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| Version | Date | Description of Revisions |
| 1 | April 29, 2014 | First Draft of newly created 01425 for internal review (AV) |
| 2 | May 28, 2014 | Incorporation of BW’s comments, change in responsibility for CMMS input role (to Consultant as per SMacD). (AV) |
| 3 | December 9, 2014 | Incorporation of all comments and finalization. (AV) |
| **4** | **October 6, 2015** | **Updated, Finalized Specification – Reference eDOCS #6325259 v5 (AV)** |
| 5 | December 17, 2015 | Minor clarifications based on comments by Legal Department. (AAM) |
| 6 | April 4, 2017 | Updated references to Design Guidelines Section 35 - Development and Maintenance of Asset Inventory and Tagging and Design Guidelines Section 30 – Operation Manual Guideline (AAM) |

NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# General

## Infrastructure Asset Management

### The Region maintains a comprehensive asset inventory and tagging management system that is essential in documenting, maintaining and effectively managing a complex and widespread water and wastewater infrastructure. The Region views all projects impacting on such infrastructure must, whether by addition, deletion or modification, properly and fully conform to the Region’s asset inventory and tagging standards that include providing and entering required asset data into the Computerized Maintenance Management System (“CMMS”).

### “Section 35 – Development and Maintenance of Asset Inventory and Tagging” (“Section 35”) is the key document that describes asset inventories, asset tagging protocols and asset inventory updating protocols; it is available on the Region’s standards web portal. The Contractor must be familiar with the contents and requirements of Section 35 and shall complete all such requirements prior to the commissioning of the entire facility.

### The Contractor shall also comply with Section 11010 – Equipment General Requirements which provides additional details with respect to CMMS data requirements for equipment including supporting documentation, studies, maintenance procedures, job plans, safety procedures etc.

### The Region utilizes Maximo™ as the CMMS and shall provide the devices and training to all external agents for effective transfer of critical information into the CMMS.

### While Section 35 acknowledges the collaborative responsibility of the Region and external agents in ensuring conformance to the standards and requirements contained therein, it will be the responsibility of the Contractor to acquire data and provide such data to the Consultant who is responsible for uploading all required data into Maximo™. The Contractor must provide the defined equipment information in a timely manner prior to commissioning of components of the facility and of the entire facility prior to Total Performance of the Work. The Consultant and Region remain available to provide support and interpretation of the Contractor requirements as defined in Section 35 and Section 11010 or as further defined by other Specification Sections.

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.]*

### *[This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### .1 Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for [item]... specified under this Section.

### *[List Sections specifying products installed but not supplied under this Section and indicate specific items.]*

#### Section 01810 – Equipment Testing and Facility Commissioning

#### Section 11010 – Equipment General Requirements

#### Design Guidelines Section 30 – Operation Manual Guideline

#### Design Guidelines Section 35 – Development and Maintenance of Asset Inventory and Tagging

## Submittals

### Pre-start Health & Safety Checks & Procedures

### Equipment Informational Submittals (as applicable)

### Arc Flash Studies

### Tagging List Conforming to Design Guidelines Section 35 – Development and Maintenance of Asset Inventory and Tagging

### Equipment information requirements as defined

### Operations & Maintenance (O&M) Manuals conforming to Design Guidelines Section 30 – Operation Manual Guideline

### Maintenance Manuals & Maintenance Data Manuals

### Computerized Maintenance Management System (CMMS) Data Requirements (Maximo)

### Job Plans

### Maintenance Plans

### Preventative Maintenance tasks and frequencies

### Predictive Maintenance requirements and other maintenance of assets

### Certificates of installation for equipment (hard and soft copy)

### Spare parts lists, special tools lists

## Measurement and Payment

*[Choose one of the following payment language provisions that best suits the individual project.*

*If this Section is not specifically referenced by an item in the Bid Form, please use the following language:*

.1 The work of this Section will not be measured separately for payment. All costs associated with the work of this Section shall be included in the Contract Price.

*OR If this Section is specifically referenced in the Bid Form, use the following language and identify the relevant item in the Bid Form:*

.1 All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

*If the work of this Section is to be measured and paid for by several different methods, please amend the standard wording given above to reflect the different methods of measurement and payment.*]

# PRODUCTS (not used)

# EXECUTION

## Time of Completion

### The Contractor must provide all required data to the Consultant [XX] Working Days in advance of commissioning. The uploading of required asset data complete with maintenance tasks (Job Plans, Preventative Maintenance tasks and frequencies) into the CMMS (Maximo) must be performed prior to the commencement of the commissioning activities and as specified in the Work schedule.

### The uploading of required maintenance tasks (including frequencies) and data into the CMMS (Maximo) must be done prior to Commissioning and as defined in the Work schedule. The Contractor must provide listings of all required maintenance tasks to the Consultant [XX] Working Days in advance of commissioning. The Contractor must provide listings of all required safety procedures to the Consultant [XX] Working Days in advance of the commencement of commissioning activities.

### Uploading of required safety procedures into the CMMS (Maximo) must be performed prior to Commissioning and as defined in the Work schedule. The Contractor must provide listings of all required safety procedures to the Consultant a minimum of [XX] Working Days in advance of the commencement of commissioning activities.

## Manufacturers Services and Certification of Installation

### All certificates of installation for equipment requiring such certification shall be provided to the Consultant both in hardcopy and in electronic format.

### Provide all materials and documents necessary to upload the required information into the CMMS (Maximo).

### The Contractor shall provide to the Consultant details of all maintenance and repair work performed on equipment under warranty prior to commissioning and Total Performance of the Work for upload to the Region’s CMMS (Maximo).

## Acquaintance with Work

### The Contractor shall be fully acquainted with all requirements in the Contract Documents related to the acquisition of and uploading of essential equipment data into the Region’s CMMS (Maximo). At no time shall the Contractor make any claim that any misunderstanding existed in regard to the nature or amount of work to be performed in relation to acquiring and providing the type of data specified in this Section.

### Obtain all necessary details from equipment suppliers including asset and other information pertinent to complying with data requirements cited in Section 35 – Development and Maintenance of Asset Inventory and Tagging.

## Special Tools and Accessories

### Provide a list of special tools required with details for use or cross-reference to O&M manuals. Provide the list in a format that is up-loadable to the Region’s CMMS (Maximo).

## Testing and Commissioning

### Provide defined commissioning activities in accordance with Section 01810 – Equipment Testing and Facility Commissioning.

### **END OF SECTION**