

# ConstructConnect CRM Integration XML Format Version 1.4 Administrator's Reference

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## Table of Contents

### Contents

Copyright notice and statement .....	2
Publication information .....	2
Introduction .....	7
About This Document.....	7
Who Should Use This Document .....	7
Accessing the File .....	7
Understanding the export file .....	9
Introduction.....	9
NASD Values .....	9
Understanding URL Components .....	9
Company and Project Details .....	9
Project Documents .....	9
CRM Version 1.4 Export Schema .....	10
Example Files.....	10
Using Search Filters .....	10
When Files are Exported.....	10
Renamed Data Values .....	11
Common Terms Used in This Document .....	11
Xpath and Nesting-level Notation Definitions .....	11
CRM Integration XML Format Version 1.4 Field Descriptions .....	13

---

Introduction .....	13
Projects .....	13
/Projects/Project .....	13
/Valuation .....	14
/Parameter .....	15
/DocumentAvailability .....	17
/ParentCategories/ParentCategory/SubCategories/ .....	18
Category parent/child values.....	18
/StageComments .....	20
Stage parent/child values .....	20
/Address .....	21
/Contracts/Contract .....	22
Companies/Company .....	24
Notes: .....	24
Classification parent/child values .....	25
/Companies/Company/Contacts/Contact.....	30
/Companies/Company/Addresses/Address .....	30
/Companies/Company/Phones/Phone .....	31
/Companies/Company/Email .....	31
/Companies/Company/Website .....	32
/Companies/Company/ParticipantRoles/ParticipantRole .....	32
/Companies/Company/PlanHolders/PlanHolder .....	32
/Companies/Company/BidderRoles/BidderRole .....	32

---

/Companies/Company/ClassificationTypes/ClassificationType.....	33
/Companies/CompanySummarizations/CompanySummary .....	33
/Companies/Company/ParentCompany .....	34
/Companies/Company/ParentCompany/Phones/Phone.....	34
/Companies/Company/ParentCompany/ParentCompanyAddress .....	34
/Users/User/Queries/Query .....	35
/Users/User/User.....	35
/UpdateSummarizations/UpdateSummary .....	35
/PlanSpec/PlanRoom .....	36
/PlanSpec/DocCenterUrl .....	36
/Details/Detail .....	37
/Materials/Material .....	37
/RSMaterialDivisions/Division/Materials/Material .....	37
/RSMaterialDivisions/Division/Materials/ .....	37
/Notes/Note .....	38
/List Date .....	38
/ProjectID .....	38
/Title .....	39
/Stage.....	39
/URL.....	39
/UpdateDate.....	40
/ProjectParentID .....	40

---

/IsProspective.....	40
/UpdateText.....	41
Buyer Activity Report .....	42
Introduction .....	42
BarData.....	42
/User .....	42
/Trade.....	42
/BuyerContact .....	43
Appendix A – Material Demand CSI codes .....	45
Introduction .....	45
Appendix B –CRM Integration XML format version 1.4 example files.....	66
Introduction .....	66
Appendix C – CRM Integration XML format version 1.4 export schema .....	59
Introduction .....	59
CRM Integration XML format version 1.4 export schema.....	59

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## Overview

### Introduction

The **Insight** CRM integration feature provides you with customized project lead data that you can import into your third-party CRM system.

Once you set up your customized **Insight** search, the results are exported in Extensible Markup Language (XML) format to download each day from the secure ConstructConnect - hosted site, accessible using File Transfer Format (FTP). Your search results are updated daily with new projects and continuous updates to projects you are tracking for development.

### About This Document

This document contains a description of the CRM export XML format file, including the data structure, field descriptions and values, and database sizing recommendations.

### Who Should Use This Document

This document is intended for system administrators and other technical personnel for use as a reference for customizing the CRM Integration XML file. Contact ConstructConnect if you have any questions about the content or use of this document.

### Accessing the File

Your customized CRM Integration XML data export file is available for download using FTP each day by 8:00AM Eastern Standard Time. The file is compressed into a .zip format and uses the following naming convention:

*DL\_<companyname>\_XML\_YYYYMMDD*

**Example:** The file for April 5, 2015 is named ***DL\_BestCompany\_20150405***

The file is available on the secure ConstructConnect -hosted FTP location at <ftp.cmdintegration.com>. To access the file for download, you must have the following information.

- Your user name, password and file name

- A connection to the Internet
- FTP software on your computer

Your FTP site logon name, password, and file name are all supplied by your ConstructConnect Account Manager. You can access your file for two weeks after the posting date on the secure ConstructConnect -hosted FTP location, after which time the file is no longer accessible.



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# Understanding the export file

## Introduction

The CRM export file contains all the information for each project and company included in your export. This section provides information about the contents of the file, URL structure, links to the schema and schema examples, and a brief description of setting up a search for CRM export.

## NASD Values

ConstructConnect is now mapping both U.S. and Canadian construction data to a single common standard, the North American Standard Data (NASD) format. To see a side-by-side comparison of how the data types are now mapped using NASD, [click to download the NASD data matrix in Excel format](#).

## Understanding URL Components

This section contains a description of how URLs are formatted for the CRM export, depending on the data represented.

## Company and Project Details

The following two URL represent company and project details, respectively:

- <http://insight.cmdgroup.com/.../CompanyDetails/399270/2>
- <http://insight.cmdgroup.com/.../ProjectDetails/9209403/2>

In the above examples,

- The numbers in **red** represent the Insight ID for the project or company.
- The numbers in **green** represent country, **1** for U.S. and **2** for Canada.

## Project Documents

The following is a matching document URL where the number at the end of the line is the query ID value, shown in **magenta**:

<http://insight.cmdgroup.com/.../DocumentCenter/9179685/2/61179>

- This URL returns any matching documents for your keyword searches.
- This feature is only available in the CRM Integration 1.4 schema.

## CRM Version 1.4 Export Schema

You can view the CRM 1.4 export schema in the following location:

[Appendix C – CRM Integration XML format version 1.4 export schema](#)

## Example Files

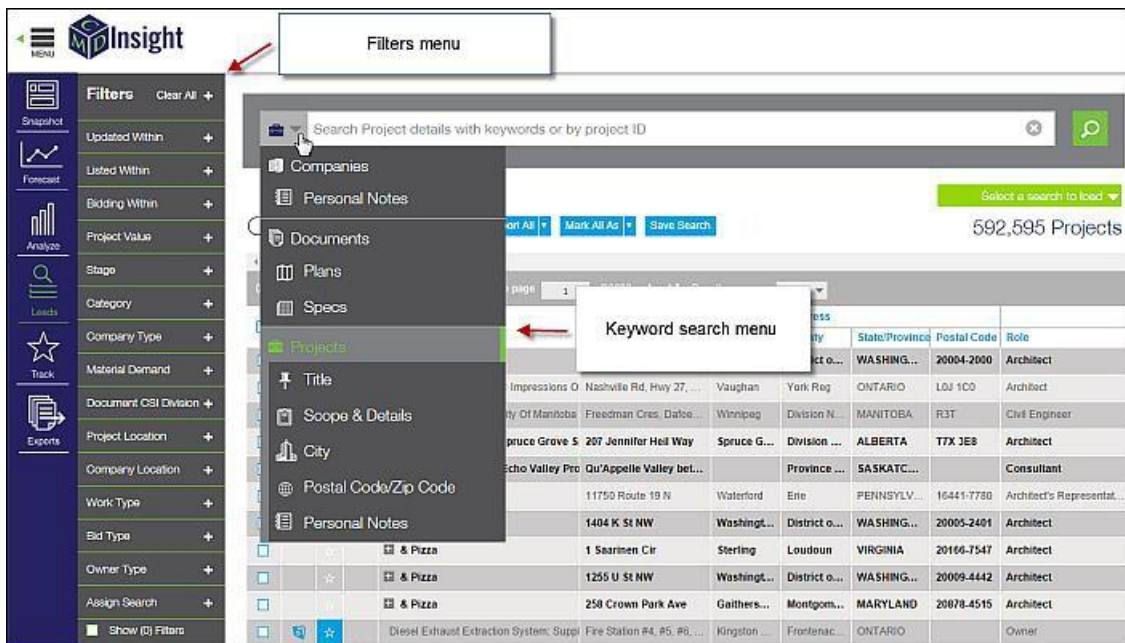
You can view examples of the export file in the following location:

[Appendix B –CRM Integration XML format version 1.4 example files](#)

## Using Search Filters

You can use any of the filters located along the left side of the **Leads** window to set up the criteria for your CRM Integration searches. Additionally, keywords entered in the search bar tile along the top of the window are also valid for CRM Integration searches.

Search filters and options are found in the following locations:



## When Files are Exported

Initially, projects selected for CRM export are included in the next scheduled feed, typically overnight from the day the project is selected. Beyond this initial export, projects are only included in your export when there is a significant update to the project. For information on the frequency of CRM exports, contact your system administrator.

## Renamed Data Values

When mapping your data, you should be aware that some of the data fields for the 1.4 release have been renamed from earlier versions, as shown in the following table.

Former name	New name
Project/Parameters/Parameter/RecordDate	Project/ListDate
Project/Parameters/Parameter/BidDate	/Projects/Project/Contracts/Contract/BidDate
Project/Parameters/Parameter/BidTime	Projects/Project/Contracts/Contract/BidTime
Project/IsUnverified	Project/IsProspective

## Common Terms Used in This Document

The following table contains common terms and definitions used in this document.

Term	Definition
Extensible Markup Language (XML)	XML is a data format for structured document interchange on the Web, allowing users to design a markup language which defines how to describe information in a certain class of documents. XML authors can define customized markup language for several classes of documents and share information between applications. The XML tagging structure allows for simplified manipulation of delivered data and allows the data structure to change without significantly impacting the target application.
File Transfer Protocol (FTP)	File Transfer Protocol (FTP) is a service that supports file transfer between local and remote computers, including the Internet. FTP supports several commands that allow bidirectional transfer of binary and ASCII files between computers. The FTP client is installed with the TCP/IP connectivity utilities.

## Xpath and Nesting-level Notation Definitions

The following table contains a description and definition of the X-path and nesting-level notation used in the file.

Xpath and Nesting-level Notation	
Description	Definition
Attribute	The attribute name. Attributes are used to provide additional information for a XML element.
Type (size)	The data type defines the data type of the field. The length of the field is defined by the data type. Example data types defined in the schema and sample data file include: <ul style="list-style-type: none"> <li>• xs:long</li> <li>• xs:string</li> </ul> DB - Defines the length of the xs:string. This may be used for sizing a DB for

<b>Xpath and Nesting-level Notation</b>	
	<p>XML files.</p> <ul style="list-style-type: none"> <li>• xs:date</li> <li>• xs:boolean</li> </ul> <p>These data types are defined under the following URL: <a href="http://schemas.microsoft.com/BizTalk/2003">http://schemas.microsoft.com/BizTalk/2003</a>.</p> <p>Other data types include:</p> <ul style="list-style-type: none"> <li>• dls.Role</li> <li>• dls.SubCategory</li> <li>• dls.Summary</li> <li>• dls.AddressType</li> <li>• dls.PhoneType</li> </ul> <p>These data types are defined in the export schema. See Appendix A for more information.</p>
Description	The description of the attribute.
Valid Example/Values	The valid example contains the values for the attribute. Specific values are also included.
Child element	Cross-reference to the child element.

# CRM Integration XML Format Version 1.4 Field Descriptions

## Introduction

This section contains a description of the fields used in the ConstructConnect CRM Integration XML Format version 1.4 export file.

## Projects

<b>/Projects/</b>			
<b>Definition: Defines the export information.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Version	xs:decimal	Version number of the export file.	Version 1.2.1
Copyright	xs:string	Copyright	
ExportDate	xs:date	CRM export date and time	XML format = YYYY-MM-DD XML example = 2014-09-16
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

## **/Projects/Project**

<b>/Projects/Project</b>			
<b>Definition: Defines the project information.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
<b>Child Elements</b>		<b>Description</b>	
Valuation		See <a href="#">/Valuation</a> for more information.	
Parameters		See <a href="#">/Parameter</a> for more information.	
DocumentAvailability		See <a href="#">/DocumentAvailability</a> for more information.	
ParentCategories		See <a href="#">/ParentCategories/ParentCategory/SubCategories</a> for more information.	
StageComments		See <a href="#">/StageComments</a> for more information.	
Addresses		See <a href="#">/Address</a> for more information.	
Contracts		See <a href="#">/Contracts/Contract</a> for more information.	
Companies		See <a href="#">Companies/Company</a> for more information.	
Queries		See <a href="#">/Users/User/Queries/Query</a> for more information.	
Users		See <a href="#">/Users/User/User</a> for more information.	
UpdateSummary		See <a href="#">/UpdateSummarizations/UpdateSummary</a> for more information.	
PlanRoom		See <a href="#">/PlanSpec/PlanRoom</a> for more information.	

<b>/Projects/Project</b>			
<b>Definition: Defines the project information.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
DocCenterUrl		See <a href="#">/PlanSpec/DocCenterUrl</a> for more information.	
Detail		See <a href="#">/Details/Detail</a> for more information.	
Materials		See <a href="#">/Materials/Material</a> for more information.	
Material		See <a href="#">/RSMaterialDivisions/Division/Materials/Material</a> for more information.	
Materials		See <a href="#">/RSMaterialDivisions/Division/Materials/</a> for more information.	
Notes		See <a href="#">/Notes/Note</a> for more information.	
ListDate		See <a href="#">/List Date</a> for more information.	
ProjectID		See <a href="#">/ProjectID</a> for more information.	
Title		See <a href="#">/Title</a> for more information.	
Stage		See <a href="#">/Stage</a> for more information.	
URL		See <a href="#">/URL</a> for more information.	
UpdateDate		See <a href="#">/UpdateDate</a> for more information.	
ProjectParentID		See <a href="#">/ProjectParentID</a> for more information.	
IsProspective		See <a href="#">/IsProspective</a> for more information.	
UpdateText		See <a href="#">/UpdateText</a> for more information.	

## Valuation

<b>/Projects/Project/Valuation</b>				
<b>Definition: Defines the valuation for the project.</b>				
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>	
ValueType	dls.ValueType	The value of the project.		
			<b>Value</b>	<b>Definition</b>
			Confirmed	The project value is confirmed with a source by the RCD Research Team.
			Estimate	The project value is estimated by the RCD Research Team.
			Unconfirmed	The project value is a best guess by the RCD Research Team.

<b>/Projects/Project/Valuation</b>			
<b>Definition: Defines the valuation for the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Currency	XML = dls.Currency DB = VARCHAR(15)	Currency type	Values: • U.S = US Canada = CAD
ValueType	xs:string  dls.ValueType	Value of the project	8800000
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

## /Parameter

<b>/Projects/Project/Parameters/Parameter</b>			
<b>Definition: Defines the parameters for the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Ownership	XML = dls.Ownership DB = VARCHAR(180)	Funding type/ownership of the project	Private Provincial Federal Defense
WorkType	XML = dls.WorkType DB = VARCHAR(180)	Development type of the project	New Addition Alterations Engineering
CommenceDate	xs:date	Confirmed or estimated construction start date for the project	XML format = YYYY-MM-DD XML example = 2007-09-16
CompletionDate	xs:date	Estimated end date for the project	XML format = YYYY-MM-DD XML example = 2007-09-16
FloorsAboveGround	xs:integer	Number of floors above ground	<b>Rule:</b> Represents number of floors above ground that may be new or alterations. If an alteration, only the numbers of floors affected by the alteration are listed. For multiple buildings, the tallest structure's numbers of floors are represented. When a project has a development/worktype of addition/alterations, only the addition floors are shown. Any alteration floors, if known, are listed in the

			project text.
FloorsBelowGround	xs:integer	Number of floors below ground	<b>Rule:</b> Represents number of floors below ground that may be new or alterations. If alterations, only the number of floors affected by the alteration are listed, not the total number of floors below ground. If project has a development/worktype of addition/alterations, only the addition floors below ground are listed. The alteration floors below ground, if known, are listed in the project text.
FloorArea	xs:unsignedLong		
SiteArea	xs:unsignedLong	Site area (in acres) involved in the project	Captured in whole numbers only.
ParkingSpaces	xs:long	Number of parking places involved in the project	<b>Rule:</b> If project has a development/worktype of addition/alterations, only the addition parking spaces are listed. The alteration parking spaces, if known, are listed in the project text.
Structures	xs:long	Number of structures involved in the project	<b>Rule:</b> If project has a development/worktype of addition/alterations, only the addition structures are listed. The alteration structures, if known, are listed in the project text.
Units	xs:long	Number of units involved in the project	<b>Rule:</b> If project has a development/worktype of addition/alterations, only the addition units are listed. The alteration units, if known, are listed in the project text. <b>Note:</b> Projects that have units are prisons, hospitals, and condominiums.
MandatoryPreBidConferenceDate	xs:date	The date of the mandatory prebid conference.	



ContractType	XML- dls.ContractType DB = VARCHAR(180)	Contract type of the project	One of the following: <ul style="list-style-type: none"> <li>• General contractor</li> <li>• Construction management</li> <li>• Project management</li> <li>• Design / Build</li> <li>• Trade contract</li> </ul>
FloorAreaUnitofMeasure	xs:long MaxLengthValue=255	Denotes square feet as the unit of measurement for the project floor area.	Square Feet
SiteAreaUnitofMeasure	xs:long	Denotes acres as the unit of measurement for project site area.	
GreenBuildingCertification	xs:long	Denotes the Green Building Certification status of the project.	Values: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Yes</li> <li>• No</li> </ul>
LEEDCertificationIntent	xs:long	Denotes the LEED certification status of the project.	Values: <ul style="list-style-type: none"> <li>• Certified</li> <li>• Silver</li> <li>• Gold</li> <li>• Platinum</li> <li>• Unknown</li> </ul>
IsSingleTrade	xs:boolean	Indicates if a single trade project. The values are free form text.	Values: TRUE= is single trade FALSE= not single trade
SingleTradeClassification	xs:string	Indicates the type of single trade project.	

## /DocumentAvailability

<b>/Projects/Project/DocumentAvailability</b>			
<b>Definition: Defines the availability of documents.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Plans	XML=xs:boolean	Indicates the availability of project documents: available = true not available = false	Addenda="true" Specs="false"
Specs			
Addenda			
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

## /ParentCategories/ParentCategory/SubCategories/

<b>/Projects/Project/SubCategories/SubCategory</b>			
<b>Definition:</b> Defines the parent and child categories of the project.			
<b>Note:</b> See the section for <a href="#">NASD values</a> for information about category / subcategory mapping.			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
ParentCategory	Xs:string	Parent category for the project.	See the <a href="#">Category parent/child</a> values in the following section for a full list of category values
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
SubCategory	XML = dls.SubCategory DB = VARCHAR(180)	Subcategory for the project. Limits: <ul style="list-style-type: none"> <li>• U.S. – 3</li> <li>• Canada – unlimited</li> </ul>	See the <a href="#">Category parent/child</a> values in the following section for a full list of category values

### Category parent/child values

The following table contains the *Category* parent and child values.

<b>Category</b>	
<b>Parent</b>	<b>Child</b>
<b>COMMERCIAL</b>	Broadcast Studios
	Laboratories
	Offices
	Parking Garages
	Rental Warehouses
	Transportation Terminals
<b>COMMUNITY</b>	Auditoriums
	Clubs, Community Centers
	Golf Course / Country Clubs
	Libraries
	Museums
	Religious Auditoriums
	Sports Arenas / Convention Centers
<b>EDUCATIONAL</b>	Athletic Bldgs
	Cafeterias
	Dormitories
	Elementary, Pre School
	Special, Vocational Schools
	College, University
	High Schools
<b>GOVERNMENT</b>	Courthouses
	Fire and Police Stations
	Government – Misc. Buildings
	Governmental Offices

	Park Facilities
	Post Offices
<b>INDUSTRIAL</b>	Manufacturing
	Miscellaneous Industrial
	Processing Plants
	Warehouses
<b>MEDICAL</b>	Hospitals, Clinics
	Medical Offices
	Nursing Homes
<b>MILITARY</b>	Military – Misc.
	Military Housing
	Military Offices
<b>RESIDENTIAL</b>	Apartments
	Condominiums
	Single Family
	Townhomes
<b>RETAIL</b>	Automotive
	Bank
	Entertainment
	Food Stores
	Hotels
	Restaurants
	Retail Stores
	Shopping Centers
<b>CIVIL</b>	Airport
	Athletic Fields and Courts
	Bridges and Culverts
	Dams and Canals
	Demolition
	Electrical Work
	Flood Control
	Marine Work
	Miscellaneous
	Parks and Landscaping
	Power Plants and Lines
	Railroad and Subway
	Roads
	Sewers and Water Mains

	Swimming Pools
	Tanks
	Tunnels
	Water and Sewage Treatment Plants

## /StageComments

<b>/Projects/Project/StageComments</b>			
<b>Definition: Defines the stage comment for the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
StageComment	XML = dls.StageComment DB = VARCHAR(255)	<b>Stage Comment:</b> Activities of the bid stage projects.	<b>Example for Stage Comment:</b>  Add bidders Closing date extended from 2014-09-16

## Stage parent/child values

The following table contains a list and description of the *Stage* parent/child values.

<b>Project/Projects.../Stage</b>	
<b>Parent</b>	<b>Stage Child</b>
<b>PLANNING</b>	Pre-design
	Schematic Design
	Design Development
	Construction Documents
<b>BIDDING</b>	SUBBIDS ASAP
	Biddate Set
<b>POST BID</b>	Bids Closed
	Construction Underway
	General Contractor Award
	Low Bids Announced
	Post Bid
	Subcontractor Awards
	Unit Prices Announced
<b>MISCELLANEOUS</b>	Disqualified Lead
	Cancelled
	Disqualified Project
	Duplicate Project

## /Address

<b>/Projects/Project/Addresses/Address</b>			
<b>Definition: Defines the address for the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
ProjectAddressType	XML=dls. AddressType DB = VARCHAR(180)	Address type for the project. There is only one possible value for this type.	Project
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
AddressLine1	XML = dls.AddressLine DB = VARCHAR(128)	Project address	2468 Montview Drive
AddressLine2	XML = dls.AddressLine DB = VARCHAR(128)	Second line for the address	Not applicable
City	XML = dls.City DB = VARCHAR(50)	City or municipal where the project is located	Talmadge
StateProvince	XML = dls.State DB = VARCHAR(50)	Abbreviation representing the state or province of the project	GA
ZipPostalCode	XML = dls.Zip DB = VARCHAR(20)	Postal or zip code for project	30033
County	XML = dls.County DB = VARCHAR(60)	Name representing the county for the project	Fulton
CountryRegion	XML = dls.Country DB = VARCHAR(120)	Name representing the country or region for the project	United States Canada
Latitude	xs:decimal	The location of the project measured in degrees from the equator (latitude) and from the prime meridian (longitude).	37.548705
Longitude	xs:decimal		77.458037

## /Contracts/Contract

<b>/Projects/Project/Contracts/Contract</b>			
<b>Definition: Defines the bid contract conditions for a project. For a given project, it is possible to have multiple bid contract conditions. For U.S data, the general contractor bid date is used as the project's main bid date.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
BidDate	xs:date	Bid date for a contract <b>Note:</b> This value is formerly <i>Project/Parameters/Parameter/BidDate</i>	
			XML format = YYYY-MM-DD XML example = 2007-09-16
Conditions	XML = dls.Conditions (text)	This is the foremost contract condition that must be met by bidders so that they may bid on a project.	Not applicable
Bonding	XML = dls.Bonding DB = VARCHAR(180)	Bonded and insured for the project. It is the general contractor insurance certificate. Bonding covers coverage for financial risk or loss on a project. Bonding refers to a type of surety guarantee that a specific project will be financially covered if performance is not complete or satisfactory.	Not applicable
PlansFrom	XML = dls.Role DB = VARCHAR(180)	The source of project documents.	
BidTo	XML = dls.Role DB = VARCHAR(180)	Project role that is accepting bids on the project contract	Owner See dls:Role line in the export schema for a complete list of the stage examples.
BidTime	XML = dls.BidTime DB = VARCHAR(120)	The time that bids are due for a project contract <b>Note:</b> This is formerly <i>Project/Parameters/Parameter/BidTime</i>	
			XML example = 12:00
BidDateAsap	xs:boolean	Not applicable	Not applicable
BidDateHold	xs:boolean	When the flag is set, the project has been placed on an indefinite hold.	If the flag is: TRUE = BidDateHold is set. FALSE = BidDateHold is not set.
Classification	XML = dls.Role DB = VARCHAR(180)	How the company is classified.	Architect See dls:Role line in the export schema for a complete list of the role examples.
Invitation	XML = dls.InvitationNumber DB = VARCHAR(50)	Unique invitation number assigned to the project for bidding purposes.	W912HY-04-B-0026 3819

<b>/Projects/Project/Contracts/Contract</b>			
<b>Definition: Defines the bid contract conditions for a project. For a given project, it is possible to have multiple bid contract conditions. For U.S data, the general contractor bid date is used as the project's main bid date.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
BidType	XML = dls.BidType DB = VARCHAR(180)	Type of contracting method being used in the construction of the building.	Open Bidding Invited Bidding Prequalified Bidders Negotiated
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

## Companies/Company

### Notes:

- To determine the specific company role for a project, the value in the **Role** field defines the company role for a project participant. If the **Role** field is populated, the company in question is playing a role for the project. Some of the values for the company role include General Contractor, Owner, and Architect. If the value in the **Role** field is null, the company is not playing a role on the project.
- To derive the Bidders List from a CRM Integration export file, the **BiddingRole** field determines the Bidder's List for a project. All companies with a non-null value in the **BiddingRole** field are a bidder for the project. If the value in the **BiddingRole** field is null, there are no bidders for the project.

<b>/Projects/Project/Companies/Company</b>			
<b>Definition: Defines the company information for a project. Companies listed here are both project participants and bidders.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Role	XML = dls.Role DB = VARCHAR(180)	Role the company is playing on the project <b>Note:</b> The Role, TenderRole, and BiddingRole are all mutually exclusive. You can only select one of these values.	General Contractor See the <a href="#">Classification parent/child</a> values in the following section for more information about Role values.  See the <b>Note</b> at the start of this section for more information.
BiddingRole	XML = dls.Role DB = VARCHAR(180)	Role for which the company is bidding on the project The code represents a generic or detailed account of what is involved in the contract. <b>Note:</b> The Role and BiddingRole are mutually exclusive. You can only have one or the other.	
Name	XML = dls.Name DB = VARCHAR(255)	Name of the company	Turner Construction
URL	XML = dls.URL DB = VARCHAR(255)	Company Detail page URL for this company	URL example = <a href="https://insight.cmdgroup.com/Company/Home/CompanyInformation?10003254521/1">https://insight.cmdgroup.com/Company/Home/CompanyInformation?10003254521/1</a>
LastUpdate	xs:date	Date the company was last updated. The LastUpdate field is the last date that the project was edited. It may not be the last significant update date.	XML format = YYYY-MM-DD XML example = 2006-03-29
CompanyID	xs:long	Identifier assigned to the company.	51095 <b>Note:</b> For companies, both DataSourceID and CompanyID must be used in combination to identify



<b>/Projects/Project/Companies/Company</b>			
<b>Definition: Defines the company information for a project. Companies listed here are both project participants and bidders.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
			the entity (company). <b>Example:</b> 32654
DataSourceID	xs:string		Values: <ul style="list-style-type: none"> <li>• U.S = US</li> <li>• Canada = CAN</li> </ul>
UpdateText	xs:string		
<b>Child Elements</b>		<b>Description</b>	<b>Valid Examples/Values</b>
Contact		See <a href="#">/Companies/Company/Contacts/Contact</a> for more information.	
Addresses		See <a href="#">/Companies/Company/Addresses/Address</a> for more information.	
Phones		See <a href="#">/Companies/Company/Phones/Phone</a> for more information.	
Email		See <a href="#">/Companies/Company/Email</a> for more information.	
Website		See <a href="#">/Companies/Company/Website</a> for more information.	
ParticipantRole		See <a href="#">/Companies/Company/ParticipantRoles/ParticipantRole</a> for more information.	
PlanHolders		See <a href="#">/Companies/Company/PlanHolders/PlanHolder</a> for more information.	
BidderRoles		See <a href="#">/Companies/Company/BidderRoles/Bid</a> for more information.	
ClassificationTypes		See <a href="#">/Companies/Company/ClassificationTypes/ClassificationType</a> for more information.	
CompanySummarizations		See <a href="#">/Companies/CompanySummarizations/CompanySummary</a> for more information.	
ParentCompany		See <a href="#">/Companies/Company/ParentCompany</a> for more information.	
Phones		See <a href="#">/Companies/Company/ParentCompany/Phones/Phone</a> for more information.	
ParentCompanyAddress		See <a href="#">/Companies/Company/ParentCompany/ParentCompanyAddress</a> for more information.	

## Classification parent/child values

The *Classification* of a company is the function that the company generally performs, and is not necessarily the *Role* that the company plays in the project. The following table contains the parent/child values for *Classification*.

<b>Classification</b>	<b>Child</b>
<b>ARCHITECT</b>	Architect
	Architect's Representative
	Designer
	Landscape Architect
	Golf Course Designer
	Water Feature Designer
<b>GENERAL CONTRACTOR</b>	General Contractor

Classification	
Parent	Child
	Construction Manager
	Negotiating General Contractor
	Design Build Contractor
<b>BUILDING OWNER: BUILDING USER</b>	Developer
	Owner
	Owner's Rep
	Tenant
<b>ENGINEERS</b>	Acoustical Engineer
	Civil Engineer
	Consultant
	Electrical Engineer
	Engineer
	Food Service Designer
	Mechanical Engineer
	Geotechnical Consultant
	HVAC Engineer
	Interior Designer
	Landscape Designer
	Mechanical and Electrical Engineer
	Structural, Mechanical, and Electrical Engineer
	Plans Representative
	Plumbing Engineer
	Specification Consultant
	Structural Engineer
<b>EQUIPMENT SUPPLIERS</b>	Construction Equipment
	Fuels
<b>NUMERIC BID PACKAGES</b>	Bid Package 1 ... to.... Bid Package 99
<b>ALPHA BID PACKAGES</b>	Bid Package A ... to.... Bid Package Z
<b>SUBCONTRACTORS – DIVISION 1</b>	Fencing
	Building Maint., Cleanup
	Equip. Rentals, Scaffolding
	Financial Services
	Misc. General Requirements

<b>SUBCONTRACTORS – DIVISION 2</b>	Landscaping
	Foundation Contractor
	Paving
	Demolition
	Asbestos Removal
	Site Work
<b>SUBCONTRACTORS – DIVISION 3</b>	Concrete
	Precast Concrete
	Concrete Forms
	Reinforcing Steel
<b>SUBCONTRACTORS – DIVISION 4</b>	Masonry
	Masonry Restoration
<b>SUBCONTRACTORS – DIVISION 5</b>	Structural Steel
<b>SUBCONTRACTORS – DIVISION 6</b>	Carpentry
<b>SUBCONTRACTORS – DIVISION 7</b>	Waterproofing
	Insulation
	Roofing
<b>SUBCONTRACTORS – DIVISION 8</b>	Doors
	Windows
	Hardware
	Glass
<b>SUBCONTRACTORS – DIVISION 9</b>	Interior Finishes
	Plaster and Stucco
	Drywall
	Tile
	Acoustical Ceilings
	Flooring
	Painting and Wall Coverings
<b>SUBCONTRACTORS – DIVISION 10</b>	Bathroom Partitions and Accessories
	Other Equipment
	Moveable Partitions

Classification	
Parent	Child
	Signage
<b>SUBCONTRACTORS – DIVISION 11</b>	Bank Equipment
	Laboratory Equipment
	Sewage Treatment Equipment
	Kitchen Equipment
	Medical Equipment
	Athletic Equipment
<b>SUBCONTRACTORS – DIVISION 12</b>	Window Coverings
	Furniture
	Seating
<b>SUBCONTRACTORS – DIVISION 13</b>	Insulated Cold Storage
	Swimming Pools
	Storage Tanks
<b>SUBCONTRACTORS – DIVISION 14</b>	Elevators and Escalators
	Conveyors
<b>SUBCONTRACTORS – DIVISION 15</b>	Mechanical Contractor
	Plumbing Contractor
	HVAC Contractor
	Refrigeration Contractor
	Temperature Controls
	Fire Sprinklers
	Thermal Insulation
	Sheet Metal
<b>SUBCONTRACTORS – DIVISION 16</b>	Electrical Contractor
	Lighting
	Alarms and Communication
	Ventilation Contractor

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Classification	
Parent	Child
	Heating Contractor
	Fire Protection

## /Companies/Company/Contacts/Contact

Note: The address and phone number data for a contact can be derived from the *company* section.

<b>/Projects/Project/Companies/Company/Contacts/Contact</b>			
<b>Definition: Defines the contact information for the company.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Name	XML = dls.ContactName DB = VARCHAR(100)	Name of the contact associated with the company for this project.	John Smith
LinkedInURL		The LinkedIn URL for the contact	<a href="http://www.linkedin.com/pub/candy-jacobs/3a/18b/937">http://www.linkedin.com/pub/candy-jacobs/3a/18b/937</a>
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Email	XML=dls.Email	The email for the company.	These three values are set to 0, are nullable in the database and do not require a value.
PhoneNumber	XML=dls.PhoneNumber	The phone number for the company.	
Extension	xs:string	The extension of the phone number for the company.	

## /Companies/Company/Addresses/Address

<b>/Projects/Project/Companies/Company/Addresses/Address</b>			
<b>Definition: Defines the company address.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Address Type	XML = dls.AddressType DB = VARCHAR(180)	Address type for the company	Street Mailing Default = Street
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
AddressLine1	XML = dls.AddressLine DB = VARCHAR(128)	Company address	283 Main Street
AddressLine2	XML = dls.AddressLine DB = VARCHAR(128)	Second line for the address	Not applicable
City	XML = dls.City DB = VARCHAR(50)	City or municipal for the company	Atlanta
StateProvince	XML = dls.State DB = VARCHAR(50)	Abbreviation representing the state or province for the company	GA

<b>/Projects/Project/Companies/Company/Addresses/Address</b>			
<b>Definition: Defines the company address.</b>			
ZipPostalCode	XML = dls.Zip DB = VARCHAR(20)	Postal or zip code for the company. <b>Note</b> that the default setting is zero (0) and some values for this field can be blank.	30309
County	XML = dls.County DB = VARCHAR(60)	Name representing the county for the company	Fulton
CountryRegion	XML = dls:Country DB = VARCHAR(120)	Name representing the country or region for the company	US

### **/Companies/Company/Phones/Phone**

<b>/Projects/Project/Companies/Company/Phones/Phone</b>			
<b>Definition: Defines the phone information for companies associated with a project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
PhoneType	XML = dls.PhoneType DB = VARCHAR(180)	Phone type for the company	<b>Example for Phone Type:</b> <ul style="list-style-type: none"> <li>• Company Phone Number</li> <li>• Contact Phone Number</li> <li>• Fax Phone Number</li> <li>• Cell Phone Number</li> <li>• Home Phone Number</li> <li>• Other Phone Number</li> </ul>
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Phone	XML = dls.PhoneNumber DB = VARCHAR(100)	Phone number of the company	770-000-0000

### **/Companies/Company/Email**

<b>/Projects/Project/Companies/Company/Email</b>			
<b>Definition: Defines the email for the company associated with a project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Email	XML = dls.Email	Email for the company	
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

## /Companies/Company/Website

/Projects/Project/Companies/Company/Website			
Definition: Defines the website address for the company associated with a project.			
Attribute	Data Type	Description	Valid Examples/Values
Website	XML=dls.URL	The web address for the company.	
Child Elements	Data Type	Description	Valid Examples/Values

## /Companies/Company/ParticipantRoles/ParticipantRole

/Projects/Project/Companies/Company/ParticipantRoles/ParticipantRole			
Definition: Defines the company role associated with a project.			
Attribute	Data Type	Description	Valid Examples/Values
RoleClassification		The role classification for the company.	
RoleStatus		The role status for the company	Awarded
Child Elements	Data Type	Description	Valid Examples/Values

## /Companies/Company/PlanHolders/PlanHolder

/Projects/Project/Companies/Company/PlanHolders/PlanHolder			
Definition: Defines the role associated with the project plan holder.			
Attribute	Data Type	Description	Valid Examples/Values
RoleClassification		The role classification for the plan holder.	
ContactName	Type=xs:string	The name of the plan holder contact person for the company.	
Child Elements	Data Type	Description	Valid Examples/Values

## /Companies/Company/BidderRoles/BidderRole

**Note:** Bidding information must be cross-referenced with the BiddingRole field to determine the BidValue, BidRank, BidWithdrawDate and BidCreateDate for each bidding company.



<b>Projects/Project/Companies/Company/BidderRoles/BidderRole</b>			
<b>Definition: Defines the bid information for all bidding companies.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
BidderClassification	xs:string	Classification of the bidder.	
BidValue	XML = dls.Currency DB = VARCHAR(15)	Amount of the bid submitted by the bidder	3344550
BidRank	xs:unsignedInt	Reflects the bid value order from lowest to highest where the lowest = 1.	1, 2, 3
BidWithdrawDate	xs:date	Not applicable	Not applicable
BidCreateDate	xs:date		
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>

### **/Companies/Company/ClassificationTypes/ClassificationType**

<b>/Projects/Project/Companies/Company/ClassificationsTypes/ClassificationType</b>			
<b>Definition: Defines the classification type of the Company.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
ClassificationType	XML = dls.ClassificationType DB = VARCHAR(180)	The company's type of business, including the classification of the services delivered in the market.	Accommodation/Hospitality Utilities Municipal Govt Services See dls:ClassificationType line in the export schema for a complete list of the stage examples.
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Rank	xs: unsignedInt	Ranking of the subcategory classification representing the proportion of the end use of project.	1 2
Type	XML = dls.ClassificationType DB = VARCHAR(180)	Service provided by the organization.	Public Owner  See dls:ClassificationType line in the export schema for a complete list of the stage examples.

### **/Companies/CompanySummarizations/CompanySummary**

<b>/Projects/Project/Companies/Company/CompanySummarizatons/CompanySummary</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
CompanySummaryDate	xs:date	The date the company merged into the current company.	2009-02-26
Summary	XML = dls.Summary DB=VARCHAR(255)	Lists companies that have merged into the current company.	Company merged: 999999 BEST ARCHITECTS

Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /Companies/Company/ParentCompany

/Projects/Project/Companies/Company/ParentCompany			
Attribute	Data Type	Description	Valid Examples/Values
Child Elements	Data Type	Description	Valid Examples/Values
DataSource	xs:string		US
CompanyId	xs:string		1000240000
CompanyType	xs:string	The primary role of the company	General Contractor
CompanyHierarchyType	xs:string		HQ
Name	xs:string	The name of the company	
Phones	See /ParentCompany/Phones for more information.		
Email	dls.Email		email.name@business.com
Website	dls.URL		www.biz.com
ParentCompanyAddress	See /ParentCompany/ParentCompanyAddress for more information.		

## /Companies/Company/ParentCompany/Phones/Phone

/Projects/Project/Companies/Company/ParentCompany/Phones/Phone			
Attribute	Data Type	Description	Valid Examples/Values
PhoneType	dls.PhoneType		Phone Fax
Child Elements	Data Type	Description	Valid Examples/Values
PhoneNumber	dls.PhoneNumber	Parent company phone number	4011011010

## /Companies/Company/ParentCompany/ParentCompanyAddress

/Projects/Project/Companies/Company/ParentCompany/ParentCompanyAddress			
Definition: Defines the address of the parent company.			
Attribute	Data Type	Description	Valid Examples/Values
Child Elements	Data Type	Description	Valid Examples/Values
AddressLine1	dls.AddressLine	The first line address for the company.	26 College Drive
AddressLine2	dls.AddressLine	The second address line for the company.	Suite 101
City	dls.City	The city for the company.	Decatur
State	dls.State	The state for the company.	GA

PostalCode	dls.PostalCode	The postal code for the company.	03301-7407
CountyName	dls.CountyName	The country for the company.	Dekalb
Country	dls.Country	The country for the company.	US

## /Users/User/Queries/Query

<b>/Projects/Project/Users/User/Queries/Query</b>			
<b>Definition: Defines the</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
QueryID	xs:string	System generated query ID #.	100
QueryName	xs:string	User name for search	MyProjectConcreteSearch
DocCenterURL	dls.URL	URL location in Document Center	
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /Users/User/User

<b>/Projects/Project/Users/User</b>			
<b>Definition: Defines the</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
UserID	xs:string	System ID of user.	
UserName	xs:string	Login/email address of user	Name@biz.com
UserFullName	xs:string	First and last name of user	Ben Smith
ProjectFlaggedforExport	xs:boolean XML = dls.Summary DB = VARCHAR(255)	Identifies what has been updated since the last export.	An example for the summary is New Project was Found.
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /UpdateSummarizations/UpdateSummary

<b>/Projects/Project/UpdateSummarizations/UpdateSummary</b>			
<b>Definition: Defines the update summary information or project history for a project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
UpdateSummaryDate	xs:date	Identifies the update summary date for a project.	XML format = YYYY-MM-DD XML example = 2006-03-29
Summary	XML = dls.Summary DB = VARCHAR(255)	Identifies what has been updated since the last export.	Plans were added / updated.

Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /PlanSpec/PlanRoom

<b>/Projects /Project/PlanSpec/PlanRoom</b>			
<b>Definition: Defines the plans and specifications information for a project.</b>			
Attribute	Data Type	Description	Valid Examples/Values
Bin	xls:string	The type of document	Plans
Name	XML=dls.PlanRoom	The name of the plan/spec.	Alberta Plan Room
URL	XML = dls.URL DB = VARCHAR(255)	URL to the Plans and Specs for this project	URL format = http://www.reedconnect.com/default.aspx?link=<encrypted string>  URL example = http://www.reedconnect.com/default.aspx?link=NSwxNDawLDEwMDAyNDI3Nzc%3d
Child Elements	Data Type	Description	Valid Examples/Values

## /PlanSpec/DocCenterUrl

<b>/Projects /Project/PlanSpec/DocCenterURL</b>			
<b>Definition: Defines the URL for the Document Center location of the plans and specs.</b>			
Attribute	Data Type	Description	Valid Examples/Values
Deposit	xs:string	Deposit and refund information for the project	May be required.
URL	XML = dls.URL DB = VARCHAR(255)	URL to the Plans and Specs page for this project	URL format = https://insight.cmdgrup.com/default.aspx?link=<encrypted string>  URL example = https://insight.cmdgrup.com/Project/Home/ProjectInformation/454875421/1
From	XML = dls.Role  DB = VARCHAR(180)	The project role that is distributing plans on the project contract	Architect Owner See dls:Role line in the export schema for a complete list of the stage examples.
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /Details/Detail

<b>/Projects/Project/Details/Detail</b>			
<b>Definition: Defines the project details information for a project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
DetailType	XML = dls.DetailType DB = VARCHAR(180)	Code representing the detail information reported on a project <b>Note:</b> This value combines the values <i>DetailText</i> and <i>DetailType</i> from the previous CRM release.	<ul style="list-style-type: none"> <li>• Project</li> <li>• Status</li> <li>• Notes</li> </ul>
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /Materials/Material

<b>/Projects/Project/Materials/Material</b>			
<b>Definition: Defines the materials or Master Format CSI divisions for a project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Code	xs:long	MasterFormat code representing materials involved in the project.	33
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /RSMeansMaterialDivisions/Division/Materials/Material

<b>/Projects/Project/RSMeansMaterialDivisions/Division/Materials/Material</b>			
<b>Definition: Defines the RSMeans Material Division numbers associated with the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Code	xs:long	The code for the material	347
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	

## /RSMeansMaterialDivisions/Division/Materials/

<b>/Projects/Project/RSMeansMaterialDivisions/Division/Materials</b>			
<b>Definition: Defines the RSMeans Material Division information associated with the project.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
Description	XML = dls.Description	The description of the material. For a list of RSMeans Material names and codes, see <a href="#">Appendix A – Material Demand CSI codes</a>	Concrete
Code	xs:long	The code for the material	3
MaterialCostValue	xs:decimal	The total cost minus installation cost	030212

InstallationCostValue	xs:decimal	The cost of the installation.	0.0305
TotalCostValue	xs:decimal	The total cost of the item including installation.	0.0520
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /Notes/Note

<b>/Projects/Project/Notes</b>			
<b>Definition: Defines the notes section of the project details.</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
UserID	xs:string	The ConstructConnect Id of the user.	System generated name.
UserName	xs:string	The ConstructConnect name of the user.	name@business.com
NoteId	xs:string	Numeric ID of the note	12
NoteText	xs:string	The body text of the note.	Great project to follow.
CreateDate	xs:DateTime	The date the note is created	2014-07-18T15:49:40.633
ModifyDate	xs:DateTime	The date of modifications to the note.	
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N.A	N/A

## /List Date

<b>/Projects/Project/List Date</b>			
<b>Definition: Defines the unique identity of the project</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
ListDate	xs:date	Unique system assigned project ID. <b>Note:</b> This value is formerly <i>Project/Parameters/Parameter/RecordDate</i>	2014-08-27
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

## /ProjectID

<b>/Projects/Project/ProjectID</b>			
<b>Definition: Defines the unique identity of the project</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
ProjectID	xs:long	Unique system assigned project ID	1000015959

Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /DataSourceID

/Projects/Project/DataSourceID Definition: Defines the source of the project.			
Attribute	Data Type	Description	Valid Examples/Values
DataSourceID	xs:string	Values: <ul style="list-style-type: none"> <li>1 = US</li> <li>2 = CAN</li> </ul>	Example: 1 <b>Note:</b> For companies, both DataSourceID and CompanyID must be used in combination to identify the entity (company).
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /Title

/Projects/Project/Title Definition: Defines the name of the project.			
Attribute	Data Type	Description	Valid Examples/Values
Title	XML = dls.Title DB = VARCHAR(180)	Title and name of the project record	WATER CONTROL PLANT ALTS: Arlington Water Pollution Control Plant
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /Stage

/Projects/Project/Stage Definition: Defines the stage of the project.			
Attribute	Data Type	Description	Valid Examples/Values
Stage	XML = dls.Stage DB = VARCHAR(180)	Stages of planning, bidding, or postbid that the project is in currently	Planning Proposed Pending Role Proposals Due Architect Selection to Begin Master Planning Conceptual Drawings
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /URL

/Projects/Project/Stage			
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Definition: Defines the URL for the project listing in Insight.			
Attribute	Data Type	Description	Valid Examples/Values
URL	XML = dls.URL DB = VARCHAR(255)	URL to the Project Detail page for this project	URL format = http://www.reedconnect.com/default.aspx?link=<encrypted string> URL example = http://www.reedconnect.com/default.aspx?link=NSwxNDawLDEwMDAyNDI3Nzc%3d
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /UpdateDate

/Projects/Project/UpdateDate Definition: Defines the date the project listing was last updated.			
Attribute	Data Type	Description	Valid Examples/Values
Project Event		Provides Event details, including date and time.	2019-11-11
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /ProjectParentID

/Projects/Project/ProjectParentID Definition: Defines the ID of the parent project to the current project.			
Attribute	Data Type	Description	Valid Examples/Values
ProjectParentID	xs:long	ID of the project parent that is related to this project	9058762
Child Elements	Data Type	Description	Valid Examples/Values
N/A	N/A	N/A	N/A

## /IsProspective

This indicates if a project has been verified by the RCD source management team. Projects in this category have not been verified but are included here for prospective use.

/Projects/Project/IsProspective			
Attribute	Data Type	Description	Valid Examples/Values
IsProspective	xs:boolean	This is formerly: <i>Project/IsUnverified</i>	IsProspective=TRUE
Child Elements	Data Type	Description	Valid Examples/Values



## /UpdateText

<b>/Projects/Project/UpdateText</b>			
<b>Attribute</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
UpdateText	xs.string	The most recent information on a project. Are concatenated when multiple updates are present.	
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
N/A	N/A	N/A	N/A

# Buyer Activity Report

## Introduction

This section contains a list and description of the elements that are included in the Buyer Activity Report XML file.

## BarData

BarData			
Attribute		Description	Valid Examples/Values
Child Elements	Description	Valid Examples/Values	
Users	Data for the company viewing the Buyer Activity Report. For more information, see <a href="#">/User</a> and <a href="#">/Trade</a> .		
BuyerInfo	Data for the subcontractors that have viewed the projects associated with Subs that have viewed shown interest in. For more information, see <a href="#">/BuyerContact</a> .		

## /User

BarData/Users/User			
Attribute	Data Type	Description	Valid Examples/Values
Child Elements	Data Type	Description	Valid Examples/Values
UserEmail	xs:string	The company email for the user.	
UserID		The internal CMD ID of the user.	

## /Trade

BarData/Users/User/SelectedTrades/Trade			
Attribute	Data Type	Description	Valid Examples/Values
Child Elements	Data Type	Description	Valid Examples/Values
CSICode	xs:string	The CSI codes and descriptions for the company user. These map to the companies returned in the Buyer Activity Report.	
CSIDescription			

## /BuyerContact

BarData/BuyerInfo/BuyerContact			
Attribute	Data Type	Description	Valid Examples/Values
<b>Child Elements</b>	<b>Data Type</b>	<b>Description</b>	<b>Valid Examples/Values</b>
BuyerContactID	xs:string	The identifier for the buyer. This value is and the child element BuyerSource constitute the unique identifier for this record.	
BuyerSource	DB = VARCHAR(10)	The ConstructConnect source of the BAR data.	<b>Example:</b> <ul style="list-style-type: none"> <li>iSqFt</li> <li>CMD</li> </ul>
ContactName	DB = VARCHAR(500)	The name of the contact for the company.	
CompanyName	DB = VARCHAR(255)	The name of the company.	
Phone	xs:string DB = VARCHAR(15)	The phone number for the contact.	
Email	xs:string DB = VARCHAR(200)	The contact's email.	
BusinessType		The company business type.	<b>Examples:</b> <ul style="list-style-type: none"> <li>Subcontractor</li> <li>Supplier</li> <li>Owner</li> </ul>
CompanyAddress	DB = VARCHAR(800)	The address of the company.	
SelectedTrades	DB = VARCHAR(800)	The CSI Division trades and codes for the company.	
Projects		The projects associated with the company. Includes the external <ul style="list-style-type: none"> <li>Project Name</li> <li>Project ID</li> <li>Activity Level rating</li> <li>Date of last company activity on the project.</li> </ul>	
YearEstablished	xs:integer	The year the company was established.	
AverageJobSize	DB = VARCHAR(50)	The typical job size for the company.	
Sector	DB = VARCHAR(10)	The sector for the company, either public, private or both.	<ul style="list-style-type: none"> <li>Public – Is public.</li> <li>Private – Is private.</li> <li>Both – Is both.</li> </ul>
MWBE	xs:string	Indicates if the company is a minority or woman owned	<ul style="list-style-type: none"> <li>Yes – Is MWBE.</li> <li>No – Is not MWBE.</li> </ul>

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		business.	
Union		Indicates if the company is a union shop.	<ul style="list-style-type: none"> <li>• Yes – Is union.</li> <li>• No – Is not union.</li> </ul>
Licensed		Indicates if the company is licensed for the work performed.	<ul style="list-style-type: none"> <li>• Yes – Is licensed.</li> <li>• No – Is not licensed.</li> </ul>
Insured		Indicates if the company is insured for the work performed.	<ul style="list-style-type: none"> <li>• Yes – Is insured.</li> <li>• No – Is not insured.</li> </ul>

## Appendix A – Material Demand CSI codes

### Introduction

This section contains a list of the CSI codes and descriptions used in the Material Demand project cost models.

CSI Code	Description
111	Summary Of Work
121	Allowances
131	Project Management And Coordination
132	Construction Progress Documentation
141	Regulatory Requirements
145	Quality Control
151	Temporary Utilities
152	Construction Facilities
154	Construction Aids
155	Vehicular Access and Parking
156	Temporary Barriers and Enclosures
158	Project Identification
171	Examination and Preparation
174	Cleaning and Waste Management
176	Protecting Installed Construction
191	Commissioning
193	Facility Maintenance
221	Surveys
232	Geotechnical Investigations
241	Demolition
242	Removal And Salvage Of Construction Materials
243	Structure Moving
256	Site Containment
258	Snow Control
265	Underground Storage Tank Removal
281	Transportation And Disposal Of Hazardous Materials
282	Asbestos Remediation
283	Lead Remediation
285	Mold Remediation
291	Chemical Sampling, Testing And Analysis
301	Maintenance Of Concrete
305	Common Work Results For Concrete

311	Concrete Forming
315	Concrete Accessories
321	Reinforcement Bars
322	Fabric And Grid Reinforcing
323	Stressed Tendon Reinforcing
324	Fibrous Reinforcing
330	Cast-In-Place Concrete
331	Structural Concrete
335	Concrete Finishing
337	Specialty Placed Concrete
339	Concrete Curing
341	Precast Structural Concrete
345	Precast Architectural Concrete
347	Site-Cast Concrete
348	Precast Concrete Specialties
351	Cast Roof Decks
352	Lightweight Concrete Roof Insulation
354	Cast Underlayment
361	Cementitious Grouting
362	Non-Shrink Grouting
363	Epoxy Grouting
364	Injection Grouting
381	Concrete Cutting
382	Concrete Boring
401	Maintenance Of Masonry
405	Common Work Results For Masonry
421	Clay Unit Masonry
422	Concrete Unit Masonry
423	Glass Unit Masonry
424	Adobe Unit Masonry
425	Adobe Unit Masonry
427	Multiple-Wythe Unit Masonry
441	Dry-Placed Stone
443	Stone Masonry
451	Flue Liner Masonry
454	Refractory Brick Masonry
457	Masonry Fireplaces
471	Manufactured Brick Masonry
472	Cast Stone Masonry
473	Manufactured Stone Masonry

501	Maintenance of Metals
505	Common Work Results For Metals
512	Structural Steel Framing
514	Structural Aluminum Framing
515	Wire Rope Assemblies
521	Steel Joist Framing
531	Steel Decking
535	Raceway Decking Assemblies
541	Structural Metal Stud Framing
542	Cold-Formed Metal Joist Framing
544	Cold-Formed Metal Trusses
551	Metal Stairs
552	Metal Railings
553	Metal Gratings
554	Metal Floor Plates
555	Metal Stair Treads and Nosings
558	Formed Metal Fabrications
571	Decorative Metal Stairs
573	Decorative Metal Railings
575	Decorative Formed Metal

CSI Code	Description
605	Common Work Results For Wood, Plastics, And Composites
611	Wood Framing
612	Structural Panels
613	Heavy Timber Construction
615	Wood Decking
616	Sheathing
617	Shop-Fabricated Structural Wood
618	Glued-Laminated Construction
622	Millwork
625	Prefinished Paneling
626	Board Paneling
643	Wood Stairs And Railings
644	Ornamental Woodwork
648	Wood Frames
649	Wood Screens And Exterior Wood Shutters
651	Structural Plastic Shapes And Plates
652	Plastic Structural Assemblies
663	Plastic Railings
665	Plastic Simulated Wood Trim
701	Operation and Maintenance Of Thermal And Moisture Protection
705	Common Work Results For Thermal And Moisture Protection
711	Damproofing
712	Built-Up Bituminous Waterproofing
713	Sheet Waterproofing
716	Cementitious And Reactive Waterproofing
717	Bentonite Waterproofing
719	Water Repellents
721	Thermal Insulation
722	Roof And Deck Insulation
724	Exterior Insulation And Finish Systems
725	Weather Barriers
726	Vapor Retarders
731	Shingles And Shakes
732	Roof Tiles
733	Natural Roof Coverings
741	Roof Panels
742	Wall Panels
744	Faced Panels
746	Siding
751	Built-Up Bituminous Roofing



752	Modified Bituminous Membrane Roofing
753	Elastomeric Membrane Roofing
754	Thermoplastic Membrane Roofing
756	Fluid-Applied Roofing
757	Coated Foamed Roofing
758	Roll Roofing
761	Sheet Metal Roofing
762	Sheet Metal Flashing And Trim
765	Flexible Flashing
771	Roof Specialties
772	Roof Accessories
781	Applied Fireproofing
784	Firestopping
791	Preformed Joint Seals
792	Joint Sealants
795	Expansion Control
801	Operation and Maintenance Of Openings
805	Common Work Results For Openings
811	Metal Doors And Frames
812	Metal Frames
813	Metal Doors
814	Wood Doors
816	Composition Door
817	Integrated Door Opening Assemblies
831	Access Doors And Panels
832	Sliding Glass Doors
833	Coiling Doors And Grilles
834	Special Function Doors
836	Panel Doors
841	Entrances And Storefronts
842	Entrances
843	Storefronts
844	Curtain Wall And Glazed Assemblies
845	Translucent Wall and Roof Assemblies
851	Metal Windows
852	Wood Windows
853	Plastic Windows
854	Composite Windows
856	Special Function Windows
861	Roof Windows
862	Unit Skylights
863	Metal-Framed Skylights

871	Door Hardware
874	Access Control Hardware
875	Window Hardware
879	Hardware Accessories
881	Glass Glazing
883	Mirrors
884	Plastic Glazing
885	Glazing Accessories
887	Glazing Surface Films
888	Special Function Glazing
891	Louvers
895	Vents
901	Maintenance Of Finishes
905	Common Work Results For Finishes
921	Plaster And Gypsum Board Board
922	Supports For Plaster And Gypsum Board
923	Gypsum Plastering
924	Cement Plastering
926	Veneer Plastering
928	Backing Boards And Underlayments
929	Gypsum Board
930	Tiling
934	Waterproofing-Membrane Tiling
951	Acoustical Ceilings
953	Acoustical Ceiling Suspension Assemblies
954	Specialty Ceilings
958	Integrated Ceiling Assemblies
962	Specialty Flooring
963	Masonry Flooring
964	Wood Flooring
965	Resilient Flooring
966	Terrazzo Flooring
967	Fluid-Applied Flooring
968	Carpeting
969	Access Flooring
972	Wall Coverings
977	Special Wall Surfacing
981	Acoustic Insulation
984	Acoustic Room Components
991	Painting
993	Staining And Transparent Finishing
996	High-Performance Coatings

997	Special Coatings
1015	Common Work Results For Specialties
1011	Visual Display Units
1013	Directories
1014	Signage
1017	Telephone Specialties
1021	Compartments And Cubicles
1022	Partitions
1026	Wall And Door Protections
1028	Toilet, Bath, And Laundry Accessories
1031	Manufactured Fireplaces
1032	Fireplace Specialties
1035	Stove
1044	Fire Protection Specialties
1051	Lockers
1055	Postal Specialties
1056	Storage Assemblies
1057	Wardrobe And Closet Specialties
1071	Exterior Protection
1073	Protective Covers
1074	Manufactured Exterior Specialties
1075	Flagpoles
1081	Pest Control Devices
1088	Scales
1105	Common Work Results For Equipment
1111	Vehicle Service Equipment
1112	Parking Control Equipment
1113	Loading Dock Equipment
1114	Pedestrian Control Equipment
1117	Teller And Service Equipment
1119	Detention Equipment
1121	Mercantile And Service Equipment

CSI Code	Description
1123	Commercial Laundry And Dry Cleaning Equipment
1124	Maintenance Equipment
1126	Unit Kitchens
1127	Photographic Processing Equipment
1131	Residential Appliances
1133	Retractable Stairs
1141	Foodservice Storage Equipment
1142	Food Preparation Equipment
1143	Food Delivery Carts And Conveyors
1144	Food Cooking Equipment
1146	Food Dispensing Equipment
1147	Ice Machines
1148	Cleaning And Disposal Equipment
1152	Audio-Visual Equipment
1153	Laboratory Equipment
1157	Vocational Shop Equipment
1161	Theater And Stage Equipment
1162	Musical Equipment
1166	Athletic Equipment
1167	Recreational Equipment
1168	Play Field Equipment and Structures
1171	Medical Sterilizing Equipment
1172	Examination And Treatment Equipment
1173	Patient Care Equipment
1174	Dental Equipment
1176	Operating Room Equipment
1177	Radiology Equipment
1178	Mortuary Equipment
1182	Solid Waste Handling Equipment
1191	Religious Equipment
1205	Common Work Results For Furnishings
1212	Wall Decorations
1221	Window Blinds
1222	Curtains And Drapes
1223	Interior Shutters
1224	Window Shades
1232	Manufactured Wood Casework
1234	Manufactured Plastic Casework
1235	Specialty Casework
1236	Countertops
1243	Portable Lamps

1245	Bedroom Furnishings
1246	Furnishing Accessories
1248	Rugs And Mats
1251	Office Furniture
1252	Seating
1254	Hospitality Furniture
1255	Detention Furniture
1256	Institutional Furniture
1259	Systems Furniture
1261	Fixed Audience Seating
1263	Stadium And Arena Seating
1267	Pews And Benches
1292	Interior Planters And Artificial Plants
1293	Site Furnishings
1305	Common Work Results For Special Construction
1311	Swimming Pools
1312	Fountains
1317	Tubs And Pools
1318	Ice Rinks
1321	Controlled Environment Rooms
1324	Special Activity Rooms
1328	Athletic And Recreational Special Construction
1331	Fabric Structures
1334	Fabricated Engineered Structures
1336	Towers
1342	Building Modules
1348	Sound, Vibration, And Seismic Control
1349	Radiation Protection
1353	Meteorological Instrumentation
1405	Common Work Results For Conveying Equipment
1411	Manual Dumbwaiters
1412	Electric Dumbwaiters
1421	Electric Traction Elevators
1424	Hydraulic Elevators
1427	Custom Elevator Cabs And Doors
1428	Elevator Equipment And Controls
1431	Escalators
1432	Moving Walks
1442	Wheelchairs Lifts
1445	Vehicle Lifts
1451	Correspondence And Parcel Lifts
1491	Facility Chutes

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1492	Pneumatic Tube Systems
2105	Common Work Results For Fire Suppression
2111	Facility Fire-Suppression Water-Service Piping
2112	Fire-Suppression Standpipes
2113	Fire-Suppression Sprinkler Systems
2121	Carbon-Dioxide Fire-Extinguishing Systems
2122	Clean-Agent Fire-Extinguishing Systems
2131	Centrifugal Fire Pumps
2201	Operation And Maintenance Of Plumbing
2205	Common Work Results For Plumbing
2207	Plumbing Insulation

CSI Code	Description
2211	Facility Water Distribution
2212	Facility Potable-Water Storage Tanks
2213	Facility Sanitary Sewerage
2214	Facility Storm Drainage
2215	General Service Compressed-Air Systems
2231	Domestic Water Softeners
2232	Domestic Water Filtration Equipment
2233	Electric Domestic Water Heaters
2234	Fuel-Fired Domestic Water Heaters
2235	Domestic Water Heat Exchangers
2241	Residential Plumbing Fixtures
2242	Commercial Plumbing Fixtures
2243	Healthcare Plumbing Fixtures
2245	Emergency Plumbing Fixtures
2246	Security Plumbing Fixtures
2247	Drinking Fountains And Water Coolers
2251	Swimming Pool Plumbing Systems
2252	Fountain Plumbing Systems
2262	Vacuum Systems For Laboratory And Healthcare Facilities
2263	Gas Systems For Laboratory And Healthcare Facilities
2266	Chemical-Waste Systems For Lab. And Healthcare Facilities
2305	Common Work Results For HVAC
2307	HVAC Insulation
2309	Instrumentation And Control For HVAC
2311	Facility Fuel Piping
2312	Facility Fuel Pumps
2313	Facility Fuel-Storage Tanks
2321	Hydronic Piping And Pumps
2322	Steam And Condensate Piping And Pumps
2323	Refrigerant Piping
2331	HVAC Ducts And Casings
2333	Air Duct Accessories
2334	HVAC Fans
2335	Special Exhaust Systems
2336	Air Terminal Units
2337	Air Outlets And Inlets
2338	Ventilation Hoods
2341	Particulate Air Filtration
2342	Gas-Phase Air Filtration
2343	Electronic Air Cleaners

2351	Breechings, Chimneys, And Stacks
2352	Heating Boilers
2353	Heating Boiler Feedwater Equipment
2354	Furnaces
2355	Fuel-Fired Heaters
2356	Solar Energy Heating Equipment
2357	Heat Exchangers For HVAC
2361	Refrigerant Compressors
2362	Packaged Compressor And Condenser Units
2363	Refrigerant Condensers
2364	Packaged Water Chillers
2365	Cooling Towers
2372	Air-To-Air Energy Recovery Equipment
2373	Indoor Central-Station Air-Handling Units
2374	Packaged Outdoor HVAC Equipment
2376	Evaporative Air-Cooling Equipment
2381	Decentralized Unitary HVAC Equipment
2382	Convection Heating And Cooling Units
2383	Radiant Heating Units
2384	Humidity Control Equipment
2391	Prefabricated Equipment Supports



<b>CSI Code</b>	<b>Description</b>
2601	Operation And Maintenance Of Electrical Systems
2605	Common Work Results For Electrical
2609	Instrumentation And Control For Electrical Systems
2612	Medium-Voltage Transformers
2613	Medium-Voltage Switchgear
2622	Low-Voltage Transformers
2624	Switchboards And Panelboards
2627	Low-Voltage Distribution Equipment
2628	Low-Voltage Circuit Protective Devices
2629	Low-Voltage Controllers
2631	Photovoltaic Collectors
2632	Packaged Generator Assemblies
2633	Battery Equipment
2635	Power Filters And Conditioners
2636	Transfer Switches
2641	Facility Lightning Protection
2642	Cathodic Protection
2651	Interior Lighting
2652	Emergency Lighting
2653	Exit Signs
2654	Classified Location Lighting
2655	Special Purpose Lighting
2655	Exterior Lighting
2661	Lighting Systems And Accessories
2671	Electrical Machines
2701	Operation And Maintenance Of Communications Systems
2705	Common Work Results For Communications
2711	Communications Equipment Room Fittings
2713	Communications Backbone Cabling
2715	Communications Horizontal Cabling
2721	Data Communications Terminal Equipment
2732	Voice Communications Terminal Equipment
2741	Audio-Video Systems
2751	Distributed Audio-Video Communications Systems
2752	Healthcare Communications And Monitoring Systems
2753	Distributed Systems
2801	Operation And Maintenance Of Electronic Safety and Security
2805	Common Work Results For Electronic Safety and Security
2813	Access Control
2816	Intrusion Detection

2823	Video Surveillance
2831	Fire Detection And Alarm
2832	Radiation Detection And Alarm
2833	Gas Detection And Alarm
2839	Mass Notification Systems
3105	Common Work Results For Earthwork
3106	Schedules For Earthwork
3111	Clearing And Grubbing
3113	Selective Tree And Shrub Removal And Trimming
3114	Earth Stripping And Stockpiling
3122	Grading
3123	Excavation And Fill
3125	Erosion And Sedimentation Controls
3131	Soil Treatment
3132	Soil Stabilization
3133	Rock Stabilization
3136	Gabion
3137	Riprap
3141	Shoring
3143	Concrete Raising
3145	Vibroflotation And Densification
3148	Underpinning
3152	Cofferdams
3156	Slurry Walls
3162	Driven Piles
3163	Bored Piles
3171	Tunnel Excavation
3173	Tunnel Grouting
3174	Tunnel Construction
3201	Operation And Maintenance Of Exterior Improvements
3206	Schedules For Exterior Improvement
3211	Base Courses
3212	Flexible Paving
3213	Rigid Paving
3214	Unit Paving
3216	Curb, Gutters, Sidewalks, And Driveways
3217	Paving Specialties
3218	Athletic And Recreational Surfacing
3231	Fences And Gates
3232	Retaining Walls
3234	Fabricated Bridges
3235	Screening Devices

3284	Planting Irrigation
3291	Planting Preparation
3292	Turn And Grasses
3301	Operation And Maintenance Of Utilities
3305	Common Work Results For Utilities
3311	Water Utility Distribution Piping
3312	Water Utility Distribution Equipment
3316	Water Utility Storage Tanks
3321	Water Supply Wells
3331	Sanitary Utility Sewerage Piping
3332	Wastewater Utility Pumping Stations
3336	Utility Septic Tanks
3341	Storm Utility Drainage Piping
3342	Culverts
3344	Storm Utility Water Drains
3346	Subdrainage
3347	Ponds And Reservoirs
3349	Storm Drainage Structures
3351	Natural Gas Distribution
3352	Liquid Fuel Distribution
3361	Hydronic Energy Distribution
3363	Steam Energy Distribution
3371	Electrical Utility Transmission And Distribution
3372	Utility Substations
3373	Utility Transformers
3375	High Voltage Switchgear And Protection Devices
3379	Site Grounding
3381	Communications Structures
3401	Operation And Maintenance Of Transportation
3411	Rail Tracks
3443	Roadway Signaling And Control Equipment
3471	Roadway Construction
3472	Railway Construction
3477	Transportation Equipment
3500	Waterway And Marine Construction
3501	Operation And Maintenance Of Waterway And Marine Construction
3505	Common Work Results for Waterway And Marine Construction
3506	Schedules For Waterway And Marine Construction
3508	Commissioning Of Waterway And Marine Construction
3510	Waterway And Marine Signaling And Control Equipment
3511	Signaling And Control Equipment For Waterways

3512	Marine Signaling And Control Equipment For Dams
3513	Signaling And Control Equipment For Dams
3520	Waterway And Marine Construction And Equipment
3530	Coastal Construction
3531	Shoreline Protection
3540	Waterway Construction And Equipment
3541	Levees
3542	Waterway Bank Protection
3543	Waterway Scour Protection
3549	Waterway Structures
3550	Marine Construction And Equipment
3551	Floating Construction
3552	Offshore Platform Costruction
3553	Underwater Construction
3559	Marine Specialties
3570	Dam Construction And Equipment
3571	Gravity Dams
3572	Arch Dams
3573	Embarkment Dams
3574	Buttress Dams
3579	Auxiliary Dam Structures
3599	Waterway And Marine Construction - Other
4000	Process Integration
4001	Operation And Maintenance Of Process Integration
4005	Common Work Results For Process Integration
4006	Schedules For Process Integration
4010	Gas And Vapor Process Piping
4011	Steam Process Piping
4012	Compressed Air Process Piping
4013	Inert Gases Process Piping
4014	Fuel Gases Process Piping
4015	Combustion System Gas Piping
4016	Specialty And High-Purity Gases Piping
4017	Welding And Cutting Gases Piping
4018	Vacuum Systems Process Piping
4020	Liquids Process Piping
4021	Liquid Fuel Process Piping
4022	Petroleum Products Piping
4023	Water Process Piping
4024	Specialty Liquid Chemicals Piping
4025	Liquid Acids And Bases Piping
4026	Liquid Polymer Piping

4030	Solid And Mixed Materials Piping And Chutes
4032	Bulk Materials Piping And Chutes
4033	Bulk Materials Valves
4034	Pneumatic Conveying Lines
4040	Process Piping And Equipment Protection
4041	Process Piping And Equipment Heat Tracing
4042	Process Piping And Equipment Insulation
4046	Process Corrosion Protection
4047	Refractories
4080	Commissioning Of Process Systems
4090	Instrumentation And Control For Process Systems
4091	Primary Process Measurement Devices
4092	Primary Control Devices
4093	Analog Controllers/Recorders
4094	Digital Process Controllers
4095	Process Control Hardware
4096	Process Control Software
4097	Process Control Auxiliary Devices
4099	Process Integration - Other
4100	Material Processing And Handling Equipment
4101	Operation And Maintenance Of Material Processing And Handling Equipment
4106	Schedules For Material Processing And Handling Equipment
4108	Commissioning Of Material Processing And Handling Equipment
4110	Bulk Material Processing Equipment
4111	Bulk Material Sizing Equipment
4112	Bulk Material Conveying Equipment
4113	Bulk Material Feeders
4114	Batching Equipment
4120	Piece Material Handling Equipment
4121	Conveyors
4122	Cranes And Hoists
4123	Lifting Devices
4124	Specialty Material Handling Equipment
4130	Manufacturing Equipment
4131	Manufacturing Lines And Equipment
4132	Forming Equipment
4133	Machining Equipment
4134	Finishing Equipment
4135	Dies And Molds
4136	Assembly And Testing Equipment
4140	Container Processing And Packaging

4141	Container Filling And Sealing
4142	Container Packing Equipment
4143	Shipping Package
4150	Material Storage
4151	Automatic Material Storage
4152	Bulk Material Storage
4153	Storage Equipment And Systems
4160	Mobile Plant Equipment
4161	Mobile Earth Moving Equipment
4162	Trucks
4163	General Vehicles
4164	Rail Vehicles
4165	Mobile Support Equipment
4166	Miscellaneous Mobile Equipment
4167	Plant Maintenance Equipment
4199	Material Processing And Handling Equipment – Other
4200	Process Heating, Cooling, And Drying Equipment
4201	Operation And Maintenance Of Process Heating, Cooling, And Drying Equipment
4206	Schedules For Process Heating, Cooling, And Drying Equipment
4208	Commissioning Of Process Heating, Cooling, And Drying Equipment
4210	Process Heating Equipment
4211	Process Boilers
4212	Process Heaters
4213	Industrial Heat Exchangers And Recuperators
4214	Industrial Furnaces
4215	Industrial Ovens
4220	Process Cooling Equipment
4221	Process Cooling Towers
4222	Process Chillers And Coolers
4223	Process Condensers And Evaporators
4230	Process Drying Equipment
4231	Gas Dryers And Dehumidifiers
4232	Material Dryers
4299	Process Heating, Cooling, And Drying Equipment – Other
4300	Process Gas And Liquid Handling, Purification, And Storage Equipment
4301	Operation And Maintenance Of Process Gas And Liquid Handling, Purification, And Storage Equipment
4306	Schedules For Process Gas And Liquid Handling, Purification, And Storage Equipment
4308	Commissioning Of Process Gas And Liquid Handling, Purification, And Storage Equipment
4310	Gas Handling Equipment

4311	Gas Fans Blowers, And Pumps
4312	Gas Compressors
4313	Gas Process Equipment
4320	Liquid Handling Equipment
4321	Liquid Pumps
4322	Liquid Process Equipment
4330	Gas And Liquid Purification Equipment
4331	Gas And Liquid Purification Filtration Equipment
4332	Gas And Liquid Purification Process Equipment
4340	Gas And Liquid Storage
4341	Gas And Liquid Storage Equipment
4399	Process Gas And Liquid Handling, Purification, And Storage Equipment
4400	Pollution And Waste Control Equipment
4401	Operation And Maintenance Of Pollution And Waste Control Equipment
4405	Common Work Results For Pollution And Waste Control Equipment
4406	Schedules For Pollution And Waste Control Equipment
4408	Commissioning Of Pollution And Waste Control Equipment
4410	Air Pollution Control
4411	Particulate Control Equipment
4413	Gaseous Air Pollution Control Equipment
4420	Noise Pollution Control
4421	Noise Pollution Control Equipment
4430	Odor Control
4432	Odor Dispersing And Masking/Counteracting Equipment
4440	Water Pollution Control Equipment
4441	Water Pollution Containment And Cleanup Equipment
4450	Solid Waste Control And Reuse
4451	Solid Waste Collection, Transfer, And Hauling Wquipment
4455	Composting Equipmen
4460	Waste Thermal Processing Equipment
4461	Waste-to-Energy Plants
4462	Fluidize Bed Combustion Equipment
4463	Rotary Kin Incinerators
4464	Pyrolysis Equipment
4465	Hazardous Waste And Medical Waste Incinerators
4466	Hazardous Waste And Medical Waste Incinerators
4467	Heat Recovery Equipment For Waste Thermal Processing
4468	Synthesis Gas Cleanup And Handling Equipment
4499	Pollution And Waste Control Equipment - Other
4500	Industry – Specific Manufacturing Equipment
4508	Commissioning Of Industry-Specific Manufacturing Equipment

4511	Oil And Gas Extraction Equipment
4513	Mining Machinery And Equipment
4515	Food Manufacturing Equipment
4517	Beverage And Tobacco Manufacturing Equipment
4519	Textiles And Apparel Manufacturing Equipment
4521	Leather And Allied Product Manufacturing Equipment
4523	Wood Product Manufacturing Equipment
4525	Paper Manufacturing Equipment
4527	Printing And Related Manufacturing Equipment
4529	Petroleum And Coal Products Manufacturing Equipment
4531	Chemical Manufacturing Equipment
4533	Plastics And Rubber Manufacturing Equipment
4535	Nonmetallic Mineral Product Manufacturing Equipment
4537	Primary Metal Manufacturing Equipment
4539	Fabricated Metal Product Manufacturing Equipment
4541	Machinery Manufacturing Equipment
4543	Computer And Electronic Product Manufacturing Equipment
4545	Electrical Equipment, Appliance, And Component Manufacturing Equipment
4547	Transportation Manufacturing Equipment
4549	Furniture And Related Product Manufacturing Equipment
4551	Other Manufacturing Equipment
4599	Industry-Specific Manufacturing Equipment - Other
4601	Operation And Maintenance Of Water And Wastewater Equipment
4605	Common Work Results for Water And Wastewater Equipment
4606	Schedules for Water And Wastewater Equipment
4607	Packaged Water And Wastewater Equipment
4608	Commissioning of Water And Wastewater Equipment
4620	Water And Wastewater Preliminary Treatment Equipment
4621	Screening Equipment
4623	Grit Removal And Handling Equipment
4624	Grinding And Shredding Equipment
4625	Oil And Grease Separation And Removal Equipment
4630	Water And Wasterwater Clarification And Mixing Equipment
4633	Liquid Chemical Feed Equipment
4636	Dry Chemical Feed Equipment
4640	Water And Wastewater Clarification And Mixing Equipment
4641	Mixing Equipment
4643	Clarifier Equipment
4646	Sediment Removal Equipment
4650	Water And Wastewater Secondary Treatment Equipment
4651	Air And Gas Diffusion Equipment



4653	Biological Treatment Systems
4660	Water And Wastewater Advanced Treatment Equipment
4661	Filtration Equipment
4663	Demineralization Equipment
4666	Ultraviolet Equipment
4670	Water And Wastewater Residuals Handling and Treatment
4671	Residuals Thickening Equipment
4673	Residuals Stabilization
4676	Residuals Dewatering Equipment
4678	Thermal Treatment Of Residuals
4699	Water And Wastewater Equipment – Other
4800	Electric Power Generation
4801	Operation And Maintenance For Electrical Power Generation
4805	Common Work Results For Electrical Power Generation
4808	Commissioning Of Electrical Power Generation
4809	Instrumentation And Control Of Electrical Power Generation
4810	Electrical Power Generation Equipment
4811	Fossil Fuel Plant Electrical Power Generation Equipment
4812	Nuclear Fuel Plant Electrical Power Generation Equipment
4813	Hydroelectric Plant Electrical Power Generation Equipment
4814	Solar Energy Electrical Power Generation Equipment
4815	Wind Energy Electrical Power Generation Equipment
4816	Geothermal Energy Electrical Power Generation Equipment
4817	Electrochemical Energy Electrical Power Generation Equipment
4818	Fuel Cell Electrical Power Generation Equipment
4819	Electrical Power Control Equipment
4870	Electrical Power Generation Testing
4871	Electrical Power Generation Test Equipment
4899	Electrical Power Generation - Other

## Appendix B –CRM Integration XML format version 1.4 example files

### Introduction

This section contains an example of the CRM Integration XML format 1.4 file populated with sample customer data.

```
<?xml version="1.0" encoding="utf-8"?>
<Projects xmlns="https://insight.cmdgroup.com/schemas/schDataLinkConfV1.4.xsd" ExportDate="2014-08-28" Copyright="© 2016 ConstructConnect" Version="1.4">
<Project ProjectID="9209399" DataSourceID="CAN" Title="Rehabilitation Centre Alts: Centre montréalais de réadaptation" Stage="Biddate Set" URL="http://insight.
cmdgroup.com/SingleSignOn/ProjectDetails/9209399/2/" UpdateDate="2014-08-28">
  <Valuation Value="150000.00" Currency="CAD" ValueType="Staff estimate" />
  <Parameters>
    <Parameter Ownership="City" WorkType="Alteration" CommenceDate="2014-09-05" MandatoryPreBidConferenceDate="2014-09-03" ContractType="Trade ContractTrade
Contract" />
  </Parameters>
  <DocumentAvailability Plans="false" Specs="false" Addenda="false" />
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      <SubCategories>
        <SubCategory>Laboratories</SubCategory>
      </SubCategories>
    </ParentCategory>
    <ParentCategory Name="MEDICAL">
      <SubCategories>
        <SubCategory>Hospitals, Clinics</SubCategory>
        <SubCategory>Medical Offices</SubCategory>
        <SubCategory>Nursing Homes</SubCategory>
      </SubCategories>
    </ParentCategory>
  </ParentCategories>
  <StageComments>
    <StageComment>Tenders Due</StageComment>
  </StageComments>
  <Addresses>
    <Address ProjectAddressType="Project">
      <AddressLine1>5300 ch de Chambly</AddressLine1>
      <AddressLine2 />
      <City>St-Hubert</City>
      <StateProvince>QC</StateProvince>
      <ZipPostalCode>J3Y 3N7</ZipPostalCode>
      <County>Rivière-du-Loup, comté</County>
      <CountryRegion>Canada</CountryRegion>
    </Address>
  </Addresses>
  <Contracts>
    <Contract BidDate="2014-09-23" BidsTo="Owner" BidTime="14:00" BidDateAsap="false" BidDateHold="false" Classification="Roofing" Invitation="CMR-C06-0822"
BidType="Open Bidding" />
  </Contracts>
</Project>
</Projects>
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```

</Contracts>
<Companies>
  <Company Role="Owner" Name="Ctrre Montérégien Réadaptation" URL="http://insight.cmdgroup.com/SingleSignOn/CompanyDetails/399270/2" LastUpdate="2014-08-28"
CompanyID="399270" DataSourceID="CAN">
  <Contacts>
    <Contact Name="Joanne Léonard" ContactID="A82EBEFC-2DFA-11E4-9A8B-5FCE069E6E5C" />
  </Contacts>
  <Addresses>
    <Address AddressType="Street Address">
      <AddressLine1>5300 ch de Chambly</AddressLine1>
      <AddressLine2 />
      <City>St-Hubert</City>
      <StateProvince>QC</StateProvince>
      <ZipPostalCode>J3Y 3N7</ZipPostalCode>
      <County>Champlain, comté</County>
      <CountryRegion>Canada</CountryRegion>
    </Address>
  </Addresses>
  <Phones>
    <Phone PhoneType="Company Phone Number">450 676-7447</Phone>
    <Phone PhoneType="Fax Phone Number">450 676-0047</Phone>
  </Phones>
  <ParticipantRoles>
    <ParticipantRole RoleClassification="Owner" ContactName="Joanne Léonard" />
  </ParticipantRoles>
</Company>
</Companies>
<Users>
  <User UserId="abcf997f-30d2-4f96-a5c8-7747711a817a" UserName="johndatalink" UserFullName="John Hendrix" ProjectFlaggedForExport="false">
    <Queries>
      <Query QueryId="639033" QueryName="alcotex"/>
    </Queries>
  </User>
</Users>
<Details>
  <Detail DetailType="Scope"><![CDATA[Medical bldgs; roof and awnings repair (Wing C). ]]></Detail>
  <Detail DetailType="Contract Conditions"><![CDATA[Documents available through tel: 1-866-669-7326 or at 514 856-6600. TENDER DEPOSIT: 10% bid bond or 5% cert
cheque. MANDATORY SITE VISIT: September 3 at 13:30 Contractors can bid only if their principal place of business is in Québec or, when an intergovernmental agreement is applicable,
in Québec or in a province or territory under that agreement, and if they possess a license required under the bldg law (RSQ c B-1.1). ]]></Detail>
</Details>
<Notes />
<ListDate>2014-08-27</ListDate>
</Project>
<Project ProjectID="9209403" DataSourceID="CAN" Title="Townhouses, Condominium, Apartment Building: Discovery Ridge" Stage="Pre-Design" URL="http://insight.
cmdgroup.com/SingleSignOn/ProjectDetails/9209403/2/" UpdateDate="2014-08-28">
  <Valuation Value="7800000.00" Currency="CAD" ValueType="Staff estimate" />

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<Parameters>
  <Parameter Ownership="Private" WorkType="New" FloorArea="60000" Structures="5" Units="51" ContractType="General contractGeneral contract"
FloorAreaUnitofMeasure="square feet" />
</Parameters>
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    <SubCategories>
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    </SubCategories>
  </ParentCategory>
  <ParentCategory Name="MEDICAL">
    <SubCategories>
      <SubCategory>Nursing Homes</SubCategory>
    </SubCategories>
  </ParentCategory>
  <ParentCategory Name="MILITARY">
    <SubCategories>
      <SubCategory>Military Housing</SubCategory>
    </SubCategories>
  </ParentCategory>
  <ParentCategory Name="RESIDENTIAL">
    <SubCategories>
      <SubCategory>Apartments</SubCategory>
      <SubCategory>Condominiums</SubCategory>
      <SubCategory>Townhomes</SubCategory>
    </SubCategories>
  </ParentCategory>
</ParentCategories>
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  <StageComment>Contemplated</StageComment>
</StageComments>
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    <City>Corner Brook</City>
    <StateProvince>NL</StateProvince>
    <ZipPostalCode>A2H</ZipPostalCode>
    <County>Division No 5</County>
    <CountryRegion>Canada</CountryRegion>
  </Address>
</Addresses>
<Companies>
  <Company Role="Owner" Name="Sleepy Cove Developments" URL="http://insight.cmdgroup.com/SingleSignOn/CompanyDetails/867226/2" LastUpdate="2014-08-28"
CompanyID="867226" DataSourceID="CAN">

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    <Contacts>
      <Contact Name="Trina Burden" ContactID="686A1A5C-24A7-11E4-A9FC-57A2069E6E5C" />
    </Contacts>
    <Addresses>
      <Address AddressType="Street Address">
        <AddressLine1>8 Gullage Ave</AddressLine1>
        <AddressLine2 />
        <City>Corner Brook</City>
        <StateProvince>NL</StateProvince>
        <ZipPostalCode>A2H 6H6</ZipPostalCode>
        <County>Division No 5</County>
        <CountryRegion>Canada</CountryRegion>
      </Address>
    </Addresses>
    <Phones>
      <Phone PhoneType="Company Phone Number">709 634-9705</Phone>
    </Phones>
    <ParticipantRoles>
      <ParticipantRole RoleClassification="Owner" ContactName="Trina Burden" />
    </ParticipantRoles>
  </Company>
</Companies>
<Users>
  <User UserId="abcf997f-30d2-4f96-a5c8-7747711a817a" UserName="johndatalink" UserFullName="John Hendrix" ProjectFlaggedForExport="false">
    <Queries>
      <Query QueryId="639033" QueryName="alcotex"/>
    </Queries>
  </User>
</Users>
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  <Detail DetailType="Scope"><![CDATA[Apartment bldgs; new residential development to include eleven townhouse units in blocks of 3; a 40-unit condominium; and an apartment building (scope yet to be defined). ]]></Detail>
  <Detail DetailType="Status"><![CDATA[Project is preliminary. Early planning is underway in-house. Construction of the townhouse units may proceed mid-2015, pending sales. Scope of work and schedules for the condominium development and apartment building are yet to be finalized. Further update spring 2015.]]></Detail>
  <Detail DetailType="Notes"><![CDATA[http://discoveryridgenl.ca/]]></Detail>
</Details>
<RSMeansMaterialDivisions>
  <Division Description="Concrete" Code="3" MaterialCostValue="165360.00" InstallationCostValue="237900.00" TotalCostValue="403260.00">
    <Material Code="311">Concrete Forming</Material>
    <Material Code="315">Concrete Accessories</Material>
    <Material Code="321">Reinforcement Bars</Material>
    <Material Code="322">Fabric And Grid Reinforcing</Material>
    <Material Code="331">Structural Concrete</Material>
    <Material Code="335">Concrete Finishing</Material>
    <Material Code="339">Concrete Curing</Material>
  </Division>

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<Division Description="Masonry" Code="4" MaterialCostValue="140400.00" InstallationCostValue="365040.00" TotalCostValue="505440.00">
  <Material Code="401">Maintenance Of Masonry</Material>
  <Material Code="405">Common Work Results For Masonry</Material>
  <Material Code="427">Multiple-Wythe Unit Masonry</Material>
</Division>
<Division Description="Metals" Code="5" MaterialCostValue="737880.00" InstallationCostValue="294840.00" TotalCostValue="1032720.00">
  <Material Code="505">Common Work Results For Metals</Material>
  <Material Code="512">Structural Steel Framing</Material>
  <Material Code="521">Steel Joist Framing</Material>
  <Material Code="531">Steel Decking</Material>
  <Material Code="551">Metal Stairs</Material>
</Division>
<Division Description="Wood, Plastics, and Composites" Code="6" MaterialCostValue="109200.00" InstallationCostValue="66300.00" TotalCostValue="175500.00">
  <Material Code="611">Wood Framing</Material>
  <Material Code="616">Sheathing</Material>
  <Material Code="648">Wood Frames</Material>
</Division>
<Division Description="Thermal and Moisture Protection" Code="7" MaterialCostValue="84240.00" InstallationCostValue="93600.00" TotalCostValue="177840.00">
  <Material Code="721">Thermal Insulation</Material>
  <Material Code="722">Roof And Deck Insulation</Material>
  <Material Code="726">Vapor Retarders</Material>
  <Material Code="751">Built-Up Bituminous Roofing</Material>
  <Material Code="753">Elastomeric Membrane Roofing</Material>
  <Material Code="765">Flexible Flashing</Material>
  <Material Code="771">Roof Specialties</Material>
  <Material Code="791">Preformed Joint Seals</Material>
  <Material Code="792">Joint Sealants</Material>
</Division>
<Division Description="Openings" Code="8" MaterialCostValue="288600.00" InstallationCostValue="138840.00" TotalCostValue="427440.00">
  <Material Code="812">Metal Frames</Material>
  <Material Code="813">Metal Doors</Material>
  <Material Code="814">Wood Doors</Material>
  <Material Code="851">Metal Windows</Material>
  <Material Code="871">Door Hardware</Material>
</Division>
<Division Description="Finishes" Code="9" MaterialCostValue="453180.00" InstallationCostValue="767520.00" TotalCostValue="1220700.00">
  <Material Code="922">Supports For Plaster And Gypsum Board</Material>
  <Material Code="929">Gypsum Board</Material>
  <Material Code="930">Tiling</Material>
  <Material Code="965">Resilient Flooring</Material>
  <Material Code="968">Carpeting</Material>
  <Material Code="972">Wall Coverings</Material>
  <Material Code="991">Painting</Material>
</Division>

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<Division Description="Furnishings" Code="12" MaterialCostValue="165360.00" InstallationCostValue="19500.00" TotalCostValue="184860.00">  
<Material Code="1232">Manufactured Wood Casework</Material>
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</Division>
<Division Description="Conveying Equipment" Code="14" MaterialCostValue="212160.00" InstallationCostValue="84240.00" TotalCostValue="296400.00">
  <Material Code="1424">Hydraulic Elevators</Material>
  <Material Code="1428">Elevator Equipment And Controls</Material>
</Division>
<Division Description="Fire Suppression" Code="21" MaterialCostValue="26520.00" InstallationCostValue="17940.00" TotalCostValue="44460.00">
  <Material Code="2105">Common Work Results For Fire Suppression</Material>
  <Material Code="2111">Facility Fire-Suppression Water-Service Piping</Material>
  <Material Code="2113">Fire-Suppression Sprinkler Systems</Material>
</Division>
<Division Description="Plumbing" Code="22" MaterialCostValue="978900.00" InstallationCostValue="1035840.00" TotalCostValue="2014740.00">
  <Material Code="2205">Common Work Results For Plumbing</Material>
  <Material Code="2207">Plumbing Insulation</Material>
  <Material Code="2211">Facility Water Distribution</Material>
  <Material Code="2213">Facility Sanitary Sewerage</Material>
  <Material Code="2214">Facility Storm Drainage</Material>
  <Material Code="2234">Fuel-Fired Domestic Water Heaters</Material>
  <Material Code="2241">Residential Plumbing Fixtures</Material>
  <Material Code="2242">Commercial Plumbing Fixtures</Material>
</Division>
<Division Description="Heating, Ventilating, and Air Conditioning (HVAC)" Code="23" MaterialCostValue="309660.00" InstallationCostValue="177840.00"
TotalCostValue="487500.00">
  <Material Code="2305">Common Work Results For HVAC</Material>
  <Material Code="2313">Facility Fuel-Storage Tanks</Material>
  <Material Code="2321">Hydronic Piping And Pumps</Material>
  <Material Code="2352">Heating Boilers</Material>
  <Material Code="2364">Packaged Water Chillers</Material>
  <Material Code="2382">Convection Heating And Cooling Units</Material>
</Division>
<Division Description="Electrical" Code="26" MaterialCostValue="257400.00" InstallationCostValue="411840.00" TotalCostValue="669240.00">
  <Material Code="2605">Common Work Results For Electrical</Material>
  <Material Code="2624">Switchboards And Panelboards</Material>
  <Material Code="2627">Low-Voltage Distribution Equipment</Material>
  <Material Code="2628">Low-Voltage Circuit Protective Devices</Material>
  <Material Code="2632">Packaged Generator Assemblies</Material>
  <Material Code="2651">Interior Lighting</Material>
</Division>
<Division Description="Communications" Code="27" MaterialCostValue="6240.00" InstallationCostValue="13260.00" TotalCostValue="19500.00">
  <Material Code="2711">Communications Equipment Room Fittings</Material>
  <Material Code="2715">Communications Horizontal Cabling</Material>
</Division>
<Division Description="Electronic Safety and Security" Code="28" MaterialCostValue="32760.00" InstallationCostValue="11700.00" TotalCostValue="44460.00">
  <Material Code="2831">Fire Detection And Alarm</Material>
</Division>
<Division Description="Earthwork" Code="31" MaterialCostValue="9360.00" InstallationCostValue="30420.00" TotalCostValue="39780.00">
  <Material Code="3122">Grading</Material>

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<Material Code="3123">Excavation And Fill</Material>
  </Division>
</RSMaterialDivisions>
<Notes />
<ListDate>2014-08-27</ListDate>
</Project>
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## **Appendix C – CRM Integration XML format version 1.4 export schema**

### **Introduction**

This section contains a link to the CRM Integration XML format version 1.4 export schema.

### **CRM Integration XML format version 1.4 export schema**

Click on the link below to open the CRM Integration XML format version 1.4 export schema in your system's default browser:

<http://insight.cmdgroup.com/schemas/schDataLinkConfV1.4.xsd>