MSD
Metropolitan Sewer District

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

August 17, 2012 (Revised September 20, 2012)

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
Post Office Box 7611
Washington DC 20044-7611

Jeff Cummins, Acting Director
Division of Enforcement
Department of Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

Chief, Water Programs Enforcement Branch
Water Management Program
US EPA Region 4
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303

Subject: Southwestern Parkway Storage Basin
Minor Project Modification
IOAP Project No. L_OR_MF_105_M_13_B_A_0
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is providing advanced notification of a proposed minor project modification to the Southwestern Parkway Storage Basin project (IOAP Project No. L_OR_MF_105_M_13_B_A_0). This modification is part of an overall adaptive management review of the approved 2009 IOAP that will be documented in the proposed 2012 IOAP Modification to be formally submitted in 2013. No action is requested at this time.

2009 IOAP Project Description

The Southwestern Parkway Storage Basin project entailed the construction of 5.08 million gallons (MG) of offline storage coupled with 8.8 MG of in-line storage from two facilities to be constructed within the Western Outfall and the Northwestern Interceptor to a zero overflow per typical year level of control. The project completion date was set at December 31, 2018.

Proposed Project Modification

Due to the re-calibration of the sewer hydraulic model, the project modification includes the construction of 11.07 MG of offline storage along with the 8.8 MG of in-line storage at the two facilities described above with the project deadline remaining at December 31, 2018. The level of control is higher at zero overflows in a typical year based on a revised benefit/cost analysis.

These modifications are part of an overall adaptive management review of the approved 2009 IOAP. Additional sewer system monitoring, hydraulic modeling recalibration and enhancements to the physical representation of the sewer system resulted in a redistribution of the flow in individual sewer lines, thus affecting project approach and sizing in some cases. Each proposed change will be justified in detail through minor modification letters. Detailed benefits, costs and program implementation refinements to the overflow abatement program will be documented in proposed 2012 IOAP Modification to be submitted in 2013. No action is requested at this time.

Technical Justification

As part of an internal modeling review and re-calibration, MSD initiated a detailed review of the combined sewer system hydraulic model utilizing new sewer monitoring data. Upon completion of this review, MSD discovered that the Southwestern Parkway Storage Basin was undersized in the previous submittal.

Since the last IOAP submittal, additional flow monitors have been installed in the system and on the overflow structures. Detailed topographic surveys were conducted at many of the CSO structures. The combined sewer system model was updated with the new survey data and re-calibrated based on the data from the additional flow monitors. The flows in the re-calibrated model differed from the original model and required changes to some of the IOAP projects.

Based on the results of the re-calibration, a level of control analysis was conducted on the Southwestern Parkway Storage Basin. The level of control with the basin sized at 11.07 MG is higher at zero overflows in a typical year. Therefore, MSD proposes to change the Southwestern Parkway Storage Basin solution from 5.08 MG to 11.07 MG. This solution also includes the construction of an in-line control structure on the overflow line to create an additional 8.8 MG of in-line storage. These improvements will maintain the same completion date of December 31, 2018, as the original solution.

For your reference, a copy of the original project fact sheet and map from the 2009 IOAP are in Attachment A. New project fact sheets and maps have been provided in Attachment B. Additional documentation on the costs and level of control analysis will be included in the 2012 IOAP Modification.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have questions or need additional information, please contact Ms. Angela Akridge, Project WIN Program Manager, or myself at (502) 540-6000.

Sincerely,

W. Brian Bingham
Regulatory Services Director

cc: Greg Heitzman Paula Purifoy

Attachments

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W. Brian Bingham
Regulatory Services Director

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Attachments

MSD

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ATTACHMENT A

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 Land Use: Project is located within Shawnee Park and approximately 300' West of CSO189.

Apparent Utilities Description: No major utilities conflict

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:

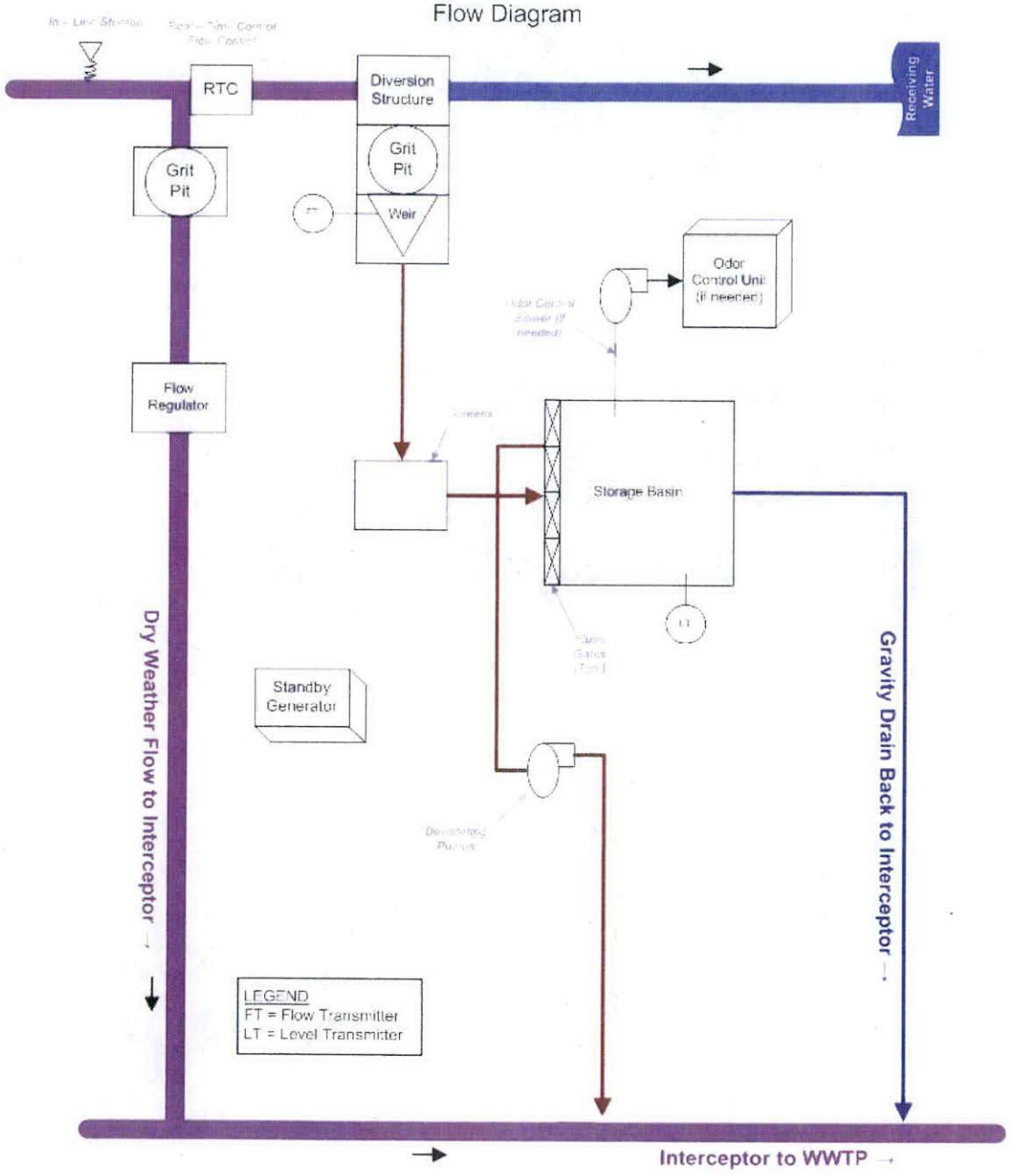
CSO Number	CSO Name	CSO Area (Acres)	2008 AAOV (MG / Yr)	# of Overflows / Yr	Post LTCP AAOV (MG/Yr)	Post LTCP # Overflows / Year
CSO104	Southwest Parkway Sewer @ Broadway	62.04	0.20	5	0	0
CSO105	Western Outfall @ Broadway	1,881.20	21.43	19	0	0
CSO189	Northwestern Sanitary Diversion	1,148.65	175.79	37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

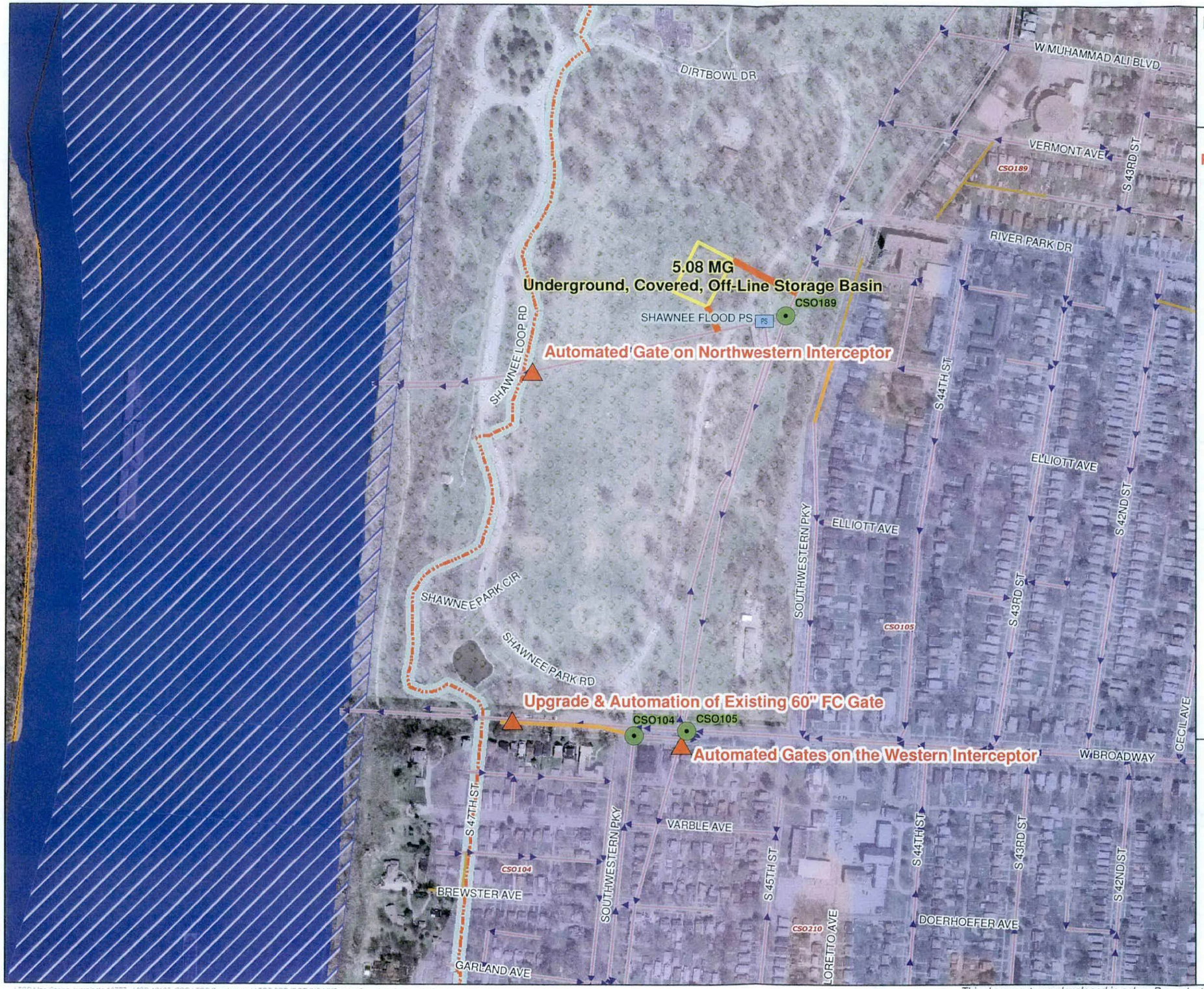
NOTE: CSO hydraulic statistics are predicted based on InfoWorks model results.

CSO LTCP
Project Fact Sheet

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





Integrated Overflow Abatement Plan

Volume 2 - Final CSO Long-Term Control Plan

Ohio River
Solution ID # L_OR_MF_105_M_13_B_A_0
Southwestern Parkway Storage Basin

Preliminary - For Budget Development Only

Legend

- Active CSO
- Eliminated CSO
- Proposed Flow Control Solution
- Proposed Pump Station Solution
- 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.

1 inch = 400 feet
Scaleable when printed on 11"x17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
Mar 13, 2009

Aerial Date: 2006

N

This document was developed in color. Reproduction in black and white may not represent the data as intended.

MSD

Metropolitan Sewer District

ATTACHMENT B

Project Name: Southwestern Parkway Storage Basin

Project Type: In-Line & Off-Line Storage

Rec Stream: Ohio River

Project Description: This project includes a 11.07 MG underground covered concrete basin for CSO104, 105, and 189 and in-line storage in the WO and the NWI for an an additional 8.8 MG using adjustable gates to reduced overflows to zero overflows per typical year.

Design Assumption: Available CSS storage capacity is based on June, 2001 BPR RTC Study. Model Run with RTC Coded in confirms available storage. Flow Control assumes inflatable dams are available at the time of construction.

Capital Cost: $33,069,000

Capital Benefit/Cost: 22.14

Present Worth Benefit Cost: 24.06

		Existing May 2012[1]		Baseline May 2012[2]	
CSO	CSO Name	Avg. Annual Overflow Volume	Avg. Annual Frequency	Avg. Annual Overflow Volume	Avg. Annual Frequency
CSO104	SW PKWY SEWER @ BROADWAY	3.90	16	3.90	16
CSO105	WESTERN OUTFALL @ BROADWAY	59.69	30	59.67	30
CSO189	NORTHWESTERN SAN DIV	51.19	28	43.98	28

1. Existing May 2012 conditions reflect existing system operating conditions as of that date.

2. Baseline May 2012 assumes all SSDP projects are complete and critical combined sewer facilities (e.g. Morris Forman WQTC Southwestern Pump Station, Starkey Pump Station) are operating at optimal, sustainable levels.

Integrated Overflow Abatement Plan

Vol. 2 - Final CSO Long Term Control Plan

Ohio River

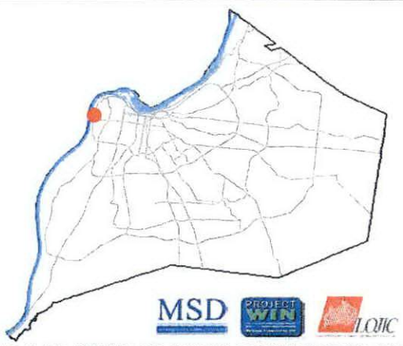
Southwestern Parkway Storage Basin

Preliminary - For Budget Development Only

- Active CSO
- Eliminated CSO
- Proposed Flow Control Solution
- Proposed Pump Station Solution
- Pump Stations
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Drainage Mains
- Proposed Storage Solution
- Streams
- Floodway
- Jefferson County Boundary

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

1 inch = 300 feet	N	Aerial Date: 2009	Map Revision: April 9, 2012



11.07 MG
Underground, Covered, Off-Line Storage Basin

Automated Gates on Northwestern Interceptor

Upgrade & Automation of existing 60" FC Gate

Automated Gates on the Western Interceptor

CSO189

SHAWNEE FLOOD PS

CSO104

CSO105

Ohio River

SHAWNEE CROSSROADS

SHAWNEE PARK RD

SHAWNEE LOOP RD

SHAWNEE PARK CIR

SHAWNEE PARK CT

DIRTBOWL DR

RIVER PARK DR

SOUTHWESTERN PKY

VERMONT AVE

DEL PARK TER

ELLIOTT AVE

S 44TH ST

S 43RD ST

S 42ND ST

W BROADWAY

S 47TH ST

S 45TH ST

VARBLE AVE

J:\msd\SharedMaps\IOAP\2012 Revision\MXD\Southwestern_Parkway_Storage_Basin.mxd

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