

ADDENDUM NO. ONE (1)

Project: Harold D. Thompson Regional Water Reclamation Facility
Phase 1 – 2.5 MGD

Date of Addendum: February 4, 2011

Owner: Lower Fountain Metropolitan Sewage Disposal District

Engineer: GMS, Inc. Phone: (719) 475-2935
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Colorado Springs, CO 80903

THE FOLLOWING REVISIONS AND CLARIFICATIONS ARE HEREBY MADE TO THE BIDDING AND CONTRACT DOCUMENTS FOR THIS PROJECT:

PART I – GENERAL

1.01 SCOPE

- A. This Addendum forms a part of the Contract Documents and modifies the Project Manual and Drawings as described below.
- B. This Addendum consists of nine (9) pages, including attachments.

1.02 ACKNOWLEDGMENT

- A. Acknowledge receipt of this Addendum by return electronic mail correspondence.

PART II - PROJECT MANUAL

2.01 BIDDING REQUIREMENTS – This Addendum No. One (1) makes no changes to the Bidding Requirements

2.02 TECHNICAL SPECIFICATIONS

- A. Section 01730 – Operation and Maintenance Data

- 1. **ADD** new Paragraph 1.6.A.3. to read as follows:

- "3. Upon final acceptance of the manuals, submit four (4) electronic copies on compact disc (CD) or digital video disc (DVD)
 - a. CDs and/or DVDs shall include all data included in the bound O&Ms
 - b. CDs and/or DVDs shall include
 - 1) All startup sign-in sheets
 - 2) All startup data sheets and checklists
 - 3) Manufacturer's installation inspection report
 - 4) Step-by-step power-up procedures
 - 5) Repairs, modifications and recommendations discussed by manufacturer's representative during startup"

B. Construction Standards

1. **ADD** Construction Standard drawing for pipe bedding. The single page graphic exhibit captioned, "Pipe Bedding," which is referenced in Specification Section 02200 previously issued is attached and issued as part of this Addendum.

Insert the Construction Standard labeled "PIPE BEDDING" following the divider sheet labeled "CONSTRUCTION STANDARDS" in the Project Manual.

PART III – DRAWINGS – This Addendum No. One (1) makes no changes to the Drawings

THIS ADDENDUM IS HEREBY MADE A PART OF THE BIDDING AND CONTRACT DOCUMENTS FOR THIS PROJECT AND IS BINDING AS IF PRINTED AND BOUND THEREIN. ALL BIDDERS SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE APPROPRIATE LOCATION ON THE BID FORM.

END OF ADDENDUM NO. ONE (1)

SECTION 01730

OPERATING AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Contractor shall compile product data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract
- B. Contractor shall prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of the Specifications
- C. Contractor shall instruct Owner's personnel in maintenance of products and in the operation of equipment and systems
- D. Additional Requirements Specified Elsewhere
 - 1. Section 01010: Summary of Work
 - 2. Section 01340: Shop Drawings, Product Data, and Samples
 - 3. Section 01700: Contract Closeout

1.2 QUALITY ASSURANCE

- A. Contractor shall assure preparation of data is done by personnel:
 - 1. Trained and experienced in maintenance and operation of the described products
 - 2. Completely familiar with requirements of this section
 - 3. Skilled as technical writers to the extent required to communicate essential data
 - 4. Skilled as draftsmen competent to prepare required drawings
- B. Manuals for equipment and systems shall be prepared by the equipment manufacturer or system supplier

1.3 SUBMITTALS

- A. Data shall be prepared in the form of an instructional manual for use by Owner's personnel
- B. Format
 - 1. Size: 8½"x11"
 - 2. Paper: 20 lb. minimum, white, for type pages
 - 3. Text: Manufacturer's printed data or neatly typewritten
 - 4. Drawings
 - a. Provide reinforced punched binder tab, bind in with text

- b. Reduced to 8½"x11" or 11"x17" and folded to 8½"x11"
- c. Where reduction is impractical, folded and placed in 8½"x11" envelopes bound in text
- d. Suitably identified on drawings and envelopes
- 5. Provide fly-leaf for each separate product, or each piece of operating equipment
 - a. Provide typed description of product, and major component parts of equipment
 - b. Provide indexed tabs
- 6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS" and list
 - a. Title of Project
 - b. Identity of separate structure as applicable
 - c. Identity of general subject matter covered in manual
- 7. To the extent possible, assemble and bind material in the same order as specified

C. Binders

- 1. Preliminary materials: Heavy paper covers
- 2. Final manuals: Commercial quality, substantial, permanent 3-ring or 3-post binders with durable, cleanable, plastic covers

1.4 CONTENT OF MANUALS

A. Contractor shall provide neatly typewritten table of contents for each volume, arranged in a systematic order

- 1. Contractor, name of responsible principal, address and telephone number
- 2. A list of each product required to be included, indexed to the content of the volume
- 3. List with each product, the name, address, and telephone number of
 - a. Subcontractor or installer
 - b. Maintenance contractor, as appropriate
 - c. Identify the area of responsibility of each
 - d. Local source of supply for parts and replacement
- 4. Identify each product by product name and other identifying symbols as set forth in Contract Documents

B. Product Data

- 1. Contractor shall include only those sheets which are pertinent to the specific product
- 2. Contractor shall annotate each sheet to:
 - a. Clearly identify the specific product or part installed
 - b. Clearly identify the data applicable to the installation
 - c. Delete references to inapplicable information

C. Drawings

1. Contractor shall supplement product data with drawings as necessary to clearly illustrate:
 - a. Relations of component parts of equipment and systems
 - b. Control and flow diagram
2. Contractor shall coordinate drawings with information in project record documents to assure correct illustration of completed installation
3. Do not use project record documents as maintenance drawings

D. Contractor shall prepare written text, as required to supplement product data for the particular installation

1. Organize in a consistent format under separate headings for different procedures
2. Provide a logical sequence of instruction for each procedure

E. Contractor shall prepare a copy of each warranty, bond, and service contract issued

1. Provide information sheet for Owner's personnel, give
 - a. Proper procedures in the event of failure
 - b. Instances which might affect the validity of warranties or bonds

1.5 MANUALS FOR EQUIPMENT AND SYSTEMS

A. Contractor shall provide an operation and maintenance manual for each item of equipment or system listed in the schedule of manuals, in the quantity listed in the submittal schedule

B. Contractor shall provide content, for each unit of equipment and system, as appropriate

1. Description of unit and component parts
 - a. Function, normal operating characteristics, and limiting conditions
 - b. Performance curves, engineering data, and tests
 - c. Complete nomenclature and commercial number of all replaceable parts
2. Operating procedures
 - a. Startup, routine and normal operating instructions
 - b. Regulation, control, stopping, shutdown, and emergency instructions
 - c. Summer and winter operating instructions, as applicable
 - d. Special operating instructions
3. Maintenance procedures
 - a. Routine operations
 - b. Guide to "troubleshooting"
 - c. Disassembly, repair, and reassembly
 - d. Alignment, adjusting, and checking
4. Servicing schedule
5. Manufacturer's printed operating and maintenance instructions

6. Description of sequence of operation by control manufacturer
 7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance
 - a. Predicted life of parts subject to wear
 - b. Items recommended to be stocked as spare parts
 8. As-installed control diagrams by control manufacturer
 9. Each contractor's coordination drawings
 10. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage
 - a. List of spare parts currently furnished
 11. Other data as required under pertinent sections of the specifications
- C. Contractor shall provide content for each electric and electronic item or system, as appropriate
1. Description of system and component parts
 - a. Function, normal operating characteristics, and limiting conditions
 - b. Performance curves, engineering data, and tests
 - c. Complete nomenclature and commercial number of replaceable parts
 2. As-installed color coded wiring diagrams
 3. Operating procedures
 - a. Routine and normal operating instructions
 - b. Sequences required
 - c. Special operating instructions
 4. Maintenance procedures
 - a. Routine operations
 - b. Guide to "troubleshooting"
 - c. Adjustment and checking
 - d. Servicing schedule
 5. Manufacturer's printed operating and maintenance instructions
 6. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage
 - a. List of spare parts currently furnished
 7. Other data as required under pertinent sections of specifications
- D. Contractor shall prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel
- E. Additional requirements for operating and maintenance data: The respective sections of specifications

1.6 SUBMITTAL SCHEDULE

A. Manuals for Equipment and Systems

1. Submit preliminary copy a minimum of 10 days prior to the date of shipment of the equipment or system
 - a. Engineer will review
 - b. If acceptable, one electronic copy will be returned to Contractor or notification of acceptance of submitted document shall be issued to

- Contractor, one copy sent to Resident Project Representative, and one copy retained in Engineer's file
- c. If unacceptable, electronic notice will be transmitted to Contractor with Engineer's comments for revision and one copy retained in Engineer's file. Resubmit three revised preliminary copies for Engineer's review
 - d. No partial payments will be made for equipment and systems on hand or installed until preliminary manuals are accepted
2. Submit six final copies no less than 10 days prior to placing the equipment or system in service. If final manuals differ from accepted preliminary manuals, submit two copies of any necessary supplemental material, with instructions for insertion, for conforming Engineer's and resident project representative's copies of preliminary manuals to final manuals
 - a. Engineer will compare with accepted preliminary manual
 - b. If identical, or otherwise acceptable, Contractor will be so notified. Five copies will be held for later transmittal to Owner
 - c. If not acceptable, all six copies will be returned to Contractor for revision or retained by Engineer and the necessary revision data requested from the Contractor, at Engineer's option
 - d. No portion of the Work is substantially complete until final equipment and systems manuals relating to that portion of the Work are accepted by Engineer
 - e. Submit eight copies of any revisions found desirable during instruction of Owner's personnel, with instructions for insertion, for revising Owner's, Engineer's, and resident project representative's copies of manual
 3. Upon final acceptance of the manuals, submit four (4) electronic copies on compact disc (CD) or digital video disc (DVD)
 - a. CDs and/or DVDs shall include all data included in the bound O&Ms
 - b. CDs and/or DVDs shall include
 - 1) All startup sign-in sheets
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 - 5) Repairs, modifications and recommendations discussed by manufacturer's representative during startup

1.7 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection or acceptance, Contractor shall fully instruct Owner's designated operating and maintenance personnel in the operation, adjustment, and maintenance of all products, equipment and systems
- B. Operating and maintenance manual shall constitute the basis of instruction
 1. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance
- C. Scheduling
 1. Contractor shall not commence instruction of Owner's personnel until manufacturer's field services specified in Section 01400 are complete and equipment is operating within specification tolerances

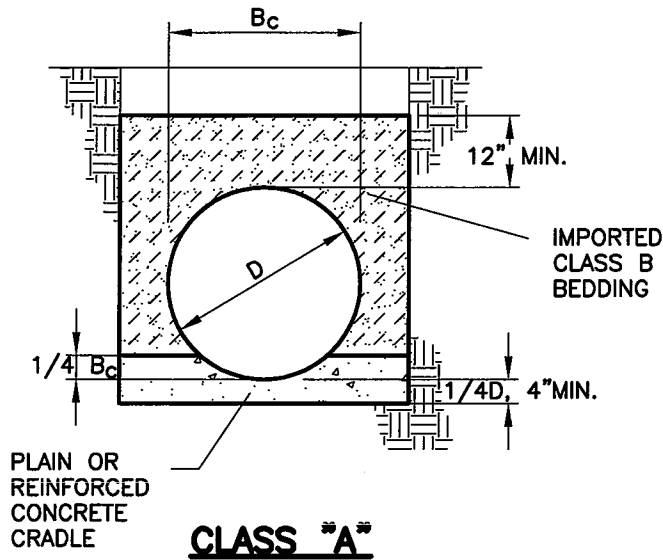
2. Separate visit for instruction of Owner's personnel
 - a. Contractor shall schedule one week in advance at a time acceptable to Owner
 - b. Confirm 48 hours in advance

- D. Additional requirements for specialized instruction of Owner's personnel are given in the detailed equipment specifications

1.8 SCHEDULE OF OPERATION AND MAINTENANCE MANUALS

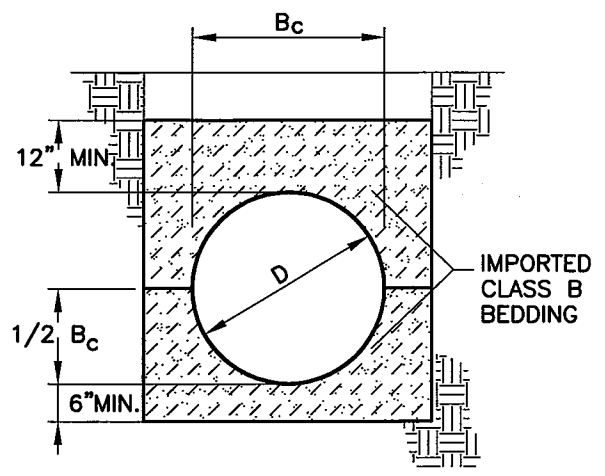
- A. Submit Operation and Maintenance Manuals on the following products, equipment and systems
 1. Refer to individual Specification sections, Divisions 2 through 16.

END OF SECTION



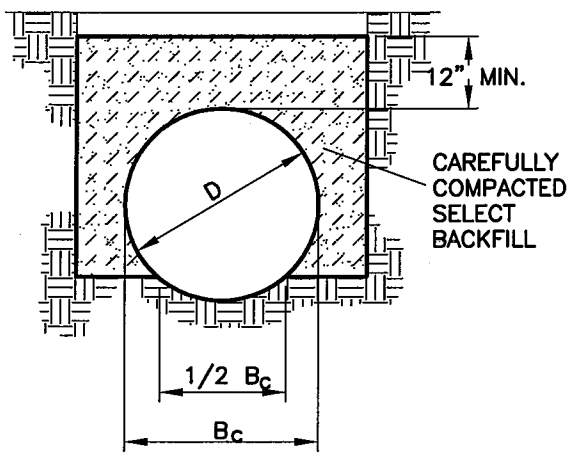
CLASS "A"
(CONCRETE CRADLE)

L.F.=2.8



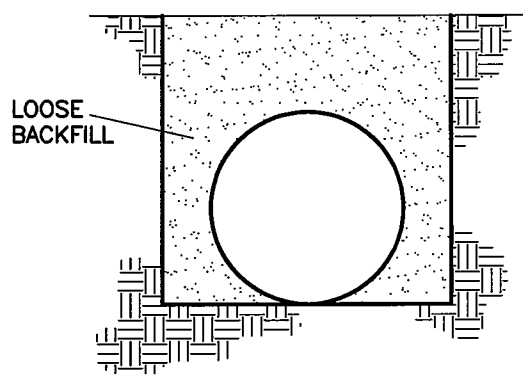
CLASS "B"
(GRANULAR BASE)

L.F.=1.9



CLASS "C"
(SHAPED BOTTOM)

L.F.=1.5



CLASS "D"
(FLAT BOTTOM)

L.F.=1.1

NOTES:

1. FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
2. L.F. = LOADFACTOR
3. CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
4. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL, WHICHEVER IS GREATER.

MISCS004.DWG

PIPE BEDDING

GMS, INC.
CONSULTING ENGINEERS
611 N. WEBER, SUITE 300 COLORADO
SPRINGS, COLORADO 80903

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