

**Computerized Maintenance Management System (CMMS)**

**Project**

**Attachment A2:**

**Functional Requirements – Interfaces**

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# Overview

This document describes the interfaces needed between the CMMS System and other District systems.

## Note on “Get” API’s

The interfaces for retrieving data will be used by the CMMS to retrieve information from newly created items in other systems which will require work needing to be tracked/completed in CMMS. E.g. GetConcreteWorkRequired below is an API for retrieving information about concrete work that’s been marked as being needed in the District Billing system.

All of these API’s will have as an input, “Datetime Last Retrieved”. The CMMS will send the date/time of the last item it received from different systems so that when it calls the API, only items which haven’t been seen by the CMMS will be sent to the CMMS.

# Interface with the District Timesheet System

## Add Time Entry

### Description

Add Time Entry is used to add a time entry into the District Timesheet System so that District employees don’t need to enter information in both the CMMS System and the District Timesheet System.

### Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Employee ID | The employee ID the District uses to uniquely identify an employee |
| Date Work | The date on which the employee preformed a task |
| Hours | The hours the employee performed on a task. Hours can be entered in tenth of hours. |
| Is Planned Overtime | Flag indicating if this is planned overtime |
| Is Job Completion Overtime | Flag indicating if this is Job Completion Overtime |
| Overtime Time to Comp Time | Flag indicating the employee would rather have overtime applied to compressed time than to pay. |
| Job Site Reporting | Flag to indicate if this is job site reporting |
| Overtime Meals | Flag indicating whether the employee was eligible for overtime meals |
| Standby | This would be used to send to ETS the number of hours an employee was on standby |
| Standby start datetime | When standby for this entry began. |
| Standby end datetime | When standby for this entry ended. |
| Program ID | The program id which is associated with the work order on which the employee worked. |
| Project ID | The project id which is associated with the work order on which the employee worked. |
| Work Order Task Id | The work order task id of the work order in the CMMS system with which this time is associated. |
| Activity ID | A code used to indicate a specific task on a project/program. |

# Interface with the District Procurement System

## CreatePurchaseOrder

### Description

Used to create a purchase order in the District Procurement System from the CMMS.

### Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Purchase Order Type | “Line Item” or “Blanket” |
| Purchase Type | “General Services”, “Materials and Supplies”, “Professional Service”, “Construction” |
| Purchase Maximum | The most that will be spent on the purchase order |
| Deliver to location | Where to deliver what’s being procured |
| Expected Delivery Date | The Expected Delivery Date |
| Item Number/Merchant Category (NIGP or NAICS or EMBUD Specific Code) | Item Number/Merchant Category (NIGP or NAICS or EMBUD Specific Code) |
| Item Description | Item Description |
| Quantity/Unit | Quantity/Unit |
| Financial Coding | A string which contains, the organization, project id or program id, account code |
| Delivery Required By Date | Delivery Required By Date |
| Tax Code | Tax Code |
| Taxable (Y/N) | Taxable (Y/N) |
| Price (quote) | Price (quote) |
| Purchase Order Discount | Purchase Order Discount (optional) |
| Freight Amount | Freight Amount (optional) |
| F.O.B | F.O.B (freight on board) (optional) |
| DIR Id | California’s Department of Industrial Relations (DIR) requires contractors/vendors providing public works services to be registered with them before bidding on our work. This is the number assigned to contractors/vendors by the state. |
| PO Expiration/Due Date | PO Expiration/Due Date |
| PO Comments | PO Comments |
| Work Order Task Id | The work order task id of the work order in the CMMS system with which this time is associated. |

# Interface with the District New Business Application (NBO)

## GetServicesReadyToBeInstalled

### Description

Retrieves a list of all services that have been marked as ready to install on or after a specific date/time.

### Input Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Datetime Last Retrieved | See note under “Overview” |

### Output Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Date | The date the lateral was marked as ready to install |
| Billing Premise ID | A unique identifier in the District Billing System representing the premises of where to install the new service |
| Tap Number | The number of the tap to be installed |
| Install Address | The address where to install the service |
| Install Location | The geo coordinates for where to install the service |
| Job Number | The New Business job number for this install |
| Tap Number | The number of the tap to install |
| Lateral Size | The lateral size to install |
| Meter Size | The meter size to install |
| Plans | A List of PDF’s of the Installation Plans |

# Interface with the District’s Infrastructure Project Tracker (IPT)

## GetSitesReadyForRCOInspection

### Description

Retrieves a list of all sites that have been marked as ready for inspection by the District’s Regulatory Compliance Office (RCO) on or after a specific date.

### Input Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Datetime Last Retrieved | See note under “Overview” |

### Output Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Date | The date the lateral was marked as ready to install. |
| IPT Task ID | A unique id in the IPT system related to this task. |
| Site Address | The address of the site to be inspected. |
| Install Location | The geo coordinates for the site. |
| Plans | A PDF of the plans. |

## TaskCompleted

### Description

Notifies the IPT system that a task has been completed in the CMMS System.

### Output Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| IPT Task ID | A unique id in the IPT system related to this task.  (This is the value that would have been retrieved by calling the GetSitesReadyForRCOInspection IPT System API described above) |
| Date Completed | The date/time the task was completed. |

# Interface with the District Billing System (CW)

## NewServiceInstalled

### Description

Notifies CW that a new service has been installed.

### Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Billing Premise ID | A unique identifier in the District Billing System representing the premises of where to install the new service.  (This is the value that would have been retrieved by calling the GetServicesReadyToBeInstalled NBO System API described above) |
| Tap Size | The diameter of the tap that was installed |
| Meter Size | The diameter size of the meter installed |
| Meter Install Date | The date/time the meter was installed |
| Meter Number | The meter number of the meter installed |
| Meter Reading | The meter reading of the meter installed.  (The vast majority of time, the reading will be 0) |
| Crew ID | An identifier for the Crew which installed the meter. |

## MeterTransferred

### Description

Notifies CW that a meter has been replaced on a service lateral.

### Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Replaced Meter Number | The number of the meter which was replaced |
| Replaced Meter Reading | The reading of the replaced meter when it was replaced |
| Date Replaced | The date the meter was replaced |
| New Meter Number | The meter number of the new meter |
| New Meter Reading | The meter reading of the meter installed  (The vast majority of time, the reading will be 0) |
| Crew ID | An identifier for the Crew which replaced the meter. |

## GetConcreteWorkRequired

### Description

Retrieves a list of all services which have been marked as needing concrete work on or after a specific date.

### Input Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Datetime Last Retrieved | See note under “Overview” |

### Output Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Date | The date the lateral was marked as ready to install |
| Service Order ID | A unique identifier in the District Billing System representing concrete work which needs to be done for a specific service |
| Meter Reading Comment Codes | The code a meter reader entered in the billing system when they noticed concrete work was need. E.g. AB for “Adjust Box” |
| Meter Reading Comment | The textual comment entered by a meter reader. This element might be null |
| Tap Number | The tap number of the service which needs concrete work |
| Address | The address where the work needs to be completed |

## CreateMeterRepairOrder

### Description

Notifies CW that a meter is in need of repair.

**Note:** in order for this functionality to work best, the CMMS system will need to have as part of service lateral information, the CW premises identifier.

### Data Elements

|  |  |
| --- | --- |
| **Data Element** | **Description** |
| Date Identified | The date/time the need for a Meter Repair Order was identified.  (This will basically be when an investigator specifies this in the CMMS) |
| Billing Premise ID | A unique identifier in the District Billing System representing the premises of where to install the new service. |
| Employee ID | The District Employee ID of the who identified the issue  (This will be the user entering this information in the CMMS) |
| Activity Code | A selection from an enumerated code describing what needs to be done. Entries include:  “Change Meter”  “Colored Water”  “Damaged Meter”  “Leak – Seepage”  (This codes are evaluated/updated every two years so the District would need this list to be configurable in the CMMS) |
| Instructions | Notes for those who’ll work on the meter repair order |
| Location Comments | Notes to help those who’ll work on the meter repair order locate the meter. |