

# Optimizing Capital Program Management PMIS and CMIS with the City of Columbus

OWEA 2015 Pre-Conference Workshop

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# **AGENDA**

- Overview
- Program Management Information System
- Construction Management Information System
- Conclusion
- Questions and Answers

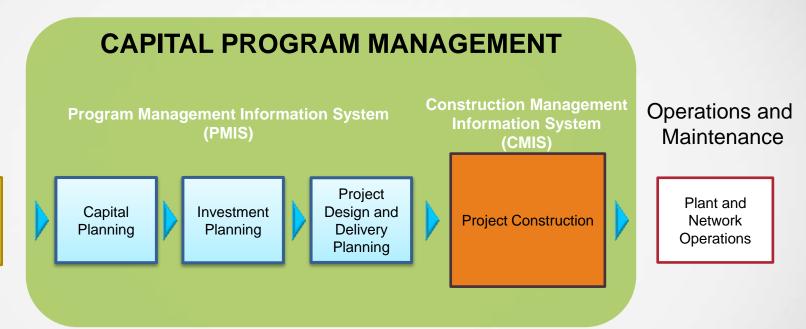
# WHAT IS ORION PMIS/CMIS?



#### PROGRAM MANAGEMENT OVERVIEW

# Business Planning

Business Plan and Regulatory Strategy

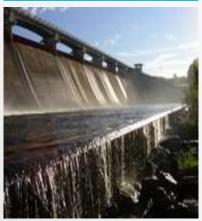


#### CITY OF COLUMBUS AT A GLANCE

#### **CITY OF COLUMBUS**

- 15th Largest City in the Country
- Increasing population for last 25 years.
- Top 10 Relocation Cities





#### **PUBLIC UTILITIES**

3 Divisions

- \$530M combined annual operating budget
- \$250M combined annual capital budget
- 3 WTP w/ 240 MGD capacity
- 2 WWTP w/ 480 MGD capacity
- Nearly 10,000 miles of water and sewer lines



#### **PUBLIC SERVICE**

Designs and constructs roadway improvements

- \$98M annual operating budget
- \$105M annual capital budget
- Maintains 6,300+ miles of roadways
- Sustains 219 bridges

#### MANAGEMENT OBJECTIVES FOR PMIS

# Program Management Information System (PMIS)



Coordinate project planning between Departments and Divisions to avoid conflicts and improve efficiency



Execute projects on schedule and on budget



Plan capital budget and bond sales



Communicate clearly with citizens, media, and other City Staff

# **PMIS FUNCTIONALITY**

Program
Management
Information
System
(PMIS)

General Project Information Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

Status Updates

Reports

Dashboards and Reports

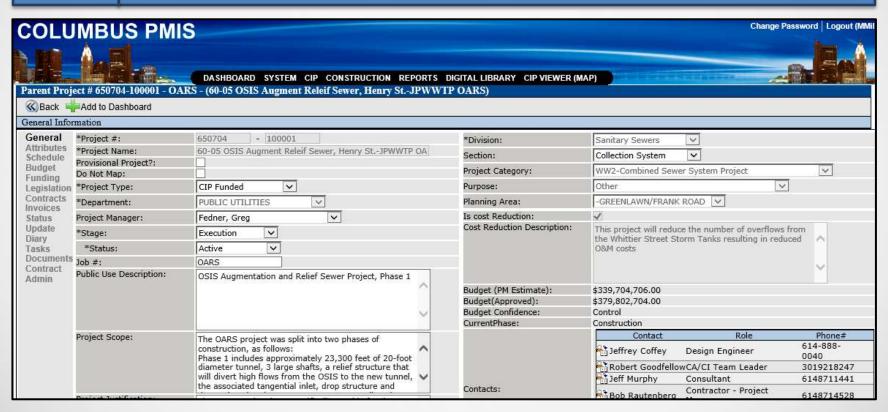
#### PROJECT GENERAL INFORMATION

**PMIS** 

General Project Information

Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

**Status Updates** 

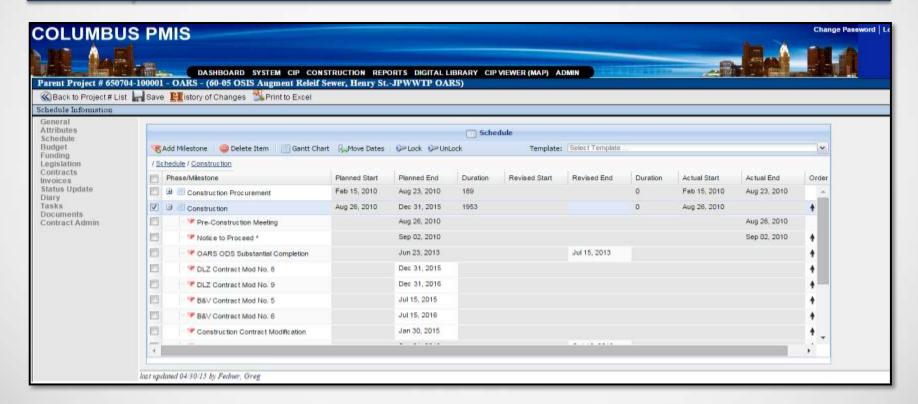


#### SCHEDULE SCREEN

**PMIS** 

General Project Information Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

Status Updates

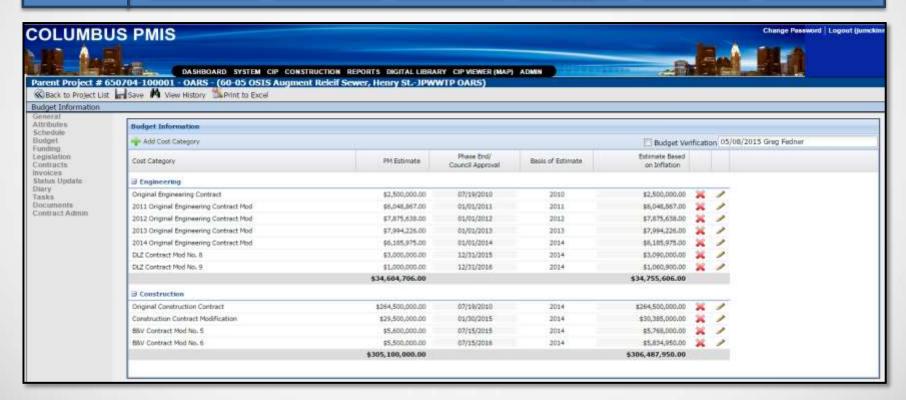


#### **BUDGET SCREEN**

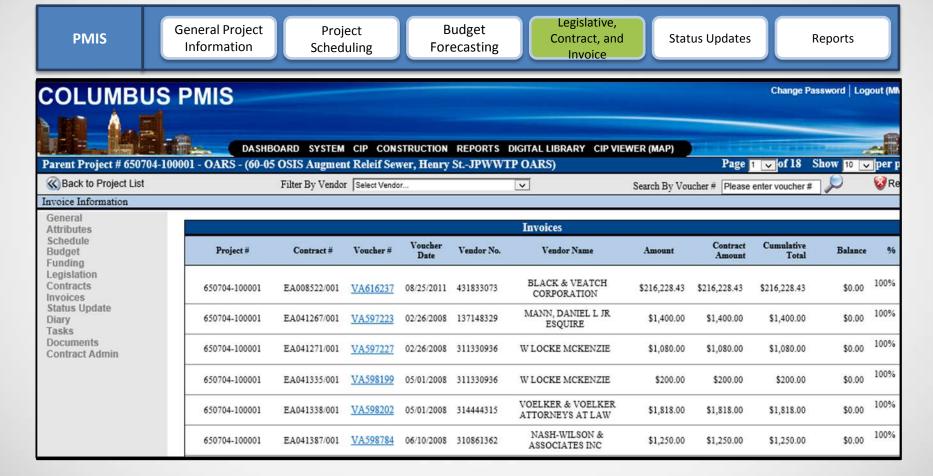
**PMIS** 

General Project Information Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

**Status Updates** 



## LEGISLATION, CONTRACT AND INVOICE SCREENS



# **MONTHLY STATUS REPORT**

**PMIS** 

General Project Information Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

Status Updates

Project # 650704-100001 (60-05 OSIS Augment Releif Sewer, Henry StIPWWTP OARS) Progress Report for Period Hay, 2015 (05/01/2015 - 05/31/2015)										
	Reporting Period									
Current Phase for Reporting Period:			(This will be used in status reports)  Construction  (**) (This will be used in status reports)							
THE PARTY OF THE P			status for the week ending May 2, 2015.							
			JP Site: CSI / Henson has delayed detivery of PCC							
Perind Summery			langments to 2h Side and Shelty Makerials has delayed							
			tunnel excavation resumes. Kenn	y/Obsystell (K/O)						
+ Const	ruction Procurement			Statu	Completed >		% Complete: 100			
Construction				Statu		% Complete: 7%				
		Start Date	Placeted End Date	Start Dale	East Date	Start Cute	Actuals East Date			
Phone	Construction	08/26/2010	12/31/2015	2600,000	100.000	Aug 26, 2010	Litt Labor			
Milestones	Pre-Construction Meeting		08/26/2010			Line was ware final	Aug 26, 2010			
	Notice to Proceed *		09/02/2010				Sep 02, 2010			
	OARS ODS Substantial Completion		06/23/2013		07/15/2013					
	DLZ Contract Med No. 8		12/31/2015		1.31.20.3003M3.W		C3			
	DLZ Contract Mod No. 9		12/31/2016				79			
	BBV Contract Mod No. 5		07/15/2015				(3)			
	BBV Centract Mod No. 6		07/15/2016				Ch			
	Construction Contract Modification		01/30/2015				73			
	WGC Substantial Completion		09/21/2013		10/16/2013		(3)			
	OARS OSS Sieb and Rough Grade		06/08/2014		01/20/2015		C3			
	Shaft & Substantial Completion		06/03/2014				(7)			
	Substantial Completion		12/31/2014		06/30/2017		7.3			
	Construction Completion Date *		06/01/2019		08/29/2017		(2)			
	Closeout Construction Contract *		12/31/2015				Ch			
Water American Street,				mation for Progress Report						
Work Performe	14	Status for the week ending			^					
		JP Site: CSI / Hanson has	delayed delivery of PCC segment their quarry until the tunnel excay	a to JP Site and Shelly Mater	ats has delayed loading					
		receiving cement 5 sodium	n siticate and continued SWP3 are	maintenance including set h	ince maintenance and					
Work Planned;					0					
					W.					
Action Hems:										
		- 9								
		CO No. 9 has been success Cut-off Grout Issue is curry	sfully negotiated and settled bay t ently under negotiation.	ne City and KOJV for \$28.5 F						
			TOTAL STATE OF THE							

#### **REPORTS**

**PMIS** 

General Project Information

Project Scheduling Budget Forecasting Legislative, Contract, and Invoice

Status Updates

Reports

Collapse

Collapse

Change Passwon

# **COLUMBUS PMIS**



DASHBOARD SYSTEM CIP CONSTRUCTION REPORTS DIGITAL LIBRARY CIP VIEWER

Directors Report

Upcoming Construction Report (MyReports)

Directors Report - Construction

Upcoming Engineering Report (MyReports)

Directors Report - Engineering

DPS Reports

DPS Design Report (MyReports)

DPS Design Report

DPS Planning Report (MyReports)

DPS Planning Report

DPU Reports

Collapse

Collapse

DPU Project Schedule Summary (MyReports)

DPU Project Schedule Summary

GIS Collapse
GIS Verification Report (MyReports)

Fiscal

Monthly Legislative Tracking Sheet (MyReports)

Monthly Legislative Tracking Sheet

Completed Legislation Report (MyReports)

Completed Legislation Report

CIP Report By Year (MyReports)

CIP Report By Year

Outstanding Contracts (MyReports)

Outstanding Contracts

#### MANAGEMENT OBJECTIVES FOR CMIS

# Construction Management Information System (CMIS)



Efficient process for field inspectors to record daily reports



Link contractor payment requests with daily reports from field inspectors and Change order management



Real time contract status

# **CMIS FUNCTIONALITY**



#### **CONTRACTS**

CMIS Bid Items Daily Reports Pay Estimates



# **CONTRACTS**

CMIS

Contracts

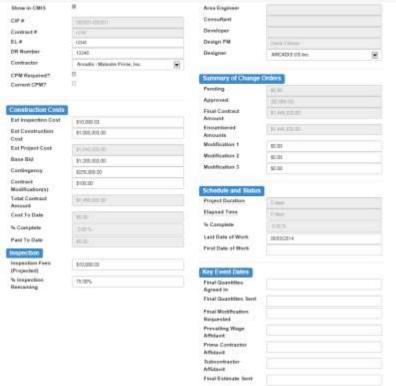
Bid Items

Daily Reports

Pay Estimates

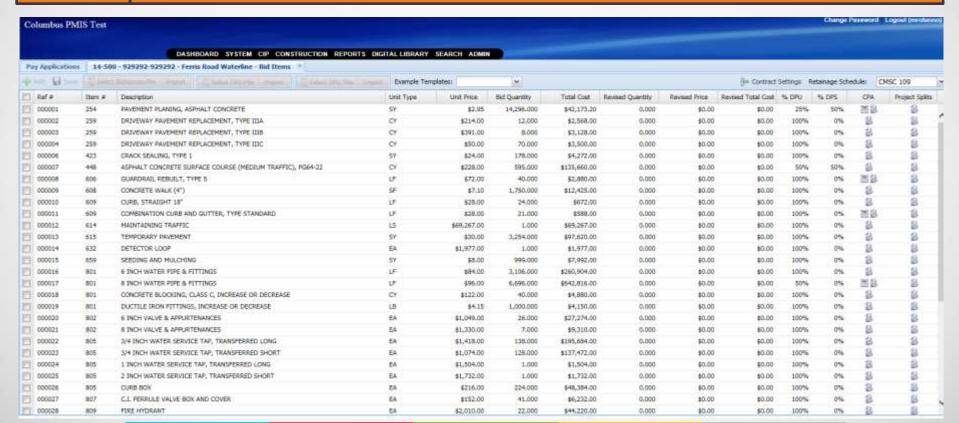
Area Engineer

Area Engineer

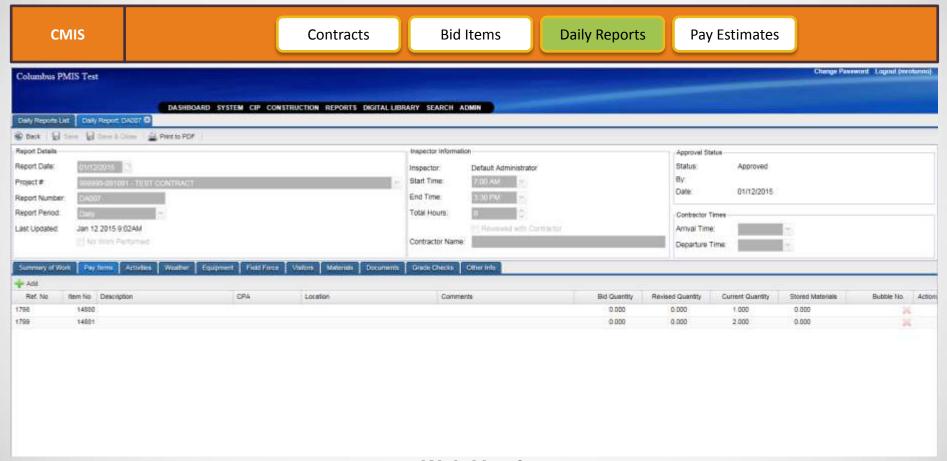


#### **BID ITEMS**

CMIS Contracts Bid Items Daily Reports Pay Estimates



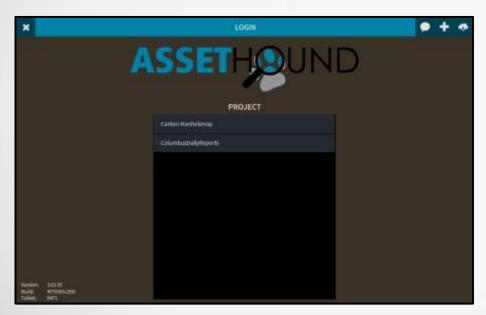
#### **DAILY REPORTS**

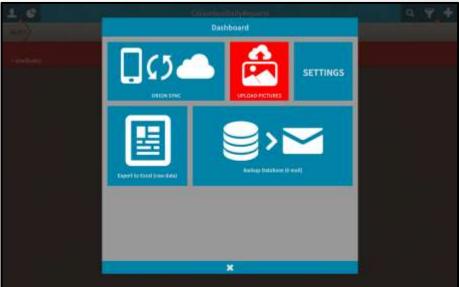


**Web Version** 

# **DAILY REPORTS**

CMIS Contracts Bid Items Daily Reports Pay Estimates

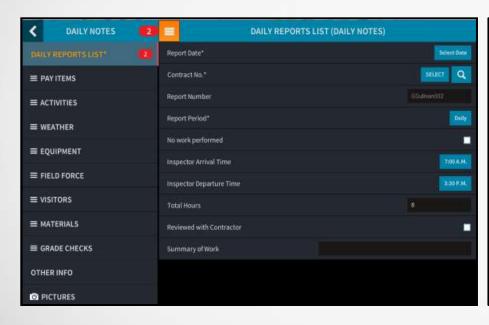


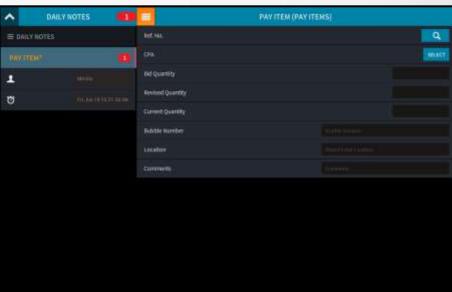


**Mobile Version** 

# **DAILY REPORTS**







#### **Mobile Version**

#### PAY ESTIMATES

CHECKED BY

**CMIS** Contracts OTY OF COLUMBUS DEPARTMENT OF PUBLIC SERVICE Division of Design and Construction CIF NO: 67 0025-1000 02 8/5/2014 AUDITORCONTRACT NO: EL016218 DIRECTIVE DATE: LETTING DATE: ACCEPTANCE CATE: COMPLETION DATE: 3/31/2015 BLAPSED TIME (Days) : 195 DET MATE NAMED IN 002 DR HAM DET ENTINATE DATE 216/2015 LAST ESTIMATE DATE: 1/16/2015 PERCENT COMPLETED: 20.01% TITLE Circuit 7217 Comersion CONTRACTOR J Randi Electric Inc. 1993 Oover Parkview Mr. Pleasant Mt 48858 ORGANIC CONTRACT NAME \$762,602.14 TOTAL WOODPCATIONS \$0.00 CONTRACT SUM TO DATE \$762,622 14 VEHIC COMPLETED TO DATE 8137,541.00 Laur. 10% Petation C \$13,754.10 BURT OTAL 5123,786.90 THE IVERSED MATERIAL STO DATE 50.00 SUSTITUTES. \$123,786.50 LESS PRECIOUS PLYMENTS \$30,894.90 CURRENT PLYMBE DUE \$50,891.94 THEREBY CERTIFY THAT THE ABOVE QUANTITIES ARE CORRECT AND THAT THE WORK HAS BEEN DONE. ACCORDING TO THE CONTRACT DALLEMED DA. CONSTRUCTION AREA ENGINEER DATE

#### Bid Items

**Daily Reports** 

Pay Estimates

#### Roadway Improvements - S-E-A Building Cost to Date

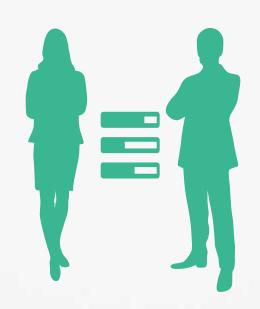
Report Dates between 12/8/2014 and 6/26/2015

Ref No	tem No	Description	Plun Cry UN	Unit Price	Total Press	Duly Gty To Date	Cost To Date
000001	201	CLEARING AND GRUBBING	1.000 LS	\$13,003.45	\$13,003.40	0.50	\$6,761.73
000021	814	MAINTENANCE OF TRAFFIC	1.000 LS	\$6,102.07	\$8,102.07	0.20	\$1,520.41
000022	023	CONSTRUCTION LAYOUT STAKES	1,000 LS	\$27,809,66	\$27,809,66	0.20	\$5,551.93
000028	624	MOBILIZATION	1.000 LS	\$2,824.92	\$2,824.92	9.90	\$2,542.43
000029	504	12' STORM SEWER WITYPE I BEDDING:	564,000 LF	\$30.00	517.847.04	538.50	\$10,450.50
0000000	604	12" STORM SEWER WICONORETE ENCASEMENT	158,000 LF	902.23	\$9,032.34	200.00	\$12,448.00
000031	004	15" STORM SEWER WITTPE I BEDDING	475.000 LF	\$35.79	\$17,000.25	444.00	\$15,890.76
000032	604	18" STORM SEWER WITHPE I BEDDING	60.000 LF	\$39.40	\$2,38400	80.00	\$2,384.00
000033	604	18" STORM SEWER WIWATER TIGHT JOINTS	127,000 LF	\$43.34	\$5,004.18	127.00	\$5,504,18
000034	604	24" STORM SEWER WITTER BEDDING	658.000 LF	\$52.73	\$34,950.86	858.00	\$34,590.88
0000035	504	35' STORM SEWER W.WATERTITE JOINTS	200.000 LF	\$85,05	\$17,210.00	200.00	\$17,210.00
0000038	604	36" STORM SEWER WITHPE I BEDDING	30,000 LF	\$85.12	\$2,553.80	30.00	\$2,553.00
000027	604	CURBINLET	25.000 EA	\$1,176.70	\$29,417.50	20.00	\$23,534.00
000038	604	ODOT 2-4 CAT OH BASIN FOR OUTLET STRUCTURES	2.000 EA	\$3,051.28	\$6,102.52	2.00	88,102.52
000039	004	STORM MANHOLE-TYPE "C"	11.000 EA	\$1,669.03	\$18,359,33	10.00	\$16,590.30
000041	604	HEADWALL 12" PIPE (AA-\$156)	3.000 EA	\$1,193.58	\$3,580.74	1.00	\$1,193.58
000042	604	HEADWALL 16" PIPE (AA-S168)	1,000 EA	\$1,193.58	\$1,193.58	1.00	\$1,193.56
000043	504	HEADWALL 18" PIPE (AA-\$168)	2.000 EA	\$1,400.00	\$2,800,00	200	\$2,800.00
000044	604	HEADWALL 36" PIPE (AAJS166)	1,000 EA	\$1,762.89	\$1,762.89	1.00	\$1,752.89
900057	801	SILT FENCINGS TREE PROTECTION FENCE	9571.000 LF	\$1.06	\$10,33666	8,400.00	\$9,072.00
300000	SPEC	INLET PROTECTION - GRASS	2.000 EA	\$54,02	\$108.04	0.00	50.00
660000	915	Frop. Sanistry Cleanout (AA-S161)	3,000 EA	\$534.30	\$1,802.80	0.00	90.00
000098	918	6" Diameter Pipe, Sanitary House Connection Service	274.000 LF	\$32.34	\$8,851.10	98.00	\$3,169.32
000057	918	If Diameter Pipe, SenitaryHouse Connection Service	333.000 LF	\$32.34	\$10,769.22	352.00	\$11,383.66
000094	901	10" Sanitary Sewer Pipe with Type 1 Bedding & Item 912 Comparated Granular Backfill	100 000 LF	\$52.48	\$5,248.00	100.00	\$5,248.00
000093	901	10" Sanitary Sewer Pipe with Type 1 Bedding	2578.000 LF	\$52.48	\$135,293.44	2,576.50	\$135,214.72
000092	604	Type C Precastitanhole	7.000 EA	\$2,300.39	\$10,102.73	7.00	\$16,10273
							\$355,959.80

# **PMIS/CMIS GROWING PAINS**

Old dogs and new tricks

Coordinating financial data



Consensus on rules and processes

Improving usability

#### **PMIS BENEFITS REALIZED**



## Single Record from Concept to Closeout

Contract, Invoice, and Schedule History

## Customizable reports

- Bond Sale and capital planning
- Upcoming RFP and bids
- PM usage consistency

## Mapping of Projects

- Conflict detection
- Public transparency

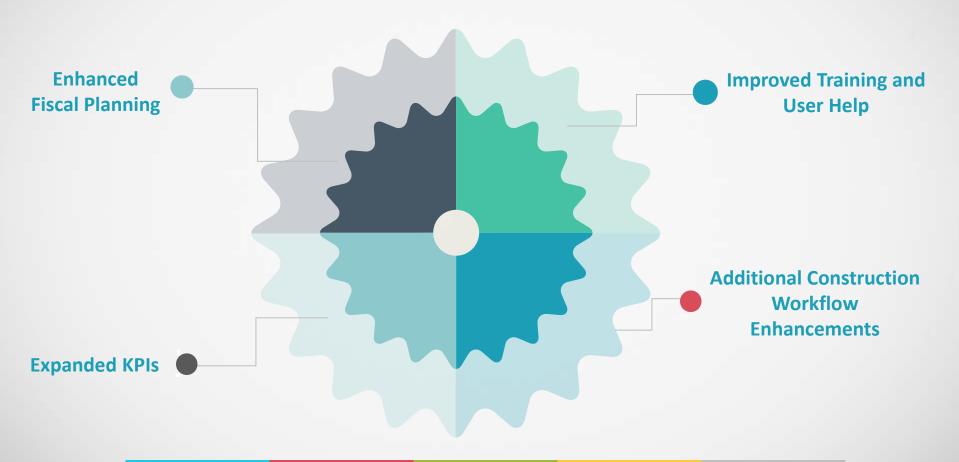
# Independence and Efficiency

 Staff can acquire a variety of project details 24/7

#### **Contractor Selection**

- Availability (quantity of jobs in process)
- Consistency (adhering to schedule and budget)

# **FUTURE ENHANCEMENTS**



#### **KEY PERFORMANCE INDICATORS**

#### **Time to Award Construction Projects**

Schedule Performance

Start Date: 6/18/2014 12:00:00 AM

**Department: Public Utilities** 

Average Award Time

165 Days

Average Award Time by Division

250

200

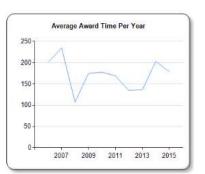
150

100

Sanzay Severs Water

Award Time Breakdown

>120
90-120
90-120
-30



End Date: 6/18/2015 12:00:00 AM

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Questions?

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