative

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

End of Section

## **SECTION 01190**

### **CONTRACT CLOSEOUT AND CLEANING**

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

1.1 SCOPE. This Section covers contract closeout procedures and both ongoing and final cleaning of the Work. This specification builds upon the Agreement, General Conditions and includes administrative provisions for Substantial Completion and for Final Completion.

#### 1.2 GENERAL.

1.2.01 Coordination. Refer to other Sections in Division 1 for coordination.

#### 1.3 CLEANING.

1.3.01 Site Cleaning Requirements. Maintain project site free of waste materials, debris, and rubbish and in a clean and orderly condition on a daily basis throughout duration of Work. If the premises and job site are not maintained properly, the Owner may have accumulations of waste materials or trash removed and charge the Contractor for those costs.

1.3.02 Street Cleaning Requirements. All public or private property streets or roads, occupied or used by the Contractor shall be kept in a neat and orderly condition at all times. When directed by the GLWA, but not less than weekly, the Contractor shall sweep the streets with a sweeper. This requirement shall apply to any streets or roads in the vicinity of the Work which are affected by the Contractor's construction or hauling operations, and as well as to streets or roads in which the Work is located. Should the Contractor neglect his duties in maintaining the proper street or road cleanliness, the GLWA has the authority to take necessary steps to perform such cleaning and will charge the Contractor for those costs.

1.4 RESTORATION REQUIREMENTS. At the completion of his Work, the Contractor shall remove all temporary facilities, equipment, tools, surplus or waste materials and rubbish of any sort from public or private premises temporarily occupied in the vicinity of the Work.

Complete all final cleaning and restoration work prior to final inspection, cleaning and disposal operations to comply with codes, ordinances, regulations and environmental protection laws.

Contractor shall restore all property occupied or affected by its operations to original conditions. Lawn areas shall be properly prepared for seeding, seeded, fertilized,

mulched, and watered to provide a healthy, well-established lawn. The final condition of the premises shall be subject to the approval of GLWA.

1.5 RE-INSPECTION FEES. Should status of completion of Work require more than one re-inspection by GLWA due to failure of Work to comply with Contractor's claims on initial inspection, GLWA will deduct from final payment to Contractor the amount of GLWA's compensation for additional re-inspection services.

1.6 SUBSTANTIAL COMPLETION. Contract shall follow the General Conditions and other Contract Documents when Contractor considers the Work or designated portion of Work to be substantially complete.

1.7 FINAL COMPLETION. Upon receiving the certificate of substantial completion or partial completion from GLWA, Work shall be complete once all close-out submittals are received and approved by GLWA. When Contractor considers Work, or designated period of Work, is complete, submit written certification indicating that:

- 1) Contract Documents have been reviewed; and
- 2) Work has been completed and inspected for compliance with Contract Documents.

The GLWA will conduct final inspection of the Work. Should GLWA's final inspection reveal Work incomplete, the GLWA shall promptly notify Contractor in writing listing observed deficiencies. Contractor shall remedy deficiencies and send a second certification of Final Completion.

The GLWA will re-inspect the Work. When GLWA finds Work is complete, closeout submittals shall be submitted.

1.8 CLOSE-OUT SUBMITTALS. Contract shall submit the following close-out submittal items:

- 1) Submittals as specified in the Contract Documents; and
- 2) Warranties and required Bonds; and
- 3) Consent of Surety to Final Payment.

## **PART 2 - PRODUCTS**

2.1 CLEANING. Use only those cleaning materials that will not create hazards to health or property and that will not damage surfaces. Use only those cleaning materials and methods recommended by manufacturer of the surface materials to be cleaned and by cleaning material manufacturer.

## **PART 3 - EXECUTION**

3.1 CLEANING REQUIREMENTS. The Contractor shall be responsible for the general maintenance of the premises and the job site and for the coordination of the clean-up work of all trades. Contractor's equipment, temporary building, and excess materials shall be promptly removed, as they become no longer needed for prosecution of the Work.

3.1.02 Weekly Cleaning Requirements. Perform weekly cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish, and windblown debris resulting from the Contractor's operations. Dispose of all materials collected through the cleaning process.

Provide on-site containers for the collection of waste materials, debris and rubbish. Collect and remove waste materials, debris and rubbish from site at least weekly and dispose of off-site as containers become full.

3.1.03 Street Cleaning. When directed by the GLWA, but not less than weekly, the Contractor shall sweep the streets with a sweeper. Waste materials, rubbish and debris shall not be allowed to accumulate. The sweeper shall have a main broom, conveyor, sprinkler system and storage hopper.

3.1.04 Dust Control. Broom and vacuum clean interior areas of the building just prior to the start of painting and finish Work. Continue cleaning these areas to eliminate dust and maintain in satisfactory condition for painting and finishing as directed by the GLWA. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.2 DAMAGED PROPERTY. Restore or replace, when and as directed, any public or private property damaged by Work, equipment, or employees, to a condition at least equal to that existing immediately prior to beginning of operations. To this end, the Contractor shall perform restoration or replacement, as required, all necessary highways or driveway, walks and landscaping work. Suitable materials, equipment and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the Contract period.

3.3 FINAL CLEANING. Clean the entire Work site as specified in Article 3.1 above and as required below. Employ skilled workmen for final cleaning.

Remove wastes, debris, and surplus materials from site. Clean grounds; remove stains, spills, and foreign substances from paved areas and sweep clean. Rake clean other exterior surfaces. Maintain cleaning until Final Completion.

End of Section

## **SECTION 02145**

### **SLUDGE REMOVAL AND DISPOSAL**

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

1.1 SCOPE. Provide all labor, design services, engineering, planning, supervision, project controls, project management, materials, equipment, tools, incidentals, mobilization, setup, and demobilization required to characterize, analyze and gain waste acceptance for lagoon materials to be removed, handled, dewatered, processed, loaded, transported, and disposed.

The lagoon materials (sludge) are by-products from the water treatment process which includes the addition of alum and polymers. The lagoons are filled with solids from periodic cleaning of the sedimentation basins and discharge of sludge from the clarifiers of the waste wash water treatment facility.

Sludge shall be disposed at a licensed municipal solid waste landfill (sanitary landfill and also referred to as “disposal facility” in these Specifications), which by St. Clair County Ordinance is designated as the Smiths Creek Landfill. The Contractor is not permitted or otherwise allowed to dispose of this material without the specific written approval from the St. Clair County authorities having jurisdiction, the MDEQ (if applicable) and GLWA.

Sludge removal and disposal operations must be coordinated with GLWA and must not interfere with normal operations at LH WTP. Once the Contractor begins operations, they must diligently pursue completion of removal and disposal of the allocated quantities up to the contractual upper limit. Once the sludge removal and disposal operation is completed by the Contractor, and they are within 95 to 100 percent of the contract upper limit quantity, Contractor shall demobilize his labor, materials, tools, equipment, facilities, and incidentals from the site. Contractor is required to restore the lagoon sufficiently to allow for its return to service and removal of all temporary means and methods, including soil erosion controls, after restoration has been completed.

1.2 DEFINITIONS. The following terms used in this Section have the following meanings:

- A. “Admixtures” – The term “admixtures” as used in connection with sludge means any material, substance, chemical, or agent that is added to the sludge to dry it, solidify it and otherwise allow it to pass the USEPA Paint Filter Liquids Test and render it suitable for transportation and disposal at a licensed municipal solid waste landfill to comply with the requirements specified in this Section and to comply with applicable federal, state and local laws, rules, regulation, and ordinances.

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- B. "Weight" – The term "weight" as used in connection with sludge means net weight.
- C. "Net Weight" – The term "net weight" means the weight of sludge (that is the weight of the cargo carried) excluding any materials, chemicals, agents, substances or items not considered to be part of the sludge. Materials, chemicals, agents, substances or items not considered to be part of the sludge include, but are not limited to, free liquids, drying agents, solidification agents, containers, conveyances, bags, wrappers, packaging materials, labels, individual piece coverings, decorative accompaniments, and coupons.
- D. "Gross Weight" – The term "gross weight" means the weight of the truck, driver and fuel plus the cargo (sludge in the case of this Contract).
- E. "Tare Weight" – The term "tare weight" means the weight of the truck, driver, fuel and other non-cargo items.
- F. "Electronically Stored Tare Weight" – The term "stored tare weight" means a tare weight that has been stored and can be recalled from memory in digital indicators and computers.
- G. "Accumulation" – The term "accumulation" means the totalized, cumulative net weight of sludge transported and disposed at the disposal facility on a daily basis when recorded on the daily weight record, and on a monthly basis when recorded on the monthly weight record.
- H. "Solids" – The term "solids" means that portion of the sludge remaining after all water is removed. This may also be referred to as "dry solids".
- I. "Sludge" – The term "sludge" means water and dry solids mixed together. This is the material that shall be subject to removal, handling, dewatering, processing, loading, transporting, and disposing at an approved disposal facility in accordance with the requirements of the Contract Documents.

**SLUDGE SAMPLING AND ANALYSIS.** Contractor shall collect one composite sample from each truck load of sludge transported and disposed, and analyze each composite sample for paint filter liquids (USEPA SW-846 METHOD 9095B PAINT FILTER LIQUIDS TEST reference: [https://www.epa.gov/sites/production/files/2015-12/documents/9095b\\_0.pdf](https://www.epa.gov/sites/production/files/2015-12/documents/9095b_0.pdf)) and total solids (Standard Methods 1684) reference: [https://www.epa.gov/sites/production/files/2015-10/documents/method\\_1684\\_draft\\_2001.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/method_1684_draft_2001.pdf))

For the purpose of reporting compliance with disposal requirements and providing sludge data to GLWA. This is the minimum testing and the disposal facility may require additional testing. The composite sampling methodology shall be approved by GLWA, the disposal facility and all authorities having jurisdiction. Contractor is responsible for collecting samples by trained personnel and analyzing samples at an accredited laboratory acceptable to GLWA, the disposal facility, and authorities having jurisdiction. GLWA reserves the right to analyze the samples on its own, and when directed, Contractor will collect composite samples for GLWA's use and analysis. Contractor shall have composite samples analyzed by an independent testing laboratory, which shall meet the approval of GLWA.



1.3 SPECIAL PAYMENT PROVISIONS. GLWA will not pay the Contractor for any sludge removal and disposal work when the sludge has been rejected by the disposal facility. All work and costs to render the sludge acceptable to the disposal facility shall be the responsibility of the Contractor.

1.4 CONTROL OF WATER. The existing influent and effluent gates and valves that isolate the lagoons leak. The Contractor is responsible for designing, furnishing, installing, maintaining, and operating all on-site dewatering systems to remove and discharge water that enters the lagoons via process or precipitation. The Contractor shall discharge the water to an approved on-site sewer or nearby lagoon as designated by LH WTP staff.

1.5 PERMITS. Contractor is responsible for applying for and obtaining all necessary regulatory permits, waste acceptance, discharge permits, transportation permits, disposal permits, and transporter and disposal facility approvals that may be required on this Project in order to complete the Work in every respect. Contractor is responsible for identifying, applying for, and obtaining all permits and approvals. Once the Contractor obtains permits and approvals, they are responsible for maintaining and complying with the requirements of the permits, including but not limited to monitoring, sampling, analyzing, reporting, communicating, etc. to the agencies that issued the permits. Contractor is also responsible for all permit application fees, permit fees, user fees, discharge fees, discharge surcharge costs, approval costs, and all related costs necessary to obtain, secure, maintain and comply with all permits and approvals from local, county, state, and federal agencies.

1.6 TRANSPORTER AND DISPOSAL FACILITY ACCEPTANCE. Contractor is fully responsible for gaining acceptance from the transporters and disposal facilities for the transportation and disposal of sludge from the GLWA water treatment plant. The Contractor shall determine and comply with the transporter and disposal facilities requirements for waste characterization, sampling, analyses, reporting, and other requirements imposed by the transporter and disposal facilities in order to obtain and maintain acceptance to dispose sludge at the disposal facilities throughout the duration of the Contract. The Contractor is responsible for collecting and analyzing sludge samples (and any other media samples) that the transporter and disposal facilities require in order to obtain and secure permits and approvals to transport and dispose sludge throughout the duration of the Contract. Contractor is fully responsible for all fees and costs imposed by the transportation companies and disposal facilities.

1.7 LOCAL ORDINANCES. Contractor is responsible for determining and complying with the Fort Gratiot Township and St. Clair County rules, regulations and code of ordinances in the execution of the Work of this Contract, including obtaining and complying with permits that may be required by these local authorities having jurisdiction. Contractor is fully responsible for the costs and fees associated with

permits that may be required by these local authorities having jurisdiction. If the Contractor's activities cause a violation of a local ordinance(s), then the Contractor shall immediately correct and/or modify its work activities to abate the violation and comply with local ordinances.

**1.8 TRANSPORTATION REQUIREMENTS.** Contractor is responsible for obtaining and complying with all required transportation-related permits, including but not necessarily limited to the St. Clair County Road Commission, Michigan Department of Transportation (MDOT), U.S. Department of Transportation, other county road commissions, and local requirements, rules, laws, limitations, and weight restrictions along the routes used by the Contractor to transport sludge between the GLWA plant and the disposal facility selected and used by the Contractor. Contractor is responsible for all permit fees and costs associated with the transportation of sludge throughout the duration of this Contract. The Contractor shall process the sludge to render it suitable for transportation prior to the sludge leaving the sites. As a minimum, all sludge shall pass the Paint Filter Liquids Test using USEPA SW-846 Method 9095B prior to leaving the site. The Contractor shall develop a sludge sampling and analysis program that demonstrates that the sludge is ready for transportation from the site to comply with the specified Paint Filter Liquids Test and all other requirements imposed by the transportation and disposal companies and as required by applicable regulatory agencies.

**1.9 DISPOSAL REQUIREMENTS.** Contractor is responsible for adhering to the following disposal requirements for sludge removed from GLWA's water treatment plants:

- A. Contractor is responsible for processing (dewatering, solidifying or other means and methods selected by the Contractor) the sludge removed from GLWA's water treatment plant lagoons so that the sludge is classified as a solid waste in accordance with Part 115 Solid Waste Management of Act 451 of 1994 Natural Resources and Environmental Protection Act, as amended, and any other applicable federal, state and local laws, rules, regulations, and ordinances.
- B. Contractor is responsible for processing the sludge as necessary to comply and meet any additional requirements that may be imposed by the disposal facilities.
- C. Contractor shall process and prepare the sludge removed from the GLWA water treatment plant to remove free liquids from the sludge as necessary to pass the Paint Filter Liquids test (USEPA SW 846 Method 9095B) prior to sludge leaving GLWA property.
- D. If the Contractor's means and methods, as approved by GLWA, involve processing the sludge off-site by adding a solidifying agent or solidifying the sludge in some other manner, then the Contractor shall comply with Act 451 of 1994 Natural Resources and Environmental Protection Act, as amended, and any other applicable federal, state and local laws, rules, regulations, and ordinances regarding solidification processing plants. If the Contractor's means and methods involve hauling sludge from the site that does not pass

the USEPA Paint Filter Liquids Test, the Contractor is responsible for complying with Part 121 Liquid Industrial Waste of Act 451 of 1994 Natural Resources and Environmental Protection Act, as amended. Any facilities or operations that the Contractor uses to solidify sludge to make it disposable shall be a licensed solid waste processing facility in accordance with Part 115 Solid Waste Management of Act 451 of 1994 Natural Resources and Environmental Protection Act, as amended.

1.10 HEALTH AND SAFETY. Contractor's Responsibility for Safety: Contractor is solely responsible for the safety of its employees, subcontractors, suppliers, transporters, throughout the course of the work and duration of the Contract. Contractor is solely responsible for the development of its health and safety program, the implementation and maintenance of its health and safety program, and for the compliance with all applicable federal and State of Michigan Occupational Health and Safety Administration. Portions of the work may involve Contractor personnel to enter permit-required confined spaces. There are many other hazards such as, but not necessarily limited to, slips and falls due to the slippery conditions, limited lighting and communications because of the enclosed confined spaces, and flowing water, and general excavation, dewatering, loading and trucking construction hazards. The Contractor is solely responsible for evaluating the existing conditions, facilities, structures, etc. within the limits of work of this Project, and for developing the safety program that complies with applicable regulations and is protective of the Contractor's employees, subcontractors, suppliers, transporters, GLWA staff and others that may be reasonably expected to be in the area of work.

1.11 USE OF ADMIXTURES TO SLUDGE. Use of admixtures to solidify, dry and otherwise remove free liquids from sludge, so that it passes the USEPA Paint Filter Liquids Test and render the sludge suitable for transportation and disposal at a municipal solid waste landfill is permitted -- provided a written work plan is submitted to GLWA for review and approval. If the Contractor decides to use drying and solidification agents as part of its means and methods for this Project, the admixtures shall be weighed using weigh scales that meet the requirements of the State of Michigan Weights and Measures Act of 1964, Public Act No. 283 (as amended), as approved by GLWA. The quantity of admixtures added to sludge shall be deducted from the quantity of sludge disposed at the disposal facility. The methods and calculations used to make such deductions will be reviewed and approved by GLWA. Contractor shall provide weigh scales that conform to the following:

- A. Scales must be approved by GLWA.
- B. Scales shall conform to the requirements of the State of Michigan Weights and Measures Act of 1964, Public Act No. 282, as amended.
- C. Scales shall give the weight results in pounds to the nearest tenths of a pound.
- D. Be portable platform or floor scales that are mobilized to the GLWA plants so that weighing of agents is performed in the presence of GLWA or its authorized representative.

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- E. Scales shall not be used to weigh a load totaling more than the nominal capacity marked on the scale by the manufacturer. Any portion of the load over the nominal scale capacity will still be deducted from the actual quantity of sludge removal and disposal work.
- F. Scales shall have a means to print out weight tickets for each load weighed.

The Contractor shall keep a written record of all sludge drying and solidification agent weights correlated and traceable to each load of sludge disposed at the disposal facility. These records shall be provided with each monthly application for payment as supporting documentation, and shall be emailed to GLWA daily.

1.12 WEIGHING SLUDGE FOR PAYMENT. Contractor shall weigh each truck load of sludge that is transported from the site and disposed at the disposal facility(ies). Weighing of sludge shall be performed to measure the actual quantity of Work performed on the Project as further described in Section 00300, Bid Form. Each truck load of sludge shall be weighed on scales conforming to the following requirements:

- A. Scales and scale locations must be approved by GLWA.
- B. Scales shall conform to the requirements of the State of Michigan Weights and Measures Act of 1964, Public Act No. 282, as amended.
- C. Scales shall be sealed and approved by the State of Michigan, Michigan Department of Agriculture and Rural Development Weights and Measures, State Inspector. All scales shall be current in their State approvals throughout the duration of the Contract.
- D. Scales shall give the weight results in pounds to the nearest pound.
- E. The zero-load balance may be adjusted, either by an electronic mechanism designed to be manually operated to provide an automatic zero balance condition (push-button zero) or by an automatic means to maintain a digital zero balance.
- F. Scales shall not be used to weigh a load totaling more than the nominal capacity marked on the scale by the manufacturer. Any portion of the load over the nominal scale capacity will not be paid.
- G. The tolerance applications of NIST Handbook 44 and to tests involving digital indications or representations, shall apply except that the tolerance value for platform scales shall be 2 pounds per 1000 pounds of load or the value of one scale division, whichever is smaller.
- H. Scales shall have a means to print out weight tickets for each load weighed.
- I. The total weight of a single highway vehicle shall be weighted as a single draft and shall not be determined by adding the results obtained by separately weighing each end of the vehicle except that weighing of a coupled combination may be determined without uncoupling under the following conditions:
  - a. The brakes are released,
  - b. There is no tension or compression on the draw-bar,
  - c. The approaches are straight and in the same level plane as the scale platform,

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- d. The approaches are paved at least 50 feet in each direction with a seal coat or higher type surfacing, and
- e. GLWA shall require a coupled vehicle to be re-weighed, with each unit being uncoupled, at least monthly during its use on the Project. The total weight of the coupled units shall agree with the total weight of the coupled units within +/- 0.2 percent. If the lack of agreement within 0.2 percent cannot be resolved, uncoupling will be required for continued use of the scale.

1.13 PRINT-OUT CAPABILITY OF SCALES. For all materials (sludge, drying agents, solidification agents, etc.) weighed on this Project, the weigh scales shall have a means to print out weight tickets for each load weighed. The printout system provided with the scale, shall be equipped with a printer that shall print and identify all of the following information on a triplicate ticket for each truckload:

1. Contract number,
2. Project name,
3. Prime Contractor's name,
4. Trucking company's name,
5. Truck identification,
6. Scale identification,
7. Scale location and facility name,
8. Type of material being weighed,
9. Date material weighed,
10. Time material weighed,
11. Sequential ticket number,
12. Gross weight,
13. Tare weight
14. Net weight,
15. Accumulation.

The information shall be labeled so that each ticket can be readily understood. The system shall be interlocked to allow printing only when the scale has come to a complete rest.

1.14 TARE WEIGHTS OF TRUCKS. All trucks used for transporting the sludge to the disposal facilities shall have their tare weights established immediately before each sludge removal and disposal event ordered by GLWA, and then re-established every day during the entire sludge removal and disposal event. Additional tare weight requirements are as follows:

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- A. Tare weights shall be established by 3 separate weighings using an arithmetic average.
- B. Tare weights shall be established using the weigh scales specified in this Section.
- C. Tare weights shall be established twice per day for each truck transporting and disposing sludge throughout the duration of this Contract. Tare weights shall be taken about 4 hours apart. Contractor shall notify GLWA when tare weights are taken so that GLWA has the opportunity to witness tare weight measurements.
- D. Electronically stored tare weights shall be deleted daily.
- E. Tare weights shall be prominently displayed on charts with the truck identification and tare weight at the plant, and updated daily so that GLWA can check the tare weights at any time throughout the course of each sludge removal and disposal event.
- F. Tare weights shall be prominently marked on the truck and updated daily so that GLWA can check the tare weights at any time throughout the course of each sludge removal and disposal event.
- G. GLWA reserves the right to request additional tare weight measurements at no additional cost.
- H. The same scales used to weigh sludge shall also be used to establish tare weights.

1.15 INSPECTION OF SCALES. GLWA maintains the right to conduct its own independent inspection or check all scale systems, private scale inspectors, and inspection agencies for all materials (sludge, drying agents, solidification agents, etc.) weighed on this Project. The Contractor shall prove the accuracy of all scales used on this Project by providing inspection services specified in this Paragraph. Any failure to conform to requirements set forth in this Specification shall be corrected immediately. The Contractor shall submit proof of scale accuracy (inspection report) to GLWA once at the beginning and end and every 365 days of the Contract.

Scale systems inspected according to the current edition of the National Institute of Standards and Technology (NIST) Handbook 44 or as otherwise provided by law.

For portable scales, the Contractor will, at the Contractor's own expense, secure a scale check from a local official sealer of weights and measures, or GLWA may give tentative approval, based on check truckloads weighed on other scales that bear an official seal placed in the current calendar year.

Permanent scale systems are defined as weighing devices that have not been moved from a given location within the past six months. Portable scales that remain in one location for more than six months are considered permanent installations. The owner of any permanent scale system shall be responsible for the scheduling of inspection, calibration, and working order of the weighing system.

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For permanent scale systems, GLWA will consider scale inspections conducted by a private scale inspection agency or the State of Michigan Department of Agriculture (Department of Agriculture) valid for one year. If the Department of Agriculture has not re-inspected the scale, the scale owner shall be required to obtain a scale inspection through a private scale inspection agency. The scale owner shall provide to GLWA written verification prior to using the scale for weighing of materials (sludge, drying agents, solidification agents, etc.) specified in this Specification Section. The scale owner shall furnish a copy of the current scale inspection report to GLWA each year of the Contract.

The private scale inspection agency shall be experienced in the inspections and required to have the following minimum equipment:

Platform Scales-Twenty 1000 pound weights  
Hopper Scales-Ten 1000 pound weights and twenty 50 pound weights

All costs incurred in the inspection of scale systems shall be the responsibility of the Contractor and no additional compensation shall be allowed. Claims by the Contractor for reasonable delays and inconveniences due to these operations will not be considered.

1.16 RESTRICTIONS. The Contractor's operations to remove and dispose sludge from GLWA's water treatment plants is subject to the following restrictions:

- A. No burning of sludge is allowed or otherwise permitted.
- B. No oil, grease, gasoline, diesel fuel, drying agents, solidification agents, or chemicals are allowed or otherwise permitted inside or on top of the sedimentation basins, flocculator chambers or associated influent and effluent channels.
- C. No release of bodily fluids is allowed or otherwise permitted outside of approved rest room facilities at the site.
- D. No sludge shall be allowed to discharge to the sewer system.
- E. No smoking at the site.
- F. No double-draft or split-weighing is allowed or otherwise permitted when weighing trucks that are transporting sludge for disposal off site.

1.17 PRE-WORK SUBMITTALS. Contractor shall submit the following to GLWA prior to commencing Work at the sites.

- A. Sludge Removal and Disposal Work Plan: This work plan shall be submitted to GLWA before commencing sludge removal and disposal work at the plant. Submit a work plan providing details of how the sludge will be removed, handled, processed (including dewatering, solidifying, etc.), loaded, transported, and disposed in accordance with the requirements of the Contract Documents and in compliance with applicable federal, state and local laws, regulations, rules, ordinances. The work plan shall include, as a minimum, the following:

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- a. Schedule for the work
  - b. Field sampling and laboratory analysis plan that addresses sampling and analysis that will be required by the transporters and disposal facilities for waste characterization and acceptance.
  - c. Site usage plan that shows the Contractor's planned areas for materials and equipment staging, sludge processing area, truck loading area, construction traffic, contractor parking, sludge conveyance areas/lines, and water discharge points for water generated from sludge dewatering operations and from water removed from the basins, chambers and channels.
  - d. Plan for controlling water that enters the lagoons and associated influent and effluent channels due to existing leaking valves and gates so that the Contractor is able to satisfactorily remove all sludge from these structures.
  - e. Plan for processing sludge to render it suitable for transportation to and disposal of sludge in accordance with all applicable federal, state and local laws, rules, regulations, and ordinances.
  - f. If the Contractor's means and methods for processing sludge involves adding any drying agents, chemicals, admixtures, or other materials to the sludge in order to render it suitable for transportation and disposal, then the Contractor shall fully disclose all information on these products to GLWA.
- B. Approved state, county, local, and federal permits required to execute and complete the Work.
- C. Approvals from disposal facilities to dispose the sludge at their facilities.
- D. Federal and state truck registrations and valid truck driver licenses for all trucks and truck drivers that will be transporting sludge on this project.
- E. Copies of all current operating permits for each disposal facility that the Contractor disposes sludge on this Project.
- F. Weigh Scales Used to Weigh Admixtures: Submit the following:
- a. Proof that scales meet the requirements of the State of Michigan Weights and Measures Act of 1964, Public Act No. 282, as amended.
  - b. Documentation that shows that the scales meet the requirements specified in this Section.
  - c. Manufacturer, model and year made for the scales.
  - d. Certification of accuracy statement from the inspection agency.
- G. Weight Scales Used to Weigh Sludge and Establish Tare Weights: Submit the following:
- a. Proof that scales meet the requirements of the State of Michigan Weights and Measures Act of 1964, Public Act No. 282, as amended.



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- b. Documentation that shows that the scales meet the requirements specified in this Section.
- c. Manufacturer, model and year made for the scales.
- d. Legal name of facility, location, and ownership of weigh scales.
- e. Compliance record of each weigh scale facility to be used by Contractor.
- f. Certification of accuracy statement from the inspection agency.

H. Weigh Scale Inspection Agency Reports – submit reports from inspection agencies as specified in this Section.

1.18 SUBMITTALS. Contractor submit the following during the progress of work:

A. Tare Weight Records: Submit the following:

- a. Daily tare weigh scale tickets for all trucks used to transport sludge and dispose it at the disposal facilities.
- b. Tabulation sheet that summarizes the daily and monthly tare weights

B. Weigh Scale Tickets: Submit the following:

- a. Weigh scale tickets for all sludge transported and disposed off-site at the disposal facilities.
- b. A separate weigh scale ticket shall be submitted for each truck load of sludge transported from and disposed of off-site.
- c. Weigh scale tickets for all admixtures used on the project. These weight scale tickets shall be correlated to the truck loads of sludge where admixtures are used.
- d. Weigh scale tickets shall be signed by the Contractor indicating his approval of their accuracy in meeting the requirements specified in this Section and of the Contract Documents.
- e. Weights on weigh scale tickets shall be given in pounds (lbs).
- f. Weigh scale tickets for sludge and admixtures shall be submitted daily in PDF format via electronic mail.
- g. Weigh scale tickets, use of admixtures and laboratory results shall be summarized in Excel spreadsheets and provided electronically on a daily basis via electronic mail.
- h. Three (3) hard copies of weigh scale tickets for sludge and admixtures and lab results shall be submitted monthly.
- i. Weigh scale tickets will be used to substantiate the Contractor's monthly applications for payment.

C. Weight Records: Submit the following:

- a. Daily Weight Record of Sludge Disposal on the form provided at the end of this Section. This form shall be signed by the Contractor that certifies information provided is accurate and conforms to the requirements of the Contract. This form shall be submitted in PDF and Microsoft Excel formats via electronic mail. All weigh scale tickets for

truck loads represented on this record must be attached with each daily weight record. Daily weight records must be submitted to GLWA within 24 hours after the last load of each day.

- b. Monthly Weight Record of Sludge Disposal on the form provided at the end of this Section. This form shall be signed by the Contractor that certifies information provided is accurate and conforms to the requirements of the Contract. Monthly weight records must be submitted within 2 days of the end of each month.
  - c. The daily and monthly weight scale records will be used to substantiate the Contractor's monthly application for payment.
  - d. The Contractor shall designate an authorized person who is a direct employee of the Contractor to certify each daily weight scale record and monthly weight scale record by signing each record. The certification means that the information presented on these forms is a correct and accurate representation of the actual quantity of sludge disposed in accordance with the Contract Documents. Furthermore, this certification attests that no person has misrepresented the weights provided by Contractor on these forms in any manner to mislead or in any way deceive GLWA, its employees, or agents.
- D. Results of sludge laboratory analyses taken throughout the course of the Contract shall be submitted to GLWA within 2 business days from when the Contractor receives the results from the laboratory.
- E. Notices of non-compliance and notices of violation: immediately submit copies of any notices of non-compliance or notices of violation by federal, state and local regulatory agency and jurisdiction issued to the Contractor. Any notices shall be submitted to GLWA within 24 hours when the Contractor receives the notice from the regulatory agency and jurisdiction.
- F. Notices of rejected load by the disposal facility shall be made within 24 hours to GLWA by Contractor and shall be followed up within 2 business days with a written report summarizing the issues, corrective action, and ultimate disposition of the rejected load.
- G. Copies of truck registrations and valid truck driver licenses for all trucks and truck drivers that will be transporting sludge on this project shall be submitted annually throughout the duration of the Contract.
- H. Copies of all current operating permits for each disposal facility that the Contractor disposes sludge on this Project shall be submitted annually throughout the duration of the Contract.
- I. Weigh scale inspection agency reports shall be submitted annually throughout the duration of the Contract and whenever a scale is re-inspected during the Contract Time period.

- J. Composite sampling plan for taking composite samples from each truck (as required in Part 1 of this Section) that demonstrates that the composite sampling will be representative of the sludge in each truck.
- K. Composite sampling percent solids analytical results as required in Part 1 of this Section for samples collected for each truck load of sludge transported and disposed offsite.
- L. Independent analytical testing laboratory to analyze the composite samples for percent solids.

## **PART 2 - PRODUCTS**

Not Used.

## **PART 3 - EXECUTION**

3.1 PROJECT INITIATION. Contractor shall provide all labor, design services, engineering, planning, supervision, materials, equipment, tools, and incidentals required to plan, develop, design and build the Contractor's program (means and methods) necessary to execute the Work of this Project in every respect, including but not necessarily limited to design of sludge removal, handling, conveyance, processing (dewatering, solidifying, etc. as dictated by the Contractor's selected means and methods), loading systems, procurement and/or fabrication of temporary facilities, sludge removal, handling, conveyance, processing, and loading equipment and systems, project planning, securing permits and disposal facility approvals, and preparing and submitting the pre-work submittals specified in Section 02145.

3.2 MOBILIZATION AND DEMOBILIZATION EVENTS. When GLWA issues a written authorization to the Contractor ordering him to proceed with a sludge removal and disposal operation at a particular plant (site), the Contractor shall mobilize all labor, equipment, materials, temporary facilities, sludge removing, handling, conveying, and processing equipment and systems, tools, and incidentals to the site in order to start and complete sludge removal and disposal operations. GLWA's written authorization will specifically indicate the lagoon(s), where sludge shall be removed during an operation. Once the Contractor completes the sludge removal and disposal operation and GLWA agrees that the Work is satisfactorily completed, then the Contractor shall demobilize all of its labor, equipment, materials, temporary facilities, sludge removing, handling, conveying, and processing equipment and systems, tools, and incidentals from the site within 10 days. In the case of labor, materials, equipment, systems, etc. inside the structures, those shall be removed from the structures so that the structures are turned over to GLWA within 1 day of the Contractor's completion of the sludge removal operation.

**3.3 SLUDGE REMOVAL AND DISPOSAL OPERATIONS.** Contractor shall remove and dispose sludge from the lagoon(s) as authorized by GLWA. The Contractor is fully responsible for the means and methods required to remove, handle, dewater, process, load, transport, and dispose the sludge to meet all of the requirements specified in Part 1 of this Section. The principle work elements that will be necessary to execute each sludge removal and disposal operation are specified below. These work elements do not necessarily represent all of the required work elements that will be necessary to execute and complete the work. It remains the responsibility of the Contractor to determine all necessary work elements and to develop and implement his means and methods in the execution of sludge removal and disposal operations.

**3.3.1 DEWATERING OF STRUCTURES.** GLWA will take the lagoon(s) and associated influent and effluent channels (collectively referred to as structures) out of service for the Contractor. The Contractor shall be responsible for removing all water from these structures. The water shall be discharged into on-site sewers at the manhole location(s) or adjacent lagoons as designated by LH WTP staff. The Contractor shall assume and plan on removing water in the amount of the entire volume of the lagoon.

**3.3.2 CONTROL OF WATER.** The existing valves and gates that GLWA will operate to isolate and take the lagoon out of service for sludge removal by the Contractor leak. The Contractor is responsible for controlling water that leaks into the structures to be cleaned. This water may also be discharged into an adjacent lagoon or structure which GLWA will identify for the Contractor.

**3.3.3 SLUDGE REMOVAL.** Contractor shall furnish, install, operate, and maintain all necessary equipment required to completely remove the specified quantity of sludge from the lagoon(s). All sludge removal operations shall be conducted in strict observance of governing regulation and in accordance with the Specifications. Once the contract quantity of sludge is removed, the Contractor shall notify GLWA that sludge removal is complete. GLWA will then inspect the structures to determine whether or not the work has been satisfactorily performed and that the Contract conditions have been satisfied.

**3.3.4 SLUDGE PROCESSING.** Contractor shall furnish, install, operate, and maintain all necessary equipment required to ensure that the sludge passes the USEPA Paint Filter Liquids Test and render the sludge suitable for transportation and disposal at a licensed municipal solid waste landfill in accordance with the requirements specified in Part 1 of this Section. GLWA makes no claim, declaration or assertion as to the degree of sludge processing that may or may not be required in order for the Contractor to meet the requirements for transportation and disposal. It remains the Contractor's responsibility to characterize the sludge and develop its means and methods it deems appropriate to remove, process, handle, load, transport, and dispose the sludge under all conditions that may be

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encountered on the project.

3.3.5 SLUDGE HANDLING AND LOADING. Contractor shall load trucks with processed sludge with expedience and care. Sludge loading shall be managed so that the site is kept clean and orderly. Sludge handling and loading operations shall not cause any noxious odors, nuisances, or deleterious conditions. Sludge staging areas and stockpiles shall be protected from inclement weather and not allowed to run-off the designated staging areas as established by the Contractor and permitted by authorities having jurisdiction.

3.3.6 SLUDGE TRANSPORTATION. The Contractor shall furnish suitable means for the transportation of sludge to the disposal facilities in accordance with these Specifications. Sludge transportation shall be undertaken by the Contractor in strict accordance with all the local ordinances and county, state and federal laws, rules and regulations, in an environmentally safe, nuisance free manner. Contractor shall adhere to the local, state, county and federal load limit restrictions that are imposed seasonally. The Contractor is fully responsible for determining these limitations in the planning and execution of the Work. Contractor shall transport sludge only on approved local and state routes adhering to bridge loading limits and road loading limits and other restrictions as applicable.

3.3.7 SLUDGE DISPOSAL. Contractor's disposal of sludge shall fully comply with all local ordinances, state and federal regulations. Before commencing any work, the Contractor shall provide written documentation to GLWA that Contractor has secured access to a specific legal disposal site (or sites) and that disposal at the site(s) is not in violation of any federal, state, or local requirements.

3.4 SAFETY. Contractor shall provide adequate lighting, ventilation and safety equipment as required and shall comply with all applicable confined space entry regulations and applicable state and federal health and safety rules and regulations for the Work involved.

3.5 POWER. Contractor shall provide its own on-site electrical generators as required to power its lighting, sludge conveyance, sludge processing, and other equipment necessary in the Contractor's means and methods to complete the Work in every respect.

3.6 ON-SITE CONTROLS. Contractor shall provide all necessary controls to comply with local ordinances and codes (including but not limited to noise, dust, etc.) so that the Contractor's execution of the Work is not disrupted or otherwise delayed.

3.7 ALLOWABLE TIMEFRAME. Contractor is responsible for providing sufficient planning, engineering, project management, controls, labor, equipment, materials,

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and incidental forces to remove and dispose all sludge (as estimated by the Contractor in its estimate of the estimated bid quantities for each unit price pay item) from the water treatment plant in accordance with the Contract Documents.

End of Section

## DAILY WEIGHT RECORD OF SLUDGE DISPOSAL

Use reverse side for Tare Record

DATE WEIGHTS TAKEN		CONTRACT NO.		CONTRACTOR			SCALE FACILITY NAME		SCALE FACILITY LOCATION		
PROJECT NAME				TRUCKING COMPANY			DATE SCALES LAST INSPECTED		NOMINAL CAPACITY OF SCALES		
PLANT WHERE SLUDGE WAS REMOVED		<b>WEIGHTS AND TICKET NUMBERS</b>									
LOAD NO.	WEIGHING TIME	TRUCK NO.	GROSS (lbs)	TARE (lbs)	TICKET NO.	ADMIXTURES (lbs)	TICKET NO.	DEDUCTS (lbs)	% Solids	NET WT. (lbs)	NET WT. (tons)
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
	a.m. p.m.										
CONTRACTOR (certification of accuracy)					GREAT LAKES WATER AUTHORITY					<b>DAILY TOTAL (lbs)</b>	<b>DAILY TOTAL (tons)</b>
BY: (Signature)			DATE		BY: (Signature)		DATE				







## MONTHLY WEIGHT RECORD OF SLUDGE DISPOSAL

<b>MONTH/YEAR:</b>	
<b>GLWA PLANT:</b>	
<b>PROJECT NAME:</b>	
<b>CONTRACT NO.:</b>	
<b>CONTRACTOR:</b>	

DAY	NET WEIGHT SLUDGE DISPOSED		DISPOSAL FACILITY NAME
	(POUNDS)	(TONS)	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

## MONTHLY WEIGHT RECORD OF SLUDGE DISPOSAL

DAY	NET WEIGHT SLUDGE DISPOSED		DISPOSAL FACILITY NAME
	(POUNDS)	(TONS)	
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
<b>TOTALS</b>			<del> </del>

<b>Contractor's Certification of Accuracy</b>		
I certify that the information presented on this form is a correct and accurate representation of the actual quantity of sludge disposed in accordance with the Contract Documents. I further certify that no person has represented the weights hereon in any manner calculated or tending to mislead or in any way deceive GLWA, its employees, or agents	<b>Signature</b>	<b>Date</b>