



Explore API Documentation

SelfService_Estimate_CostItem

Version 1.0

Last Modified: 11/14/2023

Last Modified By: Litzzy Mora



Change Log

This changelog only contains significant or notable changes to the revision. Any editorial type changes or minor changes are not included.

Revision	Change Date	Description	Modified By
1.0	3/18/2022	Initial draft	Natalie Takacs
2.0	12/22/2022	Updated pagination	Litzy Mora

Contents

Change Log.....	2
Overview	3
Relationships and Dependencies	3
API Detail.....	5
Supported Filters.....	5
Fields	5
Field Descriptions.....	8
Sample	17

Overview

The **SelfService_Estimate_CostItems** API is one of multiple APIs comprising the data contained in the Estimate Cost Item entity. A Cost Item is an item representing an activity for a scope of work being estimated. It is commonly a collection of resource employments, labor, equipment, material, etc., whose quantities are related to the amount or work or duration of the activity. The total cost of a Cost Item can be based on its detailed resource employments, or it can be a plug cost, or it can be determined from the proportional amount of an awarded quote. Cost Items have a position in a hierarchy of costs, all or which roll up to the Job level, which is the top level cost item representing the projects total estimated cost. Terminal level cost items are where all the costs in an estimate exist, either as detailed, plugged or quoted costs, and superior cost items are cost items having subordinate and/or terminal cost items belonging to them. Superior Cost Items do not contribute to the cost of the estimate but rather roll up the costs of all cost items belonging to them.

The Estimate Cost Item entity mainly includes three tables, *SelfService_Estimate_CostItems*, *SelfService_Estimate_CostItemsCalculatedValues* and *SelfService_Estimate_CostItemsReferencedData*.

The *SelfService_Estimate_CostItems* table contains Cost Items as created and managed within the Estimate application.

The *SelfService_Estimate_CostItemsCalculatedValues* table contains Cost Item data commonly calculated in some way for display purposes in the application and can provide a convenient way to reference data as it appears in the application without needing to transform it for display purposes.

The *SelfService_Estimate_CostItemsReferencedData* contains the values of the many foreign key lookup values stored in reference tables and can provide a convenient way to reference data as it appears in the application without needing to lookup the foreign key values from a lookup table.

Monetary values stored in the database are stored in their base currency and corresponding values displayed in the application have been modified based on the conversion factor of the items assigned currency.

Quantity values stored in the database are stored in their base measurement units and corresponding values displayed in the application are potentially modified based on the conversation factor of the items unit of measure

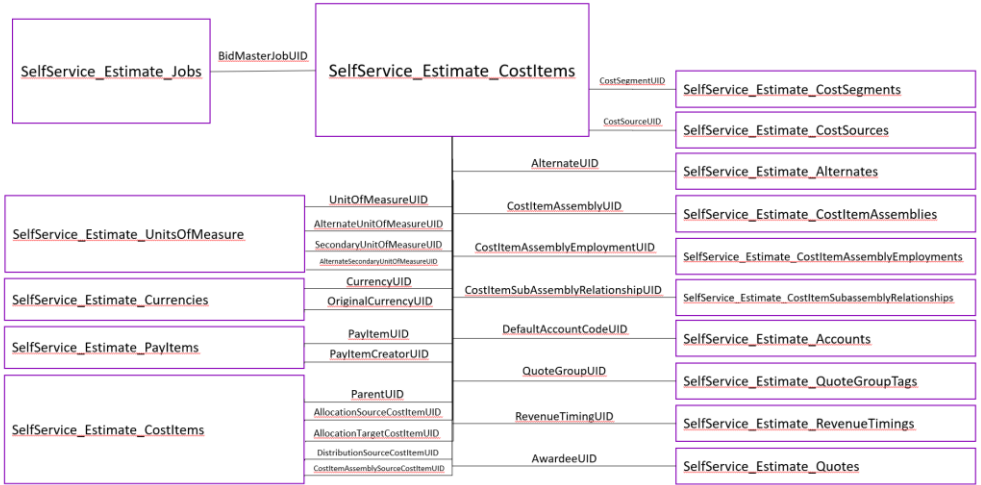
Relationships and Dependencies

From: Table	To: Table	Relationship	Cardinality ¹	Comment
CostItems(CI)	Jobs (J)	CI.BidMasterJobUID = J.BidMasterJobUID	M:1	
CostItems(CI)	UnitsOfMeasure (UM)	CI.UnitOfMeasureUID = UM.UID	M:1	
CostItems(CI)	UnitsOfMeasure (BUM)	CI.AlternateUnitOfMeasureUID = BUM.UID	M:1	
CostItems(CI)	Currencies (C)	CI.CurrencyUID = C.UID	M:1	
CostItems(CI)	Currencies (OC)	CI.OriginalCurrencyUID = OC.UID	M:1	
CostItems(CI)	PayItems (PI)	CI.PayItemUID = PI.UID	M:1	

¹ 1:M = One to Many, 1:1 = One to One, M:1 = Many to one

CostItems(CI)	PayItems (PIC)	CI.PayItemCreatorUID = PIC.UID	M:1	
CostItems(CI)	CostItems (CIP)	CI.ParentUID = CIP.UID	M:1	
CostItems(CI)	CostSegments (CSG)	CI.CostSegmentUID = CSG.UID	M:1	
CostItems(CI)	CostSources (CS)	CI.CostSourceUID = CS.UID	M:1	
CostItems(CI)	Alternates (A)	CI.AlternateUID = A.UID	M:1	
CostItems(CI)	CostItems (ASCI)	CI.AllocationSourceCostItemUID = ASCI.UID	M:1	
CostItems(CI)	CostItems (ATCI)	CI.AllocationTargetCostItemUID = ATCI.UID	M:1	
CostItems(CI)	CostItems (DSCI)	CI.DistributionSourceCostItemUID = DSCI.UID	M:1	
CostItems(CI)	UnitsOfMeasure (SUoM)	CI.SecondaryUnitOfMeasureUID = SUoM.UID	M:1	
CostItems(CI)	UnitsOfMeasure (SBUoM)	CI.AlternateSecondaryUnitOfMeasureUID = SBUoM.UID	M:1	
CostItems(CI)	CostItemAssemblies (CIA)	CI.CostItemAssemblyUID = CIA.UID	M:1	
CostItems(CI)	CostItemAssemblyEmployments (CIAEMP)	CI.CostItemAssemblyEmploymentUID = CIAEMP.UID	M:1	
CostItems(CI)	CostItems (CIAS)	CI.CostItemAssemblySourceCostItemUID = CIAS.UID	M:1	
CostItems(CI)	CostItemSubAssemblyRelationships (CIASR)	CI.CostItemSubAssemblyRelationshipUID = CIASR.UID	M:1	
CostItems(CI)	Accounts (A)	CI.DefaultAccountCodeUID = A.UID	M:1	
CostItems(CI)	QuoteGroupTags (QGT)	CI.QuoteGroupUID = QGT.UID	M:1	
CostItems(CI)	RevenueTimings (RT)	CI.RevenueTimingUID = RT.UID	M:1	
CostItems(CI)	Quotes (Q)	CI.AwardeeUID = Q.UID	M:1	

SelfService_Estimate_CostItems



API Detail

Direction	From Project Suite	
Pagination	5,000 Rows	
Frequency	All Reporting APIs are used by calling a GET method at an interval determined by the customer. InEight suggests using these APIs on an infrequent basis (once per day) to avoid potential performance impact to live systems when the returned data set could be large.	
Trigger Method(s)	All default OData filters are supported	
Average Payload Size	Depends on date range selected	
APIM Name	SelfService_Estimate_CostItem	
Data Refresh/Delta/Incremental Loads		
Project Suite	Starting Version	21.5
	Ending Version	N/A

Supported Filters

All default OData filters are supported by this API.

Fields

Name	Type	CharMaxLength	NumericPrecision	DatePrecision	Product	PK
EstimateCostItemId	bigint	8	19	0	Estimate	
EstimateCostItemUF	uniqueidentifier	16	0	0	Estimate	
EstimateCostItemUID	uniqueidentifier	16	0	0	Estimate	
AllocationProportionField	nvarchar	200	0	0	Estimate	X
AllocationSourceCostItemUID	uniqueidentifier	16	0	0	Estimate	
AllocationTargetCostItemUID	uniqueidentifier	16	0	0	Estimate	
AllocationType	int	4	10	0	Estimate	
AlternateSecondaryUnitOfMeasureUID	uniqueidentifier	16	0	0	Estimate	
AlternateUID	uniqueidentifier	16	0	0	Estimate	
AlternateUnitOfMeasureUID	uniqueidentifier	16	0	0	Estimate	
AwardeeDBEType	int	4	10	0	Estimate	
EstimateAwardeeUID	uniqueidentifier	16	0	0	Estimate	
CanBeDeleted	bit	1	1	0	Estimate	
Code	nvarchar	200	0	0	Estimate	
CostItemAssemblyEmploymentUID	uniqueidentifier	16	0	0	Estimate	
CostItemAssemblySourceCostItemUID	uniqueidentifier	16	0	0	Estimate	
CostItemAssemblyUID	uniqueidentifier	16	0	0	Estimate	
CostItemSubAssemblyRelationshipUID	uniqueidentifier	16	0	0	Estimate	
CostItemType	int	4	10	0	Estimate	
EstimateCostSegmentUID	uniqueidentifier	16	0	0	Estimate	
EstimateCostSourceUID	uniqueidentifier	16	0	0	Estimate	
EstimateCurrencyUID	uniqueidentifier	16	0	0	Estimate	
DataSource	nvarchar	400	0	0	Estimate	
DefaultAccountCodeUID	uniqueidentifier	16	0	0	Estimate	
DefaultAccountCode2UID	uniqueidentifier	16	0	0	Estimate	
DefaultAccountCode3UID	uniqueidentifier	16	0	0	Estimate	
Description	nvarchar	-1	0	0	Estimate	
DistributionSourceCostItemUID	uniqueidentifier	16	0	0	Estimate	
HiddenSort	nvarchar	200	0	0	Estimate	
ImmediateCost	float	8	53	0	Estimate	
IsAllocated	bit	1	1	0	Estimate	

IsAllocationEnabled	bit	1	1	0	Estimate
IsAllocationPayItemInherited	bit	1	1	0	Estimate
IsAllowAsBuiltChoiceByUser	bit	1	1	0	Estimate
IsAutoInclude	bit	1	1	0	Estimate
IsCBSItem	bit	1	1	0	Estimate
IsDelta	bit	1	1	0	Estimate
IsDependentSubjectItemLeaf	bit	1	1	0	Estimate
IsLeaf	bit	1	1	0	Estimate
IsLocked	bit	1	1	0	Estimate
IsPBSItem	bit	1	1	0	Estimate
IsScheduled	bit	1	1	0	Estimate
IsScheduleRolledUp	bit	1	1	0	Estimate
IsScheduleWbsByUser	bit	1	1	0	Estimate
IsSuspended	bit	1	1	0	Estimate
IsSuspendedByUser	bit	1	1	0	Estimate
LaborEquipmentTotalCost	float	8	53	0	Estimate
LastChanged	datetime	8	23	3	Estimate
LastChangedBy	nvarchar	100	0	0	Estimate
OriginalCurrencyUID	uniqueidentifier	16	0	0	Estimate
ParentUID	uniqueidentifier	16	0	0	Estimate
PayItemCreatorUID	uniqueidentifier	16	0	0	Estimate
EstimatePayItemUID	uniqueidentifier	16	0	0	Estimate
PayQuantity	float	8	53	0	Estimate
PhaseCode	nvarchar	100	0	0	Estimate
PredefinedID	int	4	10	0	Estimate
QuotedBond	float	8	53	0	Estimate
QuotedBusinessPhoneNumber	nvarchar	50	0	0	Estimate
QuotedCompanyName	nvarchar	400	0	0	Estimate
QuotedConditions	float	8	53	0	Estimate
QuotedContactName	nvarchar	160	0	0	Estimate
QuotedPrice	float	8	53	0	Estimate
QuotedTaxes	float	8	53	0	Estimate
QuotedTotal	float	8	53	0	Estimate
EstimateQuoteGroupUID	uniqueidentifier	16	0	0	Estimate
ReferenceNumber	nvarchar	200	0	0	Estimate
RevenuePercent	float	8	53	0	Estimate
EstimateRevenueTimingUID	uniqueidentifier	16	0	0	Estimate
SavedQuantityRatio	float	8	53	0	Estimate
SavedUMPerHour	float	8	53	0	Estimate

SaveID	int	4	10	0	Estimate
SecondaryQuantity	float	8	53	0	Estimate
SecondaryUnitOfMeasureUID	uniqueidentifier	16	0	0	Estimate
TakeOffQuantity	float	8	53	0	Estimate
TotalCost	float	8	53	0	Estimate
UniqueIdentifier	uniqueidentifier	16	0	0	Estimate
UnitCost	float	8	53	0	Estimate
EstimateUnitOfMeasureUID	uniqueidentifier	16	0	0	Estimate
WbsCode	nvarchar	200	0	0	Estimate
BidMasterJobUID	uniqueidentifier	16	0	0	Estimate
LastUpdateID	int	4	10	0	Estimate
IsActive	bit	1	1	0	Report
CreatedByld	bigint	8	19	0	Report
CreatedDate	datetimeoffset	10	34	7	Report
ModifiedByld	bigint	8	19	0	Report
ModifiedDate	datetimeoffset	10	34	7	Report

Field Descriptions

Name	Unique identifier assigned to each record in the table	
EstimateCostItemId	System generated field, for internal use only	N/A
EstimateCostItemUF	Unique identifier assigned to each record in the table	1
EstimateCostItemUID	Unique identifier for a Cost Item record. Not visible in the interface.	EC614499-750F-4592-B75D-DAC50F4E3E66
AllocationProportionField	For an Allocated Cost Item being allocated proportionally (AllocationType=2), this field indicates the selection in the corresponding Dropdown field.	TotalCost
AllocationSourceCostItemUID	For an Allocated Cost Item, Identifier of the <i>Allocation Source Cost Item</i> from the CostItems table.	F8F5136B-D22F-4E0E-A2AC-D2D40636F480
AllocationTargetCostItemUID	For an Allocated Cost Item, Identifier of the <i>Allocation Target Cost Item</i> from the CostItems table.	954B950A-B86A-4C51-AFE7-5FEA6E82D665
AllocationType	Indicates the selected state of the <i>How do you want to determine allocation percentages</i> group box found on the Allocation tab of the Cost Item record.	0 – by Quantity 1 – by Percentage 2 – Proportionally based on 3 – by Unit Cost
AlternateSecondaryUnitOfMeasureUID	Identifier of a Cost Items Secondary Quantity Base Unit of Measure entry in the UnitsOfMeasure table. Each Unit of Measure is related to the systems base	33AA9BC9-3822-49CA-AEE9-E674167059E1

	Unit of Measure in order to convert between quantities having the same measurement type (Length, Area, Volume, etc.). For a Cost Items Secondary Quantity selected Unit of Measure, the Alternate Secondary Unit of Measure is its corresponding Base Unit of Measure. This value is not visible in the application.	
AlternateUID	Identifier of the Cost Items assigned <i>Alternate Code</i> value from the Alternates table. Found on the Cost Item record and CBS Register.	3F3B2F4F-C14F-4ECA-BA08-B1D1BA785DBC
AlternateUnitOfMeasureUID	Identifier of the Cost Items Base Unit of Measure entry in the UnitsOfMeasure table. Each Unit of Measure is related to the systems base Unit of Measure in order to convert between quantities having the same measurement type (Length, Area, Volume, etc.). For a Cost Items selected Unit of Measure, the Alternate Unit of Measure is its corresponding Base Unit of Measure. This value is not visible in the application.	368653B4-9B1C-48AD-8453-F39177660063
AwardeeDBEType	For a Cost Item whose cost source is an awarded to a Quote, indicates the minority classification, if any.	0 – None 1 – MBE 2 – WBE 4 – DBE 8 – OBE1 16 – OBE2 32 – OBE3 64 – OBE4 128 – OBE5 256 – OBE6 512 – OBE7
EstimateAwardeeUID	For a Cost Item whose cost source is an awarded to a Quote, identifies the awarded Quote record from the Quotes table. Value is set based on awarding a quote to a Cost Item in Quote Compare and the Quotes Seller can be seen on the Cost Item in the Awardee field.	80BEE273-F2E0-45F8-A496-36580D0A973D
CanBeDeleted	Flag used to determine if a Cost Item can be deleted. Not visible in the application.	1 – True 0 – False
Code	Cost Items <i>Optional Code</i> field value. Can be used to assign an identifying field value other than the CBS Position Code. By default, this will be the value of the Assigned Pay Item Number for jobs where Cost Items are locked to Pay Items and for non-locked Cost Items it will be the CBS Position Code. These initial values can be modified by the user.	6410100

CostItemAssemblyEmploymentUID	For Cost Items in the CBS Register that are part of an employed Cost Item Assembly, identifies the Cost Item Assembly Record that created the Cost Items.	8EDBBE70-085D-4356-A767-553DE7619ABA
CostItemAssemblySourceCostItemUID	For Cost Items in the CBS Register that are part of an employed Cost Item Assembly, identifies the disconnected Cost Item Record that is created as a part of the Cost Item Assembly record.	C8EBEA4E-5EB9-4928-8D03-F1DB1C26435D
CostItemAssemblyUID	For Cost Items defined on a Cost Item Assembly record, identifies the Cost Item Assembly Record in the Cost Item Assembly register.	0003F147-3D34-46AA-B527-B29561D53B51
CostItemSubAssemblyRelationshipUID	For Subassemblies in a Cost Item Assembly record or employment, identifies the record defining the relationship between a subassembly and its parent assembly	67951AC4-A86B-4DEA-B34F-B8C0481771EF
CostItemType	Value indicating the Cost Items Type. Not visible in the application.	1 – Cost Item 2 – Dependent Cost Item 3 – Markup record 4 – Price percent Add-On 5 – Bond Cost Item 6 – Job Financing Cost Item
EstimateCostSegmentUID	Identifier of the Cost Item records assigned <i>Cost Segment</i> value from the CostSegments table. Found on the Cost Item record and CBS Register.	FCC64399-776E-4E5B-862E-24E401D68CED
EstimateCostSourceUID	Identifier of the Cost Item records assigned <i>Cost Source</i> value from the CostSources table. Found on the Cost Item record and CBS Register.	98C08F48-5AEE-4ED3-A2EC-FBAB057B3035
EstimateCurrencyUID	Identifier of the Cost Item records assigned <i>Currency</i> value from the Currencies table. Found on the Cost Item record and CBS Register.	58687BB8-8107-4B88-AE04-F236C3050E58
DataSource	Value of the Cost Items <i>Data Source</i> field. Field is read-only in the application and is commonly used to store either the source Job Code when importing data using the Bid Wizard or a value indicating the originating source when importing data from external application.	HDLibrary
DefaultAccountCodeUID	Identifier of the Cost Items <i>Account Code</i> assignment from the Accounts table. Found on the Cost Item record and CBS Register.	4E078B25-D4C4-4837-9E46-76AF3CC5CF7F
DefaultAccountCode2UID	Field for internal use only	
DefaultAccountCode3UID	Field for internal use only	
Description	Cost Items <i>Description</i> field value. Found on the Cost Item record and CBS Register.	Furnish & Haul Base Material

Commented [AC1]: @Cyrus can you confirm that this field is no longer used?

Commented [AC2]: @Cyrus Can you confirm that this field is no longer used?

DistributionSourceCostItemUID	For an Allocated Cost Item, Identifier of the <i>Distribution Source Cost Item</i> from the CostItems table.	F8F5136B-D22F-4E0E-A2AC-D2D40636F480
HiddenSort	Value indicating the ordinal position of the Cost Items in the CBS Register when the register is sorted by the CBS position code. Can be used for sorting. Not visible in the application.	1
ImmediateCost	Indicates the value of costs that contribute to the jobs estimated total cost. Values are only included for terminal Cost Items. Can be used when summing items where the recordset includes both superior and subordinate cost items	32024
IsAllocated	Flag used to determine if a Cost Item is being allocated. Allocating a Cost Item triggers the suspension of the Allocation Source Cost Item.	1 – True 0 – False
IsAllocationEnabled	Indicates the state of the <i>Allocate this Item's Cost</i> checkbox field found on the Allocation tab of the Cost Item record. The value of this field will be true (1) when the checkbox is checked	1 – True 0 – False
IsAllocationPayItemInherited	Indicates the state of the <i>Allocation distributions inherit target Pay Items Assignment</i> checkbox field found on the Allocation tab of the Cost Item record. The value of this field will be true (1) when the checkbox is checked	1 – True 0 – False
IsAllowAsBuiltChoiceByUser	Indicates if the Cost Items <i>Allow As-Built</i> field has been set to a value other than 0, which corresponds to a selection of "None". Not visible in the application.	1 – True 0 – False
IsAutoInclude	For internal use only	1 – True 0 – False
IsCBSItem	Indicates if the Cost Item appears in the CBS Register. Certain Cost Items are stored in the CostItems table but are not included in the jobs total cost, such as Cost Items defined on a Cost Item Assembly in the Cost Item Assembly register. This field can be used to identify those Cost Items not appearing in the CBS Register. Not visible in the application.	1 – True 0 – False
IsDelta	Indicates if the Cost Item is "Delta" or has attributes of the Cost Item that are different from the corresponding Job Properties attributes, such as Work/Shift arrangement values. A "Delta" Cost Item is identified with the Delta icon appearing in the record selector of the Cost Item record in the	1 – True 0 – False

Commented [AC3]: @Cyrus, help me out, I forgot what triggers the use of this field

	<p>CBS Register. Hovering over the Delta icon will display a tooltip indicating the specific field(s) that trigger the Delta state. Additionally those field(s) triggering the Delta will appear in the systems <i>Attention</i> color on the Cost Item Record. The value of this field will be true (1) when the Cost Item is "Delta". Not visible in the application.</p>	
IsDependentSubjectItemLeaf	<p>Indicates if the Cost Item can appear in the dependency tab of a Dependent Cost Item. Not directly visible in the application.</p>	<p>1 – True 0 – False</p>
IsLeaf	<p>Indicates if the Cost Item is a terminal item. Terminal items are the items whose costs contribute to the total cost of the estimate. Non-terminal items are commonly superior Cost Items and rolling up costs of the subordinate items, but do not contribute their costs to the total cost of the estimate. Not directly visible in the application.</p>	<p>1 – True 0 – False</p>
IsLocked	<p>Indicates if the Cost Item is Locked. Not directly visible in the application.</p>	<p>1 – True 0 – False</p>
IsPBSItem	<p>Indicates if the Cost Item appears in the Price Breakdown Structure (PBS) register. Certain Cost Items are stored in the CostItems table but are only available in the PBS and are not included in the CBS Register, such as the Direct and Indirect Cost Markup records. This field can be used to identify those Cost Items appearing in the PBS Register. Not visible in the application.</p>	<p>1 – True 0 – False</p>
IsScheduled	<p>Indicates the state of the <i>Schedule</i> checkbox field found on the Schedule data block of the Cost Item record. The value of this field will be true (1) when the checkbox is checked</p>	<p>1 – True 0 – False</p>
IsScheduleRolledUp	<p>Indicates the state of the <i>Roll Up Schedule</i> checkbox field found on the Schedule data block of the Cost Item record. The value of this field will be true (1) when the checkbox is checked</p>	<p>1 – True 0 – False</p>
IsScheduleWbsByUser	<p>Indicates the state of the <i>WBS Element</i> checkbox field found on the Schedule data block of the Cost Item record. The value of this field will be true (1) when the checkbox is checked</p>	<p>1 – True 0 – False</p>
IsSuspended	<p>Indicates if the state of the Suspend checkbox field found on the CBS Register for a given Cost Item record. Suspended Cost Item can include retain all the data that defines the cost of a Cost Item while not contributing its</p>	<p>1 – True 0 – False</p>

	costs to the estimates total cost. There are multiple ways of suspending cost items in the application. This field value is not directly visible in the application but the suspended state of a cost item is visible by the data fields displaying the systems suspended color, grey by default.	
IsSuspendedByUser	Indicates if a suspended Cost Item has been suspended by the user. Cost Items can be suspended by checking the Suspend checkbox field in the CBS Register or using the Toggle Suspend command on a Cost Item record. Not visible in the application.	1 – True 0 – False
LaborEquipmentTotalCost	Indicates the sum value of a Cost Items Labor, Owned Equipment and Rented Equipment cost. Not visible in the application.	38134.96
LastChanged	Date and time the Cost Item record was last updated. Found on the Cost Item Setup data block of the Cost Item record.	2016-11-02 18:19:52.713
LastChangedBy	Windows user account of the user who last updated the Cost Item record. Found on the Cost Item Setup data block of the Cost Item record.	wmfarr
OriginalCurrencyUID	Identifier of the Cost Item records original assigned <i>Currency</i> value from the Currencies table. Found on the Cost Item record and CBS Register.	58687BB8-8107-4B88-AE04-F236C3050E58
ParentUID	Identifier of the Cost Items <i>Parent Cost Item</i> as used to establish the cost item hierarchy in the CBS Register.	4442B4CC-F255-4C1A-BC46-F99455C28CE3
PayItemCreatorUID	In a job where cost items are locked to pay items, creation of a pay item automatically creates a corresponding cost item. This field identifies the <i>Pay Item</i> used to trigger the creation of the locked Cost Item. Not visible in the application.	21FEB76D-EBEA-4EE0-93F0-4C226F2CB53F
EstimatePayItemUID	Identifier of the Cost Items <i>Pay Item</i> assignment value from the PayItems table. Found on the Cost Item record and CBS Register.	3DEA9D6F-976E-43A1-8B1A-C1066DDBDF69
PayQuantity	Value of the Cost Items <i>Pay Quantity</i> field. Value is read only and can also be found using the Cost Items assigned Pay Item OriginalPayQuantity field. Since quantities are stored in their base values, divide this value by the Pay Items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Cost Item record and CBS Register.	40000

PhaseCode	Value of the Cost Items <i>Phase Code</i> field. Found on the Cost Item record and CBS Register.	1030
PredefinedID	Identifies the type of Cost Item corresponding to the list provided here. Not visible in the application.	0 - Standard Cost Item 1 - Job row 2 - Direct Cost AddOn 3 - Indirect Cost AddOn 4 - Direct Cost Escalation 5 - Indirect Cost Escalation 6 - General Expense 7 - Job Management 8 - Markup 9 - Direct Cost Markup 10 - Indirect Cost Markup 11 - Price% AddOn 12 - Bond 13 - Finance Expense 14 – Dependent Direct Cost 15 – Dependent Indirect Cost 16 – Dependent Man Hours 17 – Dependent Equipment Hours 18 – Dependent Resource Utilization 19 – Dependent Assembly Utilization 20 – Disconnected Cost Items 21 – Detailed Forecast Item 22 – Assembly Component 23 – Assembly Employment Preview
QuotedBond	For a Cost Item whose cost source is an awarded to a Quote, this field indicates the cost per unit of the quotes bond amount. Since quantities are stored in their base values, multiply the bond cost per unit by the cost items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Quote tab of the Cost Item record.	0.52
QuotedBusinessPhoneNumber	For a Cost Item whose cost source is an awarded to a Quote, this is the <i>Phone</i> field value as found on the Quote tab of the Cost Item record.	111-332-4321
QuotedCompanyName	For a Cost Item whose cost source is an awarded to a Quote, this is the <i>Company</i> field value as found on the Quote tab of the Cost Item record and in the Awardee column on the CBS Register.	Example Sub #4 DBE
QuotedConditions	For a Cost Item whose cost source is an awarded to a Quote, this field indicates the cost per unit of the quotes condition amount. Since quantities are	0.5

Commented [AC4]: @Cyrus, please confirm, Presumably identifies a system type Cost Item? 0-Standard Cost Item; 1-Job; 2-Direct Cost AddOn; 3-Indirect Cost AddOn; 4-Direct Cost Escalation; 5-Indirect Cost Escalation; 6-General Expense; 7-Job Mgmt; 11-Price% AddOn; 12-Bond; 13-Finance Expense

	stored in their base values, multiply the condition cost per unit by the cost items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Quote tab of the Cost Item record.	
QuotedContactName	For a Cost Item whose cost source is an awarded to a Quote, this is the <i>Contact</i> field value as found on the Quote tab of the Cost Item record.	Jack, Larry
QuotedPrice	For a Cost Item whose cost source is an awarded to a Quote, this field indicates the cost per unit of the quote amount. Since quantities are stored in their base values, multiply the quotes cost per unit by the cost items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Quote tab of the Cost Item record.	13.00
QuotedTaxes	For a Cost Item whose cost source is an awarded to a Quote, this field indicates the cost per unit of the quotes tax amount. Since quantities are stored in their base values, multiply the tax cost per unit by the cost items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Quote tab of the Cost Item record.	0.72
QuotedTotal	For a Cost Item whose cost source is an awarded to a Quote, this field indicates the cost per unit of the total quoted amount. Since quantities are stored in their base values, multiply the quotes cost per unit by the cost items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Quote tab of the Cost Item record.	14.76
EstimateQuoteGroupUID	Identifier of the Cost Items <i>Quote Group Tag</i> assignment value from the QuoteGroupTags table. Found on the Cost Item record and CBS Register.	5D414007-89E0-42FD-ADB6-E5ACE1686A89
ReferenceNumber	Value of the Cost Items <i>Reference Number</i> field. Field is read-only in the application and is commonly used to store either the source jobs CBS Position Code when importing data using the Bid Wizard or a foreign key field value when importing data from external application.	10.6
RevenuePercent	Value of the <i>Earnings %</i> field. Field is calculated based on the Earnings	82.13

	Timing selection for each Cost Item and is found in the CBS Register.	
EstimateRevenueTimingUID	Identifier of the Cost Items <i>Earnings Timing</i> field value from the RevenueTimings table. Found in the CBS Register.	6E1BBA8B-C158-473C-958F-1D4B1692E412
SavedQuantityRatio	Value of a subordinate Cost Items saved quantity ratio. When a superior cost items Forecast (T/O) Quantity becomes zero, the subordinate cost items get scaled to zero as well. When the superior cost item quantity is restored to a non-zero value, this field indicates the ratio of subordinate to superior cost item quantity so the subordinate quantities can be restored to a non-zero value. Not visible in the application	1
SavedUMPerHour	Value of the Cost Items saved productivity rate, expressed in UM/Hour. When there are no duration based resource employments or the Forecast (T/O) Quantity of the Cost Item is zero, all productivity rates set to zero, and this value is used to persist a productivity rate for the Cost Item so when a duration based resource employment is added of the Forecast (T/O) Quantity becomes something other than zero, the productivity rates can be set back to the saved value. Not visible in the application.	400
SaveID	Field for internal use only	230
SecondaryQuantity	Value of the Cost Items <i>Secondary Quantity</i> field. Since quantities are stored in their base values, divide this value by the items corresponding Secondary Quantity Unit of Measure Factor to obtain the applications display value. Must be a value. Found on the Cost Item record and CBS Register.	24300
SecondaryUnitOfMeasureUID	Identifier of the Cost Items <i>Secondary Quantity Unit of Measure</i> in the UnitsOfMeasure table. Found on the Cost Item record and CBS Register.	75D17C37-3EB2-4C14-933F-D44C80462D88
TakeOffQuantity	Value of the Cost Items <i>Forecast (T/O) Qty</i> field. Since quantities are stored in their base values, divide this value by the items corresponding Unit of Measure Factor to obtain the applications display value. Must be a value. Found on the Cost Item record and CBS Register.	45000

Commented [AC5]: used to determine if a record has changed and needs to be updated when a save is invoked, prevents updating all data on a save event



TotalCost	Cost Items <i>Total Cost</i> field value. Found on the Cost Item record and CBS Register.	519513.3
UniqueIdentifier	Field for internal use only	7BA29035-7E95-47F0-85AF-36094850F1F0
UnitCost	Cost Items <i>Unit Cost</i> field value. Since quantities are stored in their base values, multiply the Unit Cost by the items corresponding Unit of Measure Factor to obtain the applications display value. Found on the Cost Item record and CBS Register.	11.54
EstimateUnitOfMeasureUID	Identifier of the Cost Items <i>Unit of Measure</i> in the UnitsOfMeasure table. Found on the Cost Item record and CBS Register.	312AC3B7-373B-4369-B56C-AFC6D412BDAE
WbsCode	Cost Items <i>CBS Position Code</i> field value. Is automatically calculated based on the Cost Items hierarchical position in the Cost Breakdown Structure.	3.1
BidMasterJobUID	Identifier of the Job record from the Jobs table in the BidMaster database. This field is not unique in this table but is unique to an instance of a Job. Not visible in the application.	5376AA5E-8C85-43E8-9ACB-D7422000E832
LastUpdateID	Field for internal use only	663
IsActive	Indicates if record is active. Please note: records will become inactive if a user un-syncs a job from Estimate application	1
CreatedByld	System generated Id, will always represent the system, not actual users. This field is for internal use only.	1
CreatedDate	Date/timestamp record is entered	2022-02-21 17:47:05.4923658 +00:00
ModifiedByld	System generated Id, will always represent the system, not actual users. This field is for internal use only.	1
ModifiedDate	Date/timestamp record is modified	2022-02-21 17:47:05.4923658 +00:00

Commented [AC6]: @Cyrus, help me with this one. It appears to sometimes be the same as the Cost Item UID, but other times it is not, is this used for the Warehouse or something?

Commented [AC7]: used in conjunction with SaveID and used to determine if a record has changed and needs to be updated when a save is invoked, prevents updating all data on a save event

Sample

```
{ "EstimateCostItemId":7469,"EstimateCostItemUF":"9e77038f-e3d9-04c3-27c6-50945e6d8dfb","EstimateCostItemUID":"0038ef59-9f67-44e2-bd73-0030416560f1","AllocationProportionField":null,"AllocationSourceCostItemUID":null,"AllocationTargetCostItemUID":null,"AllocationType":0,"AlternateSecondaryUnitOfMeasureUID":null,"AlternateUID":"f0c8090c-bd08-4e95-80c8-85cd78cf642c","AlternateUnitOfMeasureUID":"bcf09be4-7394-496c-8255-1371562e23f8","AwardeeDBType":0,"EstimateAwardeeUID":null,"CanBeDeleted":true,"Code":null,"CostItemAssemblyEmploymentUID":null,"CostItemAssemblySourceCostItemUID":null,"CostItemAssemblyUID":null,"CostItemSubAssemblyRelationshipUID":null,"CostItemType":1,"EstimateCostSegmentUID":"fcc64399-776e-4e5b-862e-
```



```

24e401d68ced", "EstimateCostSourceUID": "98c08f48-5aee-4ed3-a2ec-
fbab057b3035", "EstimateCurrencyUID": "e2bd7a42-c8f3-442a-bb96-
919961ff54c6", "DataSource": null, "DefaultAccountCodeUID": "bbl3eb1-1a75-4be8-9817-
ad0f2f143661", "DefaultAccountCode2UID": null, "DefaultAccountCode3UID": null, "Descript
ion": "VT-09001 - Offload Pipe
Handle", "DistributionSourceCostItemUID": null, "HiddenSort": "1.8.2.7.1", "ImmediateCos
t": 2180.6454180285709, "IsAllocated": false, "IsAllocationEnabled": false, "IsAllocation
PayItemInherited": false, "IsAllowAsBuiltChoiceByUser": true, "IsAutoInclude": false, "Is
CBSItem": true, "IsDelta": false, "IsDependentSubjectItemLeaf": true, "IsLeaf": true, "IsLo
cked": false, "IsPBSItem": false, "IsScheduled": false, "IsScheduleRolledUp": false, "IsSch
eduleWbsByUser": false, "IsSuspended": false, "IsSuspendedByUser": false, "LaborEquipment
TotalCost": 2180.6454180285709, "LastChanged": "2017-12-
21T17:58:59.01Z", "LastChangedBy": "Shannon.Pechar", "OriginalCurrencyUID": "e2bd7a42-
c8f3-442a-bb96-919961ff54c6", "ParentUID": "7120c1f8-6da1-4e9b-bff7-
a14c3c23fc43", "PayItemCreatorUID": null, "EstimatePayItemUID": null, "PayQuantity": 80.3
5, "PhaseCode": "1556", "PredefinedID": 0, "QuotedBond": 0.0, "QuotedBusinessPhoneNumber":
null, "QuotedCompanyName": null, "QuotedConditions": 0.0, "QuotedContactName": null, "Quot
edPrice": 0.0, "QuotedTaxes": 0.0, "QuotedTotal": 0.0, "EstimateQuoteGroupUID": null, "Refe
renceNumber": null, "RevenuePercent": 0.024778514631993, "EstimateRevenueTimingUID": "96
48e86b-ed80-43b4-bea0-
0376360ecad6", "SavedQuantityRatio": 0.0, "SavedUMPerHour": 10.5, "SaveID": 1861, "Seconda
ryQuantity": 0.0, "SecondaryUnitOfMeasureUID": null, "TakeOffQuantity": 80.35, "TotalCost
": 2180.6454180285709, "UniqueIdentifier": "0038ef59-9f67-44e2-bd73-
0030416560f1", "UnitCost": 27.13933314285714, "EstimateUnitOfMeasureUID": "5ebe496b-
97cf-4166-b797-c8830afbcbdb", "WbsCode": "1.8.2.7.1", "BidMasterJobUID": "9e4fec66-
7cbe-4021-9ab5-
50a41f08ed0a", "LastUpdateID": 83, "IsActive": false, "CreatedBy": 1, "CreatedDate": "202
1-12-02T20:24:43.2813696Z", "ModifiedBy": 1, "ModifiedDate": "2021-12-
16T17:53:19.3867198Z"}
    
```

Data Validation

This data can be validated by viewing Cost Items in the CBS Register or opening a Cost Item Record from the CBS Register

Figure 1: Cost Items in the CBS Register



Position Code	Description	Optional Code	Forecast (YTD) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Hours (Duration driven)	Hours (Non-Duration driven)	Hours (Total)	Days (Duration driven)	Days (Non-Duration driven)
	JOB		20.00	Mile	\$294,411.92	\$5,888,238.43	5,508.23		59.36	5,508.23	682.70
	Prime Bond	PRIME BOND	1.00	Lump Sum	\$47,207.53	\$47,207.53					
	Price % Add-On	PRICE % ADD...	1.00	Lump Sum	\$296,167.80	\$296,167.80					
	Job Financing	FINANCE EXPE...	1.00	Lump Sum	\$0.00	\$0.00					
	Indirect Cost Escalation	INDIRECT COS...	1.00	Lump Sum	\$0.00	\$0.00					
	Direct Cost Escalation	DIRECT COST ...	1.00	Lump Sum	\$18,837.35	\$18,837.35					
	Indirect Cost Add-On	INDIRECT COS...	1.00	Lump Sum	\$0.00	\$0.00					
	Job Management & Equipment	JOB MANAGEM...	1.00	Lump Sum	\$157,096.28	\$157,096.28	800.00	0.00	800.00		100.00
	General Expense	GENERAL EXPE...	1.00	Lump Sum	\$4,200.00	\$4,200.00	0.00	0.00	0.00		0.00
	Direct Cost Add-On	DIRECT COST ...	1.00	Lump Sum	\$104,789.58	\$104,789.58					
1	Rehabilitation	411 0100	1.00	Lump Sum	\$11,969.51	\$11,969.51	80.00	0.00	80.00		10.00
2	Clearing & Grubbing	201 0102	50.00	Acre	\$3,918.50	\$39,184.50	80.00	0.00	80.00		10.00
3	Unexcavated Excavation	202 0183	50,000.00	Cubic Yard	\$4.68	\$233,915.81	291.67	44.00	335.67		36.46
3.1	Excavation	3.1	50,000.00	Cubic Yard	\$3.00	\$149,522.88	125.00	44.00	169.00		15.63
3.2	Embarkment	3.2	50,000.00	Cubic Yard	\$1.68	\$83,992.94	166.67	0.00	166.67		20.83
4	Aggregate Base	303 5912	45,000.00	Ton	\$15.40	\$692,928.99	1,240.00	0.00	1,240.00		155.00
4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	\$11.54	\$519,513.30	360.00	0.00	360.00		45.00
4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	\$0.19	\$75,948.36	320.00	0.00	320.00		40.00
4.3	Install Aggregate Base	4.3	45,000.00	Ton	\$2.17	\$97,567.33	560.00	0.00	560.00		70.00
4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	\$1.63	\$73,460.92	240.00	0.00	240.00		30.00
4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	\$0.06	\$24,106.42	320.00	0.00	320.00		40.00
5	Asphalt Concrete Hot Mix Type A	303 4263	35,000.00	Ton	\$42.62	\$1,491,980.59	466.67	0.00	466.67		52.50
5.1	Furnish & Haul Hot Mix	5.1	35,000.00	Ton	\$39.27	\$1,374,562.54	233.33	0.00	233.33		29.17
5.2	Install Hot Mix Type A	5.2	35,000.00	Ton	\$3.34	\$117,418.05	233.33	0.00	233.33		23.33
6	36 Inch RCP Culvert Class III	41305 0464	1,024.00	Linear Feet	\$69.85	\$71,525.51	149.30	15.36	164.66		18.66
6.1	Furnish RCP Materials	6.1	1,024.00	Linear Feet	\$55.75	\$56,877.72	0.00	0.00	0.00		0.00
6.2	Excavate RCP Trench	6.2	1,858.56	Cubic Yard	\$4.51	\$8,379.59	37.17	0.00	37.17		4.65
6.3	Install RCP Pipe	6.3	1,024.00	Linear Feet	\$11.74	\$12,017.60	22.77	15.36	38.13		4.10
106						\$5,888,238.43	5,508.23	59.36	5,508.23		682.70

Figure 2: Cost Item Record



Training Job - Reporting - Training Job - Maricopa County No. 1112924 - Estimate

File Setup Estimate Quote Price Execution System Actions

Split Default Data Blocks View Tools

Display Parent Information Highlight Unique (Delta) Resource Fields Insert Subordinate Trench Calculator

Display Billing Rate Highlight Unique (Delta) Cost Item Fields Edit Resource Periods Shift / Rate Calculator

Break Cost Allocation Link

Cost Breakdown Structure (CBS) Register Cost Item Record

CBS Codes: Optional Code: Description: Forecast (TFO) Qty: Unit of Measure: Unit Cost: Total Cost: Currency:

5.1 5.1 Furnish & Haul Hot Mix 35,000.00 Ton \$39.27 \$1,374,562.54 U.S. Dollar

PI Assignment: PI Line Number: PI Description: Cost Segment: Pay Quantity: Cost Source: Alternate:

303 4263 50 Asphalt Concrete Hot Mix Type A Direct Cost 38,000.00 Detail BAGE

Cost Item Summary Detail: \$39.27 Plug: \$0.00 Quote: \$0.00 Allocation

Drag columns here to group Saved view: Previous View

Row Number	%	Code	Resource Assembly	Description	Quantity	Waste % (Less Waste)	Quantity	Unit of Measure	Productivity Factor	Work Hours	Pay Hours	Unit Cost	Total (Fore)
1		MAAM		Asphalt Mix (Finish)	35,000.00	5.00	36,750.00	Ton				\$31.50	\$1,111.50
2		LT1		Teamster	7.00		7.00	Each	1.00	1,633.33	1,633.33	\$30.62	\$209.37
3		ETDT		Dump Truck	7.00		7.00	Each	1.00	1,633.33	1,633.33	\$102.20	\$715.54

Production

Duration Driven Resources Qty Driven Hourly Resources Cost Item Summary

Customize Display

Days: 29.17 0.00 29.17

Shifts: 29.17 0.00 29.17

Hours: 233.33 0.00 233.33

Man-Hours: 1,633.33 0.00 1,633.33

Equip-Hours: 1,633.33 0.00 1,633.33

Ton/Day: 1,200.00 0.00 1,200.00

Ton/Shift: 1,200.00 0.00 1,200.00

Ton/Hour: 150.00 0.00 150.00

Ton/Man-Hr: 21.43 0.00 21.43

Ton/Equip-Hr: 21.43 0.00 21.43

Days/Ton: 0.00 0.00 0.00

Shifts/Ton: 0.00 0.00 0.00

Hours/Ton: 0.01 0.00 0.01

Man-Hours/Ton: 0.05 0.00 0.05

Equip-Hours/Ton: 0.05 0.00 0.05

Man Counts: 7.00

Equip Counts: 7.00

OK Cancel < Prev Next >

As-Entered Currency As-Entered Units Training Job - Reporting - Training Job - Maricopa County No. 1112924 Accrued Costs Off

