



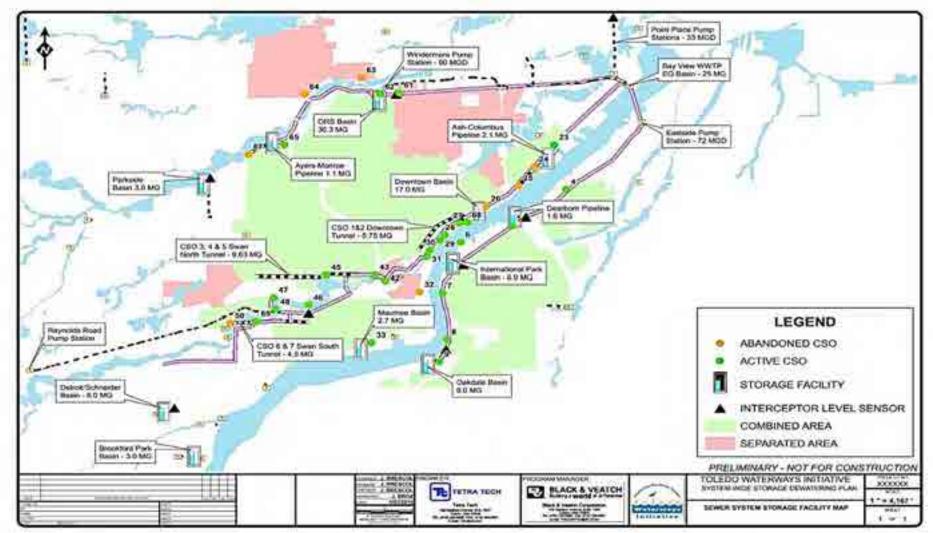
TWI Current Status Summary October 21, 2019





Bay View Water Reclamation Service Area Sewer System Storage Facility Map





Control Combined Sewer Overflows



Keeping CSO's Out of Our Waterways

- 95 MG Combined Sewer System storage at completion
 - 20 MG of tunnel storage completed in 1990s
 - 15 MG of storage in 5 projects
 - 36 MG of storage Joe E. Brown Park
 - 7 MG of storage International Park
 - 17 MG of storage in construction Downtown SB

Control Combined Sewer Overflows



Where are we today?

- Design 99% complete & Construction 97% complete
- 7 of 8 CSO outfalls eliminated....1 to go (Magnolia)
- 470 MG /year on average will be eliminated when complete
 - 8 Inflow reduction & sewer separation projects complete
 - 3 Optimization projects for ex. CSO Storage Tunnels complete
 - 8 Storage/conveyance projects complete
 - 1 Storage (Downtown Storage Basin project under construction
 - Post-Construction Compliance Monitoring

LTCP Progress Status Summary - September 2019

Project #1	Description	Permit Submittal	Initiate Construction	Construction Substantially Complete/Project Operational	Final Completion/ Project Fully Operational
		Submittai	Construction	Operational	Due July 2008
O-1	Lockwood/Devilbiss SSES	N/A	N/A	N/A	Actual 7/1/2008
0-2	Lockwood/Devilbiss Sewer Separation	Due 11/30/09 Actual 8/19/09	Due 4/1/2010 Actual 3/24/2010	Due 6/30/2012 Actual 6/28/2012	Due 12/31/2012 Actual 12/21/2012
0-2	Lockwood/Deviloiss Sewer Separation	Due 6/30/2010	Due 11/1/2010	Due 6/30/2012	Due 12/31/2012
W-1	Ash/Columbus (Jamie Farr Park) Storage Pipeline	Actual 4/7/2010	Actual 10/7/2010	Actual 5/4/2012	Actual 9/11/2012
		Due 9/1/2010	Due 1/1/2011	Due 12/31/2012	Due 6/30/2013
E-6	Wheeling Area SSES and Sewer Separation	Actual 7/1/2010	Actual 12/31/2010	Actual 11/30/2011	Actual 12/30/2011
		Due 9/1/2010	Due 1/1/2011	Due 12/31/2012	Due 6/30/2013
S-3	Highland Area SSES and Sewer Separation	Actual 7/1/2010	Actual 12/31/2010	Actual 11/30/2011	Actual 12/30/2011
S-4	Woodsdale Area SSES and Inflow Reduction	Due 9/1/2010	Due 1/1/2011	Due 12/31/2012	Due 6/30/2013
5-4	woodsdale Area SSES and Inflow Reduction	Actual 6/1/2010 Due 9/1/2010	Actual 12/31/2010 Due 1/1/2011	Actual 10/28/2011 Due 12/31/2012	Actual 12/30/2011 Due 6/30/2013
W-2	Ash Area SSES and Sewer Separation	Actual 6/1/2010	Actual 12/31/2010	Actual 10/27/2011	Actual 11/23/2011
	Tish Thea bobb and bewer beparation	Due 9/1/2010	Due 1/1/2011	Due 12/31/2012	Due 6/30/2013
W-5	Williams/Knapp Area SSES and Inflow Reduction	Actual 6/1/2010	Actual 12/31/2010	Actual 10/27/2011	Actual 11/23/2011
		Due 9/1/2010	Due 1/1/2011	Due 12/31/2012	Due 6/30/2013
W-7	New York Area and Inflow Reduction	Actual 7/1/2010	Actual 12/31/2010	Actual 11/30/2011	Actual 12/30/2011
		Due 12/31/2010	Due 5/1/2011	Due 6/30/2013	Due 12/31/2013
W-6	Maumee Storage Basin	Actual 9/10/2010	Actual 4/20/2011	Actual 6/3/2013	Actual 7/19/2013
E-7	Bay View (East Side) Grit Facility	Due 7/31/2011 Actual 5/10/11	Due 12/1/2011 Actual 11/21/2011	Due 11/30/2014 Actual 06/23/2014	Due 5/31/2015 Actual 12/5/2014
E-7	Day view (East blde) Ont Facility	Due 8/31/2011	Due 1/2/2012	Due 12/31/2013	Due 6/30/2014
O-3	Avers/Monroe Storage/Convevance Pipeline	Actual 2/16/2010	Actual 9/6/2011	Actual 4/26/2013	Actual 9/13/2013
		Due 12/31/2011	Due 5/1/2012	Due 12/31/2014	Due 7/1/2015
E-5	Oakdale Storage Basin	Actual 10/7/2011	Actual 5/1/2012	Actual 12/5/2014	Actual 3/18/2015
		Due 8/31/2012	Due 1/1/2013	Due 12/31/2014	Due 6/30/2015
S-1A	Swan Creek North Tunnel Optimization	Actual 4/23/2012	Actual 11/26/2012	Actual 10/19/2014	Actual 12/18/2014
S-2A	Server Create South Turnet Optimization	Due 8/31/2012	Due 1/1/2013	Due 12/31/2014	Due 6/30/2015
3-2A	Swan Creek South Tunnel Optimization	Actual 4/23/2012 Due 8/31/2012	Actual 11/26/2012 Due 1/1/2013	Actual 10/19/2014 Due 12/31/2014	Actual 12/18/2014 Due 6/30/2015
W-4A	Downtown Tunnel Optimization	Actual 4/23/2012	Actual 11/26/2012	Actual 10/19/2014	Actual 12/18/2014
	Downcown Polnici Optimization	Due 8/1/2014	Due 12/1/2014	Due 11/30/2016	Due 5/31/2017
E-2	Dearborn Storage (Basin) Pipeline	Actual 12/6/13	Actual 8/13/2014	Actual 4/15/2016	Actual 7/19/2016
		Due 9/1/2014	Due 1/1/2015	Due 12/31/2016	Due 6/30/2017
O-4A	Ottawa River Storage Facility (Conveyance)	Actual 4/21/14	Actual 11/14/2014	Actual 9/30/2016	Actual 6/22/2017
0.40	Others Directive Desition (Desite)	Due 9/1/2014	Due 1/1/2015	Due 12/31/2017	Due 6/30/2017
O-4B	Ottawa River Storage Facility (Basin)	Actual 4/21/14	Actual 11/14/2014	Actual 12/14/2017	Actual 6/29/2017
E-3	International Park Storage (Pipeline) Basin	Due 8/1/2016	Due 12/1/2016	Due 05/31/2019	Due 5/31/2019
E-3	international Park Storage (Pipeline) Basin	Actual 1/15/16 Due 5/1/2017	Actual 8/1/2016 Due 9/1/2017	Actual 11/30/2018 ² Due 5/31/2020	Actual 5/21/2019 Due 8/31/2020
S-1B	Swan Creek North (Tunnel Ext.) Sewer Separation	Actual 4/12/17	Actual 8/25/2017	Actual 8/25/2019	Actual 8/25/2019
0-10	sman erest i fortir (i binter bat.) bewer beparation	Due 8/31/2017	Due 1/1/2018	Due 12/31/2019	Due 6/30/2020
S-2B	Swan Creek South Tunnel In-System Storage	Actual 4/12/17	Actual 8/25/2017	Actual 8/25/2019	Actual 8/25/2019
		Due 7/31/2017	Due 11/1/2017		
W-4C	Downtown Storage Basin	Actual 1/23/17	Actual 8/1/2017	May 31, 2020	August 31, 2020
		Due 8/31/2018	Due 01/01/2019		
E-1	Paine Regulator Modifications	Actual 4/13/18	Actual 11/27/18	May 31, 2020	August 31, 2020
		Due 8/31/2018	Due 01/01/2019		
E-4	Fassett Regulator Modifications	Actual 4/13/18	Actual 11/27/18	May 31, 2020	August 31, 2020
		Due 8/31/2019			
	Post-Construction Compliance Monitoring Plan	Actual 8/29/19	N/A	N/A	N/A



Initiative



CSO LTCP Construction Safety - August 2019

		1. Sec. 1. Sec	2 LTCP PROGRA	Contraction of the New York			
Contract	Total PH Worked	Recordable Injury/Illness Rate (IIR)	IIR Frequency Rate (2) x 200K /(1)	Lost Work Day Injury (LWDI)	Days Lost Due To LWDI	LWDI Frequency Rate (4) x 200K /(1)	Severity Rate (5) x 200K/(1)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
0-2A	11,191	0	0.0	0	0	0.0	0.0
O-28	48,140	0	0,0	0	0	0.0	0.0
0-2C	19,948	0	0.0	0	0	0.0	0.0
0-3	24,735	0	0.0	0	Q	0.0	0.0
W-1	32,594	0	0.0	0	0	0.0	0.0
E-7	74,288	1	2.7	0	0	0.0	0.0
W-6	38,519	1	5.2	Ĺ	6	5.2	31.2
E-5	86,491	2	4.6	1	13	2.3	30.1
W-4A/S-1A/S-2A	69,837	1	2.9	0	0	0.0	0.0
W-4A (Madison)	1,598	0	0,0	Ó	0	0.0	0.0
E-2	51,070	0	0.0	0	0	0,0	0.0
0-4A/0-48	451,439	8	3.5	2	25	0.9	11.1
E-3	120,944	4	6.6	1	11	1.7	18.2
W-4C	224,826	6	0.0	0	0	0.0	0.0
PROGRAM TOTAL	1,255,620	23	3.7	5	55	0.8	8.8

USA Average IIR Frequency Rate =

3.5 (updated 11/12)

USA Average LWDI Frequency Rate =

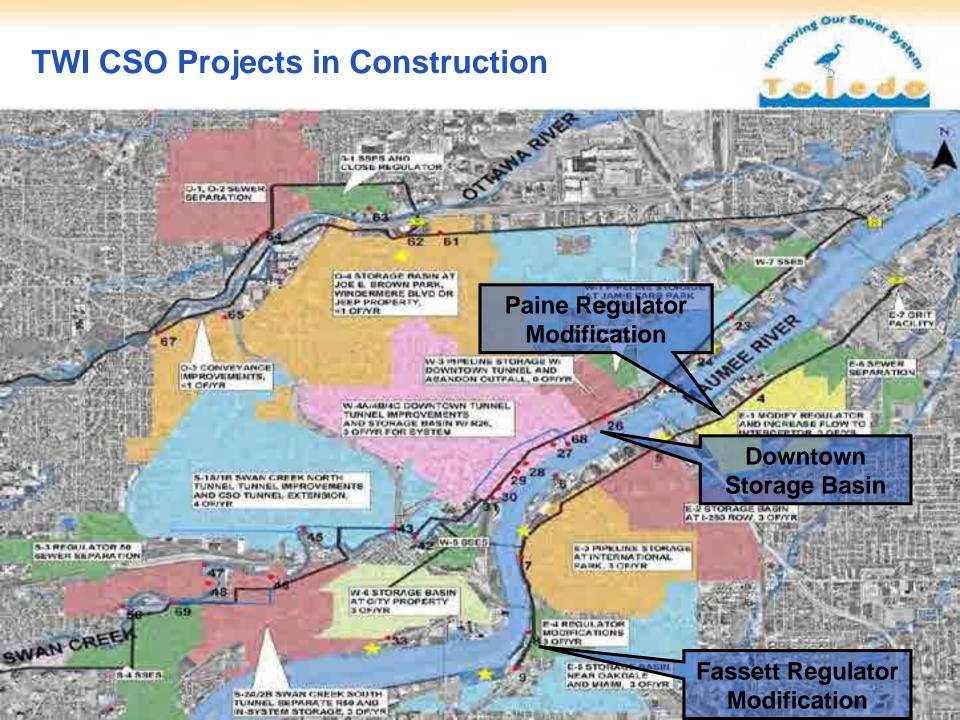
1.1 (updated 11/12)

Current Projects under Construction



- W-C4 Downtown Storage Basin
 - Substantial completion February 2020
 - Adams St. Drop Shaft delayed
 - Notices to public/businesses





Downtown Storage Basin



Setting Column Forms

Dewatering - 36" Olive St. Storm Outfall



Downtown Storage Basin



Orange St. – Tying Rebar



Adam St – Demo Adit



Downtown Storage Basin



Utility Conflicts



Adams & Superior Streets



Paine Regulator Modifications



Paine Regulator (at grade)

Paine & Front Streets



Fassett Regulator Modification



Finished intersection

Regulator Structure





Swan Creek North



Tecumseh St. Cross Over

Trench Drain







Questions??

Please visit: toledowaterwaysinitiative.com

01/28

Paine Street (E-1) and Fassett Street (E-4) Projects

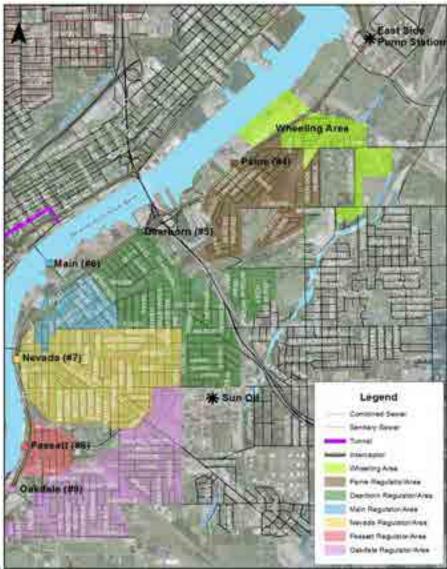
CPAC Meeting October 21, 2019

Today's Meeting

- Introduction
- Project Background
- Design and Construction
- Schedule
- Questions/Comments

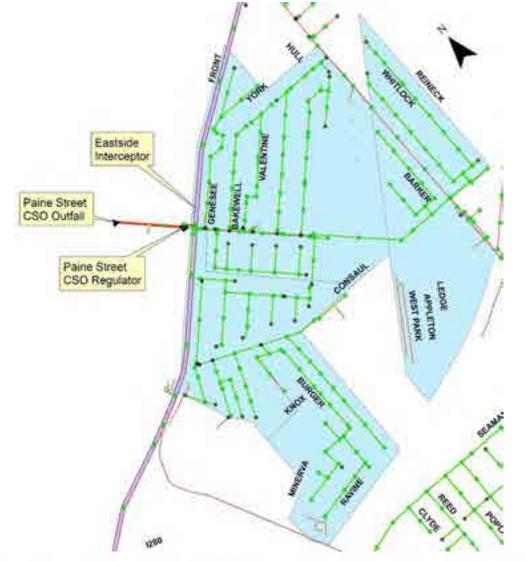


East Toledo CSO Area





CSO 04 – Paine Street





Area	380 acres
Population	~3,500
Residential Homes	~1,500
Sewers Built (#676)	June 1899 \$18,514

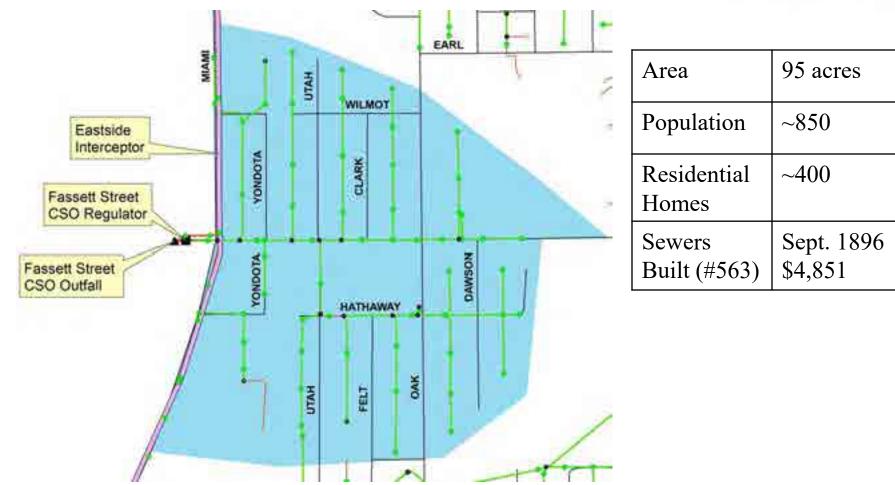
CSO 04 – Paine Street





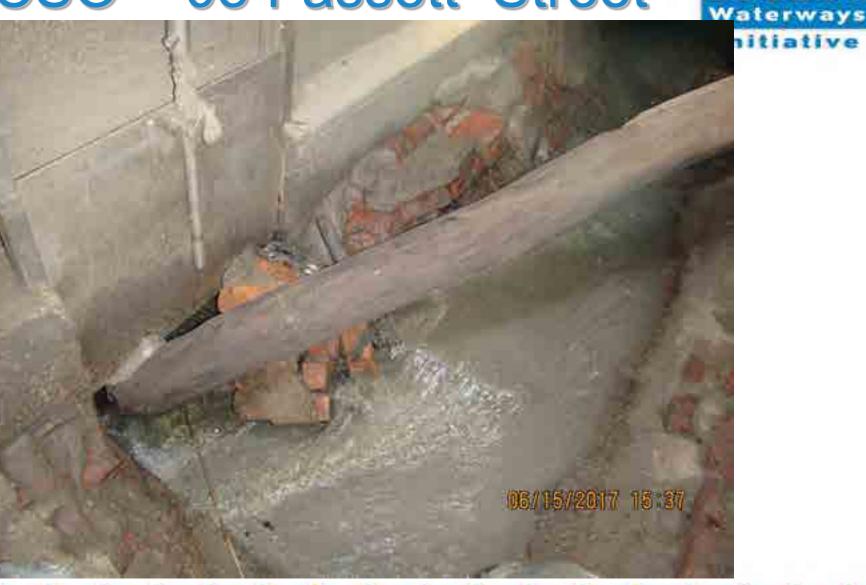
CSO 08 – Fassett Street





CSO – 08 Fassett Street

nitiative



Project Overview



- Why is this project needed?
 - To control CSO discharges to Maumee River
 - LTCP requires an annual average maximum of 3 overflows/year at each outfall

Existing Conditions Overflow Results

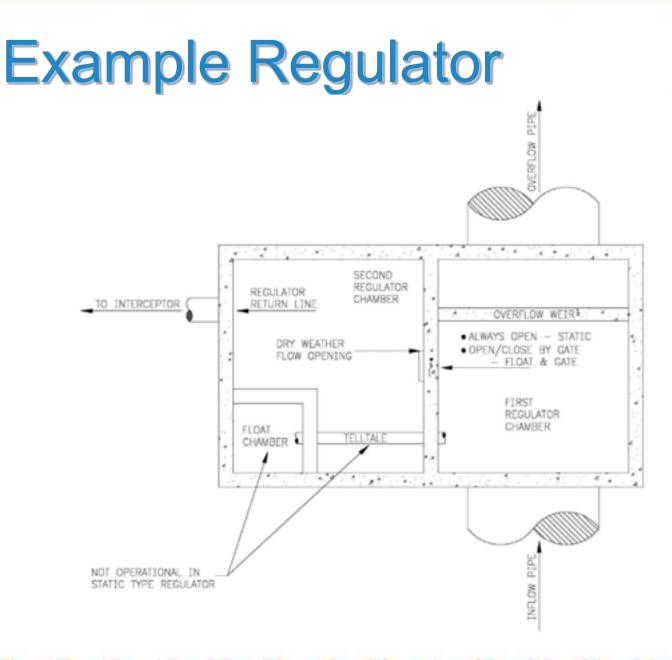
Outfall	Frequency*	Volume*
CSO – 04 Paine	11	7.7
CSO – 08 Fassett	16	7.3

*Annual Average for Typical 5-Year Simulations (1997-2001)

Alternatives Evaluated

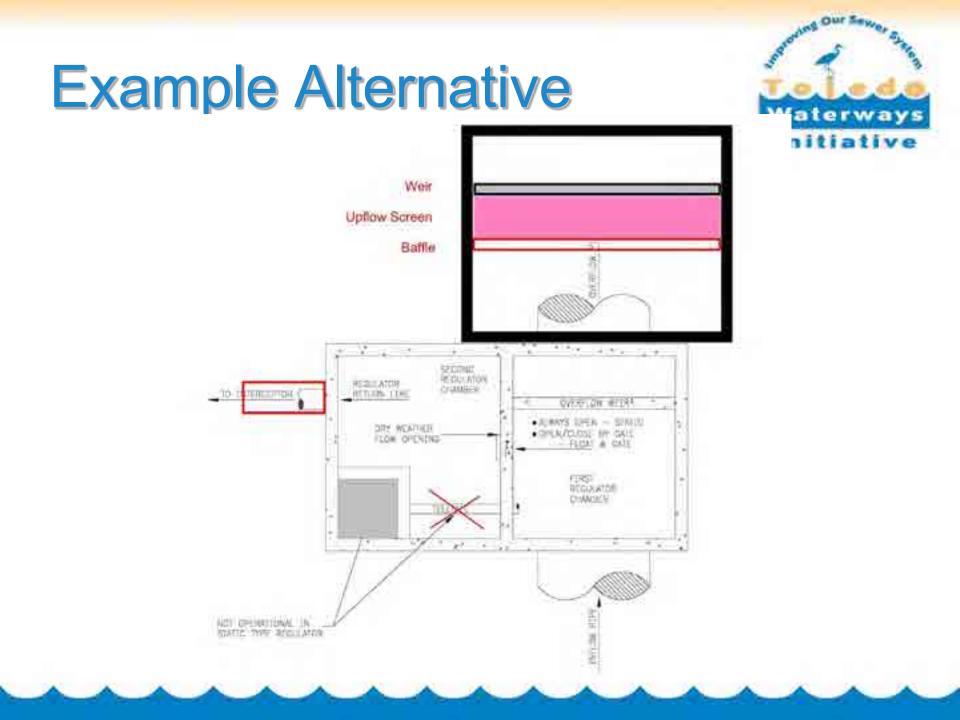


- Increase Capacity to the Eastside Interceptor
 - Raise CSO Weir and Upsize Orifice
 - Upsize Regulator Return Line
- Screening and Floatables Control
 - Baffle and horizontal upflow screen
- Keys for Design
 - Reduce Overflow Frequency
 - Limit Increase to HGL



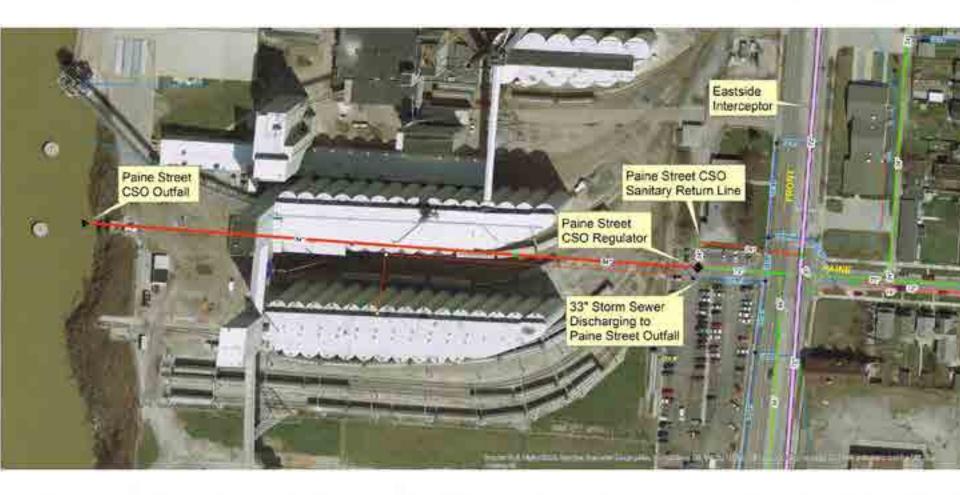
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Paine Street Site Constraints





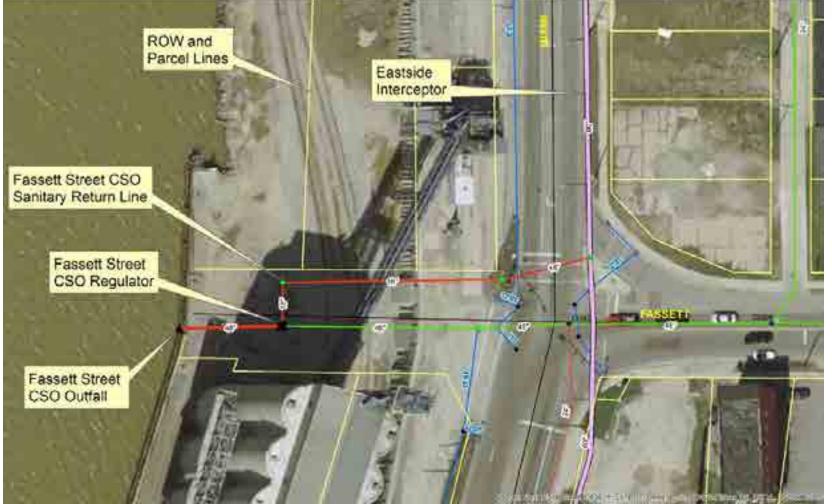
Paine Street Site Constraints



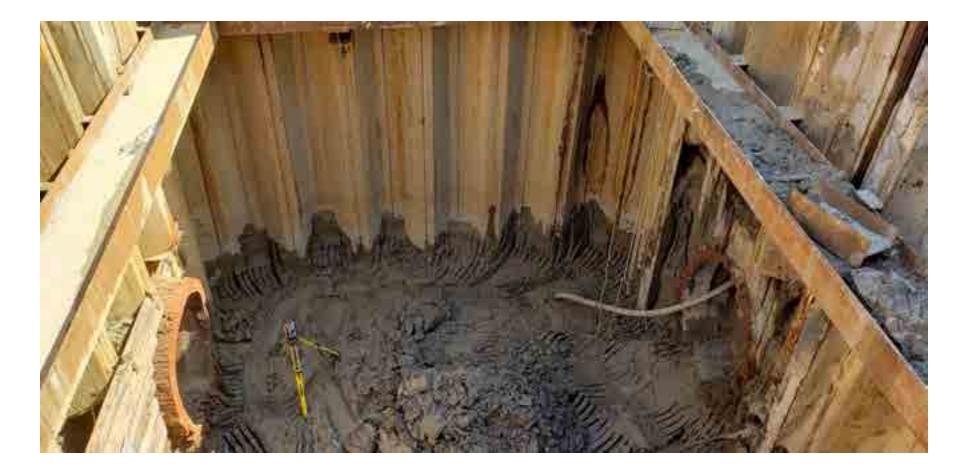


Fassett Street Site Constraints





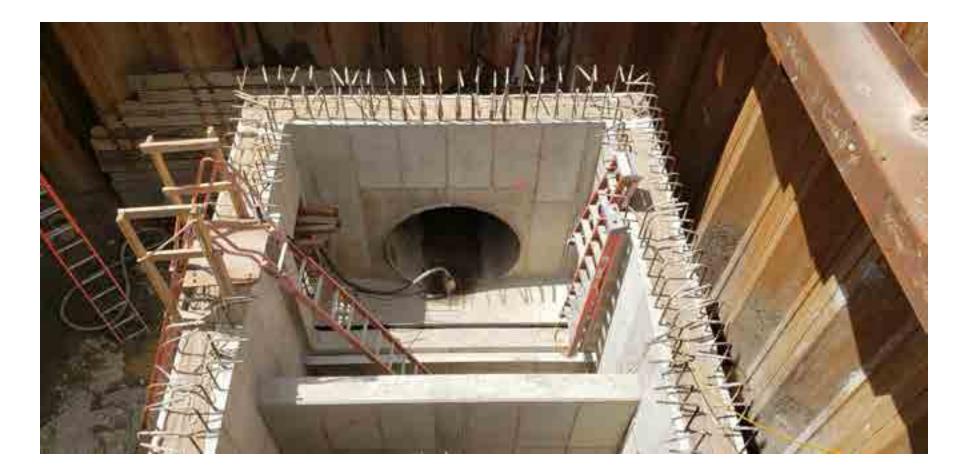




























Paine Floatables and Screening Structure





Paine Floatables and Screening Structure





Paine Floatables and Screening Structure





Paine Sewer Lining





Sewer Lining





Manhole Rehabilitation





Tie backs showing conflict







Construction Site





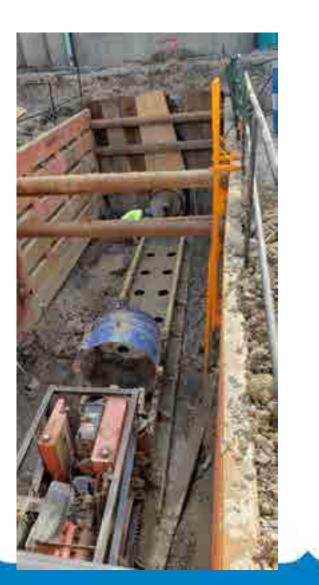
Construction Site





24" Jack and Bore













Shaft in Miami Street





Shaft in Miami Street





Connection to Eastside Interceptor





Connection to Eastside Interceptor





Miami St Restored





Fassett Outfall Connection





Fassett Outfall Connection





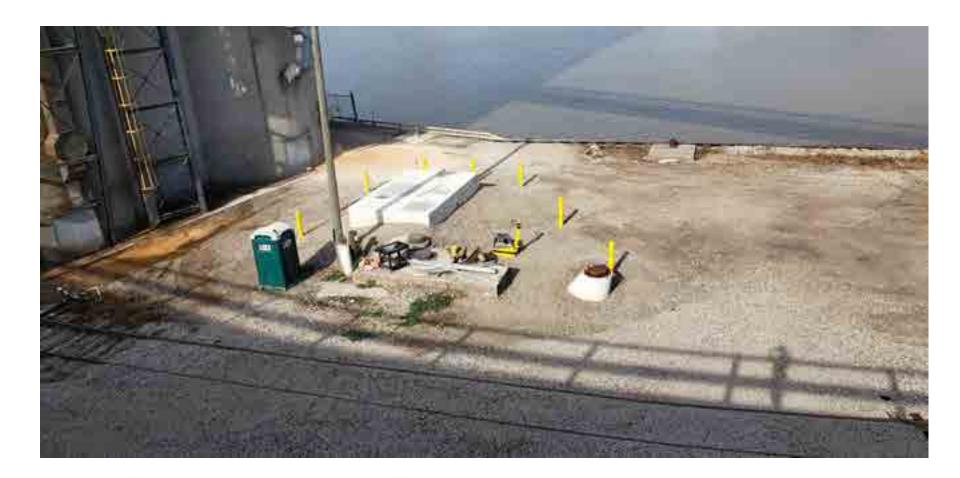
Inline backflow prevention





Fassett Restored





Project Schedule



- Final Design Complete August 2018
- Construction
 - Notice to Proceed November 27, 2018
 - Substantial Completion October 1, 2019
- Construction Cost
 - Bid \$4,047,600.00
 - Final \$4,058,130.58 (less than 0.3% increase)

Questions/Comments



 Please Direct Additional Questions/Comments To:

Toledo Waterways Initiative www.toledowaterwaysinitiative.com (419) 720 – 0929