



# Super Expedited Wasterwater Emergency Rehabilitation of Sewers (SEWERS) Contract Development & Implementation

Salem Garawi Wastewater Conveyance Construction Division Bureau of Engineering January 31, 2017

### SEWER REPAIR

Sewer maintenance is a Bureau of Sanitation (LASAN) task. Design & construction are Bureau of Engineering (BOE) tasks.

- Large Sewers Group (16" and larger in diameter)
- Secondary Sewer Renewal Program (SSRP) Group (15" and smaller in diameter)
- Sewer Repair (Emergency & urgent necessity) [No Bid & Award]
  - Emergency Sewer Repair (ESR) Group
  - SEWERS Group (urgent necessity)

# SEWERS GROUP TEAM

- Design/Construction Engineers:
   Felix Madariaga Chinh Dinh Jeanie Lam David Ventura Chris Tomes Naajia Jami (Richard Louie is former Group Manager)
- Contractors:
  - Matthew And Stewart Company, Inc.
  - Tomovich & Associates

# HISTORY of SEWERS CONTRACTS

- First SEWERS contract was initiated around 2003 to provide an alternate method for sewer repair
- Early contracts: SEWERS 1, 2, 3 and 4 (with contract duration of 3 years each)
- Currently operating under SEWERS 5 contract. Advantages:
  - Consolidated number of bid items
     3 on-call contractors awarded (2 currently working)

## SEWERS5 INFORMATION

- Unit price contract
- The contract is intended for the urgent repair/rehabilitation of sewer facilities
- Each contractor submitted unit prices for 783 bid items as a part of the statement of qualifications

# SEWERS5 INFORMATION

- Work is issued, through a series of Construction Orders, to the contractor with the lowest quantity take off (QTO) estimate using applicable bid item unit prices and respective bid item quantities.
- If the contactor with the lowest QTO has 4 or more active Construction Orders, the Engineer may issue the next Construction Order to the contractor with the subsequent lowest QTO.

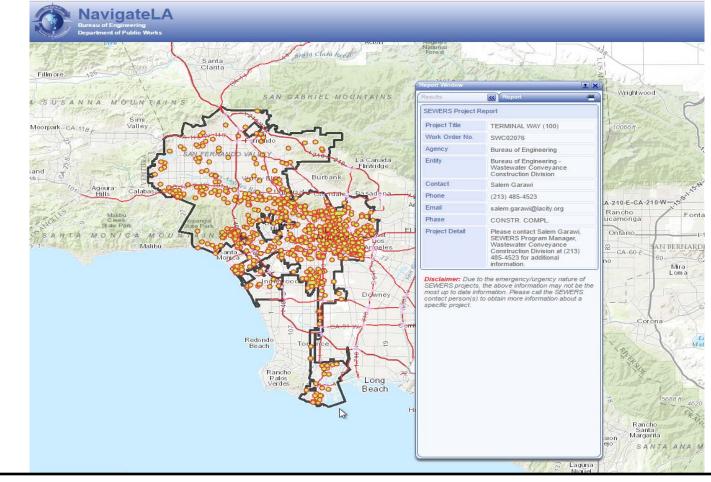
## SEWERS5 INFORMATION

- Cost Ceiling is \$25 Million
- Contract duration is 5 years
- Contract Start Date: May 2, 2013
- Contract End Date: May 2, 2018
- Over 220 Construction Orders are issued per year



### **SEWERS5 INFORMATION**

### Projects Locations (All projects are Geocoded)



## PROGRAM CHALLENGES

- Most projects may not have extensive challenges but maintaining a program with over 220 Construction Orders issued per year is challenging
- Paperwork linked to each project
- Reporting status of each project
- Keeping track of total budget
- Different design & construction engineers
- 2 Contractors



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#### PROGRAM CHALLENGES **SEWERS5** Project Delivery LASAN Work Final Closeout Asbuilt Change Order Request Time and Work Order Statement of Material Form Completion Processing **Request for** Create and Project design QTO **Final Change Closeout Form** Estimate Order Construction Email Order Authorization

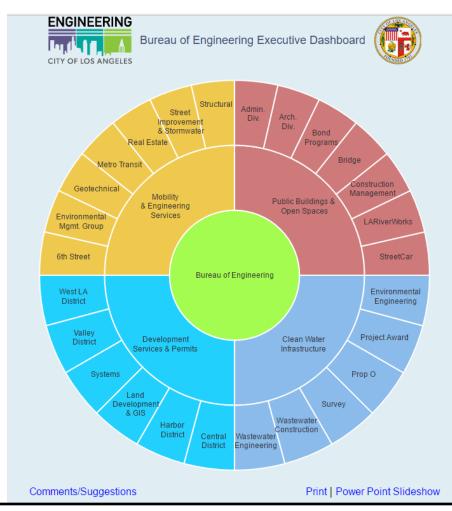
## PROGRAM CHALLENGES

- Data entry will effect weekly, monthly and quarterly reports
- Reporting systems that we have to continuously update: Uniform Project Reporting System, Dashboard
- 118 fields for each project

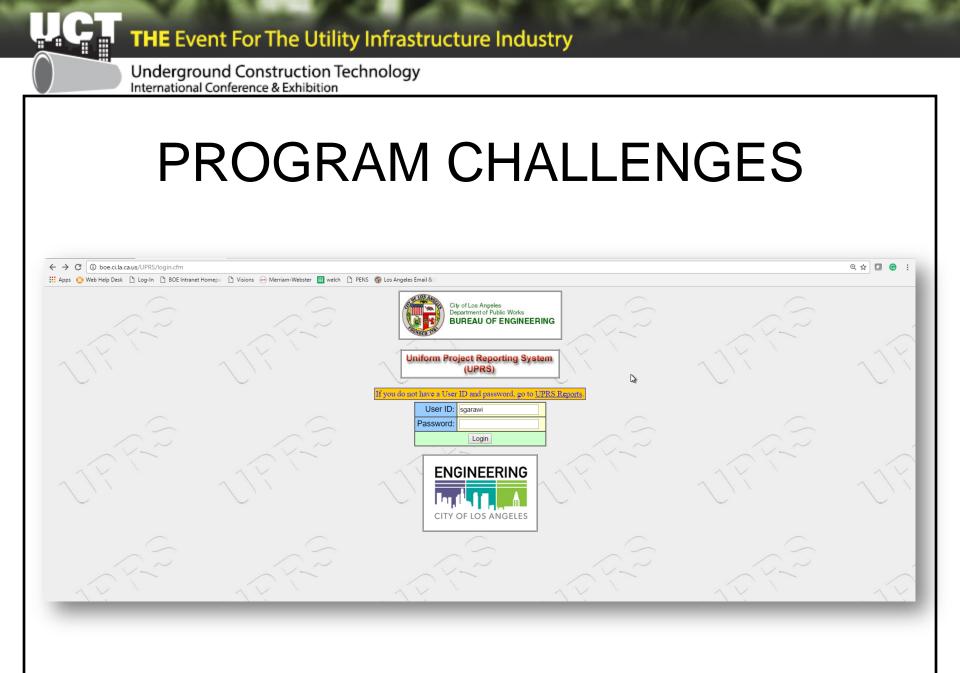


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### **PROGRAM CHALLENGES**



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			MH. ALSO	, THE U/S M	H CHANNEL IS	BROKEN.				2. REMOD	THE U/S M EL U/S MH C	H. CHANNEL.	
1.00	49509022	49509031											
	10000022												
	CIE DN	0		TRAP MH:	Calent One a			CTU (B).					
ID: PIPE ID:	GIS DN: 4950902249	Ľ	Pipe Condi		Select One 🔻			ered (mm/dd/)		With Progra	m Manager I	For Final Rev	iew: 🗆
FIFE ID:	4950902246	9009031	Pipe Condi	uon:			Date Transf	erea (mm/aa/j	yyyy):		<u> </u>		
Monthly Repo	rt Construction	on Comment	5										

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ENGINEERING CITY OF LOS ANGELES Home SEWERS Project Reports Search Constr. Order Add Constr. Order SEWERS Project List Maintenance	
Project List Repair Info Construction Info Change Order / As-Built UPRS Association	
Project Name: EUCLID AVE (1000) Work Order Number: SWC02992	
Save Update	
CONTRACTOR INFORMATION	
Name:     Tomovich & Associates        ▼ Business Address: 9611 Beverly Rd.        City:     Pico Rivera     State:     CA     Zip:     90660       Phone Number:     562-699-3496     Fax Number:     tom@tomovichandassocial Contact Name: Tom Andrejich	
CONSTRUCTION DATE AND COST	1
Construction Engineer: CHRISTOPHER TOMES •	
Date Construction Order To Map:       04/28/2016         Construction Start Date:       04/28/2016         Revised Issuance Date (Revision 1)       Revised Issuance Date (Revised 2)         (mm/dd/vvvv):       (mm/dd/vvvv):	
(mm/dd/yyyy):         IIII (mm/dd/yyyy):           Estimated Cost (\$)         14186.00           Final Acceptance Date         10/31/2016	
Monthly Report Construction Comments	
Save Update	
	18

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NS No. 1139 Request Number: 140434 Contract No. C-122084 several wave of the several	PROJECT LIS	т					Sa	ve Update						
h Priority:       No       Difficult Access Reach: No       Contract:       SEWERSS         NS No.       1139       Request Number:       140434       Contract No.       C122084         K Order Number:       52C12825       Date W.O. Opened:       04/17/2014       WO Closing Date:       SEWERS Serial: 2194         iject Title:       1ST STREET (200)       Thomas Guide:       16       Project Phase:       CONSTR. COMPL.         iject Address:       1ST STREET (200)       Design Statt Date (mm/dd/yyyy):       07/16/2014       Request Received Date: 04/17/2014       04/17/2014         iject Engineer:       CHRISTOPHER TOMES       Mat       Block:       Street       WYE MAP: UP Station: [DN Station: Plan:       Year Bu         0						Pre	evious Reco	rd Next Record						
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iject Title:       IST STREET (200)       Council District:       15       Project Phase:       CONSTR. COMPL.         iject Engineer:       (CHRISTOPHER TOMES)       Origin Start Date (mm/dd/yyyy):       07/16/2014       Request Received Date:       04/11/12014         No.       U MH:       D MH:       Length:       size:       Mat:       Block:       Street:       WYE MAP:       UP Station:       DN Station:       Plan:       Year Buc         0       0       0       0       0       0       0       0       0       0         No.       U MH:       D MH:       Length:       size:       Mat:       Block:       Street:       WYE MAP:       UP Station:       DN Station:       Plan:       Year Buc         0	Work Order Nu	-	825							/	SEWERS	Serial: 2194		
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Implied Engineer.       CHRISTOPHER TOMES       (mm/dd/yyyy):       0/110/2014       (mm/dd/yyyy):       0/110/2014       (mm/dd/yyyy):       0/110/2014       Request Received From:       BOS       Implied (Myyyy):       Implied (Myyy	Project Addres						D-4-		- Request P	acaived Date				
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REPAIR INFORMATION	
Rehab Tracking Report- Reach Length (LF)	(le. Spol-Repair, MH-MH, Lining, R&R Drop)
Non-Rehab Tracking Report- Reach Length (LF) 350.00	(Ie. Only Remodel MH Base, Only Install MH, Only CCTV, Abandon Reach)
Maximum Pipe Depth (FT)	
New Pipe Size (IN)	
New Pipe Material SELECT ONE	·
Lining Type SELECT ONE	
initial Repair Description (Check all that apply)	Actual Repair Description (Check all that apply)
MH to MH Replacement	MH to MH Replacement
Uning:	Uning:
Spot Repair:	Soot Repair:
Installing new standard MH:	Installing new standard MH:
Installing new Trap MH:	Installing new Trap MH:
R&R Drop:	R&R Drop:
Remodel MH Base: 🗹	Remodel MH Base: 🗹
Adjust MH to Grade:	Adjust MH to Grade:
Abandon Reach:	Abandon Reach:
Other:	Other:
Estimated Repair	Actual Repair
Type Of R&R Repair: SELECT ONE	Type Of R&R Repair: SELECT ONE
Pipe & Trench (LF):	Pipe & Trench (LF):
Sewer Abandonment (LF):	Sewer Abandonment (LF):
Shoring Method: SELECT ONE V	Shoring Method: SELECT ONE 🔻
Backfill Method: SELECT ONE  Install Standard MH (EA):	Backfill Method: SELECT ONE  Install Standard MH (EA):
Install Standard MH (EA):	Install Standard MH (EA):
Abandon MH (EA):	Abandon MH (EA):
Install Mainline Chimney (EA):	Install Mainline Chimney (EA):
R&R Drop (EA):	R&R Drop (EA):
Potholing (EA): 0	Potholing (EA): 0
No. of Soli Boring (EA):	No. of Soll Boring (EA):
No. of Shoring Designs (EA):	No. of Shoring Designs (EA):
Type of Traffic Control: Local St. 🔻	Type of Traffic Control: Local St. 🔻
LF of Temporary Payment (LF):	LF of Temporary Payment (LF):
CMB Thickness (IN): SELECT ONE V Pavement Type: SELECT ONE V	CMB Thickness (IN): SELECT ONE V Payment Type: SELECT ONE V
Pavement Type: SELECTIONE V Pavement Thickness (IN); SELECTIONE V	Payment Type: SELECT ONE  Payment Thickness (IN); SELECT ONE
Sawout, Remove, & Haul Away (LF)	Sawout, Remove, & Haul Away (LF)
Bypass: 250 GPM T	Bypass: 250 GPM V
Install Blind WYES (EA):	Install Blind WYES (EA):
Reconnect HC (EA):	Reconnect HC (EA):
Remodel Trap MH (EA): Remodel MH Base (EA): 1	Remodel Trap MH (EA): Remodel MH Base (EA): 1
Adjust MH F&C To Grade (EA):	Adjust MH F&C To Grade (EA):
Install HC Trap (EA):	Install HC Trap (EA):
Install HC Chimney (EA):	Install HC Chimney (EA):
CCTV(LF):	CCTV (LF):
Clean Sewer (LF):	Clean Sewer (LF):
R&R Curb & Gutter (LF):	R&R Curb & Gutter (LF):
R&R Sidewalk (SF):	R&R Sidewalk (SF):
R&R SD Connector Pipe (EA):	R&R SD Connector Pipe (EA):
R&R Concrete Encased SD Connector Pipe (EA); Restore Traffic Loop (EA);	R&R Concrete Encased SD Connector Pipe (EA): Restore Traffic Loop (EA):
Stripping (EA):	Stripping (EA):
Mobilization For R&R (EA): 1	Mobilization For R&R (EA): 1
Slope Greater Than 15% Pay Factor Applied: SELECT ONE	Slope Greater Than 15% Pay Factor Applied: SELECT ONE
Work By Hand Pay Factor Applied: SELECT ONE V	Work By Hand Pay Factor Applied: SELECT ONE
Type C Factor Applied: SELECT ONE	Type C Factor Applied: SELECT ONE
Work At Night Pay Factor Applied: SELECT ONE V	Work At Night Pay Factor Applied: SELECT ONE 🔻
Length of Lining (LF):	Length of Lining (LF):
No. of Restore Service Connections (EA):	No. of Restore Service Connections (EA):
No. of Install Top Hat (EA):	No. of Install Top Hat (EA):
Type of Traffic Control: SELECT ONE V Work By Hand Pay Factor Applied: SELECT ONE V	Type of Traffic Control: SELECT ONE  Work By Hand Pay Factor Applied: SELECT ONE
Work By Hand Pay Factor Applied: SELECT ONE V Work At Night Factor Applied: SELECT ONE V	Work by Hand Pay Factor Applied: SELECTIONE V Work At Night Factor Applied: SELECTIONE V
No. of Mobilization For Lining (EA):	No. of Mobilization For Lining (EA):
Contraction of the second seco	LEGEND
W3 - Upstream	EA-Each EA-Each
D/8 - Downstream	IN - Inch
R&R - Remove And Replace MH - Maintenance Hole	8F - Square Feet F&C - Frame & Cover
LF - Linear Footage	3D - Storm Drain

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# CHALLENGE RESOLUTION

- Created Project Delivery Procedures
- Maintains uniformity in work across many different tasks
- Has step by step descriptions of all the types of job functions in SEWERS database
- Uniform naming convention for files
- Constantly updated



### CHALLENGE RESOLUTION

- Roles clearly defined
- Organization of electronic files
- Uniformity of processes
- Interchangeable employees roles through training

### CHALLENGE RESOLUTION

### Example Language

### 4) POST-CONSTRUCTION

#### (A) Process "As-Builts"

- i) The Contractor's "marked up" as-built records are delivered to the PE by the Inspector in the same package as the Request for Change Order, and consists of a copy of the construction order data sheet with changes noted. When the marked up as-built record is received, the PE scans and saves a copy to the electronic project folder on the Q-drive.
- ii) The PE records the following information into the SEWERS Online Application:

Total Reaci	h Length (L	F) 33	0.00		iteral Repair cluded:		2					
Reach Len Repairs):	gth (Non-LF	0.0	00	Ne	w Pipe Size	(in):	SELECT OF	NE 💌	New Pipe N	taterial: S	ELECT ONE	Input
	Lining (ft):	33	0.00		tual Lining (I	(t):	0.00		New Lining Naterial:	C	IPP	
	Estimated Remodel MH	Estimated Install New MH	Estimated Install Trap MH	Estimated Adjust MH Grade	Estimated Aband Reach	A tual Repair Length	Remodel	Actual Instali New MH	Actual Install Trap MH		Actual Abandoned Reach	
330.00	0	0	0	0	0	000	0	0	0	0	0	
Repair	Pinal Repair Station US (1)	Repair Station DS (2)	Repair Station US (2)	Repair Station DS (3)	Repair	rmal Repair Station DS (4)	Repair Station	Final Repair Station DS (5)	Final Repair Station US (5)	Final Repair Station DS (6)	Final Repair Station US (6)	

## CHALLENGE RESOLUTION

Created Template files for:

As Builts, Change Orders, Construction Order Letters, Pre-Lining CCTV Emails, Right of Entry Letters, Extra Work Authorization Emails

### SUMMARY / LESSONS LEARNED

- SEWERS Group handles approximately 220 projects annually
- SEWERS Project Delivery Procedures helps to maintain consistency in the delivery, record keeping, and tracking of projects
- Our weekly, monthly, quarterly and Sewer Rehab Tracking Report help us keep our projects on schedule and on budget





### QUESTIONS?