

# CSO LTCP Project Fact Sheet



**LTCP Project Number:** L\_OR\_MF\_190\_S\_09B\_B\_A\_8

**Project Name:** 18th and Northwestern Pky Storage Basin

**Project Type:** Off-Line Storage

**Receiving Stream:** Ohio River

**Project Description:** This project includes a 1.31 MG underground covered concrete basin for CSO190 to reduce overflows to 8 overflows per year. The basin is located in a vacant lot near I-64. The project includes a 1.31 MGD pump out facility.

**Design Parameters / Assumptions:** Basins are designed to the 9th overflow event volume, resulting in 8 CSO overflows/year. The 9th peak flowrate is evaluated to compare gravity vs. pumped conveyance. Design for pump-back is 24 hours. Type of basin based on hydraulics and surroundings.

**Surrounding Area Land Use:** The project is located within 'Vacant & Undeveloped' property. The project is located in a long lot located N of I-64. The lot is located off of Northwestern Pkwy. North-West of the proposed location is 'Public and Semi-Public Area.

**Apparent Utilities Description:** Lights loc. in the surr. area of the basin at diff. distances, Sec. OH elec. Ins. running through design basin, Water Main at S part runs into design area, Lateral loc. SW from mid. of basin, Prim. OH elec. Ln. 12' NE of the basin, Sec. OH elec. 26' NE

**Capital Projects:** No capital projects identified within the project area

**Advanced Site Restoration:** N/A

**Estimated Capital Cost (2008):** \$4,514,000

**Capital Cost / Gallon Overflow Removed:** \$0.19

**Weighted Benefit / Cost Ratio (Capital Cost):** 39.87

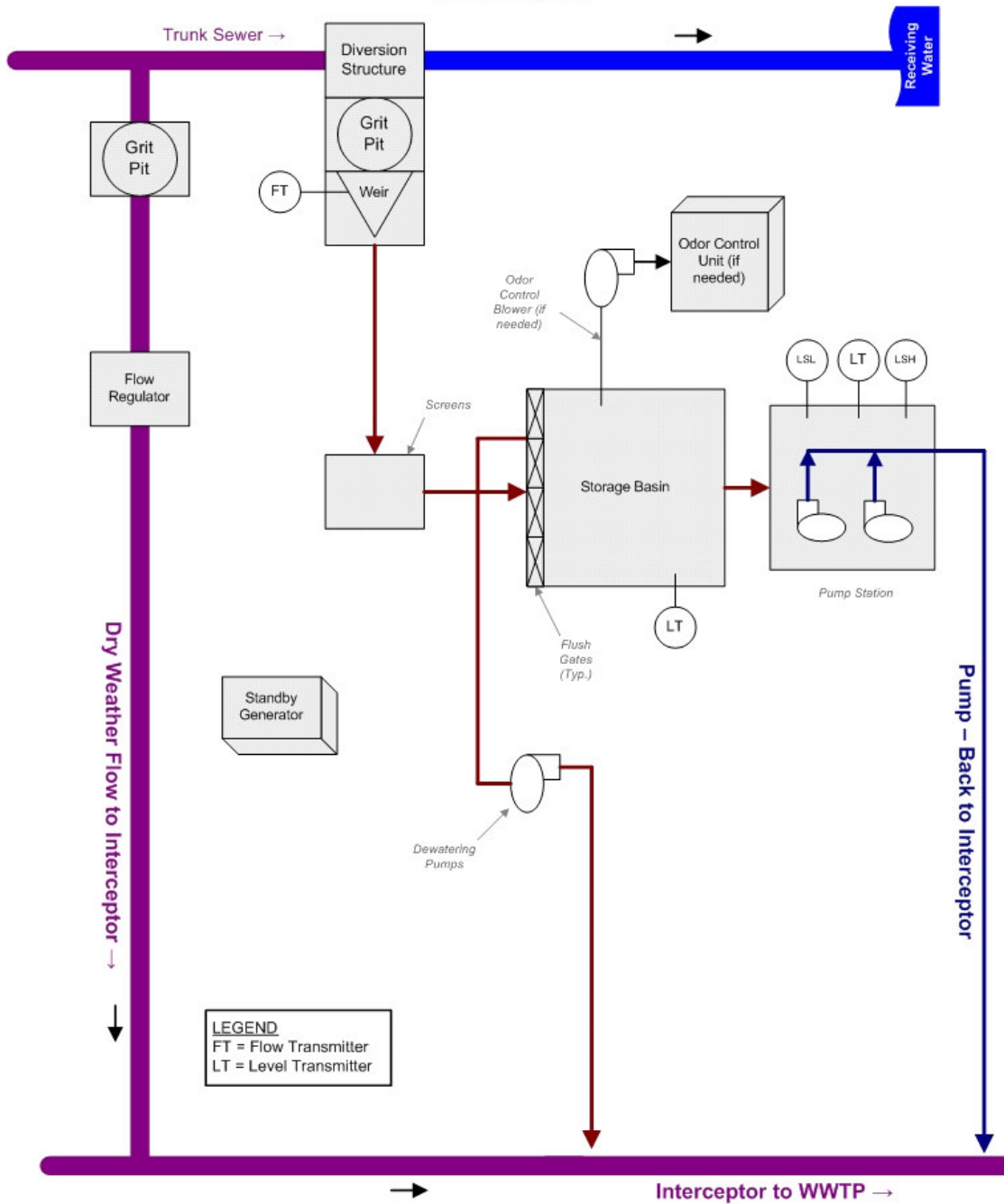
**Overflow Points Addressed:**

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO190	17th Street Sanitary Diversion	145.41	36.19	49	3.95	8

*NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.*

**LTCP Project Number:** L\_OR\_MF\_190\_S\_09B\_B\_A\_8

Off-Line Storage  
Pumped Effluent  
Flow Diagram



# Integrated Overflow Abatement Plan

## Volume 2 - Final CSO Long-Term Control Plan

Ohio River  
 Solution ID # L\_OR\_MF\_190\_S\_09B\_B\_A\_8  
 18th & Northwestern Pky Storage Basin

**Preliminary - For Budget Development Only**

### Legend

- Active CSO
- Eliminated CSO
- PS Proposed Pump Station Solution
- PS Pump Station
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Flood Wall
- Proposed Storage Solution
- Floodway
- Metro Parks
- Streams

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 100 feet  
 Scaleable when printed on 11"x17" paper



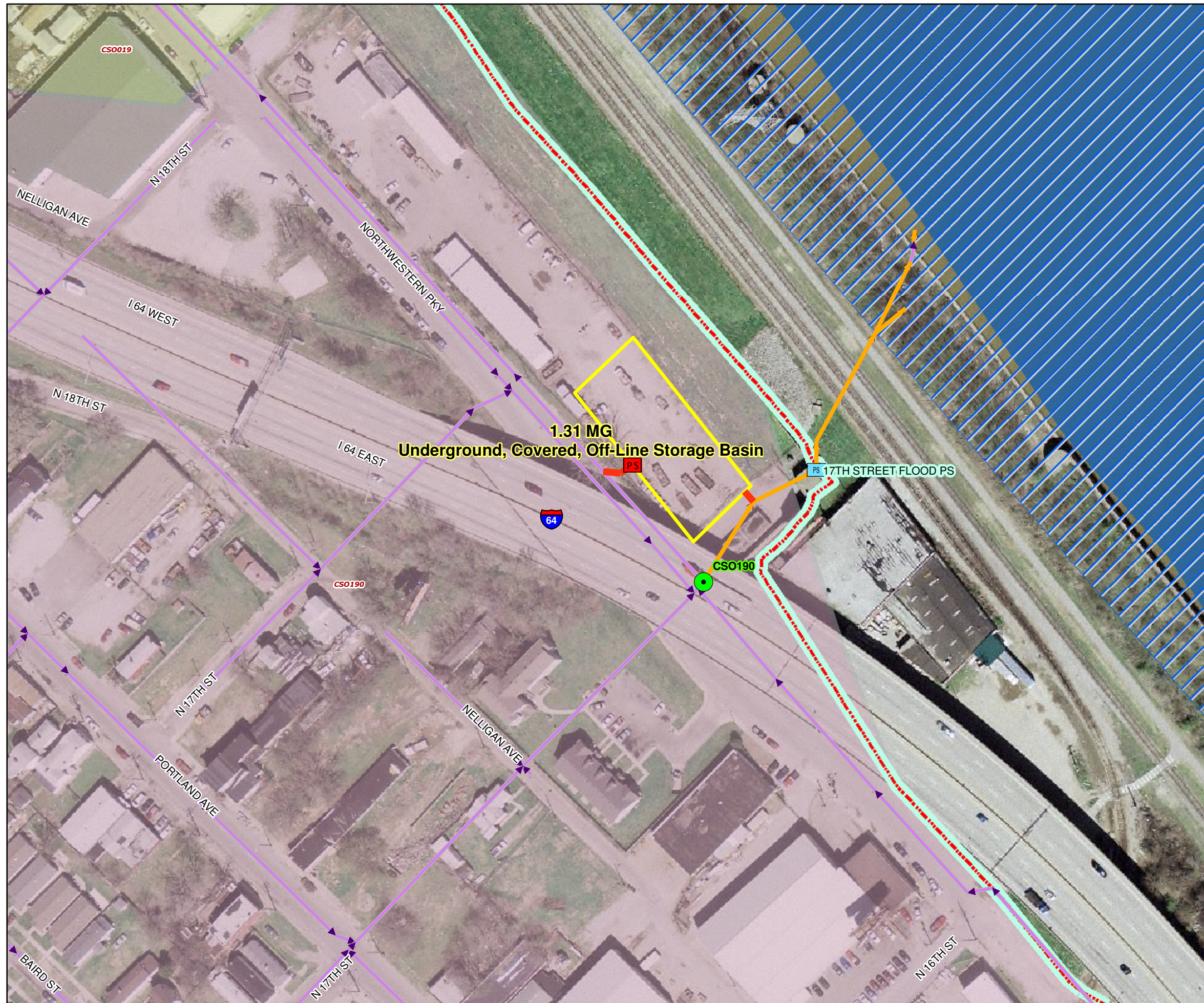
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Map Revision  
 May 28, 2009

Aerial Date: 2006



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# CSO LTCP Project Fact Sheet



**LTCP Project Number:** L\_OR\_MF\_211\_M\_13\_B\_A\_8

**Project Name:** Algonquin Parkway Storage Basin

**Project Type:** RTC with Storage

**Receiving Stream:** Ohio River

**Project Description:** This project includes a 4.84 MG underground open concrete basin and ILS at two locations within the SO for CSO016, 210, and 211 to reduce overflows to 8 overflows per year. The facility will be a gravity in-gravity out operation.

**Design Parameters / Assumptions:** Available CSS storage capacity is based on June, 2001 BPR RTC Study. Flow Control assumes inflatable dams are available at the time of construction. Down-sized storage basin design with Flow Control assumptions are same as Off-line Storage technology.

**Surrounding Area Land Use:** The project is located within 'Industrial' property. The project is located approximately 1000' Southeast of CSO211 and 100' North of Gibson Lane near Algonquin Pky.

**Apparent Utilities Description:** Prim. OH elec. Approx. 23 ft. S. of proposed basin, multi. Lights approx 32 ft. S. of the proposed basin, Secondary OH elec. Located approx. 37 ft. S. of proposed basin

**Capital Projects:** 2009~FY08/09 CD-1 Drainage Improvement - Awaiting Start; 2007~ORI Flow Meter Installation Project - Under Construction

**Advanced Site Restoration:** N/A

**Estimated Capital Cost (2008):** \$17,300,000

**Capital Cost / Gallon Overflow Removed:** \$0.04

**Weighted Benefit / Cost Ratio (Capital Cost):** 34.16

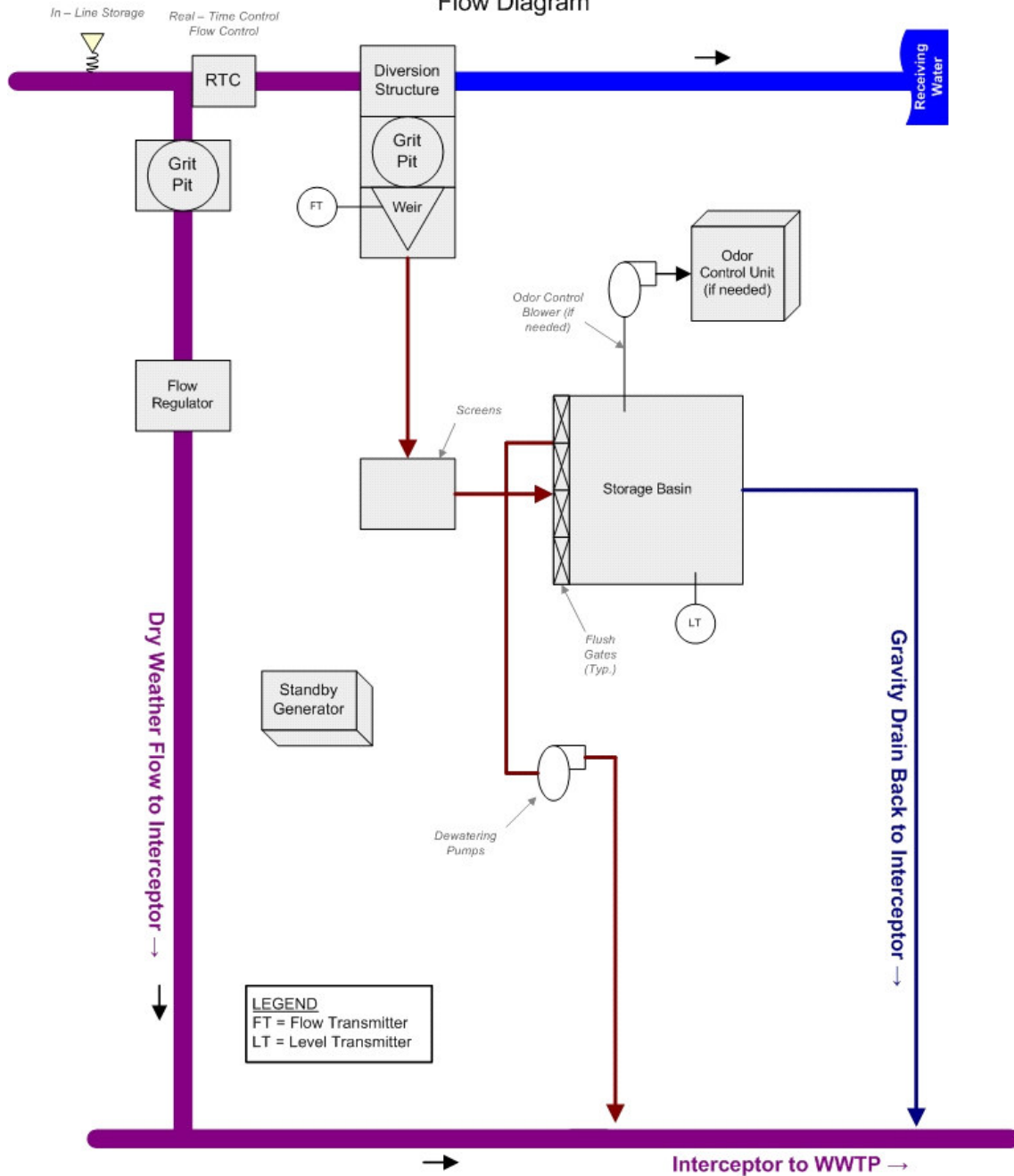
**Overflow Points Addressed:**

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO016	Miles Park Bypass	0.00	29.65	29	1.92	8
CSO210	45th Street - Greenwood	166.67	195.57	51	42.99	8
CSO211	Main Diversion Structure	3,554.89	373.17	29	7.98	8

*NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.*

**LTCP Project Number:** L\_OR\_MF\_211\_M\_13\_B\_A\_8

**Hybrid Technology:  
Off-Line Storage with Real Time Control  
Gravity Effluent  
Flow Diagram**



**Integrated Overflow Abatement Plan**  
**Volume 2 - Final CSO Long-Term Control Plan**

Ohio River  
 Solution ID # L\_OR\_MF\_211\_M\_13\_B\_A\_8  
 Algonquin Parkway Storage Basin

**Preliminary - For Budget Development Only**

**Legend**

- Active CSO
- Eliminated CSO
- ▲ Proposed Flow Control Solution
- PS Proposed Pump Station Solution
- PS Pump Station
- Proposed Pipe Solution
- Force Main
- Combined Sewer Pipe
- - - Flood Wall
- Proposed Storage Solution
- Floodway
- Metro Parks
- Streams

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

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 Map Revision  
 Mar 13, 2009  
 Aerial Date: 2006



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# CSO LTCP Project Fact Sheet



**LTCP Project Number:** L\_OR\_MF\_105\_M\_13\_B\_A\_0

**Project Name:** Southwestern Parkway Storage Basin

**Project Type:** RTC with Storage

**Receiving Stream:** Ohio River

**Project Description:** This project includes a 5.08 MG underground covered concrete basin for CSO104, 105, and 189 and ILS in the WO and the NWI for a total of 8.8 MG using adjustable gates to reduced overflows to zero overflows per year.

**Design Parameters / Assumptions:** Available CSS storage capacity is based on June, 2001 BPR RTC Study. Flow Control assumes inflatable dams are available at the time of construction. Down-sized storage basin design with Flow Control assumptions are same as Off-line Storage technology.

**Surrounding Area** Project is located within Shawnee Park and approximately 300' West of CSO189.

**Land Use:**

**Apparent Utilities** No major utilities conflict

**Description:**

**Capital Projects:** 2013~Real Time Control @ Western Outfall (SOR1); 2012~Solids & Floatables CSO104; 2013~RTC - Western Interceptor - Awaiting Start

**Advanced Site Restoration:** The area of the proposed tank is park property. Current and previous public use or development proposals for these areas have identified potential environmental mitigations. The project budget includes a site restoration allowance.

**Estimated Capital Cost (2008):** \$17,620,000

**Capital Cost / Gallon Overflow Removed:** \$0.13

**Weighted Benefit / Cost Ratio (Capital Cost):** 28.75

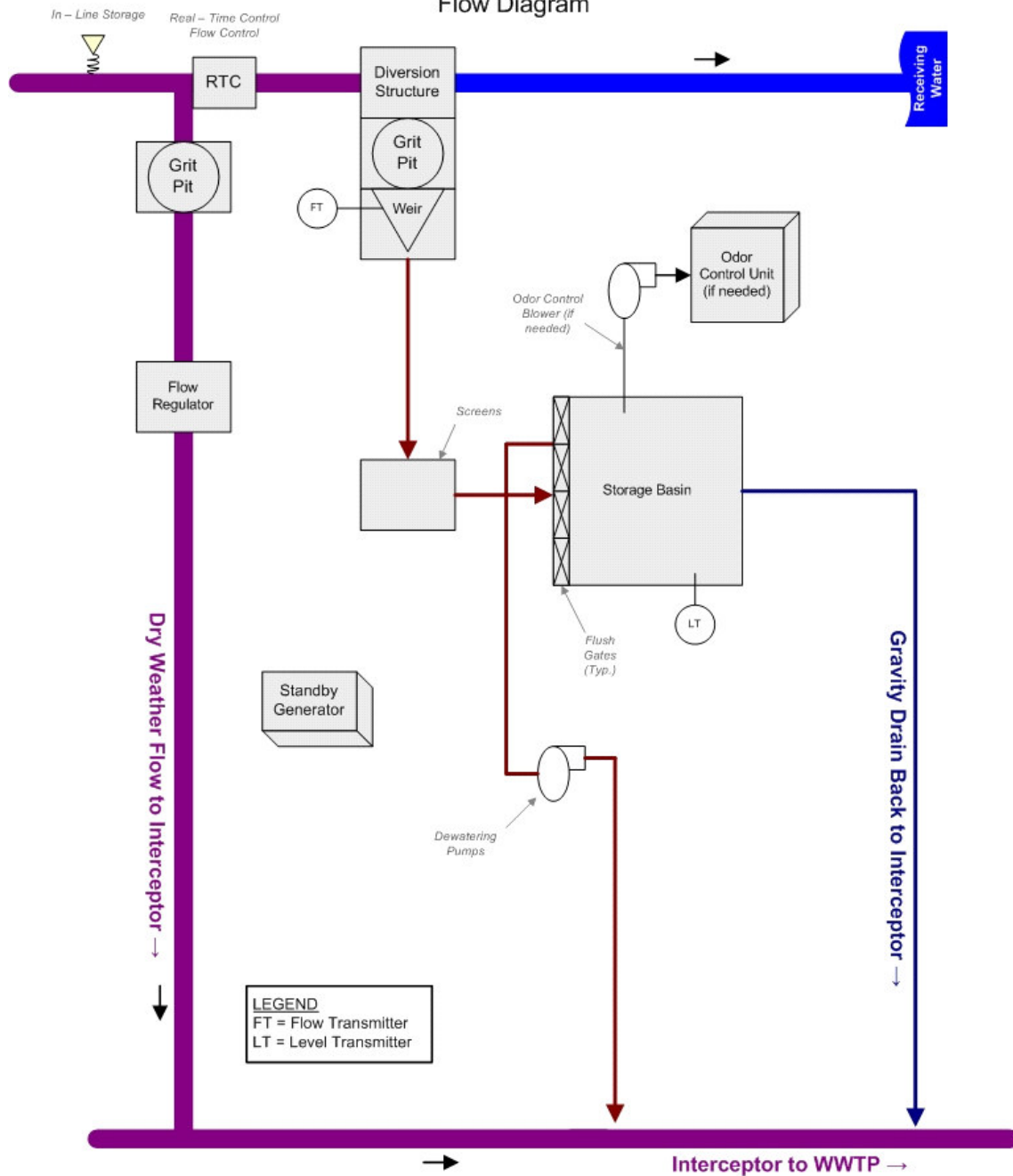
**Overflow Points Addressed:**

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO104	Southwest Parkway Sewer @ Broadway	62.04	0.20	5	0	0
CSO105	Western Outfall @ Broadway	1,881.20	21.43	19	0	0
CSO189	Northwestern Sanitary Diversion	1,148.65	175.79	37	0	0

*NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.*

**LTCP Project Number:** L\_OR\_MF\_105\_M\_13\_B\_A\_0

**Hybrid Technology:  
Off-Line Storage with Real Time Control  
Gravity Effluent  
Flow Diagram**





**Preliminary - For Budget Development Only**

**Legend**

- Active CSO
- Eliminated CSO
- ▲ Proposed Flow Control Solution
- PS Proposed Pump Station Solution
- PS Pump Station
- Proposed Pipe Solution
- ▶ Force Main
- Combined Sewer Pipe
- Flood Wall
- Proposed Storage Solution
- Floodway
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- Streams

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

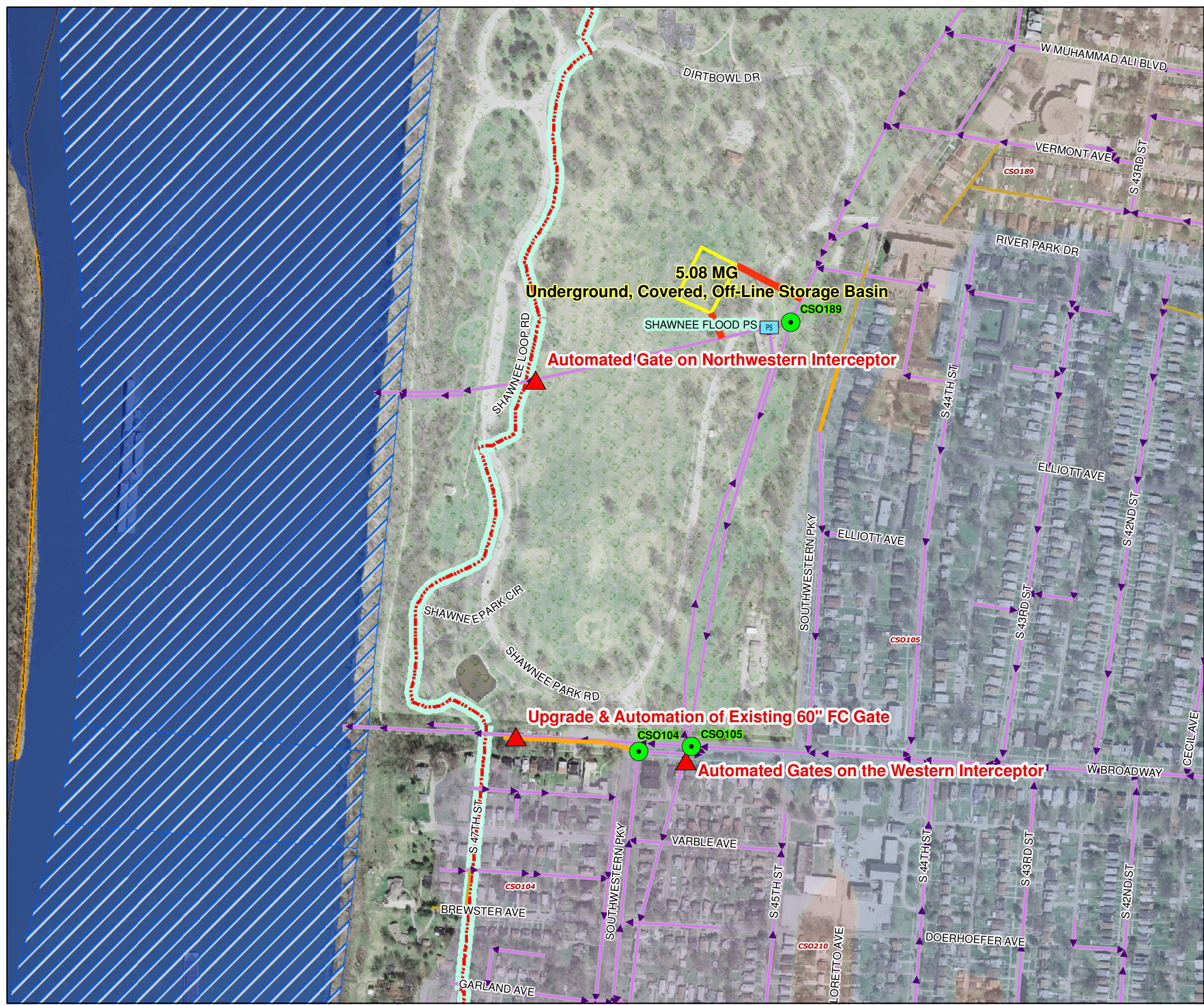
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# CSO LTCP Project Fact Sheet



**LTCP Project Number:** L\_OR\_MF\_019\_S\_13\_B\_A\_8

**Project Name:** Portland Wharf Storage Basin

**Project Type:** RTC with Storage

**Receiving Stream:** Ohio River

**Project Description:** This project includes an 6.37 MG underground covered concrete basin of 1.8 MG of ILS for CSO019 to reduce overflows to eight overflows per year. The facility will require a 6.37 MGD PS to return the stored flow back to the interceptor.

**Design Parameters / Assumptions:** Available CSS storage capacity is based on June, 2001 BPR RTC Study. Flow Control assumes inflatable dams are available at the time of construction. Down-sized storage basin design with Flow Control assumptions are same as Off-line Storage technology.

**Surrounding Area Land Use:** Project is located within a Louisville Metro Park and is approximately 65' North of I-64 West.

**Apparent Utilities Description:** Sewer line approx. 50 ft. from proposed basin

**Capital Projects:** 2013~Integration of 34th St PS to RTC; FPS: 34th St PS Improvements

**Advanced Site Restoration:** The area of the proposed tank is park property. Current and previous public use or development proposals for these areas have identified potential environmental mitigations. The project budget includes a site restoration allowance.

**Estimated Capital Cost (2008):** \$20,000,000

**Capital Cost / Gallon Overflow Removed:** \$0.12

**Weighted Benefit / Cost Ratio (Capital Cost):** 9.87

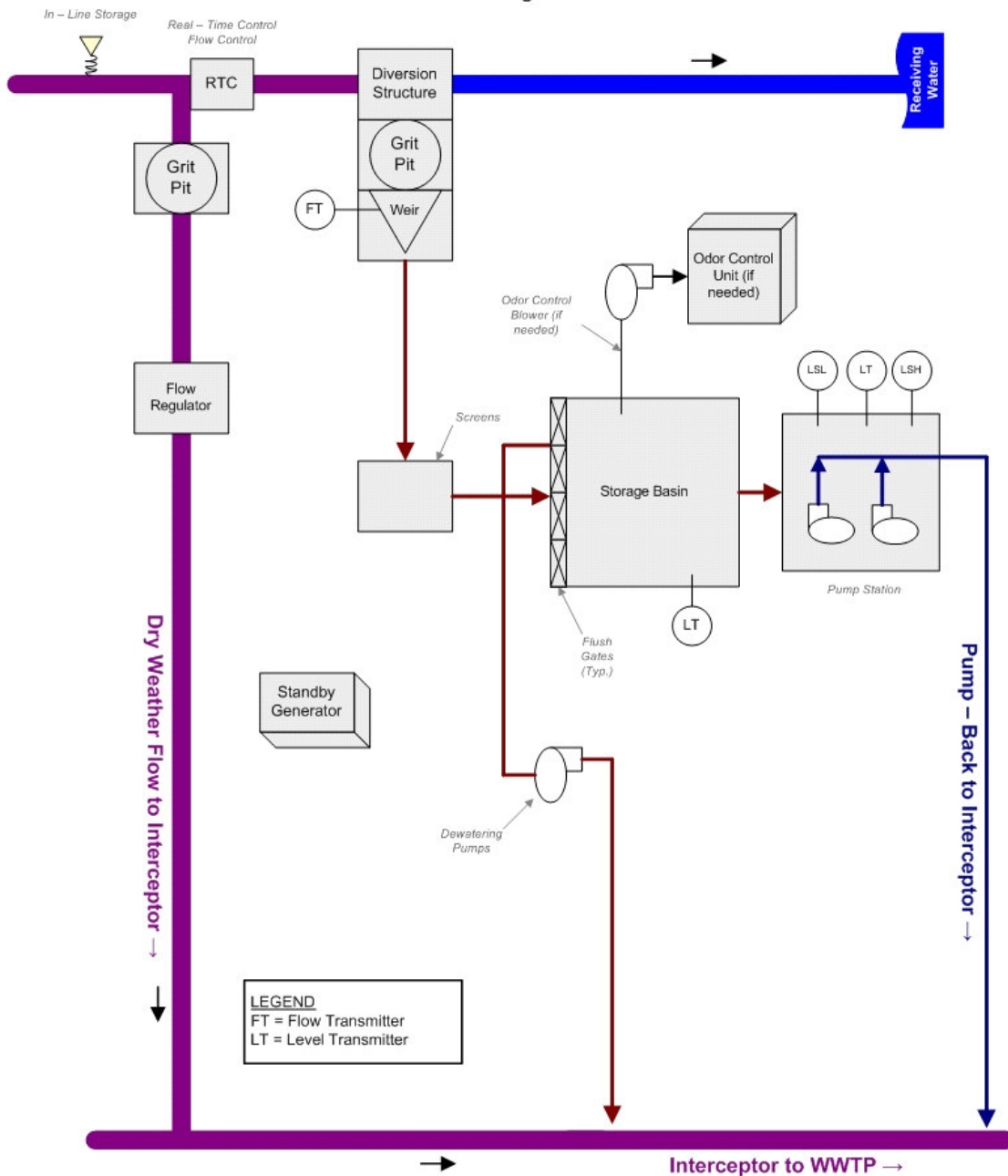
**Overflow Points Addressed:**

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO019	34th Street Pump Station	1,094.02	297.91	60	52	8

*NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.*

**LTCP Project Number:** L\_OR\_MF\_019\_S\_13\_B\_A\_8

**Hybrid Technology:  
Off-Line Storage with Real Time Control  
Pumped Effluent  
Flow Diagram**



**Integrated Overflow Abatement Plan**

Volume 2 - Final CSO Long-Term Control Plan

Ohio River  
 Solution ID # L\_OR\_MF\_019\_S\_13\_B\_A\_8  
 Portland Wharf Storage Basin

**Preliminary - For Budget Development Only**

**Legend**

- Active CSO
- Eliminated CSO
- ▲ Proposed Flow Control Solution
- PS Proposed Pump Station Solution
- PS Pump Station
- Proposed Pipe Solution
- ▶ Force Main
- ▶ Collector < 12"
- ▶ Interceptor => 12"
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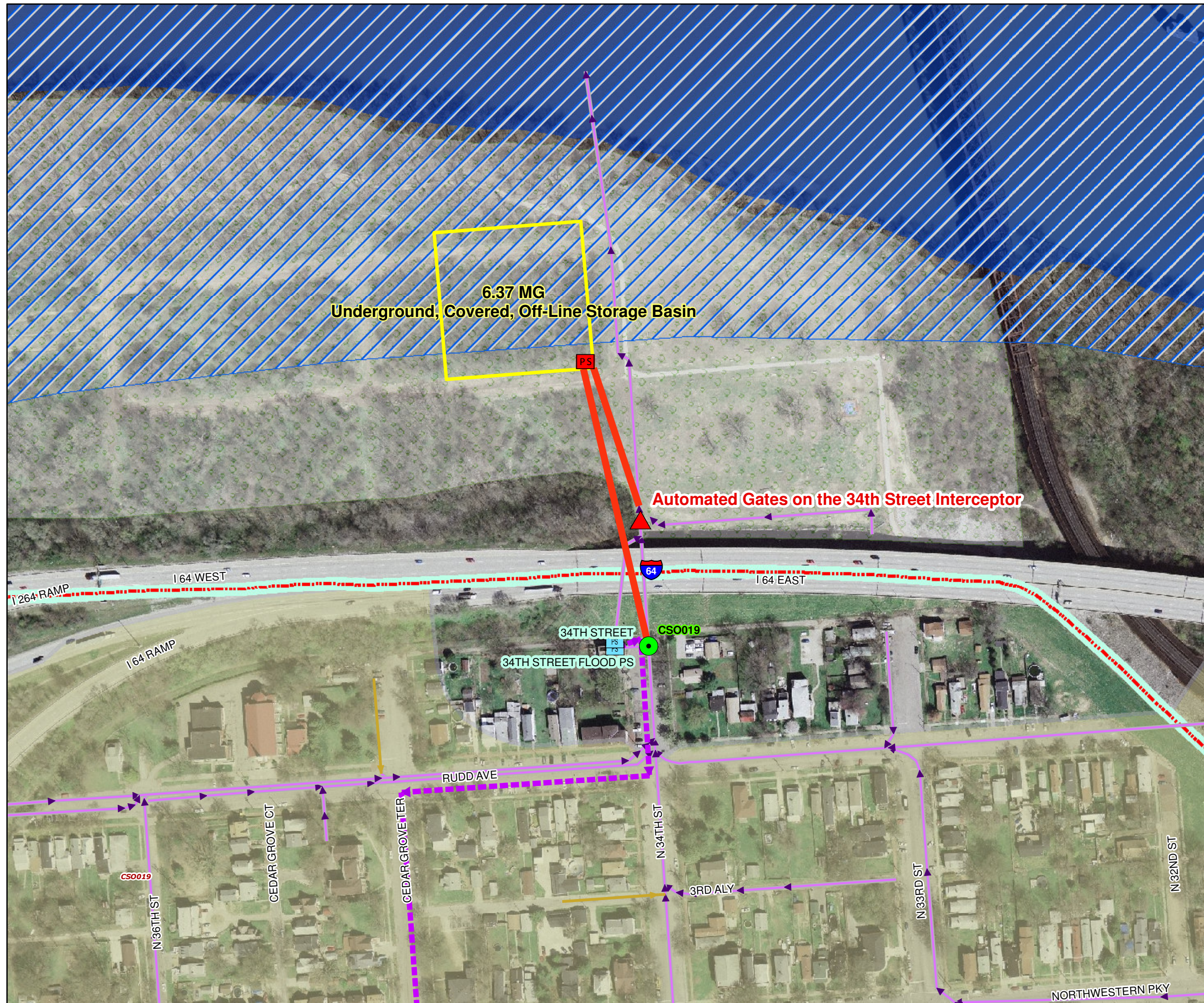
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# CSO LTCP Project Fact Sheet



**LTCP Project Number:** L\_OR\_MF\_155\_M\_09B\_B\_B\_4

**Project Name:** 13th Street and Rowan Street Storage Basin

**Project Type:** Off-Line Storage

**Receiving Stream:** Ohio River

**Project Description:** This project includes a 66" collector and 14.44 MG underground covered concrete basin for CSO022, 023, 050, 051, 052, 053, 054, 055, 056, 150, 155, 156, 208, and CRD to reduce overflows to 4 overflows per year. The facility requires a 14.44 MGD PS.

**Design Parameters / Assumptions:** Basins are designed to the 5th overflow event volume, resulting in 4 CSO overflows/year. The 5th peak flowrate is evaluated to compare gravity vs. pumped conveyance. Design for pump-back is 24 hours. Type of basin based on hydraulics and surroundings.

**Surrounding Area Land Use:** The project is located within 'Vacant & Undeveloped' property North of Rowan St. The project is located approx. 50' NW of CSO155. Area to the immediate South is mainly 'Industrial'.

**Apparent Utilities Description:** Lateral running through the designed area of the basin, Gas Main 24' S of the basin, Water Main 28' S of the basin, Water Main running through the basin, CB about 27' N of the basin

**Capital Projects:** 2007~ORI Flow Installation Project- Under Construction

**Advanced Site Restoration:** N/A

**Estimated Capital Cost (2008):** \$49,680,000

**Capital Cost / Gallon Overflow Removed:** \$0.54

**Weighted Benefit / Cost Ratio (Capital Cost):** 30.40

**Overflow Points Addressed:**

<u>CSO Number</u>	<u>CSO Name</u>	<u>CSO Area (Acres)</u>	<u>2008 AAOV (MG / Yr)</u>	<u># of Overflows / Yr</u>	<u>Post LTCP AAOV (MG/Yr)</u>	<u>Post LTCP # Overflows / Year</u>
CSO036	Central Relief Drain - 3rd Street and Broadway	23.08	0.02	4	0.03	4
CSO202	Central Relief Drain - South Ormsby Avenue, West of 3rd Street	5.32	0.00	0	0	0
CSO203	Central Relief Drain - South 4th Street and Ormsby Avenue	14.24	0.00	0	0	0
CSO181	Central Relief Drain - 2nd Street and Broadway Number 2	22.63	0.01	3	0.05	4
CSO198	Central Relief Drain - South 3rd Street and Ormsby Avenue	4.40	0.00	2	0.01	1
CSO022	4th Street Pump Station	100.89	0.95	4	0.62	4
CSO023	Ohio River Interceptor @ 4th Street Pump Station	0.00	74.00	28	18.52	4
CSO050	12th Street	36.32	38.87	41	5.95	4
CSO051	11th Street	6.34	3.84	28	1.2	4
CSO052	10th Street	8.70	8.43	27	1.44	4

# CSO LTCP Project Fact Sheet



**LTCP Project Number:**      L\_OR\_MF\_155\_M\_09B\_B\_B\_4

CSO053	8th Street	34.12	4.52	23	0.31	4
CSO054	7th Street	7.06	0.11	23	0.01	4
CSO055	6th Street	18.03	18.44	28	2.72	4
CSO056	5th Street	22.03	2.74	18	0.55	4
CSO150	8th Street @ Common Place	1.79	7.81	31	0.66	4
CSO155	Rowan Street and 12th Street	11.93	2.05	39	0.14	4
CSO156	6th Street & Washington Sanitary Diversion	0.00	0.09	10	0.04	4
CSO208	12th Street and Jefferson Street	11.19	0.33	11	0.04	4
CSO029	Central Relief Drain - 8th Street and York Street	34.78	4.53	33	0.46	4
CSO035	Central Relief Drain - 2nd Street and Broadway Number 1	14.26	0.21	11	0.04	4
CSO178	Central Relief Drain - 9th Street and York Street "B"	58.02	0.60	11	0.26	4
CSO193	Central Relief Drain - South 6th Street and Kentucky Street	22.69	0.04	5	0.02	4
CSO195	Central Relief Drain - South 4th Street and Oak Street	7.28	2.19	55	0.04	4
CSO196	Central Relief Drain - South 3rd Street and Oak Street	2.18	0.13	11	0.02	4
CSO197	Central Relief Drain - South 3rd Street, South of Oak Street	4.54	3.02	47	0.1	4
CSO199	Central Relief Drain - South 3rd Street, North of Magnolia Street	8.64	0.46	45	0.03	4
CSO200	Central Relief Drain - South 3rd Street and Magnolia Street	10.28	4.91	65	0.26	4

*NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.*

**LTCP Project Number:** L\_OR\_MF\_155\_M\_09B\_B\_B\_4

Off-Line Storage  
Pumped Effluent  
Flow Diagram

