



**BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS**

Award Contract Grant

Requested Board Meeting Date: 02/04/20

or Procurement Director Award

* = Mandatory, information must be provided

***Contractor/Vendor Name/Grantor (DBA):**

Fields Consulting Services, Inc. (Headquarters: Ventura, CA)

***Project Title/Description:**

Maximo Upgrade Services

***Purpose:**

Award: Master Agreement No. MA-PO-20-109. This Master Agreement is for an initial term of one (1) year in the award amount of \$1,700,000.00 (including sales tax) and includes four (4) one-year renewal options.

Administering Departments: Finance and Risk Management and Information Technology

***Procurement Method:**

Pursuant to Pima County Procurement Code 11.12.020, Competitive sealed proposals, Solicitation No. RFP-PO-1900005 was conducted. Four (4) responses were received. Award is to the responsive and responsible respondent submitting the highest scoring proposal.

PRCUID: 336624

Attachments: Notice of Recommendation for Award and Master Agreement.

***Program Goals/Predicted Outcomes:**

Maximo Upgrade to Version 7.6.0.10 or newer, Maximo-Advantage Interface Replacement, and Maximo-Advantage Interface Added Functionality.

***Public Benefit:**

Delivers a reliable Work Order Management System that enable employees to conduct Pima County business.

***Metrics Available to Measure Performance:**

Adherence to Scope of Work, and successful completion of project milestones.

***Retroactive:**

No

JAN 13 2020 10:44:00 AM PCD/KTF/PO

Procure Dept 01/13/20 AM 10:20

To COB: 1-9-20 (.)

Reush

Ver. 1

pgs. 128

Contract / Award Information

Document Type: MA Department Code: PO Contract Number (i.e., 15-123): 20-109

Effective Date: 02/04/20 Termination Date: 02/03/21 Prior Contract Number (Synergen/CMS):

Expense Amount: \$* 1,700,000.00 Revenue Amount: \$

*Funding Source(s) required: General Fund

Funding from General Fund? Yes No If Yes \$ % 100

Contract is fully or partially funded with Federal Funds? Yes No

*Is the Contract to a vendor or subrecipient? Vendor

Were insurance or indemnity clauses modified? Yes No

If Yes, attach Risk's approval

Vendor is using a Social Security Number? Yes No

If Yes, attach the required form per Administrative Procedure 22-73.

Amendment / Revised Award Information

Document Type: Department Code: Contract Number (i.e., 15-123):

Amendment No.: AMS Version No.:

Effective Date: New Termination Date:

Prior Contract No. (Synergen/CMS):

Expense or Revenue Increase Decrease Amount This Amendment: \$

Is there revenue included? Yes No If Yes \$

*Funding Source(s) required:

Funding from General Fund? Yes No If Yes \$ %

Grant/Amendment Information (for grants acceptance and awards) Award Amendment

Document Type: Department Code: Grant Number (i.e., 15-123):

Effective Date: Termination Date: Amendment Number:

Match Amount: \$ Revenue Amount: \$

*All Funding Source(s) required:

*Match funding from General Fund? Yes No If Yes \$ %

*Match funding from other sources? Yes No If Yes \$ %

*Funding Source:

*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?

Contact: Eric Welch, Procurement Officer

Department: Procurement Telephone: 520-724-9510

Department Director Signature/Date: Daniel Chant 01/07/2020

Deputy County Administrator Signature/Date: 1/9/2020

County Administrator Signature/Date: C. Dannebaum 1/9/2020
(Required for Board Agenda/Addendum Items)



REVISED

NOTICE OF RECOMMENDATION FOR AWARD

Date of Issue: January 3, 2020

The Procurement Department hereby issues formal notice to respondents to Solicitation No. RFP-PO-1900005 for Maximo Upgrade Services that the following listed respondent will be recommended for award as indicated below. The award action is scheduled to be performed by the Board of Supervisors on or after February 4, 2020.

Award is recommended to the highest scoring proposal.

<u>AWARDEE NAME</u>	<u>AWARD AMOUNT</u>
Fields Consulting Services, Inc.	\$1,700,000.00 (including sales tax)

OTHER RESPONDENT NAMES

Cohesive Solutions, Inc.
Intelligent Technology Solutions, LLC
Jones Lang LaSalle Americas, Inc.

*This revision does not extend the expiration date of the protest period.

Issued by: Eric Welch, Procurement Officer

Telephone Number: 520-724-9510

This notice is in compliance with Pima County Procurement Code §11.12.010(C) and §11.20.010(C).

Copy to Pima County SBE via e-mail at SBE@pima.gov.

MJF



PIMA COUNTY

MASTER AGREEMENT

PIMA COUNTY, ARIZONA

**THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES
CONTRACT EXECUTION**

Master Agreement No: 2000000000000000109

MA Version: 1

Page: 1 of 2

Description: Maximo Upgrade Services

I S S U E R	Pima County Procurement Department
	130 W. Congress St. 3rd Fl
	Tucson AZ 85701
	Issued By: ERIC WELCH
	Phone: 5207249510
	Email: eric.welch@pima.gov

T E R M S	Initiation Date: 02-04-2020					
	Expiration Date: 02-03-2021					
	<table> <tr> <td>NTE Amount:</td> <td>\$1,700,000.00</td> </tr> <tr> <td>Used Amount:</td> <td>\$0.00</td> </tr> </table>		NTE Amount:	\$1,700,000.00	Used Amount:	\$0.00
	NTE Amount:	\$1,700,000.00				
	Used Amount:	\$0.00				

V E N D O R	Fields Consulting Services Inc	Contact: Tim Fields
	DBA: Fields Consulting Services Inc	Phone: 805-701-6586
	701 E SANTA CLARA	Email: tim@fields-consulting-services.com
	Ventura CA 93001	Terms: 3.00 %
		Days: 15

Shipping Method:	Vendor Method
Delivery Type:	
FOB:	FOB Dest, Freight Prepaid
Modification Reason	
This Master Agreement is for an initial term of one (1) year in the award amount of \$1,700,000.00 (including sales tax) and includes four (4) one-year renewal options.	
Attachment: Offer Agreement.	

This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.



PIMA COUNTY

MASTER AGREEMENT DETAILS

Master Agreement No: 2000000000000000109

MA Version: 1

Page: 2 of 2

Line	Description					
1	Maximo Upgrade Services					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$0.00			
2	Maximo Upgrade Services-Free Form Line - Hardware					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %		\$0.00			
3	Maximo Upgrade Services-Free Form Line - Software					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %		\$0.00			
4	Maximo Upgrade Services-Free Form Line - Services					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %		\$0.00			

OFFER AGREEMENT (15 PAGES)

1. INTENT:

This document is intended to establish a Master Agreement ("MA") to provide Pima County ("County") with Maximo Upgrade to Version 7.6.0.10, Maximo-Advantage Interface Replacement, and Maximo-Advantage Interface Added Functionality by issue of Delivery Order ("DO") or Delivery Order Maximo ("DOM").

As defined by the Pima County Standard Terms and Conditions included herein, this contract is non-exclusive and County may terminate it for any reason without penalty or cost.

All Goods and Services that Contractor offers or provides pursuant to the contract will conform to the requirements defined by or referred to by the solicitation documents including *Solicitation Amendments, Instructions to Offerors, Standard Terms and Conditions, this Offer Agreement (15 Pages), and Exhibits A – M*, all of which are incorporated herein.

This document, including all attachments and documents incorporated by reference, constitutes the entire contract between the parties pertaining to the subject matter hereof, and merges all prior or contemporaneous agreements and understandings, oral or written, herein.

2. CONTRACT TERM, RENEWALS, EXTENSIONS & REVISIONS:

The initial term of the MA will be for a one (1) year period and include four (4) one-year renewal options that the parties may exercise upon written agreement as follows:

Contract extensions, renewals, or revisions will occur through the issuance by County to Contractor of a revised Master Agreement document setting forth the requested changes. Failure by Contractor to object in writing to the proposed revisions, terms, conditions, scope modifications and/or specifications within ten (10) calendar days of issuance by County will signify acceptance of all such changes by Contractor and the revision will be binding upon the parties, effective on the date of issuance.

3. CONTRACTOR MINIMUM QUALIFICATIONS:

The Contractor certifies that it is competent, willing and responsible for performing the services or providing the products in accordance with all requirements of the solicitation and this contract. Contractor certifies that it possesses all licenses required by applicable Agencies to satisfy the requirements of this contract. See **Exhibit B: Minimum Qualifications Verification Form (4 Pages)**.

4. PRODUCT OR SERVICE SPECIFICATIONS & SCOPE:

A. Overview

For the purposes of this request for proposal (RFP), the following clarifying statements will apply:

<i>All Environments</i>	Development (DEV), Testing (TEST), User Acceptance Testing (UAT), Production (PROD), and Training (TRAIN) used in Pima County.
<i>Deliverables</i>	A conclusive result accepted by Pima County that satisfies a set of provided requirements.
<i>Consulting</i>	An offeror's activity to provide deliverables through verbal, written, or physical methods including but not limited to opinions, direction, coding, documents, software, hardware, training, meetings, and presentations.
<i>Non-prod</i>	Development (DEV), Testing (TEST), User Acceptance Testing (UAT), and Training (TRAIN) are either individually or collectively considered the non-production (non-prod) environments.
<i>Prod</i>	Only the Production (PROD) is considered the production environment.

i. This request for proposal (RFP) has three (3) major deliverables:

1. *Maximo Upgrade to 7.6.0.10 in All Environments*
2. *Maximo-Advantage Interface Replacement*
3. *Maximo-Advantage Interface Added Functionality*

ii. The expected goals and outcomes are:

1. *Maximo Upgrade to 7.6.0.10 in All Environments:* Successful upgrade of Pima County's work order management software Maximo by IBM to version 7.6.0.10 with the current cumulative IFIX at time of upgrade. Upgrade shall maintain all currently installed modules (with upgrades to each as needed) including increasing functionality of the Scheduler and Graphical assignment module to each include Optimizer, and add on the AnyWhere module and configure it to integrate with Maximo Spatial. Upgrade shall retain current configurations and Pima County customizations. See **Exhibit F: Pima County Specifications For Maximo Upgrade** for the definition of complete and required deliverables.
2. *Maximo-Advantage Interface Replacement:* The interface between Maximo 7.6.0.10 and Advantage 3.10.0.1 within Pima County is replaced with a newly developed product. See **Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement** for the definition of complete and required deliverables.
3. *Maximo-Advantage Interface Added Functionality:* New functionalities are added to the newly developed interface between Maximo 7.6.0.10 and Advantage 3.10.0.1 within Pima County. See **Exhibits H-M** for the definition of complete and required deliverables for each functionality. These functionalities will be engaged and implemented at Pima County's discretion.

iii. Metrics available to measure performance:

1. *Maximo Upgrade to 7.6.0.10 in All Environments:* See section III. Deliverables, in **Exhibit F: Pima County Specifications For Maximo Upgrade**
2. *Maximo-Advantage Interface Replacement:* See section III. Deliverables, in **Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**.
3. *Maximo-Advantage Interface Added Functionality:* See the Deliverables section in **Exhibits H-M**.

Any hardware, software, or associated licenses whose purchase is charged to Pima County in support of this contract becomes the property of Pima County and will be surrendered as such to Pima County upon project completion. The contractor will disclose all purchases of software, hardware, and any subcontracting to Pima County. All of the contractor's subcontractors in support of this contract will be held to the same constraints as the prime contractor with no exception.

B. General Specifications

1. *Maximo Upgrade to 7.6.0.10 in All Environments*

The prospective contractor will provide consultation such that a successful upgrade from version 7.6.0.0 to version 7.6.0.10 with the current cumulative IFIX at time of upgrade, including retaining current Pima County configurations and customizations, and retaining currently installed add-on modules (which, as necessary, are also upgraded to meet minimum requirements to successfully work with base product 7.6.0.10), in all Pima County environments. Additionally, provide consultation on configuring the Scheduler module and Graphical assignment module to each include Optimizer, and on installation of the AnyWhere module and subsequent configuration to integrate with Maximo Spatial, in all Pima County environments. See **Exhibit F: Pima County Specifications For Maximo Upgrade** for complete project requirements, detailed specifications, and support requirements.

2. *Maximo-Advantage Interface Replacement*

This deliverable will provide fully functioning extract-transform-load (ETL) interface between Pima County's installation of CGI's Advantage 3.10 and IBM's Maximo 7.6.0.10. The contractor will collect requirements, design, test, demonstrate, and deliver the interface to Pima County. The contractor will train Pima County staff on the product, and will provide all necessary product documentation to support hand-off of ownership and all maintenance procedures of the interface to Pima County, including the interface's source code, test code, test

harnesses, build scripts, build tool specifications, and build documentation. See **Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement** for complete project requirements, detailed specifications, and support requirements.

The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County's upon the County's acceptance and approval of the integrated functionality.

3. *Maximo-Advantage Interface Added Functionality*

This deliverable encompasses the design and integration of six (6) new functionalities into the new interface between Pima County's installation of CGI's Advantage 3.10 and IBM's Maximo 7.6.0.10 (per section Overview.B.2 above). The contractor will collect requirements, design, test, demonstrate, and integrate the new functionalities into Pima County's non-production environments. This includes training Pima County staff on the product and providing all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County. See **Exhibits H-M** for complete project requirements, detailed specifications, and support requirements.

The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County's upon the County's acceptance and approval of the integrated functionality.

C. Item Specifications

1. *Maximo Upgrade to 7.6.0.10 in All Environments*

Pima County seeks consultation in successfully upgrading its work order management software Maximo by IBM to version 7.6.0.10 with the current cumulative IFIX at time of upgrade. The upgrade will include maintaining all current Pima County configurations and customizations, maintaining all currently installed modules (each upgraded as needed to be able to successfully function with the upgraded Maximo version), configuring the Scheduler module and Graphical assignment module to each include Optimizer, and installing the AnyWhere module and configuring it to integrate with Maximo Spatial. The upgrade will be performed in all Pima County environments. **Exhibit F: Pima County Specifications For Maximo Upgrade**, lists complete requirements and functional specifications for this upgrade.

2. *Maximo-Advantage Interface Replacement*

Pima County seeks to replace the interface between its IBM Maximo asset tracking system and its CGI Advantage financial ERP system.

This new interface is intended to go live in tandem with Pima's production upgrade to Maximo 7.6.0.10. See **Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**, lists complete requirements and functional specifications for this integration project.

3. *Maximo-Advantage Interface Added Functionality*

Pima County seeks to add new functionalities to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system.

These new functionalities are intended to go live after the newly developed interface as outlined in section Overview.C.2 is fully functional. Contractor is to separately price within their proposal each of the six (6) functionalities below.

1) *Add Grant Costs to Maximo Transactions*

The addition of grant information to Maximo transactions will enable process transactions for departments that are funded by grants. **Exhibit H: Add Grant Costs to Maximo Transactions**, lists complete requirements and functional specifications for this new integration.

2) *Charging to the General Ledger String for Non-Inventory Items*

The Maximo application must provide the ability to create a purchase requisition for non-stock items charged directly to a valid general ledger (GL) string. The solution has to work for Type 1 Purchase Requisitions and Type 2 Purchase Requisitions. **Exhibit I: Charging to the General Ledger (GL) String for Non-Inventory Items**, lists complete requirements and functional specifications for this new integration.

- 3) *Require General Ledger Account Validation in Maximo*
Documents in Maximo can be charged directly to a general ledger (GL) string. There is no check to confirm the GL string used is valid or correct until the transaction integrates to Advantage Financial where it may fail with errors if the string is determined to be invalid. An up-front check that identifies and remedies any mistakes when the GL string is entered errors and increases efficiency. **Exhibit J: Require General Ledger (GL) Account Validation in Maximo**, lists complete requirements and functional specifications for this new integration.
- 4) *Manufacturer, Model, and Catalog Number Fields Maximo Integration*
In Maximo, the Catalog Number will be maintained in the Master Agreement Contract commodity line(s). In Advantage Financial, this field is called the Manufacturer Part Number. These fields are not currently mapped nor integrated between Maximo and Advantage Financial. The Manufacturer, Model, and Catalog Number fields will be maintained in the Maximo Inventory Vendor component based on the same security that is currently set up in Pima County's production environment. They will be integrated to Manufacturer, Model Number, and Manufacturer Part Number fields on the Master Agreement (MA) Contract commodity lines in Advantage. **Exhibit K: Manufacturer, Model, and Catalog Number Fields Maximo Integration**, lists complete requirements and functional specifications for this new integration.
- 5) *Prevent Work Orders From Being Closed Prematurely*
The system currently allows a work order to be closed when it is referenced on active documents. There are no system checks to see if there are open purchase orders or unused material/labor charges when the system closes. When end users close work orders prematurely, associated transactions are rejected both in Advantage and Maximo which then results in failed transactions. **Exhibit L: Prevent Work Orders From Being Closed Prematurely**, lists complete requirements and functional specifications for this new integration.
- 6) *Rotating Assets*
Rotating assets are items that are interchangeable and/or repairable. Such assets can be lawn mowers, pumps, fire extinguishers, keyboards, or computer displays to name a few. In order to use Rotating Assets, it is necessary to set up a Repair Location which is not a Storeroom. The existing ABI implemented in Pima County does not satisfactorily handle Rotating Assets. In some cases additional steps to be taken and records need to be manually edited to correct system-generated errors. **Exhibit M: Rotating Assets**, lists complete requirements and functional specifications for this new integration.

5. OFFER ACCEPTANCE AND ORDER RELEASES:

County will accept offer and execute this contract by issue of a MA to be effective on the document's date of issue without further action by either party. The MA will document the term of the agreement.

Pursuant to the executed MA, County departments requiring the goods or services defined herein will issue a DO or DOM to the Contractor. County will furnish the DO or DOM to Contractor via facsimile, e-mail or telephone. **If County gives the order verbally, the County Department issuing the order will transmit a confirming order document to Contractor within five (5) business days of the date it gives the verbal order.**

Contractor must not supply materials or services that are not specified on the MA and are not documented or authorized by a DO or DOM at the time of provision. County accepts no responsibility for control of or payment for materials or services not documented by a County DO or DOM.

Contractor will establish, monitor, and manage an effective contract administration process that assures compliance with all requirements of this contract. In particular, Contractor will not provide goods or services in excess of the executed contract items, item quantity, item amount, or contract amount without prior written authorization by contract revision that County has properly executed and issued. Any items Contractor provides in excess of those stated in the contract are at Contractor's own risk. Contractor will decline verbal requests to deliver items in excess of the contract and will report all

such requests in writing to the County Procurement Department within one (1) workday of the request. The report must include the name of the requesting individual and the nature of the request.

6. ACCEPTANCE OF SERVICES:

The County Department designated on the issued order (DO or DOM) will accept services only in accordance with this contract. Such acceptance is a prerequisite to the commencement of payment terms.

7. COMPENSATION & PAYMENT:

Please complete **Exhibit A: Cost Proposal (4 Tabs)**

The MA issued to accept Contractor's offer will define the not-to-exceed amount of the contract.

Contractor is required to comply with and satisfy all requirements of this solicitation, which includes the *Instructions to Offerors, Standard Terms and Conditions, Exhibit A, and Offer Agreement*. County will make no payments for items not in the contract.

County reserves the right to increase or decrease quantities and amounts. County makes no guarantee regarding actual orders for items or quantities during the term of the agreement. County is not responsible for Contractor inventory or order commitment.

Unless the parties otherwise agree in writing, all pricing will be *F.O.B. Destination & Freight Prepaid Not Billed ("F.O.B. Destination")*. Contractor will deliver and unload products or services at the destination(s) that the delivery article of this contract or accepted *Order* indicates. The offered costs must include all freight costs.

Although an order may not fully define State and City sales tax, County will pay such taxes as are DIRECTLY applicable to County and Contractor invoices such taxes as a separate line item. Contractor must not include such taxes in the item unit price.

Price Warranty. Contractor will give County the benefit of any price reduction before actual time of shipment.

Price Escalation. All unit prices include compensation for Contractor to implement and actively conduct cost and price control activities. Pricing will remain firm during the initial year of the contract term after which the parties may consider price increases no more frequently than once per year. Contractor will submit a written request to County that includes supporting documents justifying requested increases at least ninety (90) days prior to the renewal date. Contractor will provide evidence, cite sources, demonstrate specific conditions and document how those conditions affect the cost of its performance, and identify specific efforts Contractor has taken to control and reduce those and other costs to avoid the need to increase prices. County will review proposed pricing and determine if it is allowable, fair and reasonable, and in the best interest of County to accept the proposal. County reserves the right to continue, accept or reject the price proposal, or terminate and re-solicit the contract.

All pricing will conform to Pima County's Living Wage ordinance if applicable, including required annual adjustments of the wage.

Standard payment terms are net thirty (30) days from the date of valid invoice document and do not commence until the later of 1) the receiving County Department receives goods or services into County's payment system or 2) County Financial Operations receives and verifies Contractor's invoice.

OPTIONAL EARLY PAYMENT DISCOUNT TERM: Pima County Administrative Procedure No. 22-35 Section 2.2.4 defines County's practice regarding discounts for early payment. Contractor offers the following discounts to those prices to be used for all orders issued pursuant to this contract. County will utilize the existing payment code that best matches that offered and does not exceed the offered discount percentage. Payment days cannot be less than ten (10) calendar days. Contractor will submit valid invoice document consistent with the associated DO or DOM to County Finance Department at least seven (7) calendar days prior to the date on which the discounted payment is due. If desired, for any order issued pursuant with this contract, Contractor may offer early payment discounts that exceed this Standard Early Payment Discount.

Standard Early Payment Discount Percent: 3 % if payment tendered within 15 Days as above.

Contractor will submit Request(s) for Payment or Invoices to the location and entity defined by County's DO or DOM document.

All Invoice documents will reference the County's DO or DOM number under which the services or products were ordered. **ALL** Invoice line items will utilize the item description, precise unit price and unit of measure defined by the County's order document. County may return invoices that include line items or unit prices that do not match those documented by the County's order to Contractor unprocessed for correction. **Contractor will not accept orders, or provide services or products that cumulatively exceed the contract amount.**

Contractor will provide detailed documentation in support of payment requests, which should be consistent with and not exceed County's DO or DOM document. Contractor will bill County within one (1) month after the date on which Contractor's right to payment accrues ("Payment Accrual Date"), which, unless this contract specifically provides otherwise, is the date Contractor delivers goods, performs services or incurs costs. Invoices must assign each billed amount to an appropriate line item of County's order and document each Payment Accrual Date. County may refuse to pay any amount that Contractor bills in which does not conform to County's DO or DOM document. County will refuse to pay any amount that Contractor bills more than six (6) months after the Payment Accrual Date, pursuant to A.R.S. § 11-622(C).

8. DELIVERY:

As defined by the Standard Terms, "On-Time" delivery is an essential part of the consideration Contractor will give COUNTY under the contract. Contractor will make delivery in accordance with the Instructions to Offerors, Standard Terms and Conditions and to the location(s) referenced on the DO or DOM or Contract.

9. TAXES, FEES, EXPENSES:

Pursuant to IRS Publication 510, County is exempt from federal excise taxes for goods. County is subject to State and City sales tax. County will pay no separate charges for delivery, drayage, express, parcel post, packing, insurance, license fees, permits, costs of bonds, surcharges, or bid preparation unless the contract expressly includes such charges and the solicitation documents itemize them.

10. OTHER DOCUMENTS:

Contractor and COUNTY in entering into this contract have relied upon information provided or referenced by Pima County Solicitation No. RFP-PO-1900005 including the Request for Proposal, Instructions to Offerors, Standard Terms and Conditions, Solicitation Amendments, Contractor's Proposal, documents submitted by Contractor or References to satisfy Minimum Qualifications and any other information and documents submitted by Contractor's response to County's Solicitation. These documents are hereby incorporated into and made a part of this Contract as if set forth in full herein, to the extent not inconsistent with the provisions of this contract.

11. INSURANCE:

The Insurance Requirements herein are minimum requirements for this Contract and in no way limit, the indemnity covenants contained in this Contract. Contractor's insurance shall be placed with companies licensed in the State of Arizona and the insureds shall have an "A.M. Best" rating of not less than A- VII. Pima County in no way warrants that the minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

Minimum Scope and Limits of Insurance:

Contractor shall procure and maintain, until all contractual obligations have been discharged, the insurance coverage with limits of liability not less than stated below. Pima County in no way warrants that the minimum insurance limits contained herein are sufficient to protect the Contractor from liabilities that arise out of the performance of the work under this Contract. The Contractor is free to purchase additional insurance that required by the County. If necessary, Contractor may obtain commercial umbrella or excess insurance to satisfy the County's Insurance Requirements.

Commercial General Liability (CGL): Occurrence Form with limits of \$2,000,000 Each Occurrence and \$2,000,000 General Aggregate. Policy shall include bodily injury, property damage, personal/advertising injury and products – completed operations.

Business Automobile Liability: Bodily Injury and Property Damage for any owned, hired, and/or non-owned automobiles used in the performance of this Contract with a Combined Single Limit (CSL) of \$1,000,000 each accident.

Workers' Compensation (WC) and Employers' Liability: Arizona Statutory requirements and Employer's Liability coverage with policy limits of \$1,000,000 and each accident and each person - disease.

Technology Errors and Omissions (E&O) Insurance: The Technology E&O coverage shall have minimum limits not less than \$2,000,000 each Claim and \$2,000,000 Annual Aggregate.

- a. Such insurance shall cover any, and all errors, omissions, or negligent acts in the delivery of products, services and/or licensed programs under this contract.
- b. Coverage shall include or shall not exclude settlement and/or defense of claims involving intellectual property, including but not limited to patent or copyright infringement.
- c. Certificate of Insurance shall identify if the Tech E&O insurance required by this Contract is a claims-made policy. Contractor shall warrant that continuous coverage will be maintained as outlined in Required Insurance. A Claims-Made policy is acceptable.

Network Security (Cyber)/Privacy Insurance: Coverage shall have minimum limits not less than \$2,000,000 Each Claim with a \$2,000,000 Annual Aggregate. The insurance shall include, but not be limited to, coverage for third party claims and losses with respect to network risks (such as data breaches, unauthorized access or use, ID theft, theft of data) and invasion of privacy regardless of the type of media involved in the loss of private information, crisis management and identity theft response costs. This should also include breach notification costs, credit remediation and credit monitoring, defense and claims expenses, regulatory defense costs plus fines and penalties, cyber extortion, computer program and electronic data restoration expenses coverage (data asset protection), network business interruption, computer fraud coverage, and funds transfer loss.

Claim-Made Insurance Coverage: If any part of the Required Insurance is written on a claims-made basis, any policy retroactive date must precede the effective date of this Contract, and Contractor must maintain such coverage for a period of not less than three (3) years following Contract expiration, termination or cancellation.

Additional Insurance Requirements:

The policies shall include, or be endorsed to include, as required by this written agreement, the following provisions:
Additional Insured: The General Liability and Business Automobile Liability Policies shall each be endorsed to include Pima County, its departments, districts, boards, commissions, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Contractor.

Subrogation: The General Liability, Business Automobile Liability and Workers' Compensation policies shall each contain a waiver of subrogation endorsement in favor of Pima County, and its departments, districts, boards, commissions, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Contractor.

Primary Insurance: The Contractor's policies shall stipulate that the insurance afforded the Contractor shall be primary and that any insurance carried by Pima County, its agents, officials, or employees shall be excess and not contributory insurance.

Insurance provided by the Contractor shall not limit the Contractor's liability assumed under the indemnification provisions of this Contract.

Notice of Cancellation:

Each Required Insurance policy must provide, and certificates specify, that County will receive not less than thirty (30) days advance written notice of any policy cancellation, except 10-days prior notice is sufficient when the cancellation is for non-payment of a premium.

Verification of Coverage:

Contractor shall furnish Pima County with certificates of insurance as required by this Contract. An authorized representative of the insurer shall sign the certificates.

All certificates and endorsements, as required by this written agreement, are to be received and approved by Pima County before work commences. Each insurance policy required by this Contract must be in effect at, or prior to, commencement of work under this Contract. Failure to maintain the insurance coverages or policies as required by this Contract, or to provide evidence of renewal, is a material breach of contract.

All certificates required by this Contract shall be sent directly to the appropriate County Department. The Certificate of Insurance shall include the Pima County project or contract number and project description on the certificate. Pima County reserves the right to require complete copies of all insurance policies required by this Contract at any time.

Neither the County's failure to obtain a required insurance certificate or endorsement, the County's failure to object to a non-complying insurance certificate or endorsement, or the County's receipt of any other information from the Contractor, its insurance broker(s) and/or insurer(s), constitutes a waiver of any of the Insurance Requirements.

Approval and Modifications:

The Pima County Risk Manager may approve a modification of the Insurance Requirements without the necessity of a formal Contract amendment, but the approval must be in writing.

12. ACKNOWLEDGEMENT of SOLICITATION AMENDMENT(S):

Contractor acknowledges that it incorporates the following solicitation amendments in its offer and this contract:

Amendment #	Date	Amendment #	Date	Amendment #	Date
AMENDMENT NO. 1	July 10	AMENDMENT NO. 3	Aug 1		
AMENDMENT NO. 2	July 29	AMENDMENT NO. 4	Aug 2		

13. SMALL BUSINESS ENTERPRISE (SBE) CERTIFICATION:

Is your firm SBE-certified as defined by the solicitation "Instruction to Offerors" section? Yes No (Select one)

If 'Yes', have you included your certification document? Yes No (Select one)

NOTE: If you do not submit the SBE Certification document with your bid, County will not apply the SBE Preference.

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14. **BID/OFFER CERTIFICATION:**

CONTRACTOR LEGAL NAME: Fields Consulting Services Inc

BUSINESS ALSO KNOWN AS: _____

MAILING ADDRESS: 22809 Pacific Coast Hwy

CITY/STATE/ZIP: Malibu, CA 90265

REMIT TO ADDRESS: 509A Park Rd

CITY/STATE/ZIP: Ojai, CA 93023

CONTACT PERSON NAME/TITLE: Tim Fields

PHONE: (805) 701-6586 **FAX:** (805) 830-1749

CONTACT PERSON EMAIL ADDRESS: tim@fields-consulting-services.com

EMAIL ADDRESS FOR ORDERS & CONTRACTS: info@fields-consulting-services.com

CORPORATE HEADQUARTERS ADDRESS: 22809 Pacific Coast Hwy, Malibu, CA 90265

WEBSITE: www.fields-consulting-services.com

By signing and submitting these Offer Agreement documents, the undersigned certifies that they are legally authorized to represent and bind Contractor to legal agreements, that all information submitted is accurate and complete, that Contractor has reviewed the Pima County Procurement website for solicitation amendments and has incorporated all such amendments to its offer, that Contractor is qualified and willing to provide the items requested, and that Contractor will comply with all requirements of the solicitation. The Unit Pricing includes all costs incidental to the provision of the items in compliance with the above documents; no additional payment will be made. Conditional offers that modify the solicitation requirements may be deemed not 'responsive' and County may not evaluate them. Contractor's submission of a signed Offer Agreement will constitute a firm offer and upon the issuance of a MA or PO document issued by the Pima County Procurement Director or authorized designee will form a binding contract that will require Contractor to provide the goods or services and materials described in this solicitation. The undersigned hereby offers to furnish the goods or services in compliance with all terms, conditions, specifications that the solicitation defines or references, which includes Pima County Standard Terms & Conditions, this Offer Agreement and other documents as listed in this Offer Agreement's "Other Documents" article.

SIGNATURE:  **DATE:** July 17, 2019

Tim Fields, President, Fields Consulting Services Inc
PRINTED NAME & TITLE OF AUTHORIZED CONTRACTOR REPRESENTATIVE EXECUTING OFFER

PHONE AND E-MAIL: (805) 701-6586, tim@fields-consulting-services.com

PIMA COUNTY STANDARD TERMS AND CONDITIONS

1. OPENING:

Pima County ("COUNTY") will publicly open responses on the date and at the location as stated in the *Invitation for Bid (IFB)* or *Request for Proposal (RFP)*. The County will read each respondent's name, and for responses to an IFB will also read the total bid amount. COUNTY will open proposals so as to avoid disclosure of the contents of any proposal to competing offerors during the **evaluation** process. COUNTY invites all interested parties to attend the bid opening.

2. EVALUATION:

COUNTY will evaluate responses to determine which are most advantageous to COUNTY considering conformity to the specifications stated in the IFB, evaluation criteria stated in the RFP, and other factors, regardless of solicitation type.

If COUNTY makes an award, COUNTY will enter into an agreement with one or more Contractor(s) that submitted the lowest responsive bid(s) or highest scoring proposal that COUNTY determined responsible for providing the required goods or services. Unless otherwise specified on the IFB document, COUNTY will determine the low or lowest bids considering all items listed in the Unit Price Schedule.

COUNTY, at its sole discretion, reserves the following rights: 1) to waive informalities in the bid or bid procedure; 2) to reject the response of any persons or corporations that have previously defaulted on any contract with COUNTY or who have engaged in conduct that constitutes a cause for debarment or suspension as set forth in COUNTY Code Section 11.32; 3) to reject any and all responses; 4) to re-advertise for bids previously rejected; 5) to otherwise provide for the purchase of such equipment, supplies materials and services as may be required herein; 6) to award on the basis of price and other factors, including but not limited to such factors as delivery time, quality, uniformity of product, suitability for the intended task, and bidder's ability to supply; 7) to increase or decrease the item quantity or eliminate any item of this solicitation prior to the award. Pricing evaluations will be based on pre-tax pricing proposed by Contractor.

3. AWARD NOTICE:

COUNTY will post a *Notice of Recommendation for Award* for IFB or RFP on the Procurement website available for review by interested parties. The Procurement Department will maintain a tabulation of the bids or ranking of proposals.

4. AWARD:

Either the Procurement Director or the Board of Supervisors will make the contract award in accordance with the Pima County Procurement Code. COUNTY reserves the right to reject any or all proposals, bids or to waive irregularities and informalities in the best interest of COUNTY. Unless COUNTY expressly agrees otherwise, resulting contracts are not exclusive, they are for the sole convenience of COUNTY, and COUNTY reserves the right to obtain like goods or services from other sources.

5. WAIVER:

Each offeror, by submission of a proposal, bid or proposal waives any and all claims for damages against COUNTY or its officers or employees when COUNTY exercises any of its reserved rights.

6. ACKNOWLEDGEMENT AND ACCEPTANCE:

If Contractor's terms of sale are inconsistent with the terms of the resultant contract, the terms herein will govern, unless COUNTY accepts Contractor's terms in writing. No oral agreement or understanding will in any way modify this contract or the terms and conditions herein. Contractor's acceptance, delivery or performance called for herein will constitute unqualified acceptance of the terms and conditions of the resultant contract.

7. INTERPRETATION and APPLICABLE LAW:

The laws of the State of Arizona govern the interpretation and construction of this Contract. If any of Contractors' terms or conditions is not in agreement with County's terms and conditions as set forth herein, COUNTY's will govern. This contract incorporates the complete agreement of the parties with respect to the subject matter of this contract. No oral agreement or other understanding will in any way modify the terms and conditions of this contract.

8. WARRANTY:

Contractor warrants goods or services to be satisfactory and free from defects.

9. QUANTITY:

Contractor will not exceed or reduce the quantity of goods ordered without written permission from COUNTY in the form of a properly executed Master Agreement ("MA"), Purchase Order ("PO"), Delivery Order ("DO"), or Delivery Order Maximo ("DOM") revision or amendment as the COUNTY's Procurement Code requires. All quantities are estimates and COUNTY provides no guarantee regarding actual usage.

10. DELIVERY:

On-time delivery of goods and services is an essential part of the consideration that COUNTY will receive.

Contractor must provide a guaranteed delivery date, or interval period from order release date to delivery if the Price proposal document requires it. Upon receipt of notification of delivery delay, COUNTY at its sole option and at no cost to COUNTY may cancel the order or extend delivery times. Such extension of delivery times will not be valid unless an authorized representative of COUNTY extends it to Contractor in writing.

To mitigate or prevent damages from delayed delivery, COUNTY may require Contractor to deliver additional quantity utilizing express modes of transport, or overtime, all costs to be Contractor's responsibility. COUNTY reserves the right to cancel any delinquent order, procure from an alternate source, or refuse receipt of or return delayed deliveries, all at no cost to COUNTY. COUNTY reserves the right to cancel any order or refuse delivery upon default by Contractor concerning time, cost, or manner of delivery.

Contractor is not responsible for unforeseen delays caused by fires, strikes, acts of God, or other causes beyond Contractor's control, provided that Contractor provides COUNTY immediate notice of delay.

11. SPECIFICATION CHANGES:

COUNTY has the right to make changes in the specifications, services, or terms and conditions of an order. If such changes cause an increase or decrease in the amount due under an order or in time required for performance, COUNTY will make an acceptable adjustment and will modify the order in writing. No verbal agreement for adjustment is acceptable.

Nothing in this clause reduces Contractor's responsibility to proceed without delay in the delivery or performance of an order.

12. PAYMENT TERMS:

Payment terms are net thirty (30) days, unless the contract specifies otherwise.

13. ACCEPTANCE OF MATERIALS AND SERVICES:

COUNTY will not execute an acceptance or authorize payment for any service, equipment or component prior to delivery and verification that the delivery meets all specification requirements.

14. RIGHTS AND REMEDIES OF COUNTY FOR DEFAULT:

In the event any item that Contractor furnishes in the performance of the contract should fail to conform to the specifications thereof, or to the sample that Contractor submitted, COUNTY may reject same, and it thereupon becomes the duty of Contractor to reclaim and remove the same, without expense to COUNTY, and immediately replace all such rejected items with others conforming to the specifications or samples. Should Contractor fail, neglect, or refuse immediately to do so, COUNTY has the right to purchase in the open market, in lieu thereof, a corresponding quantity of any such items and to deduct from any monies due or that may become due to Contractor the difference between the price named in the MA or Purchase Order ("PO") and the actual cost to COUNTY.

In the event Contractor fails to make prompt delivery as specified of any item, the same conditions as to the rights of COUNTY to purchase in the open market and invoke the reimbursement condition above apply, except when delivery is delayed by fire, strike, freight embargo, or acts of god or of the government. In the event of cancellation of the MA, PO or associated orders, either in whole or in part, by reason of the default or breach by Contractor, Contractor will bear and pay for any loss or damage sustained by COUNTY in procuring any items which the Contractor agreed to supply. The rights and remedies of COUNTY provided above are not exclusive and are in addition to any other rights and remedies provided by law or under the contract.

15. FRAUD AND COLLUSION:

Each Contractor, by submission of a bid, certifies that no officer or employee of COUNTY or of any subdivision thereof: 1) has aided or assisted Contractor in securing or attempting to secure a contract to furnish labor, materials or supplies at a higher price than that proposed by any other Contractor; 2) has favored one Contractor over another by giving or withholding information or by willfully misleading the bidder in regard to the character of the material or supplies called for or the conditions under which the proposed work is to be done; 3) will knowingly accept materials or supplies of a quality inferior to those called for by any contract; 4) has any direct or indirect financial interest in the proposal or resulting contract. Additionally, during the conduct of business with COUNTY, Contractor will not knowingly certify, or induce others to certify, to a greater amount of labor performed than has been actually performed, or to the receipt of a greater amount or different kind of material or supplies that has been actually received. If COUNTY finds at any time that Contractor has in presenting any proposal(s) colluded with any other party or parties for the purpose of preventing any other proposal being made, then COUNTY will terminate any contract so awarded and that person or entity will be liable for all damages that COUNTY sustains.

16. COOPERATIVE USE OF RESULTING CONTRACT:

As allowed by law, COUNTY has entered into cooperative procurement agreements that enable other Public Agencies to utilize procurement agreements that COUNTY has developed. Participating agencies may contact Contractor with requests to provide services and products pursuant to the pricing, terms and conditions defined by the COUNTY MA, or PO. Minor adjustments are allowed subject to agreement by both Contractor and Requesting Party to accommodate additional cost or other factors not present in the COUNTY's agreement and required to satisfy particular Public Agency code or functional requirements and within the intended scope of the solicitation and resulting contract. The parties to the cooperative procurement will negotiate and transact any such usage in accordance with State, COUNTY and other Public Agency procurement rules, regulations and requirements. Contractor will hold harmless COUNTY, its officers, employees, and agents from and against all liability, including without limitation payment and performance associated with such use. Contractor may view a list of agencies that are authorized to use COUNTY contracts at the Procurement Department Internet home page: <http://www.pima.gov/procure> by selecting the link titled *Authorized Use of COUNTY Contracts*.

17. PATENT INDEMNITY:

Contractor will indemnify, defend and hold COUNTY, its officers, agents and employees, harmless from liability of any nature or kind, including costs and expenses, for infringement or use of any copyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in connection with the MA, PO, and associated orders. COUNTY may require Contractor to furnish a bond or other indemnification to COUNTY against any and all loss, damage, costs, expenses, claims and liability for patent or copyright infringement.

18. INDEMNIFICATION:

Contractor will indemnify, defend, and hold harmless COUNTY, its officers, employees and agents from and against any and all suits, actions, legal administrative proceedings, claims or demands and costs attendant thereto, arising out of any act, omission, fault or negligence by Contractor, its agents, employees or anyone under its direction or control or on its behalf in connection with performance of the MA, PO or associated orders. Contractor warrants that all products and services provided under this contract are non-infringing. Contractor will indemnify, defend and hold COUNTY harmless from any claim of infringement arising from services provided under this contract or from the provision, license, transfer or use for their intended purpose of any products provided under this Contract.

19. UNFAIR COMPETITION AND OTHER LAWS:

Responses must comply with Arizona trade and commerce laws (Title 44 A.R.S.) and all other applicable COUNTY, State, and Federal laws and regulations.

20. COMPLIANCE WITH LAWS:

Contractor will comply with all federal, state, and local laws, rules, regulations, standards and Executive Orders, without limitation. In the event any services that Contractor provides under this contract require a license issued by the Arizona Registrar of Contractors (ROC), Contractor certifies that a contractor licensed by ROC to perform those services in Arizona will provide such services. The laws and regulations of the State of Arizona govern the rights, performance and disputes of and between the parties. Any action relating to this Contract must be filed and maintained in a court of the State of Arizona in Pima County.

Any changes in the governing laws, rules, and regulations during an agreement apply, but do not require an amendment or revisions.

21. ASSIGNMENT:

Contractor may not assign its rights to the contract, in whole or in part, without prior written approval of COUNTY. COUNTY may withhold approval at its sole discretion, provided that COUNTY will not unreasonably withhold such approval.

22. CONFLICT OF INTEREST:

This contract is subject to the provisions of A.R.S. § 38-503, the pertinent provisions of which are incorporated into and made part of all COUNTY MAs or POs as if set forth in full therein.

23. NON-DISCRIMINATION:

CONTRACTOR agrees to comply with all provisions and requirements of Arizona Executive Order 2009-09 which is hereby incorporated into this contract as if set forth in full herein including flow down of all provisions and requirements to any subcontractors. During the performance of this contract, CONTRACTOR must not discriminate against any employee, client or any other individual in any way because of that person's age, race, creed, color, religion, sex, disability or national origin.

24. NON-APPROPRIATION OF FUNDS:

COUNTY may cancel this contract pursuant to A.R.S. § 11-251(42) if for any reason the COUNTY Board of Supervisors does not appropriate funds for the stated purpose of maintaining the contract. In the event of such cancellation, COUNTY has no further obligation, other than payment for services or goods that COUNTY has already received.

25. PUBLIC RECORDS:

Disclosure. Pursuant to A.R.S. § 39-121 et seq., and A.R.S. § 34-603(H) in the case of construction or Architectural and Engineering services procured under A.R.S. Title 34, Chapter 6, all documents submitted in response to the solicitation resulting in award of this Contract, including, but not limited to, pricing schedules, product specifications, work plans, and any supporting documents are public records. As such, those documents are subject to release and/or review by the general public upon request, including competitors.

Records Marked Confidential; Notice and Protective Order. If Contractor reasonably believes that some of those records contain proprietary, trade-secret or otherwise-confidential information, Contractor must prominently mark those records "CONFIDENTIAL." In the event a public-records request is submitted to County for records marked CONFIDENTIAL, County will notify Contractor of the request as soon as reasonably possible. County will release the records ten (10) business days after the date of that notice, unless Contractor has, within that period, secured an appropriate order from a court of competent jurisdiction, enjoining the release of the records. County will not, under any circumstances, be responsible for securing such an order, nor will County be in any way financially responsible for any costs associated with securing such an order.

The Contractor agrees to waive confidentiality of any price terms in the event of a contract award.

26. CUSTOM TOOLING, DOCUMENTATION AND TRANSITIONAL SUPPORT:

Costs to develop all tooling and documentation, such as and not limited to dies, molds, jigs, fixtures, artwork, film, patterns, digital files, work instructions, drawings, etc. necessary to provide the contracted services or products and unique to the services or products supplied to COUNTY are included in the agreed upon Unit Price unless the contract specifically states otherwise. Such tools and documentation are the property of COUNTY and will be marked, as is practical, as the "Property of Pima County" and COUNTY so requests, Contractor will deliver a copy of the tooling and documentation to COUNTY within twenty (20) days of acceptance by COUNTY of the first article sample, or not later than ten (10) days of termination of the contract associated with their development, without additional cost to COUNTY. Contractor also agrees to act in good faith to facilitate the transition of work to a subsequent Contractor if and as reasonably requested by COUNTY at no additional cost. Should exceptional circumstances be present that may justify an additional charge, Contractor may submit said justification and proposed cost and negotiate an agreement acceptable to both Contractor and COUNTY, but Contractor may not withhold any requested tooling, document or support as defined above that would delay the orderly, efficient and prompt transition of work. Should conduct by Contractor result in additional costs to COUNTY, Contractor will reimburse COUNTY for said actual and incremental costs provided that COUNTY has given Contractor reasonable time to respond to COUNTY's requests for support.

27. AMERICANS WITH DISABILITIES ACT:

Contractor will comply with all applicable provisions of the Americans with Disabilities Act (public law 101-336, 42 USC 12101-12213) and all applicable federal regulations under the act, including 28 CFR parts 35 and 36.

28. NON-EXCLUSIVE:

Contracts resulting from this solicitation are non-exclusive and are for the sole convenience of COUNTY, which reserves the right to obtain like goods and services from other sources for any reason.

29. PROTESTS:

An interested party may file a protest regarding any aspect of a solicitation, evaluation, or recommendation for award. Protests must be in accordance with the Pima County Procurement Code, Section 11.20.010.

30. TERMINATION:

COUNTY reserves the right to terminate any MA, PO, Delivery Order, DOM or award, in whole or in part, at any time, without penalty or recourse, when in the best interests of COUNTY. Upon receipt of written notice, Contractor will immediately cease all work as directed by the notice, notify all subcontractors of the effective date of termination and take appropriate actions to minimize further costs to COUNTY. In the event of termination under this paragraph, all documents, data, and reports prepared by Contractor under the contract become the property of COUNTY and Contractor must promptly deliver them to COUNTY. Contractor is entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination. Pima County reserves the right to terminate the contract due to the awarded offeror's failure to perform and award the contract to the next offeror with the highest score as determined by Pima County. In such cases, the failing contractor acknowledges that they relinquish their rights to any damages or remediation from Pima County.

31. ORDER OF PRECEDENCE-CONFLICTING DOCUMENTS:

In the event of inconsistencies between contract documents, the following is the order of precedence, superior to subordinate, that will apply to resolve the inconsistency: MA, DO or DOM, PO, Offer Agreement or contract attached to a MA, PO, DO or DOM; these standard terms and conditions; any other solicitation documents.

32. INDEPENDENT CONTRACTOR:

The status of Contractor is that of an independent Contractor. Contractor and Contractor officer's agents or employees are not considered employees of COUNTY and are not entitled to receive any employment-related fringe benefits under the COUNTY Merit System. Contractor is responsible for payment of all federal, state and local taxes associated with the compensation received pursuant to this Contract and will indemnify and hold COUNTY harmless from any and all liability which COUNTY may incur because of Contractor's failure to pay such taxes. Contractor is solely responsible for its program development and operation.

33. BOOKS AND RECORDS:

Contractor will keep and maintain proper and complete books, records and accounts, which will be open at all reasonable times for inspection and audit by duly authorized representatives of COUNTY. In addition, Contractor will retain all records relating to this contract at least five (5) years after its termination or cancellation or, if later, until any related pending proceeding or litigation has been closed.

34. COUNTERPARTS:

The parties may execute the MA or PO that COUNTY awards pursuant to this solicitation in any number of counterparts, and each counterpart is considered an original, and together such counterparts constitute one and the same instrument.

For the purposes of the MA and PO, the signed proposal of Contractor and the signed acceptance of COUNTY are each an original and together constitute a binding MA, if all other requirements for execution are present.

35. AUTHORITY TO CONTRACT:

Contractor warrants its right and power to enter into the MA or PO. If any court or administrative agency determines that COUNTY does not have authority to enter into the MA or PO, COUNTY is not liable to Contractor or any third party by reason of such determination or by reason of the MA or PO.

36. FULL AND COMPLETE PERFORMANCE:

The failure of either party to insist on one or more instances upon the full and complete performance with any of the terms or conditions of the MA, PO, DO or DOM to be performed on the part of the other, or to take any action permitted as a result thereof, is not a waiver or relinquishment of the right to insist upon full and complete performance of the same, or any other covenant or condition, either in the past or in the future.

The acceptance by either party of sums less than may be due and owing it at any time is not an accord and satisfaction.

37. SUBCONTRACTORS:

CONTRACTOR is fully responsible for all acts and omissions of any subcontractor and of persons directly or indirectly employed by any subcontractor, and of persons for whose acts CONTRACTOR may be liable to the same extent that CONTRACTOR is responsible for the acts and omissions of persons that it directly employs. Nothing in this contract creates any obligation on the part of COUNTY to pay or see to the payment of any money due any subcontractor, except as may be required by law.

38. SEVERABILITY:

Each provision of this Contract stands alone, and any provision of this Contract that a court finds to be prohibited by law is ineffective to the extent of such prohibition without invalidating the remainder of this Contract.

39. LEGAL ARIZONA WORKERS ACT COMPLIANCE:

CONTRACTOR hereby warrants that it will at all times during the term of this Contract comply with all federal immigration laws applicable to CONTRACTOR's employment of its employees, and with the requirements of A.R.S. § 23-214 (A) (together the "State and Federal Immigration Laws"). CONTRACTOR will further ensure that each subcontractor who performs any work for CONTRACTOR under this contract likewise complies with the State and Federal Immigration Laws.

COUNTY has the right at any time to inspect the books and records of CONTRACTOR and any subcontractor in order to verify such party's compliance with the State and Federal Immigration Laws.

Any breach of CONTRACTOR's or any subcontractor's warranty of compliance with the State and Federal Immigration Laws, or of any other provision of this section, is a material breach of this Contract subjecting CONTRACTOR to penalties up to and including suspension or termination of this Contract. If the breach is by a subcontractor, and the subcontract is suspended or terminated as a result, CONTRACTOR will take such steps as may be necessary to either self-perform the services that would have been provided under the subcontract or retain a replacement subcontractor as soon as possible so as not to delay project completion.

CONTRACTOR will advise each subcontractor of COUNTY's rights, and the subcontractor's obligations, under this Article by including a provision in each subcontract substantially in the following form:

"SUBCONTRACTOR hereby warrants that it will at all times during the term of this contract comply with all federal immigration laws applicable to SUBCONTRACTOR's employees, and with the requirements of A.R.S. § 23-214 (A). SUBCONTRACTOR further agrees that COUNTY may inspect the SUBCONTRACTOR's books and records to insure that SUBCONTRACTOR is in compliance with these requirements. Any breach of this paragraph by SUBCONTRACTOR is a material breach of this contract subjecting SUBCONTRACTOR to penalties up to and including suspension or termination of this contract."

Any additional costs attributable directly or indirectly to remedial action under this Article is the responsibility of CONTRACTOR. In the event that remedial action under this Article results in delay to one or more tasks on the critical path of CONTRACTOR's approved construction or critical milestones schedule, such period of delay will be excusable delay for which CONTRACTOR is entitled to an extension of time, but not costs.

40. CONTROL OF DATA PROVIDED BY COUNTY:

For those projects and contracts where COUNTY has provided data to enable the Contractor to provide contracted services or products, unless COUNTY otherwise specifies and agrees in writing, Contractor will treat, control and limit access to said information as confidential and will under no circumstances release any data provided by COUNTY during the term of this contract and thereafter, including but not limited to personal identifying information as defined by A.R.S. § 44-1373, and Contractor is further prohibited from selling such data directly or through a third party. Upon termination or completion of the contract, Contractor will either return all such data to COUNTY or will destroy such data and confirm destruction in writing in a timely manner not to exceed sixty (60) calendar days.

END OF PIMA COUNTY STANDARD TERMS AND CONDITIONS

EXHIBIT F: PIMA COUNTY SPECIFICATIONS FOR MAXIMO UPGRADE (3 PAGES)

I. CURRENT NEED

Pima County seeks consultation in successfully upgrading its work order management software Maximo by IBM to version 7.6.0.10 with the current cumulative IFIX at time of upgrade. The upgrade will include maintaining all current Pima County configurations and customizations, maintaining all currently installed modules (each upgraded as needed to be able to successfully function with the upgraded Maximo version), configuring the Scheduler module and Graphical assignment module to each include Optimizer, and installing the AnyWhere module. The upgrade will be performed in Pima County Maximo non-production and production environments.

II. DEFINITION OF COMPLETE

Unless added to by items within contractor's proposal, consultation services will only be considered complete when:

- Work Order (WO) Close Web Service is an Advantage customization that must continue to work after the upgrade.
- Maximo by IBM in Pima County Maximo non-production and production environments has been upgraded to version 7.6.0.10 with the current cumulative IFIX at time of upgrade, passing user testing and keeping all current County configurations and customizations.
- All modules listed in Chart 1, Section II below (with upgrades performed to versions as needed) are fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, with all passing user testing and keeping all current County configurations and customizations.
- The Maximo *Anywhere* module is installed, configured to work with Maximo Spatial, and is fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, passing contractor functional testing.
- The Maximo *Scheduler* and *Graphical assignment* modules (each configured to include Optimizer) are fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, passing contractor functional testing.
- Maximo graphical assignment successfully functioning with Spatial and Anywhere applications.

III. DELIVERABLES

Unless added to by items within contractor's proposal, the following are the deliverables for this project:

- A build plan with the list of software and specification documentation needed for upgrade and installation including the correct implementation order of the software.
- An implementation plan, including critical steps and considerations to ensure a successful implementation.
- The software OR provide proper path routing to such software within IBM's system where Pima County can retrieve it OR provide the location(s) where such software can be legally retrieved with appropriate license authority.
- Knowledge needed to perform successful upgrade and installation of functional products.
- On-site direction of Pima County staff in their performance of the upgrade and installation in at minimum the initial DEV environment (additional on-site needs for remaining Maximo environments – TEST, UAT, PROD, TRAIN – to be decided based on contractor's proposed implementation approach).
- Project completion is reached, as measured by the Definition of Complete (above).

IV. PROJECT REQUIREMENTS

Pima County IT Department requests a proposal to provide consultation on IBM's Maximo and specified add-on software such that a successful upgrade from version 7.6.0.0 to version 7.6.0.10, including retaining current Pima County configurations and customizations, and retaining currently installed add-on modules (which as necessary are also upgraded to meet minimum requirements to successfully work with base product 7.6.0.10), in five Pima County Maximo non-production and production environments (DEV, TEST, UAT, PROD, TRAIN). Additionally, provide consultation on configuring the Scheduler module and Graphical assignment module to each include Optimizer, and on installation and configuration of a new module, AnyWhere, also in all five Pima County Maximo environments.

The intent is for Pima County staff to perform the actual installs/upgrades and move the product through the five Pima County Maximo environments, with the contractor providing on-site consultation to assure the correct software is used, where to locate the software, and to assure a successful upgrade. Reevaluation of the need for contractor to be on-site will occur after upgrade is successfully completed in each environment.

Upgrade of existing product and modules will pass user testing within each environment before movement to the next. Configuring the Scheduler module and Graphical assignment module to each include Optimizer, and installation and configuration of the AnyWhere module, will pass contractor functional testing within each environment before movement to the next.

The selected contractor will provide a build plan with the list of software and specification documentation needed for upgrade and installation including the correct implementation order of the software, provide the software OR provide proper path routing to such software within IBM's system where Pima County can retrieve it OR provide the location(s) where such software can be legally retrieved with appropriate license authority, provide knowledge needed to perform successful upgrade and installation, and direct Pima County staff in their performance of the upgrade and installation.

The selected contractor will propose an implementation approach, including critical steps and considerations to ensure a successful implementation.

An in-place upgrade is the preferred approach for this product. However, as will be outlined in the build plan that contractor will provide, Pima County welcomes alternative approaches based on contractor experience and success with Maximo upgrades, in conjunction with the interface replacement services contractor is also proposing. **Contractor's proposal should be structured in such a way as to minimize the disruption to Pima County's business processes and minimize the downtime of Pima County's Maximo environments and servers during upgrade and implementation.**

All installations will begin in Pima County's lowest non-production environment and progress, upon separate approval per environment, through each environment. Pima County's non-production environments in order of movement are development (DEV), testing (TEST), and user acceptance testing (UAT). After successful implementation into those non-production environments upgrade will occur in production environment (PROD). After successful implementation into the production environment upgrade will occur in the non-production training (TRAIN) environment.

In the event a module or Maximo software component is no longer supported by IBM Maximo (example = Maximo adapter for Microsoft Project), the contractor chosen for the upgrade will notify Pima County to receive further direction but will not stop activity or progress for the remaining work unless Pima County advises otherwise.

V. SUPPORT REQUIREMENTS

Contractor will provide a post upgrade ninety (90) day warranty from date of production installation for installation defects. All costs, inclusive, to remedy defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

VI. SOFTWARE REQUIREMENTS

The core product and modules to be upgraded or installed are listed in Chart 1.

Chart 1

PRODUCT	CURRENT PIMA COUNTY INSTALLED VERSION
SECTION I – Baseline Maximo To Be Upgraded	
Maximo base product including Tivoli®'s process automation engine	7.6.0.0-IFIX20160812-1037 Build 20141117-2230 DB Build V7600-218 HFDB Build HF7600-06
SECTION II – Maximo Modules To Be Upgraded	
IBM Maximo Project Adaptor	7.5.0.0 Build 14 DB Build V7500-01
IBM TPAE Integration Framework	7.6.0.0 Build 20141117-1800 DB Build V7600-15
IBM Maximo Asset Management	7.6.0.0 Build 20141117-2230 DB Build V7600-00
IBM Maximo Linear Management	7.5.0.0 Build \$build\$ DB Build V7500-01
IBM Maximo Asset Management Scheduler	7.5.3.0 Build 20141117-2230 DB Build V7530-19 HFDB Build HF7530-01
IBM Maximo for Service Providers	7.6.0.0 Build 20141125-1930 DB Build V7600-05
IBM Maximo Spatial Asset Management	7.5.0.1-20150504-1707 Build 20120714-2208 DB Build V7501-13 HFDB Build HF7501-06
SECTION III – Maximo Modules To Be Installed or Configured	
IBM Maximo Anywhere 1. Configured to integrate with Maximo Spatial	N/A
Scheduler 1. Configured to include Optimizer	Scheduler = 7.5.3.0 Build 20141117-2230 DB Build V7530-19 HFDB Build HF7530-01
Graphical assignment 1. Configured to include Optimizer	Part of the Scheduler module

VII. ADDITIONAL DETAILS

Pima County currently has a licensing and support agreement with IBM through an intermediary, CGI, which allows Pima County a licensed version of all the desired products listed herein.

END OF EXHIBIT F

EXHIBIT G: PIMA COUNTY SPECIFICATIONS FOR MAXIMO-ADVANTAGE INTERFACE REPLACEMENT (12 PAGES)

I. CURRENT NEED

Pima County seeks to replace the interface between its IBM Maximo asset tracking system and its CGI Advantage financial ERP system.

This new interface is currently slated to go live in tandem with Pima County's production upgrade to Maximo 7.6.0.10 with the current cumulative IFIX at time of upgrade.

II. DEFINITION OF COMPLETE

This project will only be considered complete when:

- A fully functioning interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system has passed user acceptance testing (UAT) and is installed in all Pima County environments and
 - Performs all the integrations listed below in VI. Section 1
 - Performs all the integrations listed below in VI. Section 2 that are determined to not require changes to the Advantage product to be implemented
- Contractor has provided documentation on interface development, support, and administration.
- Pima County IT staff has been trained on interface troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

III. DELIVERABLES

The following are the deliverables for this project:

1	An interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The interface will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and related artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation.
8	The contractor will provide all documentation for: <ul style="list-style-type: none"> a. Development b. Support c. Administration
9	The contractor will provide all training for: <ul style="list-style-type: none"> a. Troubleshooting b. Implementation c. Maintenance d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

IV. PROJECT REQUIREMENTS

The following are the high level requirements for the Maximo-Advantage interface:

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment
The contractor will provide products and tools configurable for the following Pima County IT environments: a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product for Pima County IT will deliver capabilities that meet or exceed the production capabilities of the existing CGI ABI product including the following areas: a. Logging. b. Auditing. c. Maintenance. d. Error handling with a description of underlying reason / root cause. e. Monitoring. f. Clusterable (high availability). g. Configurability. h. Security (encryption-at-rest/transit for message queue). i. Support for asynchronous, synchronous, and file integration. j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed. m. Ensure data type and size consistency between source and destination systems. Provide useful warnings/errors when mismatches are detected. E.g. converting a value stored as a decimal or float value lengths and character sets match the source and destination. n. Ensure data representation (character set type) is consistent between source and destination systems. Provide useful warnings/errors when mismatches are detected. Do not automatically truncate. E.g. If converting from data represented in a multi-byte system such as UTF-8 to ASCII, some characters may not map directly and a human judgement may be required. o. Provide a mechanism to mark a transaction as processed to prevent unnecessary reprocessing. Conversely, provide a mechanism to flag a transaction for reprocessing. p. Provide a mechanism to calculate data consistency across systems and the tools to reconcile inconsistencies when they are identified. q. Use currency-specific data types to represent money rather than float or double, to prevent rounding errors. r. Provide unit tests which exercise both ends of transactions. These tests should be extensible by Pima County to account for system evolution. s. Transaction payload size should be documented and validated inside the payload. e.g. If a transaction can contain only five purchase receipts because that is all the receiving system can accommodate, this limit should be expressed inside the transaction, and the software which carries out the transaction should observe and validate this limit and report errors and warnings as appropriate if the limit is

exceeded. t. The system shall provide an automated and extensible method to validate financial aspects of transactions. E.g. During processing, make sure the numbers on a receipt add up. u. The system shall have configurable thresholds for try/repeat as well as logging for failed transactions. v. The system shall report all failed transactions through an email. w. The system shall report all service failures through an email. x. The system shall not discard transactions during peak or burst processing. If transactions overrun the system, they shall be queued for later processing. y. The system shall handle all events in a transaction lifecycle. z. The system shall provide a human-readable audit trail of all transactions.
The contractor will ensure that delivered contractor-developed product will support: a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The contractor will be responsible for conversion and validation of all existing bidirectional data streams from the existing CGI ABI to the new contractor-developed product. This will include upgrading CGI Advantage and IBM Maximo connections in Pima County's IT DEV/TEST/UAT/PROD environments from existing interfaces and replacing them with the new contractor-developed product.
The interface will pass user testing within each environment before movement to the next. It is intended that the interface will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

V. SUPPORT REQUIREMENTS

The contractor will provide a ninety (90) day warranty from date of production installation for installation and upgrade defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

VI. INTEGRATION POINTS

The following (Section 1) are the 16 current integration points required to be included in the solution, listed first by system ownership alongside the data transfer timeline for each, then listed again at a detailed level. This is followed by four (4) new integration services that may be added (Section 2) if it is determined they do not require changes within the Advantage (by CGI) product.

Section 1. Current Integration Points

A. Reference Data

Reference data **owned by Advantage** and synched (sent) to Maximo.

1. Commodity (Codes and Descriptions)
 - a. Real Time (3 to 5 min delay)
2. Vendor (address, contact, purchasing and payment information)
 - a. Real Time (3 to 5 min delay)
3. Procurement Location (Address Ship/Bill)
 - a. Real Time (3 to 5 min delay)
4. Master Agreements (aka purchase contracts)

- a. Real Time (3 to 5 min delay)
- 5. Chart of Accounts for GL string
 - a. Real Time (3 to 5 min delay)
- 6. Projects & Project Budgets
 - a. Real Time (3 to 5 min delay)
- 7. Purchase order and Revisions (aka direct order).
 - a. Real Time (3 to 5 min delay)

Reference data **owned by Maximo** and synched (sent) to Advantage

- 8. Work Orders
 - a. Real Time (3 to 5 min delay)
- 9. Item
 - a. Real Time (3 to 5 min delay)
- 10. Site
 - a. Real Time (3 to 5 min delay)

B. Business Process

Business Process data **owned by Advantage** and synched (sent) to Maximo

- 11. Work Order Costs
 - a. Real Time (3 to 5 min delay)
- 12. Purchase Order, Payment
 - a. Real Time (3 to 5 min delay)
- 13. Other Costs
 - a. Batch job, runs nightly
- 14. Chart of Accounts Updates
 - a. Batch job, runs nightly

Business Process data **owned by Maximo** and synched (sent) to Advantage

- 15. Inventory Issues, Transfer, Adjustment
 - a. Real Time (3 to 5 min delay)
- 16. Purchase Request, Receipt
 - a. Real Time (3 to 5 min delay)
- 17. Purchase Order (PO) Revisions are made in Maximo and synched to Advantage
 - a. Real Time (3 to 5 min delay)

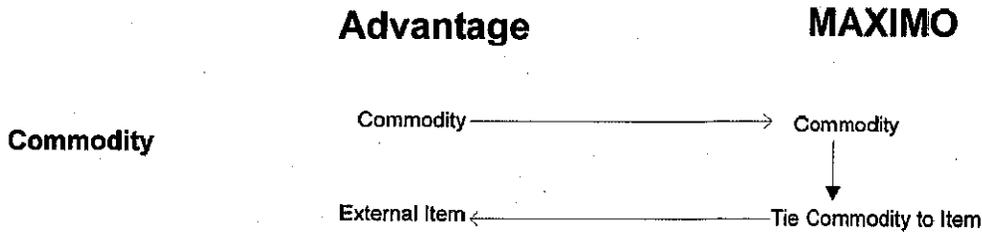
Detailed Information on Current Integration Points

Definition: *Real Time* – The time the integration starts to when it posts from one system to another not to exceed three minutes on a round trip update such as a purchase requisition to PO event.

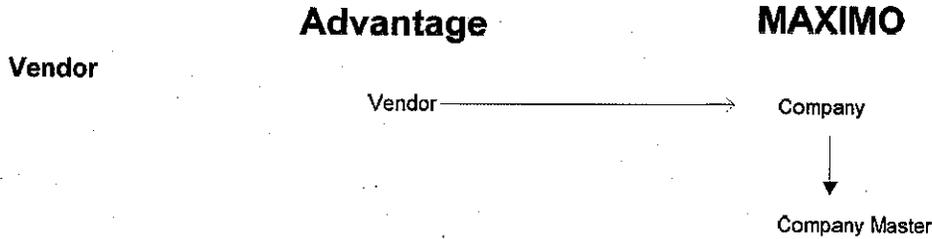
1. *Commodity (Codes and Descriptions)*

All Commodity entries (create, update, and delete) will initiate in Advantage (owner) and be sent to Maximo (target). Once a Commodity has been defined and interfaced to Maximo, Maximo users will be responsible for assigning item numbers.

Since Maximo links the Item with a Commodity Code, this allows transactions being passed from Maximo to Advantage to specify the associated Commodity Code since Advantage is Commodity based. It also allows transactions being passed from Advantage to Maximo to specify the Item since Maximo is item based.



2. *Vendor (address, contact, purchasing and payment information)*
 All Vendor Table entries (regardless of method) will initiate in Advantage (owner) and be sent to Maximo (target) as Maximo Companies.



3. *Procurement Location (Address Ship/Bill)*
 Advantage Financial will be the owner system of Address records. Address data (procurement location) will be sent from Advantage (the owner) to Maximo (the target) to keep both systems in sync.



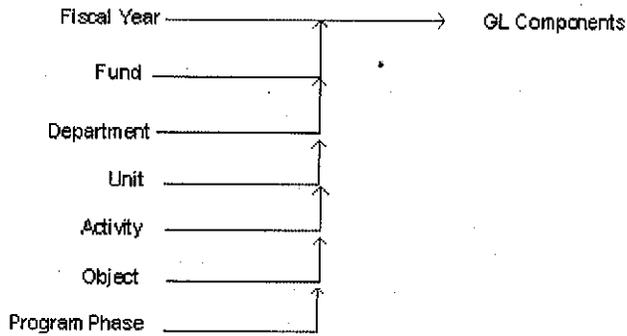
4. *Master Agreements (aka purchase contracts)*
 All Master Agreements will initiate in Advantage (owner) and be sent to Maximo as a Purchase Contract. Master Agreements with multiple vendors will create multiple Purchase Contracts in Maximo for each vendor and updates to vendors on the MA will create new Purchase Contracts or discontinue existing contracts accordingly. Commodity lines (Purchase line item) will contain the external item id (Maximo Item Master) for inventory purchases.
5. *Chart of Accounts for GL string*
 All Chart of Accounts entries will initiate in Advantage (owner) and be sent to Maximo as GL Components. GL components will be configured in Maximo for the corresponding Advantage Chart of Account elements. As Pima County defines budget structures (both operating and cost accounting) and Chart of Accounts to use during implementation, if additional elements are needed or current ones are no longer used, the interface will be modified accordingly.

Sample Baseline Integration

Advantage

MAXIMO

Chart of Accounts



Existing Maximo Configuration

Component	Name	Concatenation	Size
0	Fiscal Year	No	4
1	Fund	No	4
2	Unit	Department + Unit	8
3	Object	No	4
4	Program Phase	Department + Program + Phase	20
5	Function	Department + Function	14
6	Reporting Code	No	10
7	Task	No	7

6. *Projects & Project Budgets*

The Advantage Department interface to Maximo:

- The Maximo Site table contains a field for Advantage Department (all valid departments are stored within a hidden table in Maximo). This allows the Maximo administrator to associate a Maximo Site (Water, Electric, Parks and Recreation etc.) to an Advantage department.

Project and related Advantage chart of account elements used in Advantage project (cost accounting) budget structures will be mapped as GL components as described above.

7. *Purchase Order and Revisions (aka direct order)*

All Purchase Orders or Direct Orders will initiate in Advantage (owner) and be sent to Maximo as a Purchase Order. Revisions to Purchase Orders will initiate in Maximo and be sent to Advantage. Purchase Order cancellations will initiate in Advantage and cancel the corresponding documents in Maximo.

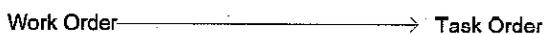
8. *Work Orders*

Maximo is the owner repository of all Work Order-related activities. This includes Work Orders that are assigned to a project (a project that was initiated in Advantage) as well as miscellaneous Work Orders that are not associated with a project.

Once the Work Order is integrated to Advantage, costs against it may initiate from Maximo or Advantage.

MAXIMO

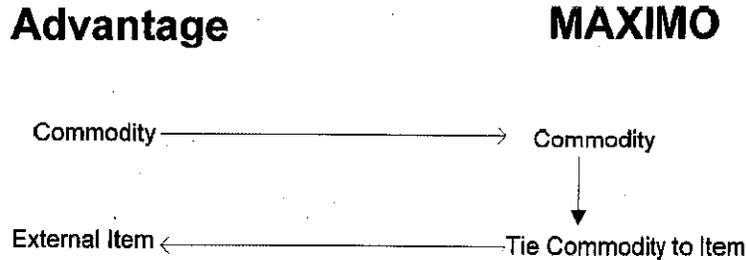
Advantage



9. *Item*

Once a Commodity has been defined and interfaced to Maximo, Maximo users will be responsible for assigning item numbers. Maximo further breaks down the Commodity Code into Items that can be used across the system including adding them to inventory or using them directly on a Work Order.

Within Maximo, each Item will be associated with a Commodity Code. This will allow Maximo users to search either by the Commodity or Item number. Since Maximo links the Item with a Commodity Code, this allows transactions being passed from Maximo to Advantage to specify the associated Commodity Code since Advantage is Commodity based. It also allows transactions being passed from Advantage to Maximo to specify the Item since Maximo is item based.



10. *Site*

All Site entries will initiate in Maximo (owner) and be sent to Advantage (target). Within Maximo, each Site will be associated to an Advantage Department (more than one Site can have the same Department) and these transactions will be interfaced from Maximo to Advantage to create a crosswalk between Sites and Departments.

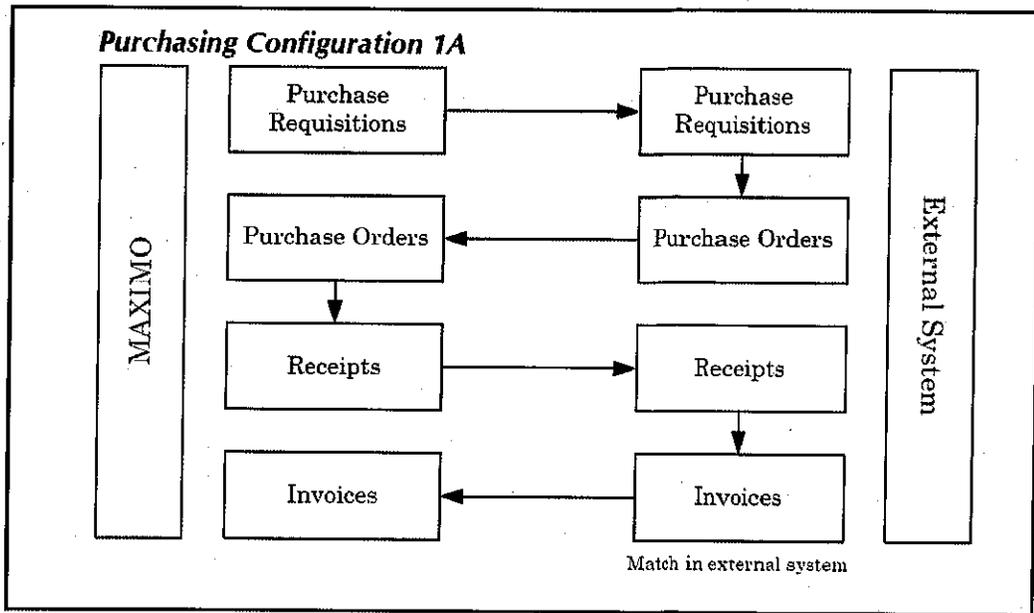
11. *Work Order Costs*

Advantage supports charge backs from work done in Maximo by a Service Provider for a Service Requestor in Maximo. To facilitate this process in Advantage a work order will create two task orders in Advantage. One for the Service Provider and one for the Service Requestor. Work order activities or tasks numbers are appended to the 10 digit Work Order number when the corresponding task order is created in Advantage. This action is triggered by a work order in one site (department) having a GL Account from another department otherwise, a task order is only created for the site. Work Order closes or cancellations in Maximo inactivate the corresponding task orders in Advantage. Costs against task orders (work orders) in Advantage update the corresponding work order and activity in Maximo.

12. *Purchase Order, Payment*

Once a Payment Request has been finalized within Advantage Financial, payment request information will be interfaced to Maximo as a Maximo Invoice. A new status in Maximo will be configured during the Maximo-Advantage implementation (using out of the box Maximo functionality) called Disbursed in Advantage (DADV) to indicate to the Maximo user that a request for payment has been made in Advantage. Please note the Advantage Invoice (IN) document is not interfaced to Maximo, but can still be used within Advantage for matching; it is the payment request that is interfaced as a Maximo Invoice.

Once the check (AD), EFT, or Manual Disbursement (MD) is finalized, the check date and number are interfaced to update the Maximo Invoice in addition to setting its status to PAID. Once the Maximo Invoice has been marked as PAID, if there is any difference in price between the Purchase Order and Payment Request and the Item is in inventory; Maximo will calculate the variance and update inventory. If there is a variance, an inventory adjustment transaction (IETM) is sent back to Advantage to record the accounting impacts.



13. *Other Costs*

Even though purchasing, payment and inventory costs are transmitted between AMS Advantage and Maximo near real-time, there can be other Work Order costs that can accumulate in AMS Advantage. Any of the following costs can be associated with a Maximo Work Order. (A Maximo Work Order is defined as an Advantage Task Order code that has a Source System = Maximo). These "Other Costs" are tracked in Advantage but do not initiate from Maximo. A few examples of "Other Costs" are:

- P-Card expenditures
- Manual corrections (e.g. Journal Vouchers)
- Accounting Based Spending correction postings (e.g. encumbrance corrections)
- Cost Allocations
- Labor Cost Allocations

These "Other Costs" need to be transmitted to Maximo so the Work Order totals in both systems are accurate. Some of these costs may actually come to Advantage from other interfaces, but from Maximo's perspective these are still "Advantage-Initiated."

14. *Chart of Accounts Updates*

All Chart of Account updates will initiate in Advantage (owner) and be sent to Maximo (target).

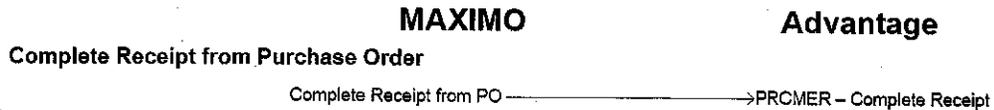
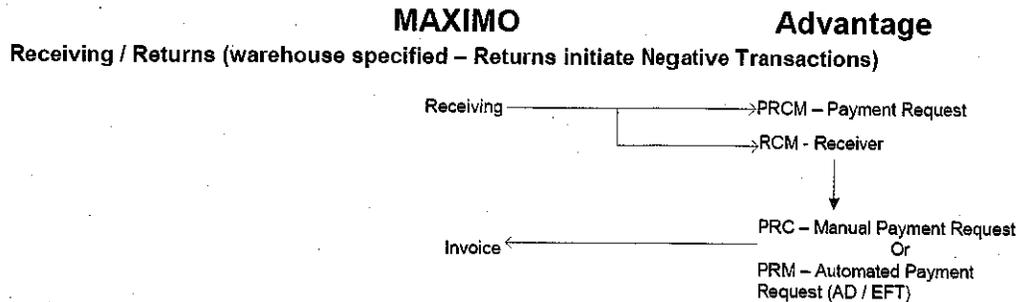
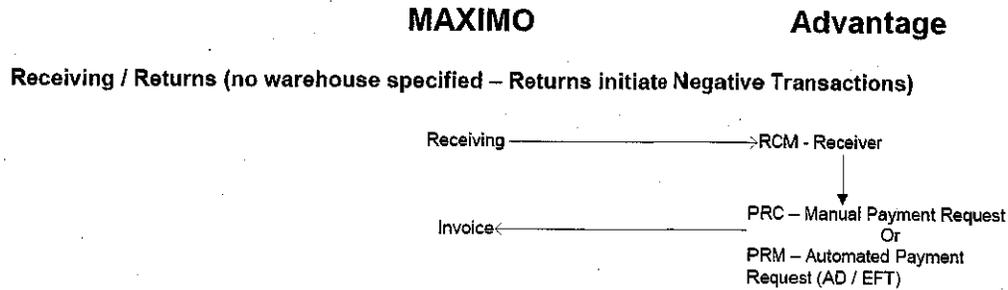
15. *Inventory Issues, Transfer, Adjustment*

Inventory transactions under this model are created by a user within Maximo and accounting changes are sent to AMS Advantage Financial via IETM documents. This AMS Advantage Financial document is then processed. In the case the document is rejected, an email notification will be sent to the Maximo user requesting further actions.

Using Maximo, users can record receipts of materials or services as well as returns of materials. Maximo Receipts are linked directly to Maximo Purchase Orders.

These receipts, returns, and complete receipts will have three important impacts in Advantage integration:

- Maximo Receiving may be necessary for three-way-match logic in Advantage to generate payments.
- If receiving includes a storeroom (meaning it is a receipt of inventory), accounting entries are needed to update the value of assets in the storeroom and a second document is interfaced to Advantage (PRCM).
- In response to a complete receipt of a purchase order line, any unused encumbrance needs to be liquidated by creation of an Advantage PRCMER document.



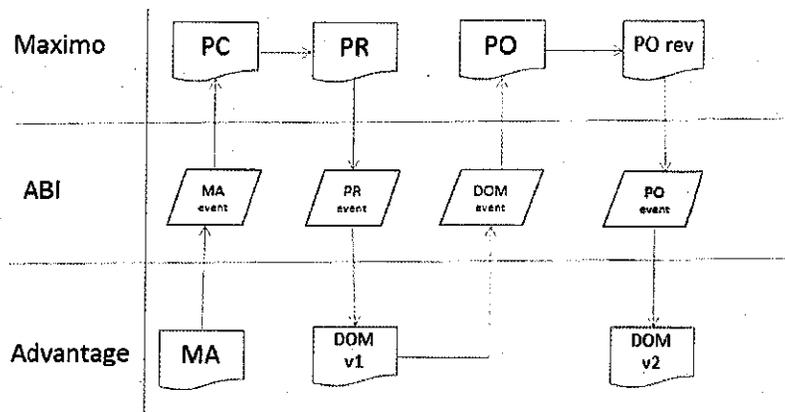
17. *Purchase Order (PO) Revisions are made in Maximo and synched to Advantage*

The need for Purchase Order (PO) change order or modification ability is to be able to process non-defined expense items that arise after the Master Agreement (MA) / Purchase Contract (PC) has been established.

The ability to modify a PO in Maximo by entering a new line was not available in the prior release because there was no revision feature supported within the Maximo integration, which would result in integration errors. Maximo now has a PO revision feature, which will support this capability.

From a business process perspective, when possible, a separate commodity line for certain unknown expenses with a \$0 value, can be inserted at the time of the Master Agreement. When the actual expense amount is known, the line on the order document can be updated with the actual value.

In Maximo 7.6, the application will allow for revisions to the PO document. Revisions include the addition of a line on a PO in Maximo that does not reference the underlying PR or PC.



The business process diagram above shows the current process from MA in Advantage to PO in Maximo. It highlights to new integration point from the revised PO in Maximo.

The need for doing a PO revision in Maximo includes the addition of non-defined expense items, such as tax, freight, and other fees not known or defined at the time of the PC or PR, but then known during the time of invoicing.

After the Maximo user creates a PO revision, they will have the option to change the status to Waiting for Advantage (WADV). This status change will trigger an integration event to Advantage where the corresponding POM or DOM will be updated to reflect the change made in Maximo.

Once Advantage has completed the processing of the POM/DOM modification received from Maximo, it will send an integration event response back to Maximo to indicate whether the updates were submitted to final or rejected due to an accounting error. A final submission will send a response to Maximo of Approved (APPR), and if the modification is rejected, Advantage will send a response to Maximo to update the status to Rejected in Advantage (RADV).

Section 2. New Integration Services To Develop

NOTE: Pima will only move forward with new integration services if they do not modify or alter existing tables in Advantage by CGI. This will be determined during the course of the project.

1. Notification of system issues
 - a. The interface shall have the ability to send emails to a configurable user population (including multiple individuals or distribution groups) in the case of technical or functional system failure.
 - b. The interface shall identify and communicate the underlying reason for the issue and the cause of failure.
 - c. The interface shall provide notification of integration problems. For example: *When poller fails Admins are not notified.*
2. Data Processing when receiving system is unavailable
 - a. The interface shall fail in an orderly fashion when the receiving system is unavailable (i.e. a time out). The interface shall document this event and notify administrators of its occurrence.
 - b. The interface shall recover automatically when the receiving system becomes available again (i.e. a time out is resolved). The interface shall document this event and notify administrators of its occurrence.
3. Transaction Processing Error Handling

The interface shall provide fault-tolerant transaction delivery in contrast to the current ABI process, described below:

 - a. All transactions are processed from a sequential queue
 - b. If any transaction within the queue fails, then all subsequent transaction processing stops.

- c. The user has to go to the stuck transaction and delete it to get processing to start again.
- d. The user cannot tell what business process was tied to the deleted transaction, so the system loses the information. It is difficult or impossible to determine how to correct the corrupted data.

4. Integrity Testing

The interface shall provide an automated mechanism, which allows system operators to verify the integrity of data between CGI Advantage and IBM Maximo. The mechanism will take the form of a report or a user interface that provides the number of successful transactions compared to the number of failed transactions. For the failed transactions, the report or user interface shall provide the root cause of the failure.

END OF EXHIBIT G

EXHIBIT H: ADD GRANT COSTS TO MAXIMO TRANSACTIONS (6 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system (Advantage).

This Exhibit details the requirements for adding the Grant costs to Maximo transactions. The design will address updates required in the Maximo-Advantage interface to support the integration of grant information from Maximo to Advantage.

The new functionality is intended to go live after the newly-developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when:

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this Exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation
8	The contractor will provide all documentation for: a. Development b. Support c. Administration
9	The contractor will provide all training for: a. Troubleshooting b. Implementation c. Maintenance

	d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause e. Monitoring f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh k. Ability for interface to consume and transmit future unspecified document types l. Speed
The contractor will ensure that delivered contractor-developed product will support: a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an amendment to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

This functional design details the requirements for adding the Grant costs to Maximo transactions. The design will address updates required in the Maximo-Advantage interface to support the integration of grant information from Maximo to Advantage.

Background and Objectives

The need for adding grant information to Maximo transactions is to be able to process transactions for departments that are funded by grants. Grant information is not currently available in Maximo, workaround is to update the long description to include the grant information so when the transaction fails in Advantage it can be corrected and finalized.

The Program and Program Period Code (PPC) code should be in the General Ledger (GL) account string rather than in the long description field. The user many times forgets to provide this additional information and business staff has to hunt it down.

Any Maximo created documents that integrate to Advantage and are missing this additional Program/PPC GL information will reject in Advantage requiring business users to manually key in this information. The document may then reject for a variety of reasons.

Modifications in Advantage

- We anticipate these changes will require modifications to the Advantage product. This may require separate contracting with the Advantage contractor.

Modifications in Maximo

- We anticipate adding this functionality may require modifications to Maximo.

Assumptions

- ❑ Existing transactions in Maximo or Advantage that require the new Program / PPC will have to be updated manually.
- ❑ The existing Chart of Accounts (COA) Integration batch process that inactivates accounts likely cannot be leveraged for this purpose due to the more complex selection logic behind the Program PPC COA element.
- ❑ The new GL component string should be available to all existing transactions from Maximo to Advantage.
- ❑ The new GL component must be added to all the Maximo tables that contain the column/field name: glaccount.
- ❑ Currently in Advantage there are many Program PPC combinations associated with Grant ID's. These records need to be identified, exported and then imported into Maximo for use on new documents created that include grant funding. Once loaded into Maximo these records will be available for use in the GL string for any document in Maximo that include a *gl account* field.

Component List

Integration Point(s)
Advantage Financial / Maximo-Advantage interface / Maximo

Documents (Documents that will use the new GL component)
Delivery Order Maximo (DOM)
Purchase Order Maximo (POM)
Maximo Purchase Order
Maximo Work order
Task Order
Inventory transactions (IETM)
Purchase Requisition (PR)
Purchase Requisition in Maximo (RQSM)
Payment Request – Commodity Based, Maximo (PRCMAX)
Service Requests – used on Work Order to Task Order in Financial

Business Requirements

Business Requirements
The GL component used in grant funded Purchase Requisition, Purchase Order, and Work Order from Maximo must contain PPC codes so transactions will be accepted in Advantage.

Elaborated Business Concept

There are departments in Pima County that are funded by Grants and when they request services from Facilities or other departments they can only enter the GL Account information available in Maximo. They normally provide the additional grant information in the Long Description field so when the transaction fails in Advantage, it can be corrected and finalized.

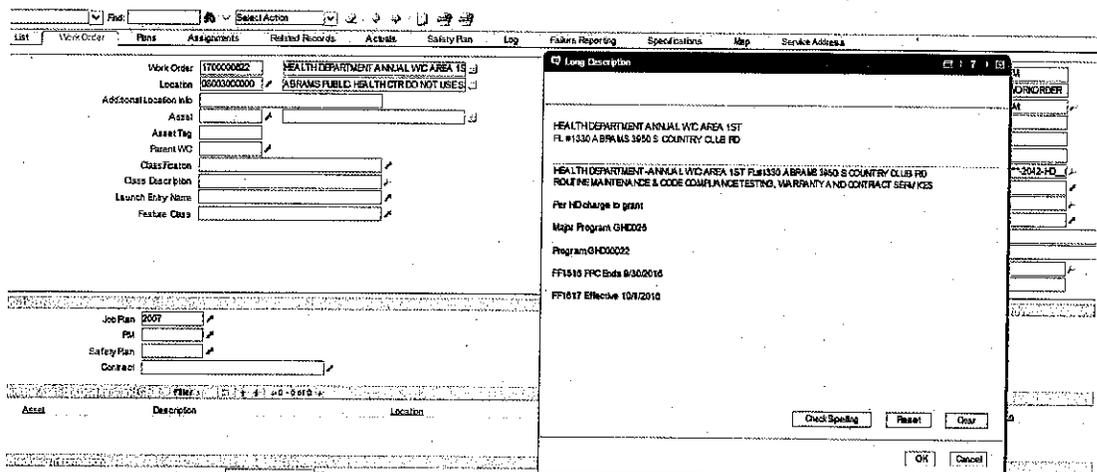


Figure 1: Screenshot illustrating the Long Description field currently used to capture the Grant information

The current GL string ends with the Task component. The requirement is to add the Program and Program Period Code (PPC) component to the GL string. Since the Grant ID is tied to a Program / Major Program in Advantage, the addition of the Program and PPC to the GL string will complete the string for Grant costs allowing integration to Advantage without errors related to the grant program accounting.

The current GL string in Maximo is shown in the table below.

Component	Description
FY	Fiscal Year
FUND	Fund
UNIT	Unit (concatenated with Department)
OBJECT	Object
PROGRAM PHASE	Dept concatenated with Program Phase code
FUNCTION	Dept concatenated with Function
REPORTING CODE	Reporting Code
TASK	Dept concatenated with Task code

The following screenshot shows a sample GL string used on a PR document in Maximo.

Component	Description
FY	**** (wildcard)
FUND	4018
UNIT	CD_0058
OBJECT	**** (wildcard)
PROGRAM PHASE	CD_CCD.2872BL001
FUNCTION	CD_CIPOTHERSS
REPORTING CODE	Null
TASK	Null

Figure 2: Illustration of a sample GL string on a PR document in Maximo

The integration of Grant ID Records From Advantage To Maximo

The Advantage to Maximo integration must recognize and integrate into Maximo any new, updated, or removed Grant ID records in Advantage.

New Process for Program PPC Inactivation

A new process will be created that will review Program PPC records for inactivation. The process will be used to synchronize Program PPC element active / inactivation status between Advantage Financial and Maximo that has become out of date due to the passage of time.

Business Scenarios

Scenario 1: Create a Work Order with GL String that uses Grant funding:
 (the PPC code is included in the GL string when creating the WO)

1. Create a service request, enter GL string that is charged to a Grant
2. Create Workorder from service request with material services charged to a Grant
3. Save and approve work order
4. Verify Task order created in ADV
5. Issue item, services charged to a Grant
6. Verify IETM transactions are created in Advantage with the Grant COA included

Scenario 2: Create Procurement documents with charges against Grant:

1. Create PR with PRLINES consisting of ITEMS & Services charged to valid GL String that contains PPC code
2. Verify DOM/ POM created with PPC code in ADV
3. Validate & Submit
4. Creates PO in maximo with the GL String that includes the PPC code
5. Receive the PO with charges to the Grant
6. Verify RCM is created in ADV

Scenario 3: Create Work Order & Procurement document with invalid GL String containing a PPC code. Maximo should validate for valid values based on validation logic defined in Exhibit J.

Scenario 4: Create a Procurement document using a Grant string where the Major Program end data has passed.

Scenario 5: Inactivate a PPC code in Advantage and confirm inactivation in Maximo.

Scenario 6: Delete a PPC code in Advantage and confirm transaction errors in Maximo.

END OF EXHIBIT H

EXHIBIT I: CHARGING TO THE GENERAL LEDGER (GL) STRING FOR NON-INVENTORY ITEMS (7 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system (Advantage).

This Exhibit addresses updates required in Maximo to support the ability to make non-stock purchases directly against GL strings.

The new functionality is intended to go live after the newly-developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when:

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this Exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage by CGI financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation
8	The contractor will provide all documentation for: a. Development b. Support c. Administration
9	The contractor will provide all training for: a. Troubleshooting b. Implementation c. Maintenance d. Break/Fix Error Handling

10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause. e. Monitoring f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed
The contractor will ensure that delivered contractor-developed product will support: a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an amendment to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

This functional design addresses updates required in Maximo to support the ability to make non-stock purchases directly against GL strings.

Background and Objectives

Currently Pima County has prohibited the use of non-stock item types within Maximo. At Pima County, non-stock items are items that do not get stored in a store room and are not "used" on a work order. Examples of these include freight and hazardous material handling.

This can lead to users adding non-stock items to inventory or creating long standing placeholder work orders in order to purchase non-stock items.

The Maximo application must provide the ability to create a purchase requisition for a non-stock item charged directly to a valid GL string. The solution has to work for both contract and non-contract related purchases. This change will impact multiple interfaces, as this check is in place for multiple documents. This enhancement is dependent upon the implementation of the *Require General Ledger (GL) Account Validation in Maximo* enhancement (Exhibit J).

Assumptions

- Management of stock vs non-stock designation will be done using native Maximo functionality.

Deviations

- N/A

Component List

UI Pages
Maximo Purchase Requisition

Integration Point(s)
Advantage / Maximo-Advantage interface / Maximo

Documents
Maximo Purchase Requisition
Delivery Order Maximo (DOM)
Purchase Order Maximo (POM)

Business Requirements

Business Requirements
The Maximo system must require a valid GL string for all stock or non-stock item purchase transactions.
The Maximo system must not require a Work Order or Storeroom entry for non-stock item

purchase transactions.
The Maximo system must require either a Work Order or a Storeroom entry for stock item purchase transactions.
The Maximo system must optionally allow a Work Order entry for non-stock item purchase transactions.
The Maximo system must prohibit a Storeroom entry for non-stock item purchase transactions.

Cross Application Impact

- Advantage Financial
- Maximo-Advantage Interface
- Maximo

Elaborated Business Concept

The Line Type for non-stock items will be set as an *Item*, and the constraint to require a Work Order (WO) or Storeroom on the Purchase Requisition will be disabled. A conditional edit to require the WO or Storeroom will be added to Maximo based on whether the Item is defined as stock or non-stock in the Stock Category field on the Item Master. See Figure 1.

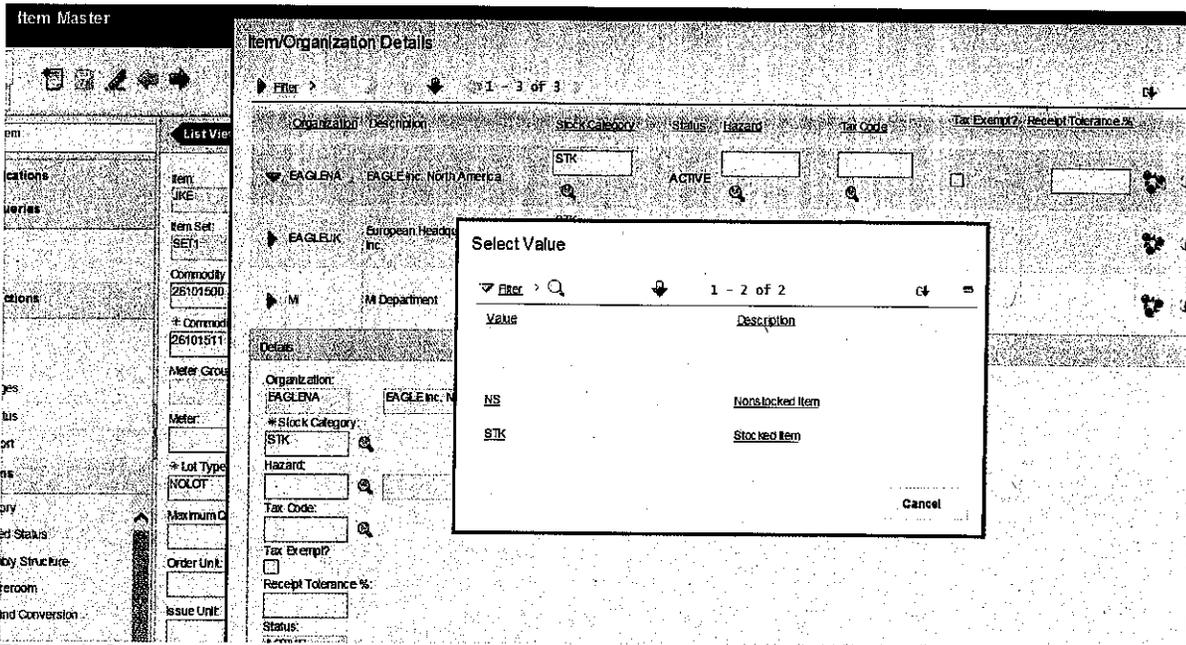


Figure 1: Screenshot of where the Stock Category is defined on the Item Master

When a PR is created for a non-stock item, a line type of Item would be used and the associated Non-stock Item ID would be entered. The Maximo user enters the GL string, which would be validated, and it would integrate to the Delivery Order from Maximo (DOM) / Purchase Order from Maximo (POM) in Advantage with the External Item ID field populated on the Commodity Line / Specifications tab.

The following series of screenshots shows the Line Type and Item ID fields on the PR in Maximo and the corresponding External Item ID field on the DOM and POM documents in Advantage.

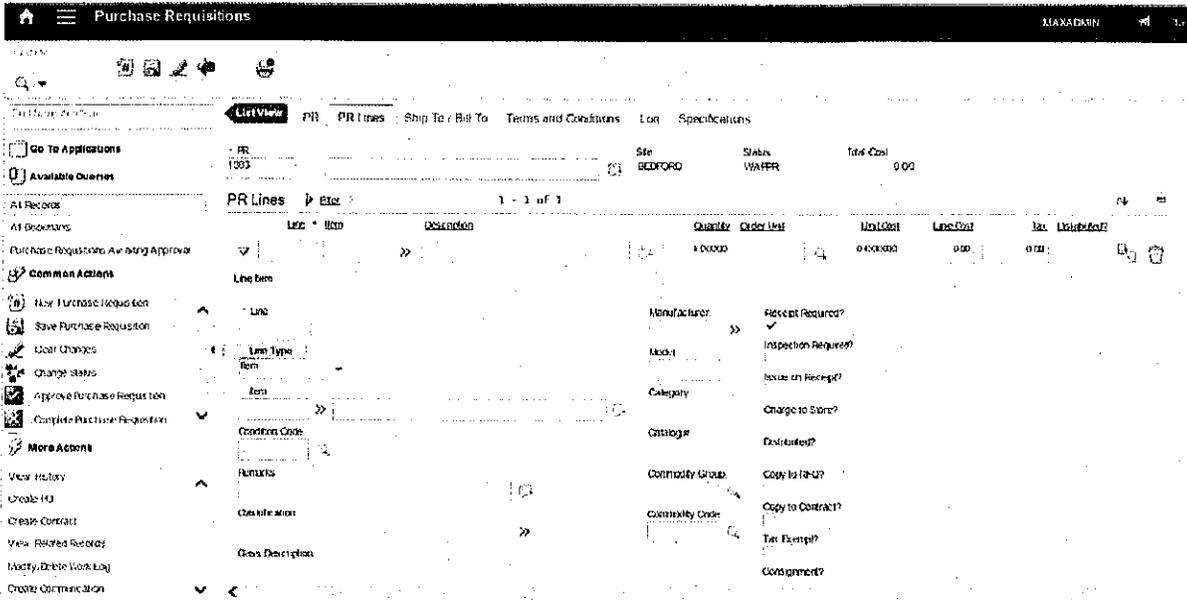


Figure 2: Screenshot of PR in Maximo showing the Line Type field on the PR Lines tab of the Purchase Requisition

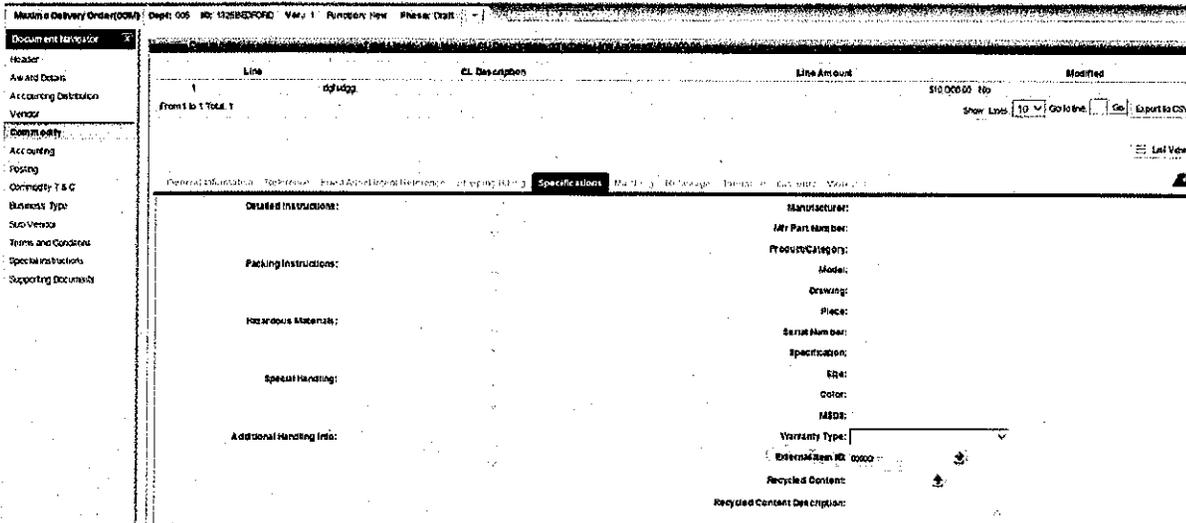


Figure 3: Screenshot of DOM in Advantage showing the External Item ID field on the Commodity Line / Specifications tab

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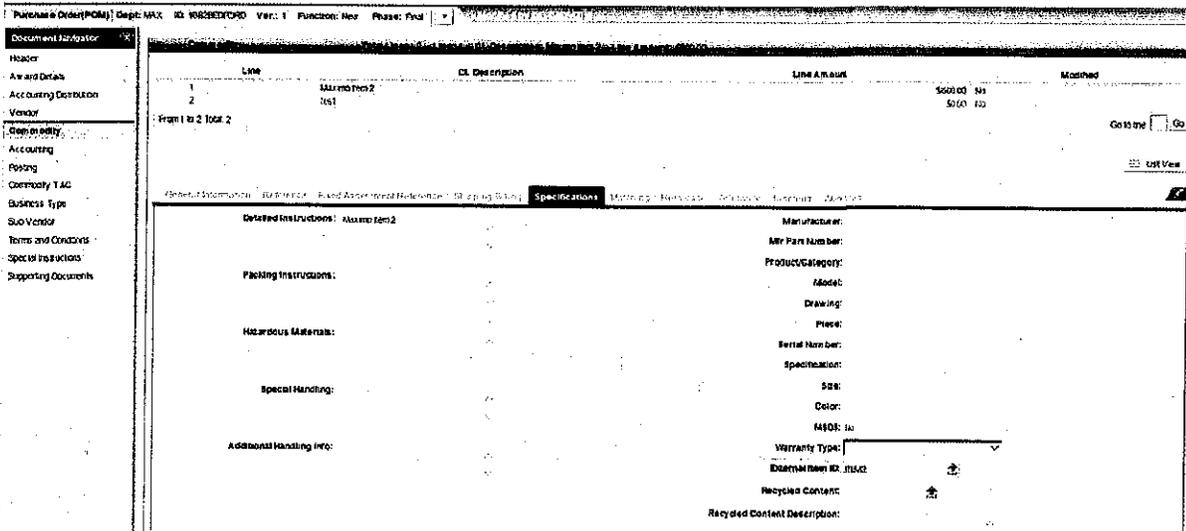


Figure 4: Screenshot of POM in Advantage showing the External Item ID field on the Commodity Line / Specifications tab

Modifications in Advantage Financial

In the event of a non-stock item purchase requisition from Maximo, an edit will be added so that these POM's with a non-stock item can be processed successfully back to Maximo without a Task Order or External Warehouse. The Item ID associated with the non-stock Item in Maximo will integrate to the External Item ID field on the corresponding DOM or POM in Advantage.

This edit will be performed by a separate Advantage contractor.

Modifications in Maximo

Maximo will allow the ability to enter a GL string directly onto a transaction in Maximo. In the event that a WO or Storeroom value is entered along with a manually entered GL string, the GL string associated with the WO or Storeroom will take precedence and overwrite any manually entered GL string.

The existing constraint on the Purchasing component in Maximo to require a WO or Storeroom entry on a PR transaction will be modified to conditionally require the WO or Storeroom. The following conditions will apply:

1. If the Item used is designated a stock item, then either WO or Storeroom is required. Both fields cannot be null.
2. If the Item used is designated a non-stock item, then WO is optional and Storeroom is prohibited. Both fields may be null. The Storeroom must be null. WO may be entered, but is not required.

Business Scenarios

Scenario A: Process a no agreement reference PR for a stock item:

Warehouse purchases inventory spares on PR Line 1, charging a Storeroom. The same item is ordered on PR Line 2, but charged to a WO. Warehouse also needs to purchase 'non-stocked' hardware for bench stock on the same PR, but there is no WO and cannot charge to a Storeroom. Currently, the warehouse must issue a DOM for PR Line 1 & 2 and a separate DO for the non-stocked hardware, all from the same vendor. The ability to manually populate and charge the GL Debit Account field will eliminate the need for two (2) POs to the same vendor from the same MA. This could be the soft reservation procedure. Inventory Items can optionally be charged to a WO.

Scenario B: Process an agreement reference PR for a material item that includes a service line:

Warehouse creates an Inventory Reorder PR from the MA picklist and charges the Storeroom. The order will include freight charges, which cannot be charged to a Storeroom. The Planner must create a WO to populate the GL Debit Account field. Aside from delaying the purchase and increasing lead time, the Planner now has the added workload of creating and monitoring another active WO. The ability to manually populate and charge the

GL Debit Account field would've avoided the Planner's increased workload and delaying the order. This scenario assumes that there is a Generic Item ID that can be used for freight charges.

END OF EXHIBIT I

EXHIBIT J: REQUIRE GENERAL LEDGER (GL) ACCOUNT VALIDATION IN MAXIMO (9 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of Advantage financial ERP system (Advantage).

This Exhibit describes requirements for adding the ability to validate that a GL Account selected for use on a record in Maximo will "pass" the validation process used in Advantage following integration from Maximo to Advantage.

The new functionality is intended to go live after the newly developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when:

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.

7	An implementation plan, including critical steps and considerations to ensure a successful implementation
8	The contractor will provide all documentation for: <ul style="list-style-type: none"> a. Development b. Support c. Administration
9	The contractor will provide all training for: <ul style="list-style-type: none"> a. Troubleshooting b. Implementation c. Maintenance d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: <ul style="list-style-type: none"> a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: <ul style="list-style-type: none"> a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: <ul style="list-style-type: none"> a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause. e. Monitoring

<ul style="list-style-type: none"> f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed
<p>The contractor will ensure that delivered contractor-developed product will support:</p> <ul style="list-style-type: none"> a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
<p>The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.</p>
<p>The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.</p>
<p>The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.</p>

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an addendum to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

This functional design describes requirements for adding the ability to validate that a GL Account selected for use on a record in Maximo will "pass" the validation process used in Advantage following integration from Maximo to Advantage.

Background and Objectives

Several documents in Maximo can be charged directly to a general ledger (GL) string. Currently, there is no check to confirm whether that GL string is valid or correct until the transaction integrates to Advantage Financial where it may fail with errors if the string is determined to be invalid. These errors create additional work and slow the business process on these transactions.

Having an up-front check to catch any mistakes when the GL string is entered would reduce the time and effort to process these transactions.

Exhibit J: Require General Ledger (GL) Account Validation in Maximo

Assumptions

- It is possible to use the same logic when validating GL strings in Maximo as that which is used in Advantage.
- It is believed that an Advantage web service exists that can be used to perform this validation.
- Loading all possible GL element combinations and then "filtering" is not feasible without some business rules related to the combinations due to the extremely large volume of combinations.
- Validations against the PROGREQ and VUPROG (valid unit program combination) will be included in the Advantage web service validation.
- There are approximately thirty-two (32) attributes (GL string fields) by document type in Maximo that need to be validated during Save or Change Status.
- It is noted that Pima County does not use the Revenue Accounting Methods - Revenue Cash (RCA) or Revenue Clearing (RCL) – and they are not included in the validation.

Deviations

N/A

Component List

UI Pages
All UI pages where GL string can be entered
Integration Point(s)
Advantage / Maximo-Advantage interface / Maximo
Documents
All document types where GL string can be entered
Batch Processes

Business Requirements

Business Requirements
1. Upon saving transactions in Maximo, any GL strings submitted are certified to be valid in Advantage prior to transmitting the transaction to Advantage.
2. Maintain the current Maximo document data entry process and not introduce any new windows or action buttons. Users will enter the required data elements on the document in Maximo including any GL string (through any means currently available, as you note) and upon Save, the GL validation process will get triggered. See below for a more detailed process outline.
3. The validation performed upon Save assures: <ul style="list-style-type: none"> a. The individual COA elements are valid. This should not technically be needed, since

- it is already done when integrating with Maximo.
- b. The combination of COA elements is allowed.
 - c. All required COA elements are present.
 - d. No disallowed COA elements are present.
 - e. The corresponding budget line is already present in any budget that requires a pre-existing budget line.
 - f. The funds are available in the budget line when the GL string is used on a document that is actually generated by the Maximo transaction.

Cross Application Impact

- Advantage Financial
- Maximo-Advantage Interface
- Maximo

Elaborated Business Concept

Under this design, every document type that includes a GL Account field in Maximo that integrates to Advantage will be validated during the Save or Change Status actions in Maximo. This design will define the document types and GL Account fields in Maximo that will include this validation service. It will also include some Maximo transactions that do not integrate to Advantage, like the Service Request and Assets entries in Maximo.

The following describes the high-level validation process that will be used for each document type in Maximo.

On Save of Maximo document that includes a GL string that will integrate to Advantage, a call to Advantage will be invoked. If the response comes back valid, the **Save** action will complete successfully and the GL account will be added to Maximo GL Account table.

If the call comes back invalid, a notification message is returned to the user to correct and re-validate (**Save** again). The GL account table in Maximo will be updated to indicate the GL string is invalid (if the record exists there). Note, in the event a GL string comes back invalid due to an incorrect VUJPROG or PROGREQ entry, the user would have to re-integrate the transaction after the table in Advantage is corrected. Or, alternatively, it would require update to the COA table in Maximo.

If Advantage is down, a check will be performed against the Maximo GL Account table for validity. If the account check is valid, the **Save** action will complete successfully. If the account check comes back invalid, a notification message is returned to the user to correct and re-validate (**Save** again). If the GL account is not found, a notification is returned to user that GL string cannot be validated at this time (due to Advantage system down). **Save** action would be unable to be completed in this case.

On Change Status action of a Maximo document that includes a GL string that will integrate to Advantage (this action will include a budget check), a call to Advantage will be triggered. If the call comes back valid, the **Change Status** action will complete successfully and the GL account is added to the Maximo GL

Account table. If the call comes back valid, but fails a budget validation, a notification is returned to the user regarding the budget constraint. If the call comes back invalid, a notification to the user is returned to correct and re-validate (perform **Change Status** again).

If Advantage is down, a check against the Maximo GL Account table is performed to determine validity. There will be no budget check at this validation level. If the account check comes back valid, the **Change Status** action will complete successfully. If the account check comes back invalid, a notification is returned to the user to correct and re-validate (perform **Change Status** again). The GL account in the Maximo GL Account table is updated to indicate GL string is invalid (if the record exists there). If the GL string record is not found, a notification is returned to the user that GL string cannot be validated at this time (due to Advantage system down). The **Change Status** action would be unable to be completed in this case.

Modifications in Maximo-Advantage Interface

To be determined.

Modifications in Maximo

To be determined.

Business Scenarios

The following business scenarios are listed to illustrate some common actions that will be performed that will utilize the new GL Account validation process. It is not meant to be an exhaustive list of all possible places where a GL Account validation will occur in Maximo.

Scenario	Requirement	Description	Result	Notes
1.	Save valid GL account – Req Advantage Up	Create and save a Maximo Purchase Request using a valid GL string.	Save successful	Advantage server up.
2.	Save valid GL account – Non-Req Advantage Up	Create and save a Maximo Service Request using a valid GL string.	Save successful	Advantage server up.
3.	Save invalid GL account – Req Advantage Up	Create and save a Maximo Purchase Request using an invalid GL string.	Notification message is returned to the user to correct and re-validate (save again).	Advantage server up.
4.	Save invalid GL account – Non-Req Advantage Up	Create and save a Maximo Service Request using an invalid GL string.	Notification message is returned to the user to correct and re-validate (save again).	Advantage server up.
5.	Change Status valid GL account – Req Advantage Up	Create and save a Maximo Purchase Request using a valid GL string, then Change Status to WADV.	Change Status successful	Advantage server up.

Scenario	Requirement	Description	Result	Notes
6.	Change Status invalid GL account – Req Advantage Up	Create and save a Maximo Purchase Request using an invalid GL string, then Change Status to WADV.	Notification message is returned to the user to correct and re-validate (save again).	Advantage server up.
7.	Save valid GL account – Req with Budget error Advantage Up	Create and save a Maximo Purchase Request using a valid GL string where the budget line exceeds the fund availability in Advantage.	Notification message returned to the user that the budget line is insufficient in Advantage (A615)	Advantage server up.
8.	Change Status valid GL account – Req with Budget error Advantage Up	Create and attempt to Change Status for WADV for a Maximo Purchase Request using a valid GL string where the budget line exceeds the fund availability in Advantage.	Notification message returned to the user that the budget line is insufficient in Advantage (A615).	Advantage server up.
9.	Save valid GL account – Req Advantage down	Create and save a Maximo Purchase Request using a valid GL string.	If the GL account is not found, a notification is returned to user that GL string cannot be validated at this time (due to Advantage system down). Save action would be unable to be completed in this case.	Advantage server down. No GL string on the GL Account table in Maximo.
10.	Save valid GL account – Non-Req Advantage down	Create and save a Maximo Work Order using a valid GL string.	If the GL account is not found, a notification is returned to user that GL string cannot be validated at this time (due to Advantage system down). Save action would be unable to be completed in this case.	Advantage server down. No GL string on the GL Account table in Maximo.
11.	Save valid GL account – Req Advantage down, GL string exists on Maximo GL Account table.	Create and save a Maximo Purchase Request using a valid GL string.	Save successful	Advantage server down. GL string exists on the GL Account table in Maximo and is valid.
12.	Save valid GL account – Non-Req	Create and save a	Save successful	Advantage server down.

Scenario	Requirement	Description	Result	Notes
	Advantage down, GL string exists on Maximo GL Account table.	Maximo Purchase Request using a valid GL string.		GL string exists on the GL Account table in Maximo and is valid.
13.	Save invalid GL account - Req Advantage Down, GL string does not exist on GL Account table in Maximo.	Create and save a Maximo Purchase Request using an invalid GL string.	If the GL account is not found, a notification is returned to user that GL string cannot be validated at this time (due to Advantage system down). Save action would be unable to be completed in this case.	Advantage server down. No GL string on the GL Account table in Maximo.
14.	Save invalid GL account - Storeroom	Create and attempt to save a new Storeroom entry in Maximo using an invalid GL string.	Save unsuccessful	Advantage server is up.
15.	Save using an invalid GL account response / Advantage is up - element that fails the VUPROG constraint and the PROGREQ constraint.	Create and save a Maximo Purchase Request using an invalid UNIT Program combination.	Save unsuccessful	Advantage server is up.
16.	Save an Inventory Issue using a valid GL account.	Create an Inventory Issue transaction in Maximo using a valid GL string.	Save successful	Advantage server is up.
17.	Save an Inventory Issue using an invalid GL account.	Create an Inventory Issue transaction in Maximo using an invalid GL string.	Notification message is returned to the user to correct and re-validate (save again).	Advantage server is up.
18.	Save an Inventory Transfer using a valid GL string on the Maximo GL Account table.	Create an Inventory Transfer transaction in Maximo using a valid GL string.	Save successful	Advantage server down.
19.	Save an Inventory Transfer using an invalid GL string on the Maximo GL Account table.	Create an Inventory Transfer transaction in Maximo using an invalid GL string.	If the GL account is not found, a notification is returned to user that GL string cannot be validated at this time (due to Advantage system down). Save action would be	Advantage server down.

Solicitation No: RFP-PO-1900005
Title: Maximo Upgrade Services

Scenario	Requirement	Description	Result	Notes
			unable to be completed in this case.	

END OF EXHIBIT J

EXHIBIT K: MANUFACTURER, MODEL, AND CATALOG NUMBER FIELDS MAXIMO INTEGRATION (17 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system (Advantage).

Item Inventory data entered and stored in Maximo should be reflected in line items under Master Agreements (MA) in Advantage. This exhibit addresses requirements for the Maximo-Advantage interface and changes needed to the Advantage application to support this integration.

The new functionality is intended to go live after the newly developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation.
8	The contractor will provide all documentation for: <ul style="list-style-type: none"> a. Development b. Support c. Administration
9	The contractor will provide all training for: <ul style="list-style-type: none"> a. Troubleshooting b. Implementation c. Maintenance

	d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause. e. Monitoring f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed
The contractor will ensure that delivered contractor-developed product will support: a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an addendum to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

Item Inventory data entered and stored in Maximo should be reflected in line items under Master Agreements (MA) in Advantage. The document addresses requirements for the Maximo-Advantage interface and changes needed to the Advantage application to support this integration.

A separate entity will be performing the Advantage changes.

Background and Objectives

The current interface between Maximo and Advantage does not include the Manufacturer and Model field data, nor are the fields mapped between the two systems. The data is currently being double entered in both systems. The Catalog # field is currently mapped/interfaced between the two systems, however a change to this mapping is needed.

Once an MA is established and used at Pima County, a Maximo user may change these fields on Inventory or Item Master applications related to the Primary Vendor, Manufacturer, Model or Catalog #. Maintenance on the MA in Advantage fails because some of the fields (i.e. the Model Number) are different from what is stored in Maximo. It is important that these entries stay in sync to prevent unintended validation errors in Advantage when MA modifications are made.

Resolution: Include integration from Maximo to Advantage Financial for three (3) fields:

1. Manufacturer,
2. Model and
3. Catalog #

Procurement controls the contract price through Manufacturer Part Number (Catalog #). Inventory controls the other fields. The Manufacturer, Model, and Catalog # fields will be maintained in the Maximo Inventory Vendor component based on the same security that is currently set up in production. They will be integrated to Manufacturer, Model Number, and Mfr Part Number fields on the MA Contract commodity lines in Advantage. The Catalog # will be maintained in the Master Agreement (MA) Contract commodity lines. In Advantage, this field is called the Manufacturer Part Number.

The Catalog field on the General Information tab of the MA commodity line in Advantage will be modified to update the Remarks field in Maximo. This field currently updates the Catalog # field in Maximo and needs to be changed to accommodate this enhancement. The Catalog field in Advantage will still be required when using a Discount Line Type, but the integration will be modified to update the Remarks field on the Purchase Contract in Maximo.

The following table shows how these three fields map between Maximo and Advantage. For the purpose of this design document, the Maximo field names will be used for consistency.

Field Name in Maximo	Field Name in Advantage
Manufacturer	Manufacturer
Model	Model Number
Catalog #	Mfr Part Number

Maximo will be the record source for these fields. They will be editable in Advantage in the event manual updates are required. These fields will integrate to a new table in Advantage called the **Item Vendor**, which will be created

as a child of the Item table in Advantage. When there is an update to these fields in Maximo an integration event is triggered to Advantage and the Item Vendor table is updated with the changes. There is no integration from Advantage back to Maximo if these fields are updated in Advantage. Maximo is considered the source of truth for this data and should own it. Any changes should be originated and done in Maximo.

To complete the process, there will be a new report developed to show the Item entries where there is no match on the Vendor and Item on an MA against the new Item Vendor table. The report will be available to all buyers listed under the Buyer Team noted on the MA header so that they can edit the MA to re-infer these fields to reflect the updated Item information so that it stays in sync with Maximo.

Assumptions

- There may be a one to many relationship between the Item, Vendor, and Manufacturer, Model and Catalog #.
- This one-to-many relationship will be managed through business practices to ensure that the correct Item, Vendor, Manufacturer, Model, and Catalog # combination are used for a given transaction.
- All MA's in Advantage that are set up for integration to Maximo are in Maximo.
- For an MA where these fields are updated and integrated to the Purchase Contract in Maximo, the revised version and the new version will be different.
- All Advantage side modifications will be done by a separate entity then the one bidding on this enhancement.

Deviations

N/A

Component List

UI Pages
ITEM
INVENTORY ITEM – New
INV_VENDOR – Maximo

Integration Point(s)
Maximo / Maximo-Advantage interface

Documents
Master Agreement

Batch Processes
MA Item Update Report (subject to name change)

Business Requirements

Business Requirements
The Manufacturer, Model, and Catalog #fields will be maintained in the item master vendor tab and synced to Advantage Financial to the new Item Vendor table.
The Manufacturer, Model, and Catalog # values will be stored on the Master Agreement Commodity line / Specifications tab in Advantage.
The Manufacturer, Model, and Catalog #values will be updated or re-inferred from the new Item Vendor table in Advantage.
A new Advantage report will be generated out of Advantage to notify the MA issuer of changes made to an ITEM entry used on their MA.
Report creation will be performed by a separate entity.

A new Advantage report will be developed to show the Item entries where there is no match on the Vendor and Item on an MA against the new Item Vendor table. The report will be available to all buyers listed under the Buyer Team noted on the MA header so that they can edit the MA to re-infer these fields to reflect the updated Item information so that it stays in sync with Maximo. The name of the new report will be: "Item Vendor Entries with Updated Manufacturer, Model, or Catalog # fields".

Report creation will be performed by a separate entity.

Elaborated Business Concept

The solution to these requirements is to add or adapt integration from Maximo to Advantage for the three fields: Manufacturer, Model and Catalog #. Maximo will be the record source for these fields. These fields will integrate to a new table in Advantage, called the **Item Vendor** table, which will be created as a child of the existing **Item** table.

When there is an update to these fields in Maximo, an integration event is triggered to Advantage and the Item Vendor table is updated with the changes. If the update creates a new Item / Vendor combination, then the integration will trigger an insert to the table in Advantage. Subsequently, when an MA document in Advantage that includes an Item on this table is modified or revised, the new values will be re-inferred upon document validation or submit to final.

A new MA document validation edit will be developed to check for a match on the Item Vendor table and infer the values if an exact match is found. If an entry is found, but does not match, an error will be returned requiring the user to make any necessary corrections. If no entry is found, or if an entry is found, but all three fields are blank, the validation edit will be bypassed.

To complete the process, there will be a new report developed to show the Item and Vendor entries where there is no match with any corresponding MA's that use the Item. The report will be available to the Issuer of the MA so that they can edit the MA to re-infer these fields to reflect the updated Item information so that it stays in sync with Maximo. This will require the MA user to edit, validate, and submit the document to invoke this new edit.

The notification email generated from the report generation process will contain the text: "*An Item associated with an MA for which you are assigned as Issuer has changed or an exact match on the Item Vendor table was not found. Please review the MA document and update it so that the latest values associated with the Item are inferred.*"

Modifications in Advantage

The following updates will be required in the Advantage application as part of this modification.

1. A new table will be developed as a child of the ITEM table. The table will be called the Item Vendor table.
2. Manufacture, Model and Catalog # fields will be sent from Maximo to Advantage as part of new integration point between the Maximo Inventory Vendor table and the Advantage Item Vendor table.
3. The new fields will be added to the new Item Vendor table in Advantage and display these fields on the Item Vendor page.
4. The new field lengths and database attributes will match what is defined in Maximo Inventory Vendor table.
5. Logic will be added to infer these values on MA validation when an Item Vendor combination on the MA exactly matches an entry on the Item Vendor table.
6. Logic to infer the updated values from ITEM to MA when an MA modification is performed.
7. A report of the Item Vendor entries that have been updated by MA document and Issuer.

A new table will be developed. The table will be called **Item Vendor** and will include the fields for Manufacturer, Model, and Catalog #. The primary key for the table will be based on a sequential number auto generated by Maximo when a new record is created. This primary key ID will be sent from Maximo to the new table in Advantage and serve as the primary key identifier to keep the two tables in sync.

The unique key combination for this group of fields on the new table in Advantage will match the unique key combination for these fields in Maximo. That unique key combination in Maximo is Manufacturer, Model, and Catalog #, Condition Code, SiteID, OrgID. This table will be the target of the new integration point from Maximo and created as a child of the ITEM table in Advantage. A mockup of the table is shown in the Mockup section.

The table will be read only with the exception of a system administrator role, who will have update rights only, but will not be able to Insert or Delete entries. Those actions will be disabled.

Whenever an Item status is updated to Obsolete in Maximo, an integration event will trigger an update to the Item Vendor table to mark that entry as Inactive. This will be designated through the addition of an Active check box flag on the Item Vendor table in Advantage.

Whenever an Item record in Maximo is deleted from the INVVENDOR table, the corresponding entry on the Item Vendor table in Advantage will get deleted through an integration event.

A document validation edit will be developed to look for a match using the Item and Vendor combination on the MA with an entry on the Item Vendor table. If a match is found, there will be a check if any of the three fields (Manufacturer, Model, or Part Number) is populated. If any one of the fields contains a value, then it will compare to the values used for these fields on the MA. If it is not an exact match, a document validation error will be returned. The error message text will be: "An exact match does not exist for the Vendor and Item combination on the Item Vendor table, please confirm the values and make the necessary correction."

If a match is found and the entry is marked "Inactive," a document validation error will be returned. The error message will say: "The match found for the Vendor and Item combination on the Item Vendor table, is marked "inactive." If the edit finds an exact match, and marked "active", but the values are different from what it existing, the system will overwrite the existing values using a hard inference.

If no match is found for the Item and Vendor combination, or if a match is found and all three fields are blank, the validation edit will be bypassed and the values as entered will be used.

The Vendor and Item field on the Commodity Line / Specifications tab are not required on the MA. The Manufacturer, Model, and Catalog # fields on the MA will be editable so that manual entry is allowed if necessary.

The new report will be added to the Advantage Batch Manager under the Financial / Procurement / Reports section. It will also be added to the Reports Page in Advantage so that it can be accessed by the affected procurement users. See below for a screenshot showing the exact location of the new report batch job.

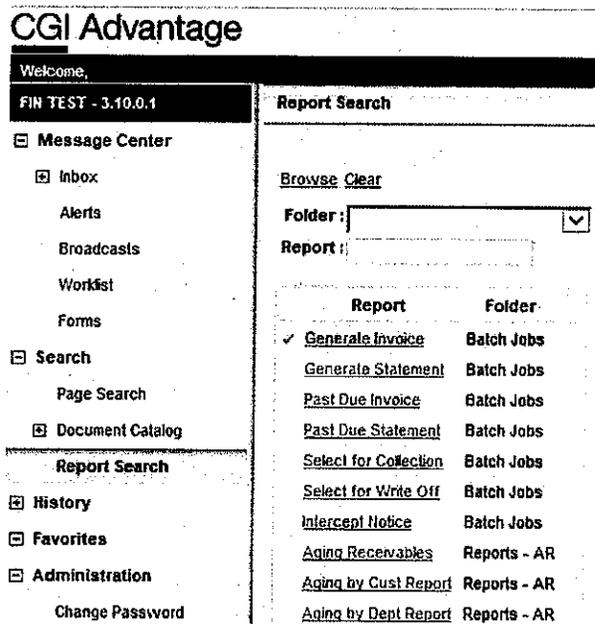


Figure 1: Online location of where the new report will be saved and accessed

The new report will be generated from Advantage to serve as the notification solution. The report will contain a list of MA's where the Item ID on the Vendor / Commodity line does not have a corresponding active entry on the Item Vendor table in Advantage.

The report process will review and select all active records on the R_INV_VEND table in Advantage. It will filter out records where the Active checkbox is unchecked. From the remaining list it will go through all the final MA documents in the systems to find a match against each Vendor / Commodity line Item ID entry. If no match is found, it will write the record to the report.

The notification and report will be generated from Advantage if at least one entry is found that does not match up with an existing, final MA document Vendor / Commodity / Item ID entry. The report batch process will include a parameter to enter a Run Date. The process will pick up records from R_INV_VEND table where TBL_LAST_DT is greater than Run Date. If no Run Date parameter is provided, the system will select all records on the table.

In addition, the following two parameters were added to the APPCTRL table to support this report batch process output. The parameters will define the Subject line on the Header and Description to use. The parameter names are: MXMO_ITEMVEND_NOTIF_SUBJECT and MXMO_ITEMVEND_NOTIF_BODY.

The process will get the email addresses based on the Buyer Team entry the MA document header. It will use the Document Commodity Line data (MA_DOC_COMM) based on Item and Vendor Customer Code, (ITEM, VEND_CUST_CD) and get the MA document header (MA_DOC_HDR) from that. The email addresses will be taken for all buyers listed under the buyer team for that MA. The email notification will go out to all buyers (not just the issuer as originally planned).

The batch process will generate a report showing the data for each record selected. The report will contain the following columns:

1. Issuer Name
2. ITEM
3. MA Document ID
4. Vendor
5. Commodity Line

The report will be sorted by Issuer Name. See Mockup section for an example of the report.

The process will trigger an email notification to each buyer listed under the Buyer Team noted on the MA document header. The Team ID is populated from the WBUYR table. An email will be generated for each occurrence where an Item Vendor and MA match is not found.

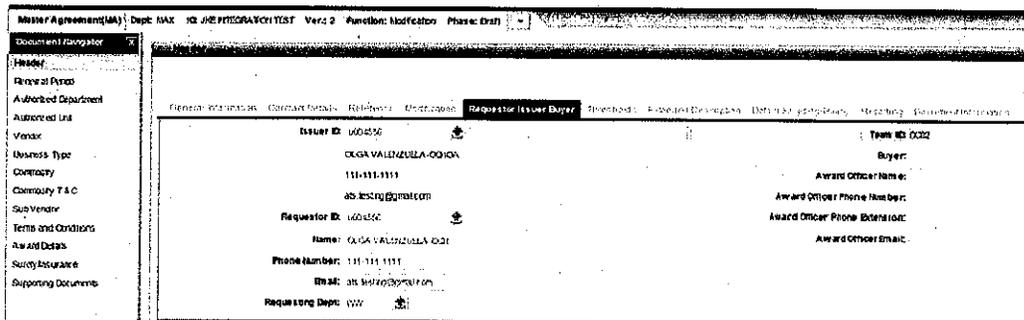


Figure 2: Screenshot showing the Buyer Team field on the MA document header

Modifications in Maximo and Maximo-Advantage interface

Add details for the integration of the new checkbox values that trigger the Inactive status trigger:

1. When an Item status changes to Obsolete on the Item Master / Organization level, it will trigger integration to make Item entry Inactive on Item Vendor table in Advantage.
2. When an item status changes to Obsolete on the Inventory / Storeroom level, it will not trigger integration to make Item entry Inactive on Item Vendor table in Advantage.

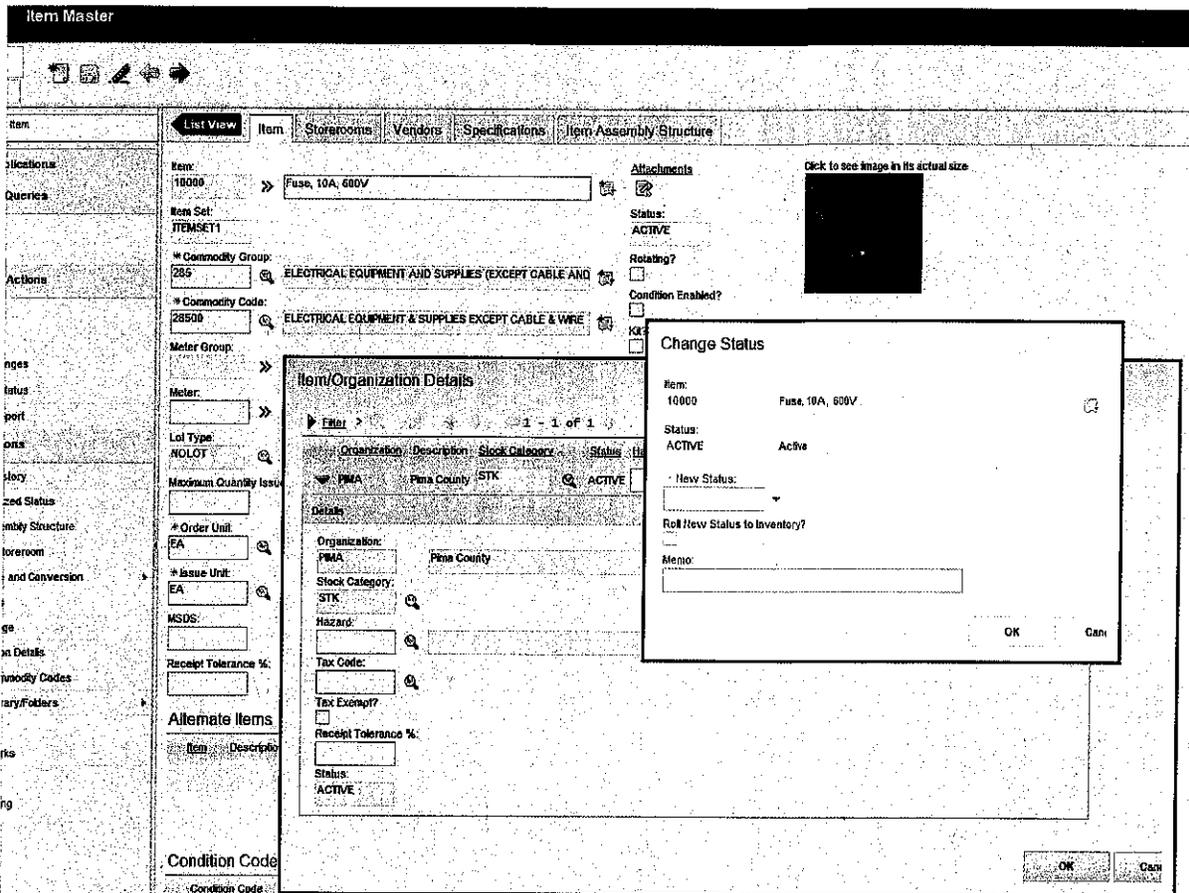


Figure 3: Screenshot showing the Status field on the Item Master /Organization level

The Maximo-Advantage interface will be modified to add a new integration point between the Maximo Inventory Vendor table and the new Advantage Item Vendor table. The Maximo-Advantage interface must accommodate the passing of these three fields from Maximo to Advantage.

Upon initial implementation, there will be a one-time export and load of this table from Maximo into the new Advantage table to populate the new table in Advantage with the data from Maximo.

There are three fields on the Inventory component in Maximo that use the Manufacturer, Model, and Catalog # from a Company or Vendor defined in Maximo. When a user inserts or updates the values on these fields a new integration event will be triggered to send the values entered on those three fields through the Maximo-Advantage interface to Advantage where it will update the new Advantage table.

In addition, there is an existing integration of the Catalog field from the Advantage MA commodity line that updates the Catalog # field on the Contract in Maximo. This integration will be updated so that the Catalog field value from Advantage will populate the Remarks field on the Purchase Contract in Maximo.

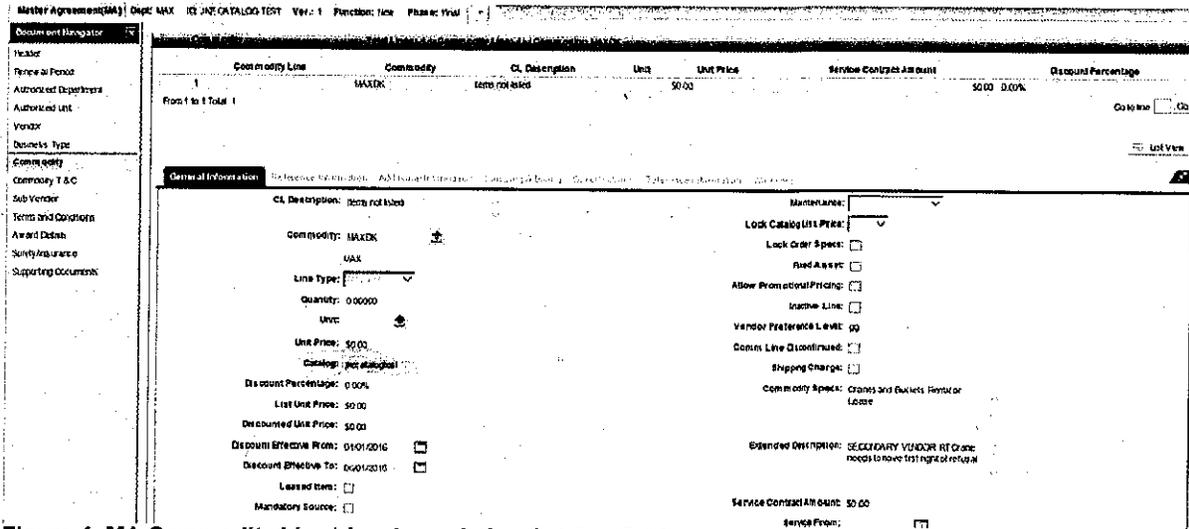


Figure 4: MA Commodity Line showing existing Catalog field

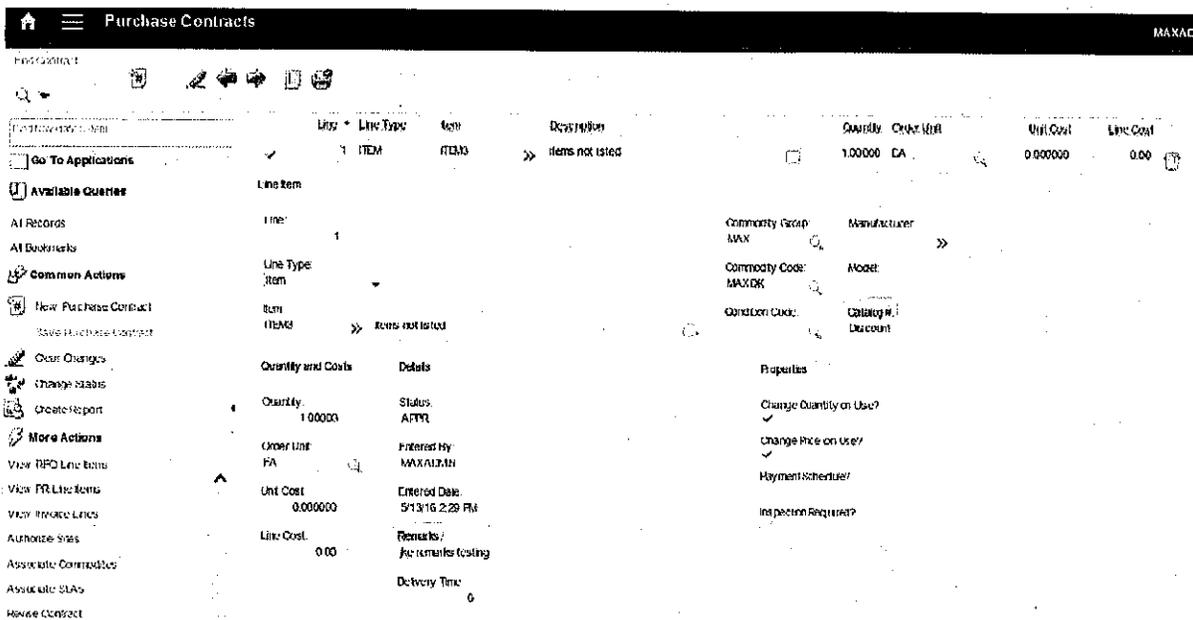


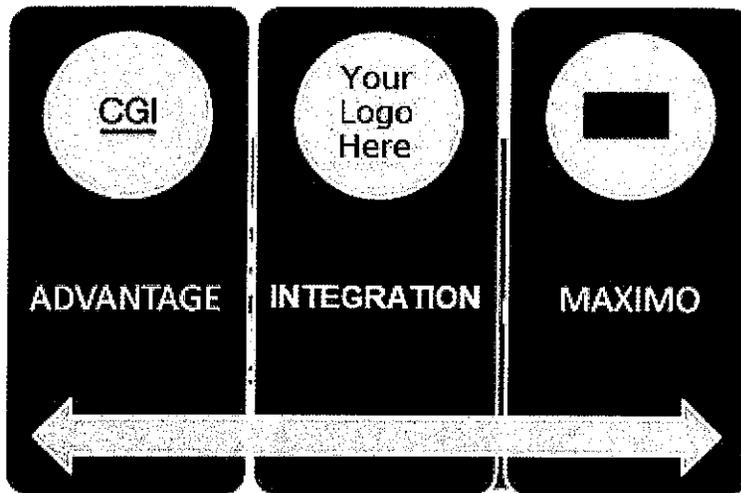
Figure 5: PC Contract Lines tab showing the Remarks field and the Catalog # field

In addition to updating the integration target of the Catalog field from Advantage to Maximo, a one-time data fix will be developed to remove the word "catalog" from the corresponding Item entry on INVVENDOR in Maximo. For each Item entry on INVVENDOR that currently has the Catalog field populated with the word, the value will be cleared.

Existing integration updates from Advantage to Maximo related to the Manufacturer, Model, and Catalog # will be disabled so that no updates are made in that direction.

In the event that an Advantage user encounters an error related to the Item Vendor combination due to no exact match on the Item Vendor table in Advantage, they will have to coordinate with the Maximo user to confirm the values and update the data in Maximo and have the integration trigger to Advantage to update the table. Then, they would re-validate the MA to infer the updates values and resolve the error.

Context Diagram



Business Process

1. Inventory Vendor / Item update made in Maximo
2. Interface to Advantage updates new Item Vendor table
3. Report batch process runs
4. Email notification sent to MA issuer
5. MA is modified and validated
6. If exact match then hard inference of updates
7. If no exact match found, warning and manual entry
8. MA submitted with updates
9. Interface back to Maximo with in sync data

Business Scenarios

Pre-condition: the new batch process must be run initially to bring the Item and Vendor data over to the new table.

Scenario 1: Vendor updates manufacturer after MA is finalized.

1. A bid received with multiple line items.
2. Buyer / issuer creates the MA with multiple lines.
3. Vendor changes manufacturer and notifies Maximo user who updates ITEM in Inventory to reflect the changes.
4. The ITEM manufacturer changes are integrated to the new Item Vendor table in Advantage.
5. The MA in Advantage is not updated yet and contains the old manufacturer information.
6. Batch process runs at night to select the Item that was updated and generates a report and notification to the buyer / issuer of the MA.
7. The buyer / issuer of the MA goes into the MA and edits the document to infer the updated Manufacturer value.
8. The buyer / issuer validates and submits the MA to final with the updated Item manufacturer information.

Scenario 2: Exact match not found on Item Vendor table upon MA validation requires manual entry.

1. A bid received with multiple line items.
2. Buyer / issuer creates the MA with multiple vendor and multiple commodity lines. Vendor 1 and Vendor 2 provide the same external Item / commodity.
3. CT created in Maximo.
4. Vendor 1 changes manufacturer and notifies Maximo user who updates ITEM in Inventory to reflect the changes.
5. The ITEM manufacturer changes are integrated to the new Item Vendor table in Advantage.
6. The MA in Advantage is not updated yet and contains the old manufacturer information for Vendor 1.
7. Batch process runs at night to select the Item that was updated and generates a report and notification to the buyer / issuer of the MA.

8. The buyer / issuer of the MA goes into the MA and edits the document.
9. Upon document validation the system returns an error message indicating that an exact match was not found on the Item Vendor table and that the Manufacturer, Model and Catalog # must be resolved before submitting the document to final.
10. The buyer / issuer validates and submits the MA to final with the updated Item manufacturer information.

Scenario 3: MA with Discount line type.

1. Create an MA in Advantage with a Commodity Line Type = Discount, Unit Price = 0. This is the "free form" line. Specifications tab is left blank, except for EID.
2. Enter the word "discount" in the Catalog field as this field is required when the Line Type is Discount.
3. Enter a commodity code.
4. Enter an External Item ID on the Specifications Tab.
5. Validate and Submit to Final.
6. Verify the integration to Maximo CT.
7. The value from the Catalog field in Advantage integrates to the Remarks field on the CT in Maximo.

Scenario 4: Item ID change in Maximo

1. Maximo user updates the status of an ITEM ID to obsolete.
2. Integration to Financial to make the entry on Item Vendor table in Financial Inactive.
3. Maximo user creates a new ITEM ID with Manufacturer, Model, and Catalog #.
4. New Item ID integrates to Financial Item Vendor table.
5. Report runs and selects MA using the old Item ID.
6. Financial user edits MA and validates to get warning.
7. Financial user must manually enter the new Item ID on the MA and re-validate.

Current State: The transactions errors out during the integration without identifying the reason, which is due to the out of sync Item / Vendor information.

New Result: Upon MA modification, when the document is validated, it will re-infer updated ITEM data if an exact match is found on the new ITEM Vendor table in Advantage. If an exact match is not found, the system will return an error and give the user the ability to enter the correct entry manually. If after manual entry an exact match is not found upon validation, the system will return the same warning error. The Advantage user in this case must coordinate with the Maximo user to confirm the data and make any updates in Maximo first, which will trigger an integration event to update the Item Vendor table in Advantage. Once the Item Vendor table in Advantage contains the latest, correct information, the MA would be validated again and the error would not be returned.

Detailed Business Rules

BR 1: Master Agreement / Commodity Line / Specifications

The system shall provide a field on the MA / Commodity Line / Specifications tab.

RQ: Functional Area: Procurement
RQ: Business Requirement Type: Document

BR 1.1: Commodity Line

The Procurement Document Type shall have a Commodity component.

BR: Business Rule Type: Informational
Origin: Existing Application
Client Modification Type: Unchanged
Baseline Indicator: Baseline
Tech Details:

BR 1.1.1: Specifications Tab

The Specifications tab shall include fields for Manufacturer, Model Number, and Manufacturer Part Number.

BR: Business Rule Type: Informational
Origin: Existing Application

<i>Client Modification Type:</i>	Unchanged
<i>Baseline Indicator:</i>	Baseline
<i>Tech Details:</i>	

BR 1.1.1.1: Manufacturer

The Manufacturer field shall infer its value from the Manufacturer field on the Item Vendor table upon validation.

<i>BR: Business Rule Type:</i>	Property-Document
<i>Origin:</i>	Baseline
<i>Client Modification Type:</i>	Add
<i>Baseline Indicator:</i>	Baseline
<i>BR: Property Name:</i>	Manufacturer
<i>BR: Property Data Type:</i>	Varchar
<i>BR: Property Length:</i>	
<i>BR: Property Required:</i>	No
<i>BR: Property Upper Mixed:</i>	Upper
<i>BR: Property Default Value:</i>	<blank>
<i>BR: Prop-Doc Copy Forward:</i>	

BR 1.1.1.1: Model Number

The Model Number field shall infer its value from the Model field on the Item Vendor table upon validation.

<i>BR: Business Rule Type:</i>	Property-Document
<i>Origin:</i>	Pima County
<i>Client Modification Type:</i>	Add
<i>Baseline Indicator:</i>	Not Baseline
<i>BR: Property Name:</i>	Model Number
<i>BR: Property Data Type:</i>	Varchar
<i>BR: Property Length:</i>	
<i>BR: Property Required:</i>	No
<i>BR: Property Upper Mixed:</i>	Upper
<i>BR: Property Default Value:</i>	<blank>
<i>BR: Prop-Doc Copy Forward:</i>	

BR 1.1.1.1: Manufacturer Part Number (Catalog # in Maximo)

The Manufacturer Part Number field shall infer its value from the Catalog # field on the Item Vendor table upon validation.

<i>BR: Business Rule Type:</i>	Property-Document
<i>Origin:</i>	Pima County
<i>Client Modification Type:</i>	Add
<i>Baseline Indicator:</i>	Baseline
<i>BR: Property Name:</i>	Manufacturer Part Number
<i>BR: Property Data Type:</i>	Varchar
<i>BR: Property Length:</i>	
<i>BR: Property Required:</i>	No
<i>BR: Property Upper Mixed:</i>	Upper
<i>BR: Property Default Value:</i>	<blank>
<i>BR: Prop-Doc Copy Forward:</i>	

BR 1.2: Validation Edit to Infer Values from Item Vendor Table

The MA document validation will include an edit that will look up to the Item Vendor table for an exact match between the Item used on the commodity line and the vendor used on the vendor line. If an exact match is found the Manufacturer, Manufacturer Model Number, and Model Number will be inferred. This will be a hard inference and overwrite any existing values in these fields.

<i>BR: Business Rule Type:</i>	Informational
<i>Origin:</i>	Existing Application
<i>Client Modification Type:</i>	Modification
<i>Baseline Indicator:</i>	Pima Custom
<i>Tech Details:</i>	

BR 1.3: Warning Message if No Match

The MA document validation will include a new warning message that will be returned in the event no match is found on the Item Vendor table between the Item and Vendor used on the MA Vendor / Commodity line combination. The error message severity will be set to Warning.

<i>BR: Business Rule Type:</i>	Informational
<i>Origin:</i>	Existing Application
<i>Client Modification Type:</i>	Modification
<i>Baseline Indicator:</i>	Pima Custom
<i>BR: Error Message:</i>	"An exact match does not exist for the Vendor and Item combination on the Item Vendor table, a value must be inserted manually."
<i>BR: Error Detailed Msg:</i>	"An exact match does not exist for the Vendor and Item combination on the Item Vendor table. Please review the entries on the table to determine the correct values and enter them manually."
<i>BR: Error Severity:</i>	Validation Warning
<i>BR: Error Override:</i>	0
<i>Tech Details:</i>	This is a new error message code.

BR 2: Item Vendor Table

The system shall include an Item Vendor table. The Item Vendor table will define entries by Item and Vendor combination. The table will serve as the target for the integration of the Manufacturer, Model Number, and Manufacturer Part Number (Catalog #) from Maximo. The table shall include the following fields:

<i>BR: Business Rule Type:</i>	Informational
<i>Origin:</i>	Existing Application
<i>Client Modification Type:</i>	Modification
<i>Baseline Indicator:</i>	Pima Custom
<i>Tech Details:</i>	

BR 2.1: Item Vendor Table – Vendor

The Item Vendor table shall include a field for Vendor.

<i>BR: Business Rule Type:</i>	Informational
<i>Origin:</i>	Existing Application
<i>Client Modification Type:</i>	Modification
<i>Baseline Indicator:</i>	Pima Custom
<i>BR: Property Name:</i>	
<i>BR: Property Data Type:</i>	
<i>BR: Property Length:</i>	
<i>BR: Property Required:</i>	
<i>BR: Property Upper Mixed:</i>	
<i>BR: Property Default Value:</i>	
<i>Tech Details:</i>	

BR 2.2: Item Vendor Table – Item

The Item Vendor table shall include a field for Item.

<i>BR: Business Rule Type:</i>	Informational
<i>Origin:</i>	Existing Application
<i>Client Modification Type:</i>	Modification

Baseline Indicator:

Pima Custom

BR: Property Name:

BR: Property Data Type:

BR: Property Length:

BR: Property Required:

BR: Property Upper Mixed:

BR: Property Default Value:

Tech Details:

BR 2.3: Item Vendor Table – Manufacturer

The Item Vendor table shall include a field for Manufacturer.

BR: Business Rule Type:

Informational

Origin:

Existing Application

Client Modification Type:

Modification

Baseline Indicator:

Pima Custom

BR: Property Name:

BR: Property Data Type:

BR: Property Length:

BR: Property Required:

BR: Property Upper Mixed:

BR: Property Default Value:

Tech Details:

BR 2.4: Item Vendor Table – Manufacturer Part Number

The Item Vendor table shall include a field for Manufacturer Part Number.

BR: Business Rule Type:

Informational

Origin:

Existing Application

Client Modification Type:

Modification

Baseline Indicator:

Pima Custom

BR: Property Name:

BR: Property Data Type:

BR: Property Length:

BR: Property Required:

BR: Property Upper Mixed:

BR: Property Default Value:

Tech Details:

BR 2.5: Item Vendor Table – Model Number

The Item Vendor table shall include a field for Model Number.

BR: Business Rule Type:

Informational

Origin:

Existing Application

Client Modification Type:

Modification

Baseline Indicator:

Pima Custom

BR: Property Name:

BR: Property Data Type:

BR: Property Length:

BR: Property Required:

BR: Property Upper Mixed:

BR: Property Default Value:

Tech Details:

BR 3: MA Item Update Report

The system will provide the ability to generate a batch report that will be used to notify MA Issuers that an update has been made to the values on the Item Vendor table. The report will select entries from the Item Vendor table that have a modification date greater than a parameter driven run date.

BR: Business Rule Type: Informational
 Origin: Existing Application
 Client Modification Type: Modification
 Baseline Indicator: Pima Custom

BR 3.1: MA Item Update Report – Run Date Parameter

The report batch job will include the ability to specify a Run Date parameter. If a run date parameter value is not provided, the job will use the application system date.

BR: Business Rule Type: Informational
 Origin: Existing Application
 Client Modification Type: Modification
 Baseline Indicator: Pima Custom

BR 3.2: MA Item Update Report – Email Notification

The report batch job will generate an automatic email notification to the MA Issuer. The email will be sent to the Issuer ID email listed on the MA document header for which a record matching the Item and Vendor used on the MA was found.

BR: Business Rule Type: Informational
 Origin: Existing Application
 Client Modification Type: Modification
 Baseline Indicator: Pima Custom

UI Specification

Mockups

Report generated from Advantage Financial Batch Process

REPORT ID:						PAGE 1
RUN DATE:	Item Vendor Entries with Updated Manufacturer, Model, or Catalog # Fields					
RUN TIME:						
<hr/>						
	MA Issuer Name	MA Doc ID	MA VL	MA CL	Item ID	
<hr/>						

Email Notification Mockup

Send From: john.aldredge@cgi.com
 To: MA Issuer Email Address
 Subject: Auto Notification - Item Vendor Manufacturer, Model, Catalog Number Updates from Maximo - Require Your Attention

"An Item associated with an MA for which you are assigned as Issuer has changed. Please review the MA document and update it so that the latest values associated with the Item are inferred."

Batch System Admin

Inventory Reorder Details tab in Maximo showing the three fields that will be integrated to Advantage

Inventory | Reorder Details | Primary Vendor

Item: 10000 | Description: Fuse, 10A, 600V | Site: WW

Storage: 01 | Location: TREATMENT CENTRAL WAREHOUSE

Reorder Details

Reorder Point: 0.00
 Lead Time (Days): 0
 Safety Stock: 0
 Economic Order Quantity: 10000
 Order Unit: EA

Primary Vendor

Manufacturer: VC00000032
 Manufacturer: HD SUPPLY POWER SOLUTIONS LTD
 Model: NCS-10
 Catalog #: NCS-10

Vendor	Manufacturer	Model	Catalog #	Order Unit	Last Price	Last Order Date	Organization
CVS0001170			NCS-10	EA		11/29/11	PIMA
CVS0003792			NCS-10	EA	6.50	5/22/07	PIMA
VC00000032			NCS-10	EA		8/6/10	PIMA

Item Master Vendors tab in Maximo showing the three fields that will be integrated to Advantage

Item Master | Vendors | PMA1MAX100

Vendor	Manufacturer	Model	Catalog #	Last Price	Last Order Date	Order Unit	Organization	Site
PMA1MAX100				1.00	5/27/16	EA	EACLEIA	BEDFORD
PMA1MAX100			Discount	25.00	5/25/16	EA	EACLEIA	BEDFORD

Details

Vendor: PMA1MAX1001
 Manufacturer: PMA1MAX1001
 Model: Discount
 Catalog #: Discount
 Promised Lead Time (Days): 0
 Tax Code: TUCS001
 Currency: USD
 Receipt Tolerance %:
 Default Vendor?

Disqualified Vendor?
 Last Price: 25.00
 Last Order Date: 5/25/16
 Order Unit: EA
 Change Web Page:
 Tax Exempt?
 Organization: EACLEIA
 Site: BEDFORD

(REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK)

Corresponding fields in Advantage on the MA commodity line / Specifications tab

Commodity Line	Commodity	CL Description	Unit	Unit Price	Service Contract Amount	Discount Percentage
1	99001	Color Control Program Sampling Accuracy and Performance	SO CD		\$0.00	0.00%
Item 1 to 1 Total: 1						

Detail Instructions: Packing: Hazardous Materials: Special Handling: Additional Handling Info:	Manufacturer: Mfr Part Number: Product Category: Model Number: Drawing Number: Place Number: Serial Number: Specification Number: Size: Color: Material Safety Data Sheet: No Warranty Type: External Item ID: Recycled Content: Recycled Content Description:
---	---

Mockup of fields on the new ITEM Vendor table in Advantage. The Insert, Delete, Copy and Paste actions on this table will be disabled (or hidden from view). A system administrator will have update ability.

Item Vendor

Item Vendor

✓ 10000 28500

First Prev Next Last

Save Undo Delete Insert Copy Paste Search

Item : 10000

Commodity : 28500

Manufacturer : ABC Company

Model Number : ABC2016

Mfr Part Number : JKE16

Active:

Figure 6: Item Vendor Page Mockup

Documentation

A runsheet for the new report batch process will be needed. Creation of this will be handled by a separate entity then the one bidding on this enhancement.

END OF EXHIBIT K

EXHIBIT L: PREVENT WORK ORDERS FROM BEING CLOSED PREMATURELY (13 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system (Advantage).

This Exhibit outlines the functionality of introducing a real time call and edit to prevent Maximo Work Orders (WO) from being closed in Maximo when they are actively referenced on transactions in Advantage that are not closed.

The new functionality is intended to go live after the newly developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when:

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this Exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation.
8	The contractor will provide all documentation for: a. Development b. Support c. Administration
9	The contractor will provide all training for: a. Troubleshooting b. Implementation c. Maintenance d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.

11	Project completion is reached, as measured by the Definition of Complete (above).
----	---

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause. e. Monitoring f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed
The contractor will ensure that delivered contractor-developed product will support: a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an amendment to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

Background and Objectives

This design will introduce a real time call and edit to prevent Maximo Work Orders (WO) from being closed in Maximo when they are actively referenced on transactions in Advantage that are not closed.

Facilities and Parks do not do purchasing out of Maximo but use a WO number to post costs in Advantage. These WO's can get closed in Maximo while the document referencing the Work Order in both Maximo and Advantage are still open, causing integration, data, and accounting errors that have to be manually corrected.

The system currently allows a WO to be closed when it is referenced on documents still active in Maximo and Advantage. The system performs no check before it closes the Work Order to see if there are open Purchase Orders (PO), unused material, or labor charges. Impact: end users are closing WO's prematurely, and associated transactions are rejecting both in Advantage and Maximo. Transactions that are failing are: labor hours coming through the Other Cost job in Advantage, invoices from Advantage, and JV documents to capture labor charges, inventory issues and returns from Maximo, PR from Maximo and PRCMAX document from Advantage, and DOM documents from Advantage.

Assumptions

- The real time call and edit process will not consider documents in Draft phase.
- When Work Order is closed in Maximo, related Task Order becomes inactive in Advantage. This is current functionality and will remain in place.
- When Work Order is cancelled in Maximo, related Task Order becomes inactive in Advantage. This is current functionality and will remain in place.
- Existing escalation delay in Maximo to account for future postings will not be changed by this design. (In Maximo, there is an escalation to update the Invoice from IADV to PAID and CLOSE.) The escalation lag built into the automated WO close process will be configured to match this escalation if necessary.
- When Advantage or the Maximo-Advantage interface is down, the call and edit process will return a response as if the Work Order does not pass the close edit.
- Pima County will restrict the entry of labor charges for the Work Orders that should not accept these charges in their Time Card entry system.

Deviations

- The Advantage Other Costs batch process will not be used for this enhancement. Instead a new real time call and edit process will be developed to achieve the WO edit to prevent the premature close.

Component List

UI Pages
Maximo Work Order Tab to display the new flag
ACTGINT – Accounting Integration Table in Advantage

Integration Point(s)
Advantage / Maximo-Advantage interface / Maximo

Documents
Work Order - Maximo

Maximo Batch Processes
Real time call and edit process in Maximo

Business Requirements

Business Requirements
Provide an edit in Maximo to prevent the premature closing of Work Orders referenced on transactions that are not closed in Advantage.
When "Accepts Labor Charges" is set to "Yes," the Work Order cannot be closed until labor is posted. This cannot be set to "Yes" if Accept Charges is set to "No."
The Work Order must remain open until all additional closing criteria are met such as open documents in Advantage or Maximo, open Purchase Requests, etc.
The Work Order close process will be controlled and scheduled by the SysAdmin either manually or scheduled with the ability to change the number of days the Work Order status was changed to one of the 'completed' statuses. Pima would prefer that this NOT be set up as a scheduled regularly recurring interval task (called a 'chron' task).
The close process will follow a bottom up order for Work Order closure. Child Work Orders and tasks must be eligible to close before the Parent Work Order can. All Child Work Orders must close before Parent Work Order can close.
'Real time' for the call and edit process means as rapidly as possible given the number of child transactions that have to occur for a given parent transaction. Currently interface functionality provides this in under a minute for the non-batch process routines, and under five (5) minutes for the batch process routines.

Cross Application Impact

- Advantage / Maximo-Advantage interface / Maximo

Elaborated Business Concept

When an attempt to close a Work Order (aka: Task Order in Advantage) in Maximo is made, a new edit will be introduced to check if that WO is referenced on any active transactions in Advantage. This edit will be in addition to existing edits to check for status, unused material, cost or labor charges, or if the WO is referenced on a Maximo Purchase Order or Purchase Requisition.

To implement the additional edit check for open transactions in Advantage, a new real time call and edit process will be implemented from Maximo to Advantage. The real time call and edit process will perform a check in Advantage to determine if there are any open transactions using a given Maximo WO.

An existing Accounting Integration Parameters table in Advantage (ACTGINT) will be used for this real time call and edit process to use. The ACTGINT will continue to be used for the Other Costs batch job. Any new document codes added for the real time call and edit process, will not impact the Other Costs job. The inserted documents that apply to the real time call and edit process under this design will be designated through the use of a new checkbox. The table will define the document codes for which the real time call and edit process will need to validate for any open activity using a given WO. The following documents will be inserted into this table with the Work Order Close Checkbox selected:

1. Maximo Purchase Order (POM)
2. Maximo Delivery Order (DOM)
3. Contract (CT)

4. Standard Requisition Maximo (RQSM)
5. Journal Voucher Interface (JVI)
6. Payment Request – Commodity Based, Maximo (PRCMAX)

The real time call and edit process will perform a lookup on the corresponding document accounting table for each document code and verify if the following conditions are met for any accounting line using the WO:

1. Doc Close Date = not null
2. Doc Close Amount > \$0
3. Open Amount = \$0

If these conditions are met for all accounting lines for a given WO, the real time call and edit process will return a value of True, meaning that the WO is okay to close. If any accounting line does not meet any one of these three conditions, the real time call and edit process will return a value of False, meaning the WO is NOT okay to close (i.e. there is at least one open transaction in Advantage using the Maximo WO).

Once a Work Order in Maximo is updated to closed, an integration event is triggered to update the corresponding task order in Advantage to Inactivated.

Modifications in MAXIMO-ADVANTAGE INTERFACE

The modifications to the MAXIMO-ADVANTAGE INTERFACE will be done to handle the real time call and edit communication if necessary. This will be confirmed during technical design.

Modifications in Maximo

The following modifications will be done in Maximo to support the Work Order close process.

- When creating a Work Order in Maximo and a user selects "Accepts Charges" (default selection), it is required that an additional drop down box asking "Yes" or "NO" (default is blank) to Labor Charges, must be selected.
- The Accept Labor Charges selection will also have to be made under the Plans tab when a Child Work Order or task is added.

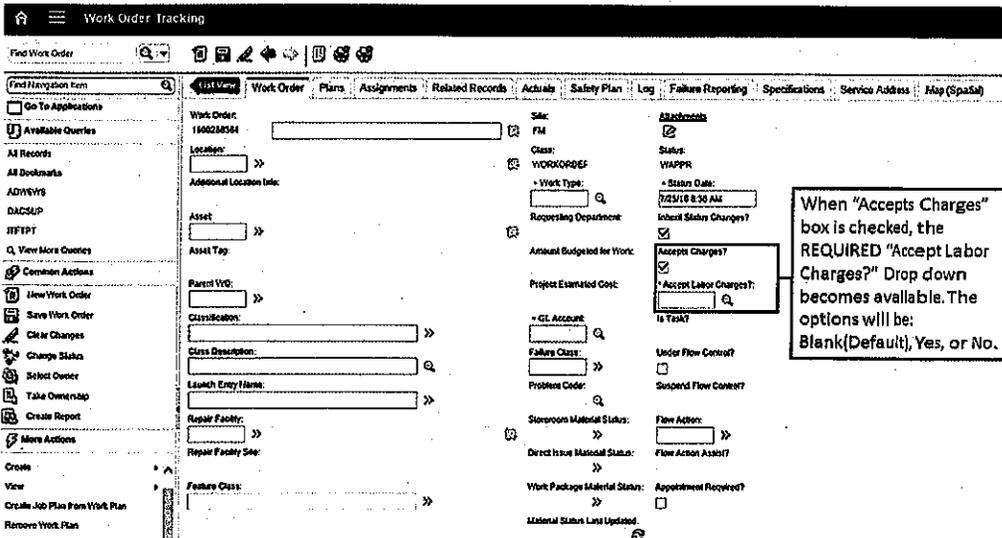


Figure 1: Screenshot showing the WO Accept Charges checkbox along with the new "Accept Labor Charges" field

Children of Work Order 1600280966 Filter > 1 - 1 of 1

Sequence	Record	Record Class	Summary	Location	Asset	Status
1600280967	WORKORDER					WAPPR

Child Information

Sequence: [Field]
 Record: 1600280967 >> [Field]
 Record Class: WORKORDEF
 Location: [Field] >>
 Asset: [Field] >>
 Job Plan: [Field] >>
 Service Group: [Field]
 Service: [Field]
 Route: [Field]

Status: WAPPR
 GL Account: [Field]
 Priority: [Field]
 Inherit Status Changes?
 Accepts Charges?
 Under Flow Control?
 Suspend Flow Control?
 Flow Action: [Field] >>
 Flow Action Assist? [Field]
 Launch Entry Name: [Field] >>

Figure 2: Screenshot of the Child Work Order showing the same Accept Charges checkbox and where the new "Accept Labor Charges" field should be added

Tasks for Work Order 1600280966 Filter > 1 - 1 of 1

Sequence	Task	Summary	Estimated Duration	Status	Owner	Owner Group	Appointment Required?	Include in Schedule?
5			0:00	WAPPR			<input type="checkbox"/>	<input checked="" type="checkbox"/>

Task Information

Task: 5 [Field]
 Sequence: [Field]
 Status: WAPPR
 Classification: [Field] >>
 Classification Description: [Field]

Under Flow Control?
 Flow Action: [Field] >>
 Suspend Flow Control?
 Flow Action Assist? [Field]
 Launch Entry Name: [Field] >>
 Appointment Required?

Attachments
 Inherit Status Changes?
 Accepts Charges?
 Owner: [Field] >>
 Owner Group: [Field] >>
 Crew Work Group: [Field] >>
 Route: [Field]
 Route Step: [Field]

Figure 3: Screenshot of a Work Order task showing the Accepts Charges checkbox and where the new "Accept Labor Charges" field should be added

Automatic Work Order Close Process

Maximo will be configured to automatically close Work Orders after a configurable period of time that meets the following conditions:

1. It must be in SKIPPM, COMP, WORKCOMP, or QA2 status (after a period of time, e.g. 20 days, which is user controlled through Maximo configuration).
 - a. If the status is SKIPPM, then the other conditions do not apply and the WO will be closed after the set period of time.
2. It must not be referenced on an open purchase order that is in APPR status in Maximo or a Purchase Requisition not in CLOSE status.
3. Labor hours or dollar amount are greater than zero and are posted on the Work Order when "Accepts Labor Charges" is set to "Yes." Labor hours means the hours posted on the Labor tab.
4. The result of the new real time call and edit process to Advantage to verify any open transactions using the WO. If the real time call and edit process finds an open transaction in Advantage using the WO, the WO close in Maximo will be prevented.

The following detailed conditions will also be considered in association with item 3 and 4 above.

All tasks and Child Work Orders on Work Orders should not be on an open document in Maximo or Advantage before it is closed. The real time call and edit process will be initiated for each Child Work Order and task under a given Work Order Parent. Since there is no limit to the number of Child Work Orders and the number of Child Work Orders can be great, the process will start at the lowest level child and check the close conditions for it and work up. The process will stop when it hits a Child Work Order that does not meet the close conditions. This process will also be applied to tasks.

Labor cost will be checked at the parent level for any labor being logged on any associated task/child. The only Work Order that can be closed without any labor are preventive maintenance tasks that have been skipped and have this status 'SKIPPM'. We will check for labor cost on any task or Work Order record where the "Accepts Labor Charges" is set to "Yes." Any amounts greater than zero will be checked. If the "Accepts Labor Charges" field is set to "No" the edit will pass.

The configurable period of time will be based on the date which the WO status was updated to SKIPPM, COMP, WORKCOMP, or QA2. Work Orders that do not meet all conditions will have the Close status option disabled.

Maximo will provide the ability to manually close Work Orders for a defined security group or user role. For this role, the Close status option will be available regardless of these conditions. The user roles that will be configured to have this capability will be the Maximo Admin and Functional Admin. When a manual close action is triggered by a user with the required security, the system will bypass conditions 1 through 3 above, but still invoke the 4th condition to trigger the real time call and edit process check to Advantage. If the real time call and edit process finds any open transactions in Advantage using that WO, it will reject the close action with an error. "This Work Order cannot be closed because it is currently in use on an open transaction in Advantage." For the group select close action, any records that fail the real time call and edit process to Advantage will be noted upon completion of the group close action.

If the real time call and edit process to Advantage cannot be completed due to an Advantage server connection error, the reply will default to the value that it would have returned if Advantage had found open documents for the Work Order. The Close option would remain disabled until a successful connection with Advantage can be made.

Context Diagram

The screenshot below shows the three document accounting line fields that the real time call and edit process will look up to validate the okay to close condition criteria.

Line	Line Amount	Line Open Amount	Line Closed Amount	Referenced Line Amount
1	\$150.00	\$150.00	\$0.00	\$0.00
Row 1 of 1 Total: 1				

General Information		Reference	Fund Assigned	Reference	Fund Accounting	Detail Accounting	Payment Details
Event Type:	PP05	Budget FY:	2016	Accounting Template:		Fiscal Year:	2016
Line Description:		Period:	4	Reserved Funding:		Freight %:	0.0000
Line Amount:	\$150.00	Modified:	hh	Roll Indication 1:	<input type="checkbox"/>	Number of Attachments:	0
Roll Indication 2:	<input type="checkbox"/>	Line Closed Amount:	\$0.00	Roll Indication 2:	<input type="checkbox"/>	Line Closed Date:	
		Line Open Amount:	\$150.00			Referenced Line Amount:	\$0.00
		Outyear Adjustments Amount:				Obligation Amt Adjusted for Outyear:	\$150.00
		Related Accounting Line:					

Figure 4: Advantage document accounting line fields used for the close edit

The screenshot below shows the Work Order (Task Order) field under Fund Accounting on the PO document accounting line.

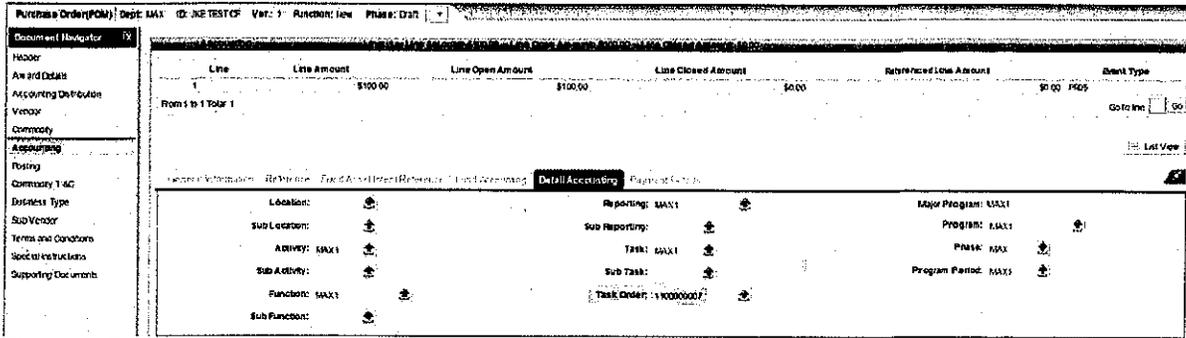


Figure 5: Task Order field on Advantage document accounting line

Business Process for Real Time Call and Edit Process

The real time call and edit process from Maximo to determine if there are open transactions in Advantage will be triggered automatically during the Automated WO close process. The WO close process will be initially scheduled to run daily, but could also be run on demand if necessary. The other point at which the real time call and edit process is triggered from Maximo is when there is a manual attempt to close a WO by one of the defined security roles. This could either be individually, through the Work Order Tracking application, or through a group select and status update script.

The following describes the high-level process for the real time call and edit process from Maximo to Advantage as part of the Maximo automated WO close process:

1. Maximo WO close process sends a real time call and edit check to Advantage.
2. The real time call and edit process sends a call by WO number.
3. A check is done on the ACTGINT for eligible document codes. Eligible document codes are those on the ACTGINT table with the Work Order Close checkbox checked.
4. For each eligible document code in Final or Pending phase, the real time call and edit process will check the Document Accounting table for any active transactions using that Work Order. In Advantage, the Work Order is called Task Order and is located on the Detail Accounting tab of the Accounting Line. (See Figure 4).
5. For each accounting line transaction found for a given WO, the system will check if the following conditions are met:
 - a. Doc Close Date = not null
 - b. Doc Close Amount > \$0
 - c. Open Amount = \$0
 - d. Source System for the Task Order is Maximo. (See Figure 3).
6. If all three (3) conditions are met for each accounting line found, the real time call and edit process will return a reply of True, meaning okay to close. If it finds any condition for any accounting line where the condition is not met, it will return a reply of False, meaning that the WO is not okay to close.

If all conditions are met, then the real time call and edit reply from Advantage = True. If one condition fails, then real time call and edit reply from Advantage = False.

The real time call and edit process will include transactions for each document code added to the ACTGINT table in Advantage with the Work Order Close checkbox checked. For each document code, all conditions shown in the table will be considered. Each document code could have a different set of conditions applied. The table below shows an example of some of the different combinations that could exist.

Document Code	Maximo WO on TASKORD table?	AL Close Date	AL Close Amt	AL Open Amt	Result
POM	Yes	Null	= \$0	>\$0	False
DOM	Yes	Null	>\$0	>\$0	False
CT	No	Not null	>\$0	\$0	False
RQSM	Yes	Not null	>\$0	\$0	True

Document Code	Maximo WO on TASKORD table?	AL Close Date	AL Close Amt	AL Open Amt	Result
JVI	Yes	Not null	>\$0	\$0	True
PRCMAX	Yes	Null	>\$0	\$0	False

Task Order

Department	Task Order	Name	Active	Effective From	Effective To
✓ MAX	T1080	MAX	Yes		

First Prev Next Last [Attachments](#)

Save Undo Delete Insert Copy Paste Search

*Department: MAX
 *Task Order: T1080
 *Name: MAX
 *Short Name: T1080
 Contact Code: [Field]
 Source System: Maximo
 External Site ID: BEDFORD
 Maximo Site Department:
 Major Program:
 Program: [Field]
 Phase: [Field]

Effective From: [Field]
 Effective To: [Field]
 Active:
 Budgeting:
 Description: MAX
 Billable:
 Reimb Status: [Field]
 Reimb Output Type: None

Figure 6: Illustration of the TASKORD table in Advantage showing the Source System field

Figure 7: Screenshot showing the Task Order field on the document Accounting Line / Detail Accounting tab in Advantage

Business Scenarios

Scenario A: Work Order automatically closed that meets the auto close conditions.

1. Create a Work Order in Maximo and integrate to Advantage (Status APPR). Set Accept Labor Charges to 'YES.'
2. Create a Purchase Req using the WO.
3. Integrate to RQSM / POM in Advantage.
4. Receive in Maximo.
5. Invoice and pay in Advantage. Change status of Invoice to 'PAID' which closes the PO.
6. Update status of WO in Maximo to COMP.

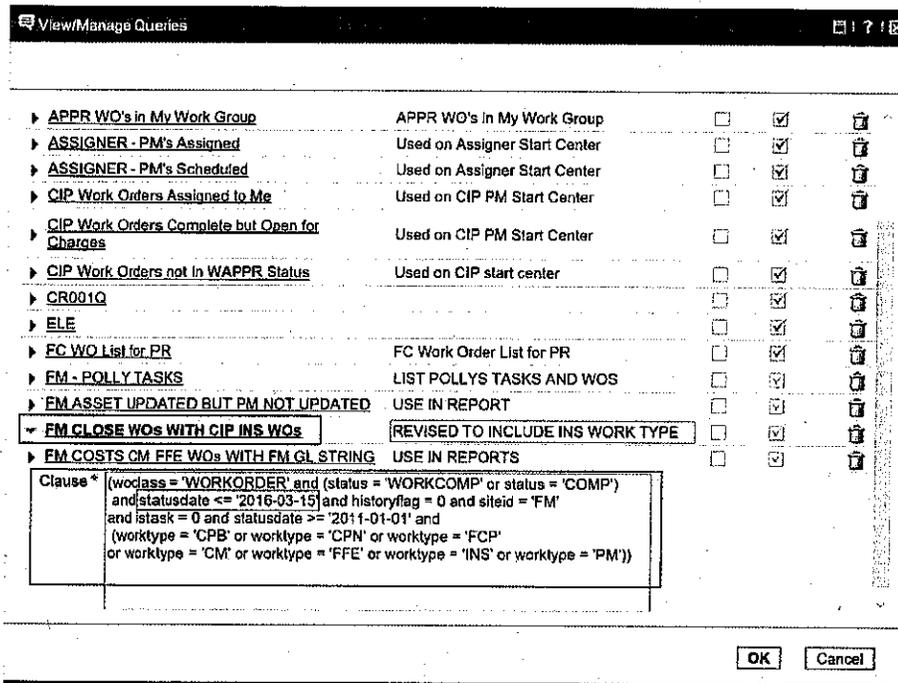
7. Confirm the status is set to COMP or QA2.
8. Labor hours are posted to the Work Order.
9. Costs are posted on the Work Order.
10. No unused material is on the Work Order.
11. No "open" or "active" transactions in Advantage using the Work Order (Task Order).
 - a. It must be in COMP or QA2 status.
 - b. It must not be referenced on an open purchase order that is in APPR status in Maximo.
 - c. Labor hours are posted on the Work Order.
 - d. Costs are posted on the Work Order.
 - e. No unused material is on the Work Order.
 - f. The Work Order Close flag is checked, meaning there are no open Advantage documents referencing the Work Order.

Scenario B: Work Order webservice call returns false – not okay to close.

1. Create a Work Order in Maximo.
2. Create a Purchase Req using the WO.
3. Integrate to RQSM / POM in Advantage.
4. Receive in Maximo.
5. Invoice and pay in Advantage. Change status of Invoice to 'PAID' which closes the PO.
6. Update status of WO in Maximo to COMP.
7. Confirm the status is set to COMP or QA2.
8. Labor hours are posted to the Work Order.
9. Costs are posted on the Work Order.
10. No unused material is on the Work Order.
11. Create a new POM in Advantage using the Work Order above.
12. From Maximo Work Order Tracking, attempt to close the WO. The options should not be available.

Scenario C: Manual Close of Work Orders by group select – This process should work regardless of this enhancement and is included as a regression scenario.

1. Run a query to select the Work Orders you want to close.
2. The query finds all Work Orders whose status is set to WORKCOMP or COMP for more than One-Hundred Twenty (120) days.
3. Change the status date every month to get the next set of Work Orders to be closed.

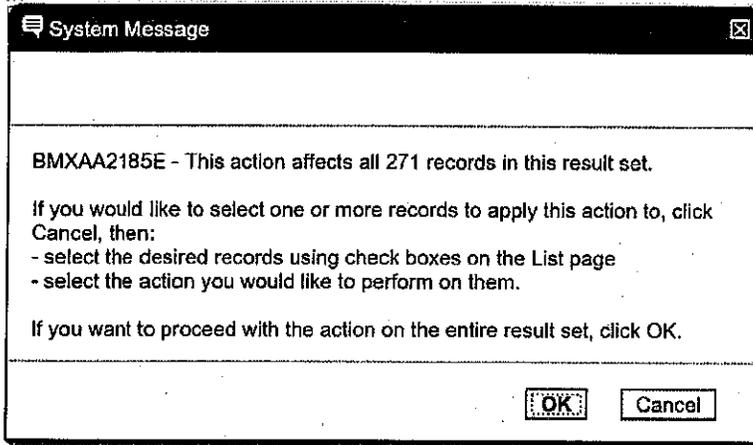


4. This finds 271 Work Orders. Choose Select Action>Change Status and receive the message to confirm. Select OK.

FM CLOSE WOs WIT Find: [] Select Action []

List	Work Order	Plans	Assignment
Advanced Search Save Query Bookm			
Filter 1-20 of 271			
Work Order	Description		
1500106130	EST TO REMODEL FINANCE - ADMIN	16011000000	
1600013086	INSTALL NEW DOOR FOR DDS/VEHICLE UNIT	16012000000	
1600138714	SD Prop & Evidence EST TO CONVERT DRIVING RM TO WORKSPACE	16009000000	

Select Action menu:
 Change Status
 Assign to New Parent
 Reschedule Assignments
 Select Owner
 Take Ownership
 Run Reports



- After changing the status to Closed, you receive this message for several minutes depending on how many Work Orders you want to close. This process took 12 minutes to complete for 271 Work Orders.
- After completion, you get dialog boxes confirming the closure for each WO.

Data Setup

Field	Value

Logical Object Model

N/A

Detailed Business Rules

BR 1.0: The Maximo application shall provide an edit to prevent the premature closing of Work Orders referenced on transactions that are not closed in Advantage.

1.1: The Work Order Close status shall be disabled for all users without the proper security role.

1.2: The Maximo application shall invoke a real time call and edit process to Advantage Financial to check for any open transactions using a Maximo Work Order.

BR 2.0: The Maximo application shall have automated process that runs nightly to close Work Orders.

2.1: The close process shall perform the following edit checks

2.1.1: WO must be in accepted completed status.

2.1.2: It must not be referenced on an open purchase order that is in APPR status in Maximo or a purchase requisition not in 'CLOSE' status.

2.1.3: Labor hours are posted on the Work Order if the accepts labor charges is 'YES.'

2.1.4: The there are no open Advantage documents referencing the Work Order.

Special Considerations for Business Rules

N/A

Table Mapping

N/A

Entity Name	Property Name	Property Required	Property Data Type	Property Length	Source Of Value
-------------	---------------	-------------------	--------------------	-----------------	-----------------

UI Specification

Mockups

Accounting Integration Parameters

Ledger Table	Document Code	Document Code Name	Posting Code	Integration Type
<input checked="" type="checkbox"/> JRNL_ACTG	JVI	JV Interface	D014	service

First Prev Next Last

Save Undo Delete insert Copy Paste Search

*Ledger Table : JRNL_ACTG

Document Code : JVI

Document Code Name : JV Interface

*Posting Code : D014

Posting Code Name : External CE

*Integration Type : service

Work Order Close:

Figure 8: ACTGINT Table showing the Work Order Close Checkbox

UI Actions

N/A

Documentation Updates

Advantage System Admin Guide to document the real time call and edit process may need updating. This will be handled by a separate entity than the one bidding on this enhancement.

END OF EXHIBIT L

Exhibit M: Rotating Assets (4 PAGES)

Current Need

Pima County seeks to add new functionality to the as yet created interface between its upgraded version of IBM Maximo asset tracking system and its current version of CGI Advantage financial ERP system (Advantage).

This Exhibit outlines the functionality of Rotating Assets. Rotating Assets are items that are interchangeable and/or repairable. Such assets can be lawn mowers, pumps, fire extinguishers, keyboards, or computer displays to name a few. In order to use Rotating Assets, it is necessary to set up a Repair Location which is not a Storeroom. The existing Maximo-Advantage interface does not satisfactorily handle Rotating Assets. In some cases additional steps to be taken and records need to be manually edited to correct system-generated errors.

The new functionality is intended to go live after the newly developed interface goes live.

Prospective contractors will provide a separate inclusive price for the added functionality detailed in this Exhibit, and Pima County reserves the right to not exercise purchase of the functionality. Prospective contractors must bid on this functionality.

Definition Of Complete

If Pima County chooses to implement the added functionality outlined in this Exhibit, this added functionality purchased will be considered complete when:

- The functionality is successfully integrated and has passed user testing in all environments by Pima County.
- Contractor has provided documentation on the added functionality's development, support, and administration.
- Pima County IT staff has been trained on the added functionality's troubleshooting, implementation, maintenance, and break/fix error handling.

The contractor's proposal may add to, not subtract from, this definition.

Deliverables

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the minimum deliverables.

1	Added functionality (as outlined in this Exhibit) to the newly developed interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The added functionality will be fully supported by Pima County staff post production implementation.
2	Contractor will deliver all source code and relating artifacts to Pima County.
3	The contractor will provide all installation scripts.
4	The contractor will provide all test harnesses.
5	The contractor will provide all build processes.
6	The contractor will provide Pima County licenses of all commercial and open source (OSS) software employed in solution for review and cost analysis. Contractor will provide license information within forty-five (45) days of contract initiation.
7	An implementation plan, including critical steps and considerations to ensure a successful implementation.
8	The contractor will provide all documentation for: a. Development b. Support c. Administration
9	The contractor will provide all training for:

	<ul style="list-style-type: none"> a. Troubleshooting b. Implementation c. Maintenance d. Break/Fix Error Handling
10	The contractor will provide output from static code analysis such as Sonar LINT.
11	Project completion is reached, as measured by the Definition of Complete (above).

The contractor's proposal may add to, not subtract from, this set of deliverables.

Project Requirements

If Pima County chooses to implement the added functionality outlined in this Exhibit, the following are the project requirements.

The file format for data transfers must be .xml
All source code will execute in a WebSphere environment.
The contractor will provide products and tools configurable for the following Pima County IT environments: <ul style="list-style-type: none"> a. DEV b. TEST c. UAT d. PROD
The contractor will provide a minimum of three (3) software quality checkpoints for Pima County IT to validate that the contractor-developed product is meeting expectations: <ul style="list-style-type: none"> a. 25% development quality checkpoint b. 50% development quality checkpoint c. 75% development quality checkpoint
The contractor will ensure that the contractor-developed product, when installed within the interface, will not diminish the ability of the interface to meet its production capabilities in the following areas: <ul style="list-style-type: none"> a. Logging b. Auditing c. Maintenance d. Error handling with a description of underlying reason / root cause. e. Monitoring f. Clusterable (high availability) g. Configurability h. Security (encryption-at-rest/transit for message queue) i. Support for asynchronous, synchronous, and file integration j. Ability to reset the interface during an environmental refresh. k. Ability for interface to consume and transmit future unspecified document types l. Speed
The contractor will ensure that delivered contractor-developed product will support: <ul style="list-style-type: none"> a. MS SQL Server, current industry release -1 b. MS Server, current industry release -1
The new functionality will pass user testing within each environment before movement to the next. It is intended that the new functionality will be migrated to Pima County's production environment by Pima County staff and the contractor should treat this deliverable as such.
The contractor will train Pima County staff on the product and provide all product documentation including the functionalities' source code, test code, test harnesses, build scripts, build tool specifications, and build documentation to support hand-off of ownership and all maintenance procedures of the functionalities to Pima County.
The contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of it.

The inclusion of the work outlined in this portion of the RFP may, at the discretion of Pima County, be included in an overall contract or it may be awarded as an amendment to the primary contract.

Support Requirements

The contractor will provide a ninety (90) day warranty from date of production installation for software and performance defects in the contractor-developed product. There will be no cost to Pima County for this warranty. All costs, inclusive, to remedy software and performance defects during warranty will be the sole responsibility of the contractor.

Contractor will provide a post-warranty time and materials basis support model.

Added Functionality Requirements

Rotating Assets are items that are interchangeable and/or repairable. Such assets can be lawn mowers, pumps, fire extinguishers, keyboards, or computer displays to name a few. Rotating Assets typically have a unique asset number and an inventory item number. An item number allows you to track assets as a group when they are moved in / out of inventory or locations. An asset number is used to track individual instances of the asset as it is moved from one Location to another or from one Site to another.

In order to use Rotating Assets (which may sometimes be referenced as Repairable Spares in Maximo) it is necessary to set up a Repair Location which is not a Storeroom. The Rotating Asset is placed in this Repair Location while it is getting repaired. After the repair is made to the Rotating Asset, it is moved from the Repair Location back to a Real Storeroom or Operating Location and the status updated accordingly.

Problems

The existing Maximo-Advantage interface does not satisfactorily handle Rotating Assets. In some cases, resulting errors cause additional steps to be taken and records to be manually edited to correct system-generated errors.

Pima County has categorized the problems into two categories:

1. Problems when using the Consumption Storeroom
2. Problems when using the Purchase Storeroom

Problems When Using the Consumption Storeroom

Problem 1 – Consumption Storeroom

When receiving a Rotating Asset on a Maximo Purchase Order, the existing Maximo-Advantage interface generates a series of documents, some of which are Internal Exchange Transaction Maximo (IETM) documents which should not be generated.

Problem 2 – Consumption Storeroom

When selecting Move/Modify of a Rotating Asset from the Repair Location to a Storeroom, the existing Maximo-Advantage interface uses the Event Type MX33/MX35. It should be using MX03/MX05.

The MX05 must have an Offset Balance Sheet Account (OBSA) code of 1300. The existing Maximo-Advantage interface is missing the OBSA account which results in documents getting rejected.

The dollar amounts should be negative as goods are being returned to the Storeroom. The IETM on Header should be Provide/Seller. 1st Party should be Storeroom, 2nd Party should be Location.

Transferring a Rotating Asset from one Consumption Storeroom to another Consumption Storeroom other than MX33/MX35 is appropriate. However, it is not appropriate from Rotating Asset Location to a Storeroom.

The system shall not perform any accounting when transferring Rotating Assets from Rotating Assets Location to Storeroom.

Problems When Using the Purchase Storeroom

Problem 3 – Purchase Storeroom

When receiving a Rotating Asset on a Purchase Order, the existing Maximo-Advantage interface generates a series of documents including the PRCM and IETM documents that should not be generated.

Problem 4 – Purchase Storeroom

When issuing a Rotating Asset out of a Purchase Storeroom, the existing Maximo-Advantage interface is generating an IETM with both Event Types MX03 and MX05. The MX03 is correct. The MX05 should be eliminated. The MX05 reclassifies the Inventory to an Expense.

Problem 5 – Purchase Storeroom

When selecting Move/Modify of a Rotating Asset from the Repair Location to a Purchase Storeroom, the existing Maximo-Advantage interface is generating an IETM with both Event Types MX23 and MX25. The MX23 is correct. The MX25 should be eliminated. The MX25 reclassifies the Inventory to an Expense.

END OF EXHIBIT M

ATTACHMENT 1: PROPOSED SCOPE OF WORK

CONTENTS

Project Overview	2
Project Goals	2
General Specifications.....	4
Scope of Work	5
Delivery Methodology and Sprint Based Milestone Payments	16

GLOSSARY OF TERMS

- KPI = Key Performance Indicator
- Messaging = The exchange of information between Maximo and other systems. For example: Transactions integrated between Maximo and Financial Management systems as represented in the original Request for proposal. Using technologies such as the MIF and/or SOA platforms like Mulesoft.
- MIF = Maximo Integration Framework
- SOA = Service Oriented Architecture
- ERP = Enterprise Resource Planning
- ABI = Advantage Business Interface
- ETL = Extract-Transform-Load
- WO = Work Order
- PMI = Project Management Institute
- PMBOK = Project Management Body of Knowledge, as published and maintained by the PMI
- KB = Knowledge Base
- FD/TS = Functional Design and Technical Specification. These are the two primary functional and technical design documents used during the project for all major deliverables.
- SME = Subject Matter Expert
- IBM PMR = Problem resolution tickets submitted to IBM that deal with the base Maximo code or functionality.

PROJECT OVERVIEW

FOR THE PURPOSES OF THIS SCOPE OF WORK (SOW), THE FOLLOWING CLARIFYING STATEMENTS WILL APPLY:

ALL ENVIRONMENTS: DEVELOPMENT (DEV), TESTING (TEST), USER ACCEPTANCE TESTING (UAT), PRODUCTION (PROD), AND TRAINING (TRAIN) USED IN PIMA COUNTY.

DELIVERABLES: A CONCLUSIVE RESULT ACCEPTED BY PIMA COUNTY THAT SATISFIES A SET OF PROVIDED REQUIREMENTS.

CONSULTING: AN OFFEROR'S ACTIVITY TO PROVIDE DELIVERABLES THROUGH VERBAL, WRITTEN, OR PHYSICAL METHODS INCLUDING BUT NOT LIMITED TO OPINIONS, DIRECTION, CODING, DOCUMENTS, SOFTWARE, HARDWARE, TRAINING, MEETINGS, AND PRESENTATIONS.

NON-PROD: DEVELOPMENT (DEV), TESTING (TEST), USER ACCEPTANCE TESTING (UAT), AND TRAINING (TRAIN) ARE EITHER INDIVIDUALLY OR COLLECTIVELY CONSIDERED THE NON-PRODUCTION (NON-PROD) ENVIRONMENTS.

PROD: ONLY PRODUCTION (PROD) IS CONSIDERED THE PRODUCTION ENVIRONMENT.

PROJECT GOALS

RFP-PO-1900005 has three (3) major deliverables:

1. *Maximo Upgrade to 7.6.0.10 or Higher in All Environments*
2. *Maximo-Advantage Interface Replacement*
3. *Maximo-Advantage Interface Added Functionality*

The expected goals and outcomes are:

1. Successful upgrade of Pima County's work order management software Maximo by IBM to version 7.6.0.10 or higher with the current cumulative IFIX at time of upgrade. Upgrade shall maintain all currently installed modules (with upgrades to each as needed) including increasing functionality of the Scheduler and Graphical assignment module to each include Optimizer and add on the Anywhere module and configure it to integrate with Maximo Spatial. Upgrade shall retain current configurations and Pima County customizations. See **RFP-PO-1900005 Exhibit F: Pima County Specifications for Maximo Upgrade** for the definition of complete and required deliverables.
2. The interface between Maximo 7.6.0.10 or higher and Advantage 3.10.0.1 within Pima County is replaced with a newly developed product. See **RFP-PO-1900005 Exhibit G: Pima County Specifications for Maximo-Advantage Interface Replacement** for the definition of complete and required deliverables.
3. New functionalities are added to the newly developed interface between Maximo 7.6.0.10 or higher and Advantage 3.10.0.1 within Pima County. See **RFP-PO-1900005 Exhibits H-M** for the definition of complete and required deliverables for each functionality. These functionalities will be engaged and implemented at Pima County's discretion.

Metrics available to measure performance:

1. Maximo Upgrade to 7.6.0.10 in All Environments: See section III. Deliverables, in **RFP-PO-1900005 Exhibit F: Pima County Specifications for Maximo Upgrade.**
2. Maximo-Advantage Interface Replacement: See section III. Deliverables, in **RFP-PO-1900005 Exhibit G: Pima County Specifications for Maximo-Advantage Interface Replacement.**
3. Maximo-Advantage Interface Added Functionality: See the Deliverables section in **RFP-PO-1900005 Exhibits H-M.**

Pima County Upgrade Project Communication Plan:

The table below defines the communication types that will be used on this project along with the owner (responsible party), audience, purpose, methods, and frequency:

Type	Owner	Audience	Purpose	Methods	Frequency
Project direction	Project Owner, Steering Committee	Project Manager	Communicate project direction & prioritization	1 on 1, email	As necessary
Project details	Project Manager	Project Owner, Steering Committee, Functional Managers, & Contributors	Obtain buy-In, approval, or acceptance, or provide status	Presentation, 1 on 1, email	Initially, after changes, & as necessary
Project status	Project Manager	Project Owner, Steering Committee, Functional Managers, & Contributors	Communicate project accomplishment, issues, & health	Presentation, 1 on 1, email	Weekly & upon request
Meeting Minutes	Project Manager	Meeting Participants, Project Owner, Steering Committee, Functional Managers, & Contributors	Communicate agreements, issues, & task assignments	Email	Following meetings

Recommendations on approach, products, design, or deliverables	Contributor	Project Manager, Functional Manger	Provide expert opinion	1 on 1, email	As necessary & when scheduled
Recommendation vetting	Project Manager	Project Owner, Steering Committee, Functional Managers, & Contributors	Circulate inventory product, analysis, or research for review	Presentation, 1 on 1, email	When defined & when scheduled
Recommendation approval request	Project Manager	Project Owner & Steering Committee	Obtain go / no go approval of milestones & key deliverables	Presentation	When defined & when scheduled
Assigned task & issue status	Contributor	Project Manager & Functional Manager	Communicate status on assigned tasks & issues	1 on 1, email, weekly status meeting	Weekly & as necessary
Issue reporting	Contributor	Project Manager	Control project & manage risk	1 on 1, email	As identified
Executive issue reporting	Project Manager	Project Owner & Steering Committee	Control project & manage risk	1 on 1, email, status reports	As identified

GENERAL SPECIFICATIONS

1. Maximo Upgrade to 7.6.0.10 or most recent available version in all Environments

Contractor will provide consultation services such that a successful upgrade from version 7.6.0.0 to version 7.6.0.10 or most recent available version, with the current cumulative IFIX at time of upgrade, including retaining current Pima County configurations and customizations, and retaining currently installed add-on modules (which, as necessary, are also upgraded to meet minimum requirements to successfully work with base product 7.6.0.10 or most recent available version), in all Pima County environments. Additionally, provide consultation on configuring the Scheduler module and Graphical assignment module to each include Optimizer, and on installation

of the Anywhere module and subsequent configuration to integrate with Maximo Spatial, in all Pima County environments. See **RFP-PO-1900005 Exhibit F: Pima County Specifications for Maximo Upgrade** for complete project requirements, detailed specifications, and support requirements.

2. Maximo-Advantage Interface Replacement

Contractor will implement Messaging, to be provided by Pima County, to interface between Pima County's installation of CGI's Advantage 3.10 and IBM's Maximo 7.6.0.10 or most recent available version. Contractor will collect requirements, design, test, demonstrate, and integrate the new functionalities into Pima County's non-production and production environments. Contractor will train Pima County staff on the relevant use of the product and will provide all available product documentation to support hand-off of ownership and all maintenance procedures of the interface to Pima County, including the related test documentation.

3. Maximo-Advantage Interface Added Functionality

This deliverable encompasses the design and integration of up to six (6) new functionalities into the new interface between Pima County's installation of CGI's Advantage 3.10 and IBM's Maximo 7.6.0.10 or most recent available version. Contractor will collect requirements, design, test, demonstrate, and integrate some/all of the new functionalities into Pima County's non-production and production environments. This includes training Pima County staff on the product and providing all product documentation including the support hand-off of ownership and all maintenance procedures of the functionalities to Pima County. See **RFP-PO-1900005 Exhibits H-M** for complete project requirements, detailed specifications, and support requirements.

Contractor will relinquish all rights and claims to this deliverable and any subcomponents thereof to Pima County upon the County's acceptance and approval of the integrated functionality.

SCOPE OF WORK

1. Maximo Upgrade

Contractor will provide a successful upgrade from version 7.6.0.0 to version 7.6.0.10 or most recent available version with the current cumulative IFIX at time of upgrade, including retaining current Pima County configurations and customizations, and retaining currently installed add-on modules (which, as necessary, are also upgraded to meet minimum requirements to successfully work with base product 7.6.x), in all Pima County environments. Additionally, provide consultation on configuring the Scheduler module and Graphical assignment module to each include Optimizer, and on installation of the Anywhere module and subsequent configuration to integrate with Maximo Spatial, in all Pima County environments.

Upgrade of existing product and modules will pass user testing within each environment before movement to the next. Configuring the Scheduler module and Graphical assignment module to each include Optimizer, and installation and configuration of the Anywhere module, will pass contractor functional testing within each environment before movement to the next.

Contractor will provide an on-site upgrade of the DEV environment, then subsequently provide increasing instruction and support for Pima County staff to perform the upgrades if desired, or simply perform the remaining upgrades for TEST, UAT and TRAIN. Contractor will perform the PROD upgrade, unless otherwise requested.

- DEFINITION OF COMPLETE

Unless added to by items within contractor's proposal, consultation services will only be considered complete when:

- WO Close Web Service is an Advantage customization that must continue to work after the upgrade.
- Maximo by IBM in Pima County Maximo non-production and production environments has been upgraded to version 7.6.0.10 or latest version with the current cumulative IFIX at time of upgrade, passing user testing and keeping all current County configurations and customizations.
- All modules listed in **RFP-PO-1900005 Exhibit F: Pima County Specifications for Maximo Upgrade** Chart 1, Section II (with upgrades performed to versions as needed) are fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, with all passing user testing and keeping all current County configurations and customizations.
- The Maximo *Anywhere* module is installed, configured to work with Maximo Spatial, and is fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, passing contractor functional testing.
- The Maximo *Scheduler* and *Graphical assignment* modules (each configured to include Optimizer) are fully functional with the upgraded version of Maximo in Pima County Maximo non-production and production environments, passing contractor functional testing.
- Maximo graphical assignment successfully functioning with Spatial and Anywhere applications.

- DELIVERABLES

The following are the deliverables for this project:

- A build plan with the list of software and specification documentation needed for upgrade and installation including the correct implementation order of the software.
- An implementation plan, including critical steps and considerations to ensure a successful implementation.
- The software OR provide proper path routing to such software within IBM's system where Pima County can retrieve it OR provide the location(s) where such software can be legally retrieved with appropriate license authority.
- Knowledge needed to perform successful upgrade and installation of functional products.

- On-site direction of Pima County staff in their performance of the upgrade and installation in, at minimum the initial DEV environment (additional on-site needs for remaining Maximo environments – TEST, UAT, PROD, TRAIN – to be decided by Pima County but are not in the current travel budget except PROD).
- Project completion is reached, as measured by the Definition of Complete (above).
- Contractor will provide a post upgrade ninety (90) day warranty from date of production installation for installation defects. All costs, inclusive, to remedy defects during warranty will be the sole responsibility of the contractor.

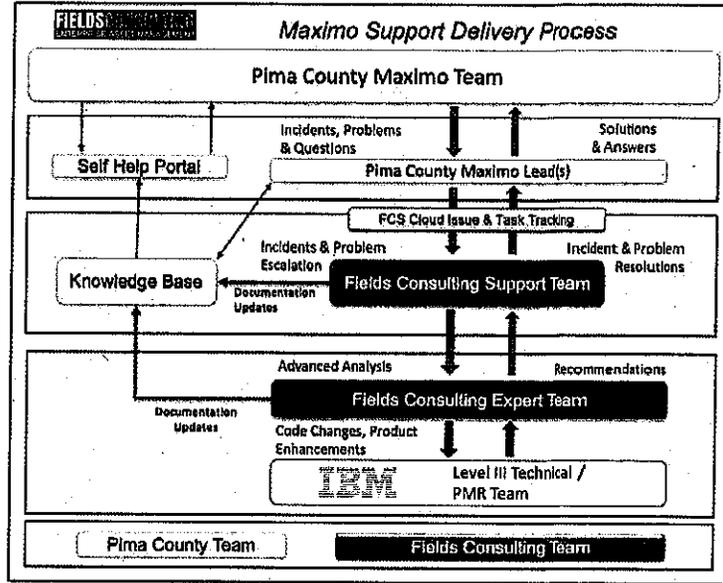
Contractor will provide a post-warranty time and materials basis support model.

An overview of the Support Process:

Contractor will work to avoid issues needing to be escalated in most cases as Pima County works with the Project Manager and Technical Lead on a daily basis, so that Contractor is aware of all activities on all work streams, including challenges on large projects. Further, Contractor will provide at a minimum, bi-weekly status reports which include Earned Value Schedule and Budget variance, which provide insight into the overall progress and value being delivered per the schedule. When issues do arise, there may be something internal which Contractor identifies, which are flowed to the Technical Lead and Project manager for review and resolution in coordination with Pima County if needed. For those times when Pima County may feel or observe a risk, Contractor strongly encourages all issues to be taken to the Technical Lead or Project Manager immediately for resolution. As the company owner, the Project Manager has full control of all options to resolve issues. Contractor will proactively work to avoid issues, to resolve them internally if a technical issue comes up, or to work with Pima County on any issues. Direct escalation to Contractor's Project Manager is available at any time.

Contractor will use the Maximo Support flow, which starts with either end users of the system or the IT support team, flows through the Contractor's support team, with resolutions going to the team site – and all actions being tracked in Adminitrack. Adminitrack provides full KPI's, reports and exportable data for Pima County SLA review. SLA's are aligned with IBM Authorized Support SLA's.

All issues can be managed through Contractor's SLA system, including all IBM PMR requests for Pima County. IBM PMRs are escalated Tier 3 issues that go to IBM can be painful to manage with IBM support. Contractor can provide that support rather than County staff if desired. We do this for other clients, as they prefer to not deal with IBM on the PMR tickets in most cases. Contractor will advocate on Pima County's behalf with issue escalations with IBM. Contractor will ensure IBM gets responses and keeps focus on any Tier III issues, through resolution.



All Upgrade project and/or support documents, knowledge base documents, design documents, calendar events (outages, on-site support, approval gates, etc.), contacts, etc. are all managed in an Office 365 SharePoint site:

The screenshots show a SharePoint site for EMWD. The left sidebar contains navigation links like Home, Edit Links, and various document categories. The main content area displays several document libraries:

- Interface Design Documents:** A table listing documents such as '7-8 Design Documents', 'APM Interface Soft', and 'APM75 ISA Reports' with columns for Name, Modified, and Modified By.
- Report and Start Center Documents:** A table listing documents like 'Report Design Files', 'NAT Report Development & Testing Contractions', and 'EMWD - Maximo - AP Invoicing'.
- Administration Script Documents:** A table listing documents such as 'EMWD Maximo - Interfaces, Current, Profiles, All, Data', 'EMWD Maximo - Interfaces, Current, UOS, Invoices', and 'EMWD Maximo - Interface - Data'.
- Environment and Build Documents:** A table listing documents like 'EMWD Maximo - Environment & Build Documents', 'EMWD Maximo - Build Documents', and 'EMWD Maximo - Build Documents'.

Contractor will provide key team members of Pima County access to Adminitrack to track all requests or log issues. This allows users to create requests, issues or defects; attach documents (such as screen shots, word documents, etc.); track communication logs on the requests; automate email notifications to any user or requestor as desired and selected to be sent at status change, assignment, communication log entry – it is an easy to use and completely configurable tool. An example of a client list of requests (note age is in days since opened, even if closed in one day):

ID	Project	Status	Assigned To	Created	Updated	Open	Age
1484	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1485	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1486	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1487	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1488	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1489	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1490	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1491	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1492	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1493	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1494	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36
1495	Part of Tacoma	Open	Allyaz Wali	Apr 23 2019	Apr 23 2019	Open	36

Different client, Issue Detail page section:

View Issue Detail

Issue # 1478 - In Progress (Open)

Project: Part of Tacoma

Assigned To: Allyaz Wali (Developer)

Brief Description: Sometimes on work orders generated from PMs, the LEAD field doesn't flow from PM to WO

Full Description: Usually this is not an issue and the LEAD field from the PM will populate as the LEAD field from who generated from the PM. However, sometimes, the LEAD field on the WO does not get populated when the WO is generated. Example: WO 210744 / PR 152328. It is expected that the LEAD field on the WO should be populated by the LEAD field on the PM when the WO is generated from the PM.

Buttons: Detail, Notify Now for this Issue, Notify When Modified, Attachments (0), Private Notes

New Issue entry:

Add New Issue

Issue ID: [Field]

Project: [Field]

Status: [Field]

Assigned To: [Field]

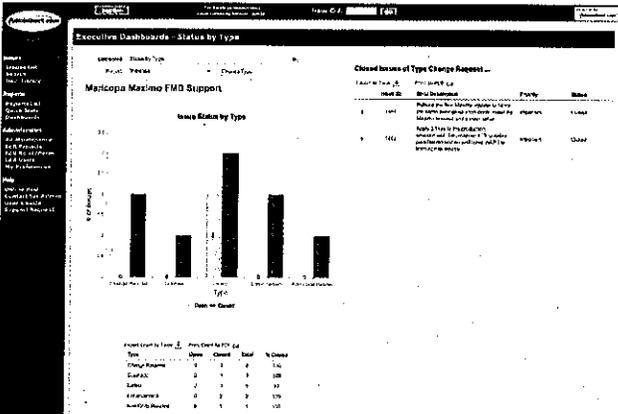
Created: [Field]

Updated: [Field]

Open: [Field]

Age: [Field]

Issue Tracking Dashboard, KPI, 'Drillable' Reporting and Data Export.



Contractor’s project team consists of Tech Lead (actively supporting all areas), three Maximo / Interface developers, a SOA/WebSphere/Anywhere Admin and a Maximo Spatial expert as the core members. Contractor does not hand off support to offshore teams. For any issues, Pima County will get support directly from the developer that worked on the particular configuration or from the Tech Lead that is knowledgeable on all aspects of Maximo and interfaces. SOA and Spatial will be supported by those very qualified and experienced staff for these more niche skillsets.

Service Levels: (Same as IBM)

Priority	Response Time (Business Hours)	Response Time (After Hours)
1 (Critical)	30 min or less (See Note 1)	30 min or less (See Note 1)
2 (High)	Call within 2 Business Hours	(see Note 2)
3 (Medium)	Call before end of business day (within 10 business hours if reported at end of day)	(see Note 2)
4 (Low)	2-day response	(see Note 2)
Note 1:	Only outages or imminent outages (such as indicated by a partial server failure), or failure of business-critical interfaces are considered critical. For all critical incidents work on the incident will be continuous regardless of time of day, or day of week, until a complete or interim resolution is completed.	

<p>Note 2:</p>	<p>Incidents reported outside of Business Hours will be processed as if the incident was received at the start of the next Business Day.</p> <ul style="list-style-type: none"> • High Priority are issues that causing significant impact to business operations, but system is still available. Major process not working, such as work order creation, etc. • Medium Priority are issues that have moderate impact to business operations, but do not impact a large percentage of users or functionality. • Low Priority are issues that have little business impact but need to be addressed.
<p>Note 3:</p>	<p>Pima County Business Hours are defined as Monday – Friday, 8:00 a.m. – 5:00 p.m., local Tucson, AZ. Time.</p>

2. Maximo – Advantage Interface Replacement

• **CURRENT NEED**

Pima County seeks to replace the interface between its IBM Maximo asset tracking system and its CGI Advantage financial ERP system. This new interface is currently slated to go live in tandem with Pima County’s production upgrade to Maximo 7.6.x with the current cumulative IFIX at time of upgrade.

• **DEFINITION OF COMPLETE**

The contractor will be responsible for conversion and validation of all existing bidirectional data streams from the existing CGI ABI to the new contractor-developed product. This will include upgrading IBM Maximo connections to work with existing CGI Advantage connections in Pima County’s IT DEV/TEST/UAT/PROD environments from existing interfaces and replacing them with the new Contractor-developed product.

This project will only be considered complete when:

- A fully functioning interface between Pima County’s Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system has passed user acceptance testing (UAT) and is installed in all Pima County environments and
 - Performs all the integrations listed in **RFP-PO-1900005 Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**, VI. Section 1.
 - Performs all the integrations listed in **RFP-PO-1900005 Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**, VI. Section 2 that are determined to not require changes to the Advantage product in order for the Advantage Interface Replacement to be installed.
- Contractor has provided documentation on interface development, support, and administration.

- Pima County IT staff has been trained on interface troubleshooting, implementation, maintenance, break/fix handling.

- **DELIVERABLES**

The following are the deliverables for this project:

1	Implement a County-provided Messaging interface between Pima County's Maximo (by IBM) asset tracking system and its Advantage (by CGI) financial ERP system. The interface will be fully supported by Pima County staff post production implementation.
2	An implementation plan, including critical steps and considerations to ensure a successful implementation.
3	<p>The contractor will provide all documentation for:</p> <ul style="list-style-type: none"> a. Support b. Administration
4	<p>The contractor will provide all training, per latest submitted clarification for:</p> <ul style="list-style-type: none"> a. Troubleshooting - Troubleshooting covers all aspects of potential technical system related issues that Contractor finds or is elsewhere documented. For example, Maintenance includes message reprocessing, cache clearing or other best practice system maintenance. Troubleshooting is for when system errors may be generated or an outage occurs. Generally, anything that is known which could arise and cause a system issue/message will be covered under troubleshooting, including restarts, how to deal with messages in process or other issues to be sure if a problem does occur, data is not lost and the system is back up within SLA guidelines. b. Implementation - All general system installation documentation and review, and also in particular the specific implementation and Technical Design documentation for Pima County. The Pima County Admins will have full working knowledge of all aspects of how their system is set up, how to run tests and support production, and reference materials for future use and lookup. c. Maintenance - Day to day Admin maintenance as needed, including message reprocessing (which should be very limited but can occur if bad data is sent, CGI goes down, etc.), general system maintenance and anything Contractor finds specific to the Pima County implementation. d. Break/Fix Error Handling (all): One of the biggest issues for SOA or interfaces can be if there is a system error, such as Maximo or Advantage going down for any reason (which is not expected, but again needs to have a plan in place), is the potential for loss of data. Maximo (using MIF and WebSphere) has tools for holding messages that are in process, so that once

	<p>system issues are cleared, the in process messages then complete processing and no data is lost. Contractor will be reviewing the resolution of system issues for Maximo and Messaging in the Troubleshooting portion of the training, but will review specifically how to handle restoring the system without data loss in the event of some uncontrollable outage. Troubleshooting will provide the high level process to restart interfaces, Break/Fix will discuss more advanced topics to support Pima County in all instances. Contractor doesn't expect this to happen on their side, but don't control CGI's systems, so Contractor plans for all potential issues.</p>
5	<p>Project completion is reached, as measured by the Definition of Complete (above).</p>

- **INTEGRATION POINTS**

Contractor will implement the following (from **RFP-PO-1900005 Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**, Section 1) 17 current integration points required to be included in the solution, listed first by system ownership alongside the data transfer timeline for each, then listed again at a detailed level. This is followed by four (4) new integration services that may be added.

Contractor will implement the following (from **RFP-PO-1900005 Exhibit G: Pima County Specifications For Maximo-Advantage Interface Replacement**, Section 2) if it is determined they do not require changes within the Advantage (by CGI) product.

Section 1. Current Integration Points

A. Reference Data

Reference data **owned by Advantage** and synched (sent) to Maximo.

Statement regarding Real Time from Contractor:

"We consider real time, in a normal implementation, to be 1-3 seconds to send/receive transactions, as a general expectation. However, we have had clients that due to various processing rules or security, or end systems that utilize cron tasks which have resulted in longer than real time transactions, even though our system is designed for near instant messaging. So we make that '3 to 5 min delay' statement just in case you have very strong security or some other limiting factors, such as cron tasks on the CGI end. That being said, with control over the implementation of Messaging, we assume CGI can process requests in real time. If they have a cron task running, we can send in real time,

but are dependent on CGI systems to complete the end to end cycle. Our designs are meant for 1-3 seconds, based on system latency.”

1. Commodity (Codes and Descriptions)
 - a. Real Time (3 to 5 min delay)
2. Vendor (address, contact, purchasing and payment information)
 - a. Real Time (3 to 5 min delay)
3. Procurement Location (Address Ship/Bill)
 - a. Real Time (3 to 5 min delay)
4. Master Agreements (aka purchase contracts)
 - a. Real Time (3 to 5 min delay)
5. Chart of Accounts for GL string
 - a. Real Time (3 to 5 min delay)
6. Projects & Project Budgets
 - a. Real Time (3 to 5 min delay)
7. Purchase order and Revisions (aka direct order).
 - a. Real Time (3 to 5 min delay)

Reference data **owned by Maximo** and synched (sent) to Advantage

8. Work Orders
 - a. Real Time (3 to 5 min delay)
9. Item
 - a. Real Time (3 to 5 min delay)
10. Site
 - a. Real Time (3 to 5 min delay)

B. Business Process

Business Process data **owned by Advantage** and synched (sent) to Maximo

11. Work Order Costs
 - a. Real Time (3 to 5 min delay)
12. Purchase Order, Payment
 - a. Real Time (3 to 5 min delay)
13. Other Costs
 - a. Batch job, runs nightly
14. Chart of Accounts Updates
 - a. Batch job, runs nightly

Business Process data **owned by Maximo** and synched (sent) to Advantage

15. Inventory Issues, Transfer, Adjustment

- a. Real Time (3 to 5 min delay)
- 16. Purchase Request, Receipt
 - a. Real Time (3 to 5 min delay)
- 17. Purchase Order (PO) Revisions are made in Maximo and synced to Advantage
 - a. Real Time (3 to 5 min delay)

Section 2. New Integration Services To Develop

NOTE: County will only move forward with new integration services if they do not modify or alter existing tables in Advantage by CGI. This will be determined during the course of the project and is not in the current project costs.

1. Notification of system issues
 - a. The interface shall have the ability to send emails to a configurable user population (including multiple individuals or distribution groups) in the case of technical or functional system failure.
 - b. The interface shall identify and communicate the underlying reason for the issue and the cause of failure.
 - c. The interface shall provide notification of integration problems. For example: *When poller fails Admins are not notified.*
2. Data Processing when receiving system is unavailable
 - a. The interface shall fail in an orderly fashion when the receiving system is unavailable (i.e. a time out). The interface shall document this event and notify administrators of its occurrence.
 - b. The interface shall recover automatically when the receiving system becomes available again (i.e. a time out is resolved). The interface shall document this event and notify administrators of its occurrence.
3. Transaction Processing Error Handling

The interface shall provide fault-tolerant transaction delivery in contrast to the current ABI process, described below:

 - a. All transactions are processed from a sequential queue
 - b. If any transaction within the queue fails, then all subsequent transaction processing stops.
 - c. The user has to go to the stuck transaction and delete it to get processing to start again.
 - d. The user cannot tell what business process was tied to the deleted transaction, so the system loses the information. It is difficult or impossible to determine how to correct the corrupted data.
4. Integrity Testing

The interface shall provide an automated mechanism, which allows system operators to verify the integrity of data between CGI Advantage and IBM Maximo. The mechanism will take the form of a report or a user interface that provides the number of successful transactions compared to the number of failed transactions.

For the failed transactions, the report or user interface shall provide the root cause of the failure.

3. Maximo-Advantage Interface Added Functionality

Contractor will implement some/all of the Added Functionality per requirements of **RFP-PO-1900005 Exhibits H-M** of the Pima County proposal.

- **EXHIBIT H: ADD GRANT COSTS TO MAXIMO TRANSACTIONS**
- **EXHIBIT I: CHARGING TO THE GENERAL LEDGER (GL) STRING FOR NON-INVENTORY ITEMS**
- **EXHIBIT J: REQUIRE GENERAL LEDGER (GL) ACCOUNT VALIDATION IN MAXIMO**
- **EXHIBIT K: MANUFACTURER, MODEL, AND CATALOG NUMBER FIELDS MAXIMO INTEGRATION**
- **EXHIBIT L: PREVENT WORK ORDERS FROM BEING CLOSED PREMATURELY**
- **EXHIBIT M: ROTATING ASSETS**

DELIVERY METHODOLOGY AND SPRINT BASED MILESTONE PAYMENTS

As part of the Contractor Delivery Methodology, project delivery and deliverables are based on a hybrid Agile/Waterfall approach as demonstrated in the project plan and proposal. There are 7 phases, each with an associated cost that make up the total project cost. These milestones will be reviewed and approved by Pima County (and subsequently invoiced upon approval) on a monthly basis, and all project deliverables will be tracked using Earned Value Schedule and Budget Variance Index as part of the Status Reports. They are aligned as closely as possible with all proposal submission planning. The sprints identified below relate to the final project plan version which was simply an update to the expected start date and linked project task dates, and the expected (per Pima County approval) monthly spend is noted below the table. **Please Note:** These timelines are close estimates only. It is understood that County tasks could take longer than expected.

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
1	2	Initiation Phase	6.5	3	156	\$ 23,400	Mon 1/13/20	Tue 1/21/20
	9	Analysis Phase					Tue 1/21/20	Fri 2/21/20
	10	Maximo Technical Upgrade - 7.6.0.0 to 7.6.1.1	2.25	2	36	\$ 5,400	Tue 1/21/20	Thu 1/23/20
	11	Section I: Baseline Upgrade	1	2	16	\$ 2,400	Tue 1/21/20	Wed 1/22/20
	13	SECTION II – Maximo Modules To Be Upgraded	1.25	2	20	\$ 3,000	Wed 1/22/20	Thu 1/23/20
	19	County-provided Messaging Implementation Design	10	2	160	\$ 24,000	Tue 1/21/20	Tue 2/4/20
	21	Maximo Advantage Interface Replacement Analysis - Review current design docs, analyze issues and opportunities					Tue 1/21/20	Fri 2/21/20
	22	Reference Data: From Advantage	18	1	144	\$ 21,600	Tue 1/21/20	Fri 2/14/20
	30	Reference Data: From Maximo	5	1	40	\$ 6,000	Fri 2/14/20	Fri 2/21/20
	34	Business Process: From Advantage	10	1	80	\$ 12,000	Tue 1/21/20	Tue 2/4/20
	39	Business Process: From Maximo	7	1	56	\$ 8,400	Tue 2/4/20	Thu 2/13/20
	43	New Integration Services	10	1	80	\$ 12,000	Tue 2/4/20	Tue 2/18/20
	52	Maximo Advantage Added Functionality					Tue 1/21/20	Wed 2/19/20
	53	Adding the Grant costs to Maximo transactions (Exhibit H)	5	1	40	\$ 6,000	Tue 1/21/20	Tue 1/28/20

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
2	56	Charging to the GL String for Non Inventory Items (Exhibit I)	3.5	1	28	\$ 4,200	Tue 1/28/20	Fri 1/31/20
	59	Require GL Account Validation in Maximo (Exhibit J)	3.5	1	28	\$ 4,200	Mon 2/3/20	Thu 2/6/20
	62	Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	3.5	1	28	\$ 4,200	Thu 2/6/20	Tue 2/11/20
	65	Prevent Work Orders from Premature Closure (Exhibit L)	3.5	1	28	\$ 4,200	Wed 2/12/20	Mon 2/17/20
	68	Rotating Assets	2.5	1	20	\$ 3,000	Mon 2/17/20	Wed 2/19/20
	71	Design Phase (Functional Documentation)					Mon 1/13/20	Thu 4/9/20
	72	Maximo Technical Upgrade - 7.6.0.0 to 7.6.0.10 minimum					Mon 1/13/20	Tue 2/11/20
	73	Section I: Baseline Upgrade	5	1	40	\$ 6,000	Mon 1/13/20	Fri 1/17/20
	75	SECTION II – Maximo Modules to Be Upgraded	5	2	80	\$ 12,000	Thu 1/23/20	Thu 1/30/20
	81	SECTION III – Maximo Modules to Be Installed or Configured	5	1	40	\$ 6,000	Tue 2/4/20	Tue 2/11/20
	83	County-provided Messaging Implementation Design	15	1	120	\$ 18,000	Tue 2/18/20	Tue 3/10/20
	85	Maximo Advantage Interface Replacement					Thu 2/13/20	Thu 4/9/20
	86	Reference Data: From Advantage					Fri 2/21/20	Tue 3/31/20
	87	Commodity (Codes and Descriptions)	3	1	24	\$ 3,600	Fri 2/21/20	Wed 2/26/20
	89	Vendor (address, contact, purchasing and payment information)	3	1	24	\$ 3,600	Wed 2/26/20	Mon 3/2/20
	91	Procurement Location (Address Ship/Bill)	3	1	24	\$ 3,600	Mon 3/2/20	Thu 3/5/20
	93	Master Agreements (aka purchase contracts)	5	1	40	\$ 6,000	Thu 3/5/20	Thu 3/12/20
	95	Chart of Accounts for GL string	5	1	40	\$ 6,000	Thu 3/12/20	Thu 3/19/20
	97	Projects & Project Budgets	5	1	40	\$ 6,000	Thu 3/19/20	Thu 3/26/20
	99	Purchase order and Revisions (aka direct order).	3	1	24	\$ 3,600	Thu 3/26/20	Tue 3/31/20
	101	Reference Data: From Maximo					Tue 3/31/20	Thu 4/9/20
	102	Work Orders	3	1	24	\$ 3,600	Tue 3/31/20	Fri 4/3/20
	104	Item	2	1	16	\$ 2,400	Fri 4/3/20	Tue 4/7/20
	106	Site	2	1	16	\$ 2,400	Tue 4/7/20	Thu 4/9/20
	108	Business Process: From Advantage					Thu 2/13/20	Thu 3/5/20
	109	Work Order Costs	3	1	24	\$ 3,600	Thu 2/13/20	Tue 2/18/20
	111	Purchase Order, Payment	3	1	24	\$ 3,600	Tue 2/18/20	Fri 2/21/20
	113	Other Costs	4	1	32	\$ 4,800	Fri 2/21/20	Thu 2/27/20
115	Chart of Accounts Updates	5	1	40	\$ 6,000	Thu 2/27/20	Thu 3/5/20	
117	Business Process: From Maximo					Thu 3/5/20	Thu 3/26/20	
118	Inventory Issues, Transfer, Adjustment	5	1	40	\$ 6,000	Thu 3/5/20	Thu 3/12/20	
120	Purchase Request, Receipt	5	1	40	\$ 6,000	Thu 3/12/20	Thu 3/19/20	
122	Purchase Order (PO) Revisions	5	1	40	\$ 6,000	Thu 3/19/20	Thu 3/26/20	
124	New Integration Services					Tue 3/10/20	Fri 3/20/20	
125	Notification of system issues	2	1	16	\$ 2,400	Tue 3/10/20	Thu 3/12/20	
127	Data Processing when receiving system is unavailable	2	1	16	\$ 2,400	Thu 3/12/20	Mon 3/16/20	
129	Transaction Processing Error Handling	2	1	16	\$ 2,400	Mon 3/16/20	Wed 3/18/20	
131	Integrity Testing	2	1	16	\$ 2,400	Wed 3/18/20	Fri 3/20/20	
133	Maximo Advantage Added Functionality					Thu 2/20/20	Fri 3/20/20	

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
3	134	Adding the Grant costs to Maximo transactions (Exhibit H)	5	1	40	\$ 6,000	Thu 2/20/20	Wed 2/26/20
	136	Charging to the GL String for Non Inventory Items (Exhibit I)	3	1	24	\$ 3,600	Thu 2/27/20	Mon 3/2/20
	138	Require GL Account Validation in Maximo (Exhibit J)	3	1	24	\$ 3,600	Tue 3/3/20	Thu 3/5/20
	140	Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	5	1	40	\$ 6,000	Fri 3/6/20	Thu 3/12/20
	142	Prevent Work Orders from Premature Closure (Exhibit L)	3	1	24	\$ 3,600	Fri 3/13/20	Tue 3/17/20
	144	Rotating Assets	3	1	24	\$ 3,600	Wed 3/18/20	Fri 3/20/20
	146	Build Phase (Technical Specifications, Development, Unit Test)					Mon 9/2/19	Fri 8/14/20
	147	25% Build Validation Review - Based on Build Phase % Complete					Fri 4/3/20	Fri 4/3/20
	148	50% Build Validation Review - Based on Build Phase % Complete					Fri 6/26/20	Fri 6/26/20
	149	75% Build Validation Review - Based on Build Phase % Complete					Fri 8/14/20	Fri 8/14/20
	150	Maximo Technical Upgrade - 7.6.0.0 to 7.6.1.1					Mon 9/2/19	Wed 4/22/20
	151	New DEV 7.6.1.1 Environment (On-Site)					Mon 1/20/20	Fri 2/28/20
	152	MS SQL Upgrade - 2012 SP3 to 2014					Mon 1/20/20	Fri 1/24/20
	153	Perform Upgrade	5	1	40	\$ 6,000	Mon 1/20/20	Fri 1/24/20
	154	Upgrade to 7.6.0.0 Maximo 7.6.1.1	5.5	1	44	\$ 6,600	Thu 1/30/20	Fri 2/7/20
	164	Maximo Update Db	1.5	1	12	\$ 1,800	Fri 2/7/20	Mon 2/10/20
	168	Maximo Smoke Test	11	1	88	\$ 13,200	Mon 2/10/20	Tue 2/25/20
	173	Pima County Environment Review					Tue 2/25/20	Fri 2/28/20
	176	TEST Upgrade Tasks (off site guidance / onsite as needed)					Mon 9/2/19	Wed 4/22/20
	177	MS SQL Upgrade - 2012 SP3 to 2014					Fri 2/28/20	Tue 3/3/20
	178	Perform Upgrade / Refresh	2	1	16	\$ 2,400	Fri 2/28/20	Tue 3/3/20
	179	Upgrade to 7.6.1.1 Maximo 7.6.1	5.5	1	44	\$ 6,600	Tue 3/3/20	Wed 3/11/20
	188	Maximo Update Db	1.5	1	12	\$ 1,800	Wed 3/11/20	Thu 3/12/20
	192	Maximo Smoke Test	1	1	8	\$ 1,200	Thu 3/12/20	Fri 3/13/20
	196	Migrate Spatial Configs	5	1	40	\$ 6,000	Fri 4/10/20	Fri 4/17/20
	197	Configure Scheduler Optimizer	5	1	40	\$ 6,000	Mon 9/2/19	Fri 9/6/19
	198	Pima County Environment Review					Fri 4/17/20	Wed 4/22/20
	201	Maximo Anywhere 7.6 Install					Tue 2/25/20	Tue 3/17/20
	202	Install Maximo Anywhere DEV 7.6.3.1	4	1	32	\$ 4,800	Tue 2/25/20	Mon 3/2/20
	206	Develop Deployment Package (for development)	8	1	64	\$ 9,600	Mon 3/2/20	Thu 3/12/20
212	Pima County Environment Review					Thu 3/12/20	Tue 3/17/20	
215	Maximo Anywhere TEST 7.6 VM Snapshot	8	1	64	\$ 9,600	Mon 3/2/20	Thu 3/12/20	
225	Mobile TEST Deployment	6	1	48	\$ 7,200	Thu 3/12/20	Fri 3/20/20	
228	Pima County Environment Review					Fri 3/20/20	Wed 3/25/20	
231	Maximo Anywhere UAT 7.6 VM Snapshot	8	1	64	\$ 9,600	Mon 3/2/20	Thu 3/12/20	
241	Mobile TEST Deployment	6	1	48	\$ 7,200	Thu 3/12/20	Fri 3/20/20	
244	Pima County Environment Review					Thu 3/12/20	Tue 3/17/20	
247	Maximo Anywhere PROD 7.6 VM Snapshot	6	1	48	\$ 7,200	Tue 3/17/20	Wed 3/25/20	

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
	256	Pima County Environment Review					Wed 3/25/20	Mon 3/30/20
	259	Maximo Spatial	30	1	240	\$ 36,000	Fri 2/28/20	Fri 4/10/20
	263	County-provided Messaging Implementation	15	1	120	\$ 18,000	Fri 3/20/20	Fri 4/10/20
	265	Messaging Interface Dev Support (billed monthly)	90	1	720	\$ 108,000	Fri 4/10/20	Fri 8/14/20
	266	Maximo Advantage Interface Replacement					Mon 3/23/20	Wed 7/15/20
	267	Reference Data: From Advantage					Thu 4/9/20	Thu 7/9/20
	268	Commodity (Codes and Descriptions)	7	1	56	\$ 8,400	Thu 4/9/20	Mon 4/20/20
	271	Vendor (address, contact, purchasing and payment information)	7	1	56	\$ 8,400	Mon 4/20/20	Wed 4/29/20
	274	Procurement Location (Address Ship/Bill)	7	2	112	\$ 16,800	Wed 4/29/20	Fri 5/8/20
	277	Master Agreements (aka purchase contracts)	14	2	224	\$ 33,600	Fri 5/8/20	Thu 5/28/20
	280	Chart of Accounts for GL string	5	1	40	\$ 6,000	Thu 5/28/20	Thu 6/4/20
	283	Projects & Project Budgets	5	1	40	\$ 6,000	Thu 6/4/20	Thu 6/11/20
	286	Purchase order and Revisions (aka direct order). (Bi-Directional)	20	2	320	\$ 48,000	Thu 6/11/20	Thu 7/9/20
	289	Reference Data: From Maximo	14	1	112	\$ 16,800	Mon 3/23/20	Thu 4/9/20
	290	Work Orders (Bi-Directional)	14	1	112	\$ 16,800	Mon 3/23/20	Thu 4/9/20
	293	Item	5	1	40	\$ 6,000	Thu 3/26/20	Thu 4/2/20
	296	Site	5	1	40	\$ 6,000	Thu 4/2/20	Thu 4/9/20
	299	Business Process: From Advantage					Thu 4/9/20	Tue 6/16/20
	300	Work Order Costs	8	1	64	\$ 9,600	Thu 4/9/20	Tue 4/21/20
	303	Work Order Status	5	1	40	\$ 6,000	Tue 4/21/20	Tue 4/28/20
	306	Purchase Order, Payment	15	2	240	\$ 36,000	Tue 4/28/20	Tue 5/19/20
	309	Other Costs	15	1	120	\$ 18,000	Tue 5/19/20	Tue 6/9/20
	312	Chart of Accounts Updates	5	1	40	\$ 6,000	Tue 6/9/20	Tue 6/16/20
	315	Business Process: From Maximo					Tue 6/16/20	Wed 7/15/20
	316	Inventory Issues, Transfer, Adjustment	5	1	40	\$ 6,000	Tue 6/16/20	Tue 6/23/20
	319	Purchase Request, Receipt	8	1	64	\$ 9,600	Tue 6/23/20	Fri 7/3/20
	322	Purchase Order (PO) Revisions	8	1	64	\$ 9,600	Fri 7/3/20	Wed 7/15/20
	325	New Integration Services	14	1	112	\$ 16,800	Fri 4/10/20	Thu 4/30/20
	326	Notification of system issues	5	1	40	\$ 6,000	Fri 4/10/20	Fri 4/17/20
	329	Data Processing when receiving system is unavailable	3	1	24	\$ 3,600	Fri 4/17/20	Wed 4/22/20
	331	Transaction Processing Error Handling	3	1	24	\$ 3,600	Wed 4/22/20	Mon 4/27/20
	333	Integrity Testing	3	1	24	\$ 3,600	Mon 4/27/20	Thu 4/30/20
	335	Maximo Advantage Added Functionality					Fri 4/10/20	Tue 8/4/20
	336	Adding the Grant costs to Maximo transactions (Exhibit H)	15	1	120	\$ 18,000	Fri 4/10/20	Thu 4/30/20
	339	Charging to the GL String for Non Inventory Items (Exhibit I)	14	2	224	\$ 33,600	Fri 5/1/20	Wed 5/20/20
	342	Require GL Account Validation in Maximo (Exhibit J)	14	1	112	\$ 16,800	Thu 5/21/20	Tue 6/9/20
	345	Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	15	1	120	\$ 18,000	Wed 6/10/20	Tue 6/30/20
	348	Prevent Work Orders from Premature Closure (Exhibit L)	14	1	112	\$ 16,800	Wed 7/1/20	Mon 7/20/20
	351	Rotating Assets	14	1	112	\$ 16,800	Wed 7/15/20	Tue 8/4/20
	354	UAT Upgrade Tasks - Mock Cutover					Mon 4/27/20	Thu 5/21/20

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
	355	MS SQL Upgrade - 2012 SP3 to 2014					Mon 4/27/20	Tue 4/28/20
	356	Perform Upgrade	2	2	32	\$ 4,800	Mon 4/27/20	Tue 4/28/20
	357	Upgrade to 7.6.1.1 Maximo 7.6.1	6.5	1	52	\$ 7,800	Tue 5/5/20	Thu 5/14/20
	367	Maximo Update Db	1.5	1	12	\$ 1,800	Thu 5/14/20	Fri 5/15/20
	371	Maximo Smoke Test	1	1	8	\$ 1,200	Fri 5/15/20	Mon 5/18/20
	375	Pima County Environment Review					Mon 5/18/20	Thu 5/21/20
4	378	Test Phase					Mon 5/18/20	Thu 12/10/20
	379	Promote Build					Mon 5/18/20	Fri 6/26/20
	380	Develop Migration Packages (Initial Structures)	23	1	184	\$ 27,600	Mon 5/18/20	Thu 6/18/20
	385	Migrate Build Phase Migration Packages to TEST Environment (First Pass, Defect Resolution)	5	1	40	\$ 6,000	Thu 6/18/20	Thu 6/25/20
	386	Validate TEST environment	1	1	8	\$ 1,200	Thu 6/25/20	Fri 6/26/20
	387	Interface End to End (Full Cycle) Testing					Thu 7/9/20	Wed 9/2/20
	388	Maximo Advantage Interface Replacement					Thu 7/9/20	Wed 9/2/20
	389	Reference Data: From Advantage					Thu 7/9/20	Mon 8/17/20
	390	Commodity (Codes and Descriptions)	3	1	24	\$ 3,600	Thu 7/9/20	Tue 7/14/20
	392	Vendor (address, contact, purchasing and payment information)	3	1	24	\$ 3,600	Tue 7/14/20	Fri 7/17/20
	394	Procurement Location (Address Ship/Bill)	3	1	24	\$ 3,600	Fri 7/17/20	Wed 7/22/20
	396	Master Agreements (aka purchase contracts)	5	1	40	\$ 6,000	Wed 7/22/20	Wed 7/29/20
	398	Chart of Accounts for GL string	3	1	24	\$ 3,600	Wed 7/29/20	Mon 8/3/20
	400	Projects & Project Budgets	5	1	40	\$ 6,000	Mon 8/3/20	Mon 8/10/20
	402	Purchase order and Revisions (aka direct order).	5	1	40	\$ 6,000	Mon 8/10/20	Mon 8/17/20
	404	Reference Data: From Maximo	7	1	56	\$ 8,400	Mon 8/17/20	Wed 8/26/20
	405	Work Orders	3	1	24	\$ 3,600	Mon 8/17/20	Thu 8/20/20
	407	Item	2	1	16	\$ 2,400	Thu 8/20/20	Mon 8/24/20
	409	Site	2	1	16	\$ 2,400	Mon 8/24/20	Wed 8/26/20
	411	Business Process: From Advantage				\$ -	Tue 8/4/20	Wed 8/19/20
	412	Work Order Costs	2	1	16	\$ 2,400	Tue 8/4/20	Thu 8/6/20
	414	Purchase Order, Payment	5	1	40	\$ 6,000	Thu 8/6/20	Thu 8/13/20
	416	Other Costs	1	1	8	\$ 1,200	Thu 8/13/20	Fri 8/14/20
	418	Chart of Accounts Updates	3	1	24	\$ 3,600	Fri 8/14/20	Wed 8/19/20
	420	Business Process: From Maximo					Wed 8/19/20	Wed 9/2/20
	421	Inventory Issues, Transfer, Adjustment	5	1	40	\$ 6,000	Wed 8/19/20	Wed 8/26/20
	423	Purchase Request, Receipt	5	1	40	\$ 6,000	Wed 8/26/20	Sun 8/30/20
	425	Purchase Order (PO) Revisions	5	1	40	\$ 6,000	Sun 8/30/20	Wed 9/2/20
	427	New Integration Services	5	1	40	\$ 6,000	Fri 8/14/20	Wed 8/26/20
	428	Notification of system issues	2	1	16	\$ 2,400	Fri 8/14/20	Tue 8/18/20
	430	Data Processing when receiving system is unavailable	2	1	16	\$ 2,400	Tue 8/18/20	Thu 8/20/20
	432	Transaction Processing Error Handling	2	1	16	\$ 2,400	Thu 8/20/20	Mon 8/24/20
	434	Integrity Testing	2	1	16	\$ 2,400	Mon 8/24/20	Wed 8/26/20
	436	Maximo Advantage Added Functionality					Tue 7/21/20	Sat 8/29/20
	437	Adding the Grant costs to Maximo transactions (Exhibit H)	5	1	40	\$ 6,000	Tue 7/21/20	Mon 7/27/20
	439	Charging to the GL String for Non Inventory Items (Exhibit I)	5	1	40	\$ 6,000	Tue 7/28/20	Mon 8/3/20

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
5	441	Require GL Account Validation in Maximo (Exhibit J)	5	1	40	\$ 6,000	Tue 8/4/20	Mon 8/10/20
	443	Manufacturer, Model, and Catalog Number Fields	5	1	40	\$ 6,000	Tue 8/11/20	Mon 8/17/20
	445	Prevent Work Orders from Premature Closure (Exhibit L)	5	1	40	\$ 6,000	Tue 8/18/20	Mon 8/24/20
	447	Rotating Assets	5	1	40	\$ 6,000	Tue 8/25/20	Sat 8/29/20
	449	Defect Resolution					Wed 9/2/20	Wed 9/30/20
	450	Interfaces	20	2.5	400	\$ 60,000	Wed 9/2/20	Wed 9/30/20
	451	Spatial	10	1	80	\$ 12,000	Wed 9/2/20	Wed 9/16/20
	452	Graphical Scheduler	5	1	40	\$ 6,000	Wed 9/2/20	Wed 9/16/20
	453	Defect Testing & Signoff	3	1	24	\$ 3,600	Wed 9/30/20	Mon 10/5/20
	457	Pre-UAT Signoff	3	2	48	\$ 7,200	Mon 10/5/20	Thu 10/8/20
	459	Training Development	20	2	320	\$ 48,000	Tue 9/1/20	Mon 9/28/20
	461	UAT Testing					Thu 10/8/20	Fri 12/4/20
	462	UAT Environment Prep					Thu 10/8/20	Tue 10/27/20
	463	Promote Build	5	1	40	\$ 6,000	Thu 10/8/20	Thu 10/15/20
	467	Maximo Anywhere	13	1	104	\$ 15,600	Thu 10/8/20	Mon 10/12/20
	471	Maximo Spatial	2	1	16	\$ 2,400	Mon 10/12/20	Wed 10/14/20
	473	Graphical Scheduler	2	1	16	\$ 2,400	Wed 10/14/20	Thu 10/15/20
	475	Graphical Assignment	2	1	16	\$ 2,400	Thu 10/8/20	Tue 10/27/20
	477	Maximo Advantage Interface Replacement UAT					Tue 10/27/20	Thu 10/29/20
538	Defect Resolution	15	3	360	\$ 54,000	Thu 10/29/20	Mon 11/2/20	
539	UAT / Warranty Readiness Signoff					Thu 10/29/20	Mon 11/2/20	
540	Deploy Phase					Mon 11/2/20	Wed 11/4/20	
541	Change Management	25	1	200	\$ 30,000	Tue 10/27/20	Fri 11/27/20	
544	Training	10	2	160	\$ 24,000	Fri 11/13/20	Fri 12/4/20	
549	Go-Live Preview	1	1	8	\$ 1,200	Fri 12/4/20	Thu 12/10/20	
550	Executive Communication; What to expect with rollout, overall schedule	1	1	8	\$ 1,200	Thu 10/8/20	Fri 3/19/21	
551	Go-Live Announcement					Thu 10/8/20	Thu 11/12/20	
552	Email or All Hands Meeting presentation; Schedule and support options/war room	1	1	8	\$ 1,200	Thu 10/8/20	Fri 10/9/20	
553	War Room Setup	4	1	32	\$ 4,800	Thu 11/5/20	Thu 11/12/20	
554	Go-Live War Room - Pima County and Contractor Staff	4	1	32	\$ 4,800	Fri 12/11/20	The 12/31/20	
555	Go-Live Review	1	1	8	\$ 1,200	Thu 12/10/20	Fri 12/11/20	
556	Outage Notification					Thu 12/10/20	Fri 12/11/20	
557	Inform users of Outage - 24 hour notice					Thu 12/10/20	Thu 12/10/20	
558	Inform users of Outage - 2 hour notice					Thu 12/10/20	Thu 12/10/20	
559	Go-Live					Thu 12/10/20	Wed 12/16/20	
560	MS SQL Upgrade - 2012 SP3 to 2014					Thu 12/10/20	Tue 12/15/20	
561	Perform Upgrade	1.5	3	36	\$ 5,400	Tue 12/15/20	Wed 12/16/20	
562	Upgrade to 7.6.1.1	1.75	3	42	\$ 6,300	Tue 12/15/20	Thu 12/17/20	
570	Maximo Update Db	0.25	3	6	\$ 900	Tue 12/15/20	Wed 12/16/20	
572	Migrate Configurations	1.25	3	30	\$ 4,500	Wed 12/16/20	Thu 12/17/20	
577	Maximo Smoke Test	1	1	8	\$ 1,200	Thu 12/17/20	Fri 12/25/20	
581	Pima County Environment Review					Thu 12/17/20	Mon 12/21/20	

Phase	Task ID	Pima County Maximo Upgrade, Interface Replacement and Add Interface Functionality - Milestones	Days	Staff	Hours	Sprint Cost	Start	Finish
	582	PROD Review					Thu 12/17/20	Mon 12/21/20
	583	Go/No Go					Mon 12/21/20	Tue 12/22/20
7	584	Hyper Care Support	10	1	80	\$ 12,000	Tue 12/22/20	Mon 1/11/2021

Note: Costs are aligned with deliverable dates and level of effort and are as close as possible to the project plan. A revised plan (with only dates updated to reflect the anticipated start date) is part of the Scope of Work documentation, with Task IDs noted in the above table as related to the Sprint ID.

Expected Monthly Invoice – Approved Deliverables by Month:

Expected Start Date: Jan 13, 2020

Feb 1: \$68,400

Mar 1: \$148,800

Apr 1: \$168,000

May 1: \$202,800

Jun 1: \$130,800

Jul 1: \$111,600

Aug 1: 106,800

Sep 1: \$228,000

Oct 1: \$138,000

Nov 1: \$40,800

Dec 1: \$ 90,000

Jan 1, 2020: \$49,500

Feb 1: \$12,000

Total: \$1,495,500 (includes Services & Training)

Travel Costs, per BAFO schedule of trips: **\$18,450**

PROJECT PLAN:

- After the Kickoff Meeting with County, Contractor will develop a highly-detailed final Project Plan that incorporate every analytical and technical requirement, all infrastructure tasks to support the upgrade, testing, deployment and support.
- Project Plan assumes 8 hours per day, using methodology which is based on PMI (PMBOK) and other leading industry frameworks. This includes the development of Planning, Analysis, Build, Test, Deploy and Sustain stages, with all tasks from our methodology as applied to this particular project in the plan, based on the task estimates.
- Contractor will conduct a three-way match to finalize Project Plan (stages shown below), to ensure all three approaches are in alignment as it relates to the costs.
 - Stage 1: hourly task estimates
 - Stage 2: duration for Pima County reviews
 - Stage 3: Budget Tracker

TRAINING:

Training Time Breakdown (220 Hours total):

- 40 hours – On-site training, prep and closure time.
- Document Development (specific to Pima County):
 - 40 hours - Maximo Asset and Work Management (core functionality including transportation as used at Pima County).
 - 40 hours - Maximo Graphical Scheduling and Assignment.
 - 40 hours - Maximo Spatial.
 - 40 hours - Maximo Anywhere.
- 20 hours - anticipated revisions/enhancements post initial Pima County review.

Training will use the County-specific developed training materials:

- Maximo 7.6.0.10 (or later) Admin Guide
 - General Administration, Product Installation
 - Troubleshooting, including interface queues and MIF restart, etc.
 - Maintenance: applying feature packs, database maintenance recommendations
 - Break Fix: Common Issues and KB Development. As problems arise and are resolved, they go into the KB so support staff can do a search to see if a new problem has come up before, and how it was resolved. Contractor recommends a SharePoint site be set up to use for the KB, and will have one for the project during the life of the project and support.
 - Maximo Anywhere

- Maximo 7.6.0.10 (or later) User Guide
 - o User Guide by Application (Maximo, Spatial, Scheduler Plus, Service Provider, Anywhere)
 - o Quick Guide / Cheat Sheet (formatted to laminate): Maximo, Spatial, Scheduler Plus, Service Provider, Anywhere
- Complete set of Maximo Functional Design and Technical Specifications:
 - o Every Interface will have its own FD/TS documents
 - o Any Maximo or Anywhere configurations (if added) will have an FD/TS document
- Quick Reference / Cheat Sheets:
 - o Contractor will provide double sided 'Cheat Sheets' on all major processes. These can be placed desk side and used for quick reference to guide new staff.

Admin Training:

- Contractor will provide an on-site 5-day training class for all admin users, to fit one classroom as available at County using a 'train the trainer' approach. Additional classes available on request due to either number of staff or classroom size limitation.

Functional Training:

- Contractor will provide an on-site 5-day training class for SME end users, to fit one class as available at County using a 'train the trainer' approach. This class will cover What's New in 7.6.0.10 (or later), all add-ons and Maximo Anywhere. Additional training up to full training for every user is available.

TRAVEL:

Anticipation of 15 total trips, for Project Manager and Technical Lead. The number of lodging nights are based on one week on-site per visit, such as a total of 75 nights for 15 trips. The \$180 of car costs proposed are per TRIP (per week), which is off of Uber rates, which are typically less than car rentals gasoline, and parking.

The total daily rates should add up to at or less than the maximum daily rates, but if Contractor incurs lower costs, they will charge actual amounts with no admin costs to save money.

CANCELLATION FOR CONFLICT OF INTEREST:

This contract is subject to cancellation pursuant to A.R.S. §§38-506 and 38-511, the pertinent provisions of which are incorporated into this Contract by reference.

ISRAEL BOYCOTT CERTIFICATION:

Pursuant to A.R.S. § 35-393.01, if Contractor engages in for-profit activity and has 10 or more employees, and if this Contract has a value of \$100,000.00 or more, Contractor certifies it is not currently engaged in, and agrees for the duration of this Contract to not engage in, a boycott of goods or services from Israel. This certification does not apply to a boycott prohibited by 50 U.S.C. § 4842 or a regulation issued pursuant to 50 U.S.C. § 4842.

Pima County Maximo Upgrade, Interface Replacement and Aid Interface Functionality - SOW Version		
Initiation Phase	314.85 days	Mon 1/13/20
Phase Project Detailed Project Plan	5.5 days	Tue 1/21/20
Phase Project Development (Recreation)	2.0 days	Tue 1/21/20
Phase Project Development (Recreation)	0.5 days	Wed 1/22/20
Phase Project Development (Recreation)	0.5 days	Thu 1/23/20
Phase Project Development (Recreation)	0.5 days	Fri 1/24/20
On-Site Meeting with Project Team	1 day	Mon 1/20/20
Project Team Kickoff	1.5 day	Tue 1/21/20
Analysis Phase	23 days	Tue 1/21/20
Maximo Technical Upgrade - 7.6.0.0 to 7.6.1.1	2.25 days	Tue 1/21/20
SECTION I - Maximo Modules to be Upgraded	1.8 day	Wed 1/22/20
Maximo SOA Platform Implementation Design	10 days	Wed 1/22/20
Maximo Advantage Interchange Replacement Analysis - Review current design ideas, analyze issues and opportunities	13 days	Tue 1/21/20
Reference Data: From Advantage	18 days	Tue 1/21/20
Reference Data: From Maximo	5 days	Fri 2/4/20
Business Process: From Advantage	10 days	Tue 2/13/20
Business Process: From Maximo	7 days	Tue 2/13/20
New Integration Services	10 days	Tue 2/13/20
Maximo Advantage Added Functionality	21.5 days	Wed 2/19/20
Adding the Grant costs to Maximo transactions (Exhibit H)	3 days	Tue 1/28/20
Charging to the GL String for Non Inventory Items (Exhibit I)	3.5 days	Tue 1/28/20
Requires GL Account Validation in Maximo (Exhibit J)	3.5 days	Mon 2/9/20
Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	3.5 days	Tue 2/11/20
Prevent Work Orders from Premature Closure (Exhibit L)	3.5 days	Mon 2/17/20
Rebuilding Assets	2.5 days	Mon 2/17/20
Maximo Technical Upgrade - 7.6.0.0 to 7.6.1.1	21.5 days	Mon 1/13/20
SECTION I - Maximo Modules to be Upgraded	1.8 day	Mon 1/13/20
SECTION II - Maximo Modules to be Upgraded	5.8 days	Mon 1/13/20
SECTION III - Maximo Modules to be Installed or Configured	9 days	Tue 2/4/20
Maximo SOA Platform Implementation Design	15 days	Tue 2/13/20
Maximo Advantage Interchange Replacement	40 days	Fri 2/15/20
Reference Data: From Advantage	27 days	Fri 2/15/20
Vendor Data (Codes and Description)	3 days	Mon 2/16/20
Vendor Location, contact, pricing and payment information	3 days	Mon 2/16/20
Procurement Location (Address Ship/Bill)	3 days	Mon 2/16/20
Master Agreements (aka purchase contracts)	5.8 days	Mon 2/16/20
Chart of Accounts for GL string	15 days	Mon 2/16/20
Projects & Project Budgets	3 days	Mon 2/16/20
Purchase order and Invoices (aka direct order)	3 days	Mon 2/16/20
Reference Data: From Maximo	27 days	Mon 2/16/20
Work Orders	3 days	Fri 4/3/20
SW	2 days	Fri 4/3/20
SW	2 days	Fri 4/3/20
Business Process: From Advantage	15 days	Tue 4/7/20
Work Order Costs	3 days	Tue 4/7/20
Purchase Order, Payment	4 days	Tue 4/7/20
Other Costs	5 days	Tue 4/7/20
Chart of Accounts Updates	5 days	Tue 4/7/20
Business Process: From Maximo	15 days	Tue 4/7/20
Inventory Issues, Transfer, Adjustment	5 days	Tue 4/7/20
Purchase Order (PO) Revisions	5 days	Tue 4/7/20
New Integration Services	8 days	Tue 4/7/20
Notification of system issues	2 days	Tue 4/7/20
Data Processing when receiving system is unavailable	2 days	Tue 4/7/20
Transaction Processing Error Handling	2 days	Tue 4/7/20
Inventory Testing	2 days	Tue 4/7/20
Maximo Advantage Added Functionality	21.5 days	Mon 1/13/20
Adding the Grant costs to Maximo transactions (Exhibit H)	3 days	Tue 2/13/20
Charging to the GL String for Non Inventory Items (Exhibit I)	3 days	Tue 2/13/20
Requires GL Account Validation in Maximo (Exhibit J)	3 days	Tue 2/13/20
Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	3.5 days	Tue 2/13/20
Prevent Work Orders from Premature Closure (Exhibit L)	3 days	Tue 2/13/20
Rebuilding Assets	3 days	Tue 2/13/20
Build Phase	23 days	Mon 1/20/20
25% Build Validation Review - Based on Build Phase % Complete	1 day	Fri 4/3/20
50% Build Validation Review - Based on Build Phase % Complete	1 day	Fri 4/3/20
75% Build Validation Review - Based on Build Phase % Complete	1 day	Fri 4/3/20
Maximo Technical Upgrade - 7.6.0.0 to 7.6.1.1	89.75 days	Mon 1/20/20
Requires GL Account Validation in Maximo (Exhibit J)	29.75 days	Mon 1/20/20
Manufacturer, Model, and Catalog Number Fields Maximo Integration (Exhibit K)	29.75 days	Mon 1/20/20
Perform Upgrade	12 days	Mon 1/20/20
Upgrade to 7.6.0.0 Maximo 7.6.1.1	35.5 days	Thu 1/24/20

Exhibit A: Cost Proposal

Schedule 1: Summary

Maximo Upgrade to Version 7.6.0.10 in All Environments, Maximo-Advantage Interface Replacement, and Maximo-Advantage Interface Added Functionality - Summary of Professional Services, Training and Travel Expenses

Cost Categories	Proposed Cost	Explanation/Notes (if necessary)**
Professional Services (Schedule 2):	\$ 1,430,435	3% Rate Discount, same LOE
Training (Schedule 3)	\$ 65,087	3% Rate Discount, same LOE
Travel and Other Costs (Schedule 4)	\$ 18,450	No Change
Total Project Cost	\$ 1,513,972	

**Attach additional notes (if needed) to provide full explanation.

Assumptions/Additional Comments

All expenditures are subject to review by Pima County. Pima County reserves the right to request justification for any/all expenses charged to the County as claimed to support of this contract.

Exhibit A: Cost Proposal

Schedule 2: Professional Services Estimated Professional Services By Activity

1. Estimated Vendor Hours and Cost

Activity Name	Implementation Services			Cost
	Hours	Rate*	Functionality Cost	
Maximo Upgrade to 7.6.1.1				
DEV: Initial analysis of current implementation, target DEV environment review, SQL Upgrade support if needed, software downloads. Run IBM Data Integrity Check Tool, Mitigate as needed up to 2 days. Work with Pima County DBAs to support Db upgrade for 7.6.1.1. Upgrade DEV environment, upgrade all industry solutions / add-ons, apply UPDATE DB, full 'smoke test' of upgrade, support any regression testing. Initial set up of Scheduler Plus Optimization / test parameters with SME for validity. Explain upgrade process to Pima Staff, answer questions, etc. Initial work and integrity check work will be offsite. 1 week Upgrade will be onsite with Pima staff. Scheduler Plus Optimization will be off site. Note: The initial upgrade setup and testing is the longest of all the environments, and is used to setup the processes for the remaining environments.	176 \$	155	N/A	\$ 27,315
Test Upgrade	56 \$	155	N/A	\$ 8,691
UAT	40 \$	155	N/A	\$ 6,208
Prod	36 \$	155	N/A	\$ 5,587
TRAIN	36 \$	155	N/A	\$ 5,587
Environment Testing (all environments), UAT support, Hypercare (2 weeks)	120 \$	155	N/A	\$ 18,624
Spatial: Review of current Spatial integrations, Map Services (MXD), data links if used, 3rd party tools if used and general functionality	40 \$	160	N/A	\$ 6,402
Spatial: Migration of all map services to 7.6.1.1, including all individual map layers, data links - all spatial data direct linking to ESRI for all Maximo related map service layers. Develop Migration packages for post DEV environment migration, test migration packages	240 \$	160	N/A	\$ 38,412
Spatial: UAT Support	80 \$	160	N/A	\$ 12,804
Maximo Anywhere w/Spatial: Dev Installs, Dev Maximo Configuration, Deployment Package Builds (requires separate VM for each environment)				\$ -
Anywhere DEV: Prep VM's, install all software, configure with related environment, testing, configure Spatial on Anywhere, develop deployment packages for Maximo Anywhere applications, support SCCD or other 'Push' tools	120 \$	155	N/A	\$ 18,624
Anywhere TEST: VM clone, then configure all settings, create deployment packages, testing	80 \$	155	N/A	\$ 12,416

Anywhere UAT: VM clone, then configure all settings, create deployment packages, testing	60 \$	155	N/A	\$	9,312
Anywhere PROD: VM clone, then configure all settings, create deployment packages, testing	60 \$	155	N/A	\$	9,312
Anywhere TRAIN: VM clone, then configure all settings, create deployment packages, testing	60 \$	155	N/A	\$	9,312
Maximo Team Tech Lead: 50% of full time excluding Maximo Upgrade time, for project duration. Manages all technical issues, troubleshoots and is POC with Pima technical team, reports to PM.	750 \$	155	N/A	\$	116,400
Maximo Upgrade Project Manager: 50% of Full Time. Manages entire effort, project kickoff, all project reporting, earned value analysis, functional expertise, team guidance, issue escalation point for both Fields and Pima Team.	940 \$	160	N/A	\$	150,447
NOT-TO-EXCEED TOTAL: Maximo Upgrade				\$	455,454
Maximo-Advantage Interface Replacement					
NOTE: SOA Platform/Admin optional if decision is made to use the Maximo MIF, with some data management limitations from requirements					
SOA Platform Analysis, EAM-ERP Implementation Design (using MuleSoft)	200 \$	150	N/A	\$	30,070
SOA Implementation	120 \$	150	N/A	\$	18,042
SOA Admin for Development and Testing, supporting all interfaces for both Fields and CGI testing, t	500 \$	150	N/A	\$	75,175
Integration Integrity Testing Reporting between Systems (Complex)	240 \$	150	N/A	\$	36,084
Reference Interfaces (Analysis, Design, Build, Test, End to End): Name, Type, Direction, Complexity, Exists with Modifications or New				\$	
Commodity (Codes and Descriptions), Real Time From ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Vendor Data, Real Time From ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Procurement Location, Real Time From ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Master Agreements, Real Time, From ERP, High, Exists/Modification	320 \$	141	N/A	\$	45,008
Chart of Accounts - Approved Combinations, Real Time, From ERP, Simple, Exists/Modification	125 \$	145	N/A	\$	18,125
Chart of Accounts - Segment Values, Real Time, From ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Projects & Project Budgets, Real Time, From ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Purchase Order and Revisions, Real Time, From ERP, High, Exists/Modification	160 \$	141	N/A	\$	22,504
Work Orders, Real Time, To ERP, Medium, Exists/Modification	120 \$	141	N/A	\$	16,876
Item, Real Time, To ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Site, Real Time, To ERP, Simple, Exists/Modification	125 \$	141	N/A	\$	17,581
Business Process Interfaces (Analysis, Design, Build, Test, End to End): Name, Type, Direction, Complexity, Exists with Modifications or New				\$	
Work Order Costs, Real Time, From ERP, Medium, Exists/Modification	225 \$	141	N/A	\$	31,646

Purchase Order, Payment (Invoice), Real Time, From ERP, High, Exists/Modification	320	\$	141	N/A	\$	45,008
Other Costs (numerous sources), Batch Job, From ERP, High, Exists/Modification	320	\$	141	N/A	\$	45,008
Chart of Accounts Updates, Batch Job, From ERP, Simple, Exists/Modification	125	\$	141	N/A	\$	17,581
Inventory Issues, Real Time, To ERP, Simple, Exists/Modification	125	\$	141	N/A	\$	17,581
Inventory Transfer, Real Time, To ERP, Simple, Exists/Modification	125	\$	141	N/A	\$	17,581
Inventory Adjustment, Real Time, From ERP, Simple, Exists/Modification	125	\$	141	N/A	\$	17,581
Purchase Request Receipt, Real Time, To ERP, Medium, Exists/Modification	225	\$	141	N/A	\$	31,646
Purchase Order Revisions, Real Time, To ERP, Medium, Exists/Modification	225	\$	141	N/A	\$	31,646
NOT-TO-EXCEED TOTAL: Maximo-Advantage Interface Replacement						
Maximo-Advantage Interface Added Functionality						
1: Add Grant Costs to Maximo Transactions						
Add Grant Costs for Maximo Transactions, Real Time, From ERP, High, New	320	\$	141	\$	45,008	
Maximo Configurations	120	\$	141	\$	16,878	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	61,886	\$
2: Charging to the General Ledger String for Non-Inventory Items						
Charging to the General Ledger (GL) string for non-inventory items, Real Time, To ERP, Medium	225	\$	141	\$	31,646	
Maximo Configurations	120	\$	141	\$	16,878	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	48,524	\$
3: Require General Ledger Account Validation in Maximo						
Require General Ledger Account Validation in Maximo, Real Time, From ERP, Medium	225	\$	141	\$	31,646	
Maximo Ecalations	160	\$	141	\$	22,504	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	54,150	\$
4: Manufacturer, Model, and Catalog Number Fields Maximo Integration						
Manufacturer, Model, and Catalog Number Fields Maximo Integration, RealTime, From ERP Com	225	\$	141	\$	31,646	
Maximo Configurations	120	\$	141	\$	16,878	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	48,524	\$
5: Prevent Work Orders From Being Closed Prematurely						
Prevent Work Orders From Being Closed Prematurely, Real Time, From ERP, Complex	320	\$	141	\$	45,008	
Maximo Ecalations	160	\$	141	\$	22,504	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	67,512	\$
6: Rotating Assets						
Added Functionality option subtotal				\$	67,512	\$

Rotating Assets, Real Time, From ERP, Medium	225	\$	141	\$	31,646	
Maximo Escalations	160	\$	141	\$	22,504	
(add additional rows if needed)				\$	-	
Added Functionality option subtotal				\$	54,150	\$ 54,150
NOT-TO-EXCEED TOTAL: Added Functionality						\$ 334,747
Professional Services Total					9,749	1,430,435

Assumptions/Additional Comments

Any hardware, software, or associated licenses whose purchase is charged to Pima County in support of this contract becomes the property of Pima County and will be surrendered as such to Pima County upon project completion. The vendor will disclose all purchases of software, hardware, and any subcontracting to Pima County. All of the vendor's subcontractors in support of this contract will be held to the same constraints as the prime vendor/contractor with no exception.

Exhibit A: Cost Proposal

Schedule 3: Training Costs

Estimated Cost of Training by Phase: Class size of 12 staff members or less.

* Training is defined as classroom training or other knowledge transfer exercises that does not include work to implement the system

Activity Name	Training Type (on-site, off-site, web, etc.)	Hours of Training (Instruction)	Rate (per hour)	Cost Related to Added Functionality	Costs	Explanation/Notes
Spatial, Anywhere, Graphical Assignment, Scheduler with Optimizer						
Functional Training	On-Site, 1 week	220.0	\$141	N/A	\$30,943	Includes Document Prep Time
Admin Training	On-Site, 1 week	220.0	\$155	N/A	\$34,144	Includes all Admin Training Document Prep Time, Technical Trainer
(add additional rows if needed)						
NOT-TO-EXCEED TOTAL						\$0
New Integration between Maximo and Advantage						
Included in Admin Training	See Admin Training			N/A	\$0	
(add additional rows if needed)						
NOT-TO-EXCEED TOTAL: Integration						\$0
Maximo-Advantage Interface Added Functionality						
1: Add Grant Costs to Maximo Transactions						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
2: Changing to the General Ledger String for Non-Inventory Items						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
3: Require General Ledger Account Validation in Maximo						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
4: Manufacturer, Model, and Catalog Number Fields Maximo Integration						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
5: Prevent Work Orders From Being Closed Prematurely						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
6: Rotating Assets						
Included in Admin Training	See Admin Training			0	0	
(add additional rows if needed)						
Added Functionality option subtotal						\$0
NOT-TO-EXCEED TOTAL: Added Functionality						\$0
Total						\$65,087

Assumptions/Additional Comments

Exhibit A: Cost Proposal

Schedule 4: Travel & Other Costs

Description	Volume	Rate	Added Functionality Cost	Cost
Maximo Upgrade to 7.6.0.10				
Airfare, non-emergency	15	\$300.00	N/A	\$4,500.00
Accommodation, per night	75	\$94.00	N/A	\$7,050.00
Per diem	75	\$56.00	N/A	\$4,200.00
Rental car, per day	15	\$180.00	N/A	\$2,700.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)				
Maximo-Advantage Interface Replacement - As Requested				
Airfare, non-emergency		\$300.00	N/A	\$0.00
Accommodation, per night		\$94.00	N/A	\$0.00
Per diem		\$56.00	N/A	\$0.00
Rental car, per day		\$25.00	N/A	\$0.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)				
Maximo-Advantage Interface Added Functionality - As Requested				
OPTION: Add Grant Costs to Maximo Transactions				
Airfare, non-emergency		\$300.00	\$0.00	
Accommodation, per night		\$94.00	\$0.00	
Per diem		\$56.00	\$0.00	
Rental car, per day		\$25.00	\$0.00	
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)				
Added Functionality option subtotal				\$0.00
OPTION: Charging to the General Ledger String for Non-Inventory Items				
Airfare, non-emergency		\$300.00	\$0.00	
Accommodation, per night		\$94.00	\$0.00	
Per diem		\$56.00	\$0.00	
Rental car, per day		\$25.00	\$0.00	
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)				
Added Functionality option subtotal				\$0.00
OPTION: Require General Ledger Account Validation in Maximo				
Added Functionality option subtotal				\$0.00

Airfare, non-emergency			\$300.00	\$0.00
Accommodation, per night			\$94.00	\$0.00
Per diem			\$56.00	\$0.00
Rental car, per day			\$25.00	\$0.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)			\$0.00	\$0.00
Added Functionality option subtotal				\$0.00
OPTION: Manufacturer, Model, and Catalog Number Fields Maximo Integration				
Airfare, non-emergency			\$300.00	\$0.00
Accommodation, per night			\$94.00	\$0.00
Per diem			\$56.00	\$0.00
Rental car, per day			\$25.00	\$0.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)			\$0.00	\$0.00
Added Functionality option subtotal				\$0.00
OPTION: Prevent Work Orders From Being Closed Prematurely				
Airfare, non-emergency			\$300.00	\$0.00
Accommodation, per night			\$94.00	\$0.00
Per diem			\$56.00	\$0.00
Rental car, per day			\$25.00	\$0.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)			\$0.00	\$0.00
Added Functionality option subtotal				\$0.00
OPTION: Rotating Assets				
Airfare, non-emergency			\$300.00	\$0.00
Accommodation, per night			\$94.00	\$0.00
Per diem			\$56.00	\$0.00
Rental car, per day			\$25.00	\$0.00
Additional costs charged for on site per day, as applicable. Provide details below. (add additional rows if needed)			\$0.00	\$0.00
Added Functionality option subtotal				\$0.00
Total				\$18,450

Assumptions/Additional Comments

Note:

Note: Onsite for Project Kickoff, Dev Upgrade, Review Stage Gates (25%, 50%, 75%), UAT, Go Live. Kickoff, Dev Upgrade, UAT, GoLive trips include Project Manager and/or Technical Manager. Added 4 extra trips to cover any additional requested on-site time. We are happy to be onsite as needed, if more time is requested as a scope modification.

Travel expenses should be reasonable. Reasonable travel, accommodation and out-of-pocket expenses are defined as coach airfare at fares purchased in advance to reduce County's expenses (unless an emergency visit), compact rental car, housing accommodations and per diem rate provided such combined housing and per diem do

not exceed \$150 per business day. Additional Guidance can be found on the FederalPay.org website with specificities for Arizona 2019:
<https://www.federalpay.org/perdiem/2019/arizona>

To the greatest extent possible (per Pima County discretion) the vendor will utilize virtual meeting technologies at their own cost so as to reduce travel expenses.