

SPDES Permit No. NY0028410

Long Term Control Plan Semi-Annual Status Report Reporting Period: January through June 2017

Amended Administrative Order CWA-02-2014-3033 (Amends CWA-02-2012-3024)

September 2017

Long Term Control Plan Semi-Annual Status Report Reporting Period: *January through June 2017*

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1. INTRODUCTION

The Buffalo Sewer Authority (Authority) received approval of its Long Term Control Plan (LTCP) from the United States Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (NYSDEC) on March 18, 2014. The Authority entered into an Amended Administrative Order on April 16, 2014 (herein after referred to as the AO), with the USEPA. This AO establishes a schedule for implementation of the Authority's LTCP, approved by the USEPA and NYSDEC.

The AO in part requires that the Authority submit written Semi-Annual Status Reports to the USEPA and NYSDEC by September 1^{st} for current year January 1– June 30 reporting period, and March 1^{st} for the previous calendar year July 1 – December 31 reporting period. The AO requires that the following be provided in each Semi-Annual Status Report:

- The project milestones, deadlines and other terms that the Authority is required to meet since the date of the last Semi-Annual Status Report, whether and to what extent the Authority has met those requirements, and the reason for any anticipated delays and/or noncompliance.
- A general description of the work completed during the reporting period and the applicability of the work to meet indicated design criteria, as well as the projection of work to be performed during the next reporting period and any anticipated delays for the upcoming work. Any changes in key personnel must also be noted.
- Enclosure of public meeting (if held) materials including: advertisements, handouts, formal meeting notes, and a summary of the meeting (see Attachment C).
- Copies (to USEPA only) of all monthly monitoring reports or other reports pertaining to combined sewer overflows (CSOs) and bypasses that Authority submitted to the NYSDEC during the reporting period. Please note DMRs are now submitted electronically directly to the USEPA and no dry weather overflows occurred during this period, so this item does not apply during this reporting period.

This report covers January through June 2017 which serves as Semi-Annual Report No. 7.

2. REQUIREMENTS DUE IN REPORTING PERIOD

Attachment A provides the current status of all projects listed in the Administrative Order. Issues with implementing these projects are detailed in Section 4 of this document.

This document serves as the September 1, 2017 semi-annual report.

There are no Certificates of Acceptance and Occupancy for fully completed projects for this reporting period.

3. WORK COMPLETED IN CURRENT REPORTING PERIOD AND PROJECTION OF WORK TO BE PERFORMED NEXT REPORTING PERIOD

A general description of the work completed on LTCP projects during the reporting period (January 1 through June 30, 2017) and the work projected to be performed during the next reporting period (July 1 through December 31, 2017) is provided in Attachment A. Items that have been completed have been highlighted orange.

A more detailed description of each project including the location and the goal to be achieved through each project is provided in Attachment B.

4. IMPLEMENTATION ISSUES

4.1 Smith Street Storage

The Smith Street Storage project has undergone several conceptual level redesigns that have reduced capital and maintenance costs and negative impacts to the environment and residents; however these redesigns have also resulted in a prolonged engineering period. In order to expedite construction, the Smith Street storage project has been separated into a partial sewer separation project and an in-line storage project.

The partial sewer separation project was completed on June 22, 2016.

NYSDEC approval of plans for Bidding for the Smith Street in-line storage project was granted on February 25, 2016. The contract was awarded at the May 11, 2016 meeting of the Board of the Buffalo Sewer Authority and the Notice to Proceed was issued on July 13, 2016. Due to the extended approval process of the Smith Street in-line storage project, completion of construction of the overall Smith Street storage project is expected to be completed by October 2017.

4.2 Hamburg Drain Optimizations

Preliminary design for the Hamburg Drain Optimizations was begun prior to January 1, 2014, however detailed design was delayed due to high water levels in Lake Erie. As a result of this delay the March 18, 2016 Notice to Proceed deadline was exceeded. Upon further review of the proposed locations for sewer separation and/or green infrastructure, it was determined that sufficient sewer separation had already been conducted and/or extensive private investment requiring storm water detention/retention is expected in the drainage basins where this work was proposed. As a result, engineering design has been completed for Louisiana and Miami Streets and the Willert Park Green Infrastructure project. These projects were bid in March, awarded in April and a Notice to Proceed issued in May. Construction has commenced on the green infrastructure portion of the project.

4.3 WWTP Improvement Project Alternative C2

Design of this project has been delayed due to the need to remove extensive quantities of grit which have accumulated in the system reducing WWTP capacity. Before further upgrades are considered, the existing issues must first be rectified to allow for accurate measurements of existing capacity to be conducted. The Authority is completing requests for proposals from engineering firms for the WWTP Project Alternative C2 and anticipates awarding that contract(s) by December 2017. The first notice to proceed for construction of Alternative C2 is expected to be issued in 2019.

The cleaning of the A-side influent channels, aeration basin 3 and both the A-side and Bside effluent channels was completed during this reporting period. Due to the noted grit issues in aeration, the Buffalo Sewer Authority is currently in progress with a new project to remove grit from the secondary system aeration tanks.

4.4 North Relief-Interceptor

Preliminary subsurface investigation in conjunction with the North Relief-Interceptor concept has revealed concerns with the location of bedrock and the feasibility of the proposed tunnel location. Due to the noted concerns, the Authority has phased the proposed project. Engineering and design has progressed the Bird Avenue Underflow sewer project. This project is expected to be bid in September 2017. Engineering for the second phase is expected to begin March 2019.

5. CHANGES IN KEY PERSONNEL

No changes in key personnel occurred during this reporting period.

6. PUBLIC MEETINGS

Public meetings regarding the Northland Avenue Streetscape project, which incorporates green infrastructure, have taken place during the reporting period (see Attachment C).

7. MODEL MODIFICATIONS

The process of converting the hydraulic model from XP-SWMM to PC-SWMM is continuing. The model is currently being refined and the calibration process has commenced.

8. CERTIFICATION STATEMENT

"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 the 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."

Oluwole A. McFoy, P.E., General Manager

AUG 17 Date

Attachment A to the Semi-Annual Status Report: September 2017

Work Completed in Current Period/ Projection of Work to be Performed in Next Reporting Period

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Phase I Projects				
CSO 060 GI Project			Prior to 1/1/2014	Complete.
Bird/Lang RTC	Construction Start	3/17/2014	2/24/2014	Complete
Projects	Completion Date	9/2/2014	5/9/2016	Complete
	Operations/ Optimization (RTC)	9/3/2014 – 9/3/15	10/1/2016	Complete
Bird RTC Project	Construction Start	3/17/2014	2/24/2014	Complete
	Completion Date	9/2/2014	5/6/2016	Complete
	Operations/ Optimization (RTC)	9/3/2014 – 9/3/15	10/1/2016	Complete
Lang RTC Project	Construction Start	3/17/2014	2/24/2014	Complete
	Completion Date	9/2/2014	5/9/2016	Complete
	Operations/ Optimization (RTC)	9/3/2014 – 9/3/15	10/1/2016	Complete

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Foundation Projects	<u>5</u>			
Foundation 1 -	Engineering Start	3/18/2014	Prior to 1/1/2014	Complete
Smith Street	Engineering Completion	3/18/2015	6/10/2015	Complete
Storage	Notice to Proceed	3/18/2015		Complete
	Substantial Completion	3/18/2017		
CSO No. 026 Sewer	Engineering Start	3/18/2014	Prior to 1/1/2014	Complete
Separation	Engineering Completion	3/18/2015	4/3/2015	Complete
	Notice to Proceed	3/18/2015	7/8/2015	Complete
	Substantial Completion	3/18/2017	6/22/2016	Complete
CSO No. 026 RTC	Engineering Start	3/18/2014	Prior to 1/1/2014	Complete
Structure	Engineering Completion	3/18/2015	6/10/2015	Complete
	Notice to Proceed	3/18/2015	7/13/2016	Complete
	Substantial Completion	3/18/2017		Scheduled to be complete in October 2017; See 4.1
Foundation 2 - SPP	Engineering Start	3/1/2014	Prior to 1/1/2014	Complete
Optimization (20	Engineering Completion	3/18/2015	4/20/2015	Complete
projects)	Notice to Proceed	3/1/2014	Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017		
SPP 180	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/20/2015	Complete
	Notice to Proceed		9/8/2015	Complete
	Substantial Completion	3/18/2017	12/16/2015	Complete
SPP 331	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion	3/18/2015	4/20/2015	Complete
	Notice to Proceed		9/8/2015	Complete
	Substantial Completion	3/18/2017	12/16/2015	Complete

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
SPP 036	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		1/20/2014	Complete
	Notice to Proceed		5/30/2014	Complete
	Substantial Completion	3/18/2017	8/4/2014	Complete
SPP 217	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/3/2015	Complete
	Notice to Proceed		7/8/2015	Complete
	Substantial Completion	3/18/2017	12/21/2015	Complete
SPP 318	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/3/2015	Complete
	Notice to Proceed		7/8/2015	Complete
	Substantial Completion	3/18/2017	12/21/2015	Complete
SPP 097A	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/20/2015	Complete
	Notice to Proceed		9/8/2015	Complete
	Substantial Completion	3/18/2017	12/16/2015	Complete
SPP 122	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 163	Engineering Start		3/1/2014	Complete
Optimization	Engineering Completion		11/25/2014	Complete
	Notice to Proceed		3/1/2015	Complete
	Substantial Completion	3/18/2017	8/6/2015	Complete
SPP 165	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete

Project Name	Project Milestone	AO Project Deadline	Actual Completion	Project Status
		Deadline	Dates	
SPP 165A	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/4/2014	Complete
	Notice to Proceed		7/25/2014	Complete
	Substantial Completion	3/18/2017	11/3/2014	Complete
SPP 178	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 335B	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 336A	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		4/20/2015	Complete
	Notice to Proceed		9/8/2015	Complete
	Substantial Completion	3/18/2017	12/16/2015	Complete
SPP 341A	Engineering Start		1/1/2014	Complete
Optimization	Engineering Completion			
	Notice to Proceed			This project is on hold pending the results of post-
	Substantial Completion	3/18/2017		construction monitoring.
SPP 342B	Engineering Start:		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 001	Engineering Start:		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		3/27/2014	Complete
	Notice to Proceed		6/16/2014	Complete
	Substantial Completion	3/18/2017	12/12/2014	Complete

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
SPP 183	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 283	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
SPP 211	Engineering Start		Prior to 1/1/2014	Complete
Optimization	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2017	Prior to 1/1/2014	Complete
Foundation 3 -	Engineering Start	3/18/2016	8/9/2016	Ongoing
Remaining RTC	Notice to Proceed	3/18/2017		
(14 sites)	Engineering Completion	3/18/2023		
	Substantial Completion	3/18/2024		
Hertel Northwest	Engineering Start			
In-Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Hertel South In-	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Hertel Northeast In-	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Bird East In-Line	Engineering Start		Dutto	
Storage	Engineering Completion			
5	Notice to Proceed			
	Substantial Completion	3/18/2024		
East Ferry In-Line	Engineering Start			
, Storage	Engineering Completion			
-	Notice to Proceed			
	Substantial Completion	3/18/2024		
Colorado In-Line	Engineering Start			
Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
North Bailey In-	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
South Bailey In-	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Roslyn In-Line	Engineering Start			
Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Hazelwood (Kay) Ir	- Engineering Start		8/9/2016	Complete
Line Storage	Engineering Completion			Projected to be Completed During Next Reporting Period
	Notice to Proceed			
	Substantial Completion	3/18/2024		

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Amherst Quarry	Engineering Start			
Off-Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Fillmore North In-	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Gibson CSO Line	Engineering Start			
Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Montgomery CSO	Engineering Start			
Line Storage	Engineering Completion			
	Notice to Proceed			
	Substantial Completion	3/18/2024		
Foundation 4 -	Engineering Start	3/18/2015	Prior to 1/1/2014	Complete
Hamburg Drain	Engineering Completion	3/18/2017	2/23/2017	Complete
Optimizations	Notice to Proceed	3/18/2016	5/16/2017	Complete
	Substantial Completion	3/18/2018		
Foundation 4 -	Engineering Start	3/18/2028		
Hamburg Drain	Engineering Completion	3/18/2030		
Storage	Notice to Proceed	3/18/2030		
	Substantial Completion	3/18/2032		
<u>WWTP</u>				
WWTP	Engineering Start	3/18/2015		On hold; See 4.3.
Improvement	Engineering Completion	3/18/2019		
Project Alternative	Notice to Proceed	3/18/2017		
C2	Substantial Completion	3/18/2022		

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Green Infrastructur	<u>e Projects</u>			
Green 1 - Pilot	Engineering Start	3/1/2014	Prior to 1/1/2014	Complete
Projects – 267-	Engineering Completion	3/18/2016		Complete
acres of GI control	Substantial Completion	3/18/2018	12/31/2016	Complete
2001-2016	Engineering Start		Prior to 1/1/2014	Complete
Residential (traditional)	Engineering Completion		Prior to 1/1/2014	Complete
Demolitions	Substantial Completion	3/18/2018	12/31/2016	Complete
2001 - 2016	Engineering Start		Prior to 1/1/2014	
Commercial and Industrial	Engineering Completion		Prior to 1/1/2014	
Demolitions	Substantial Completion	3/18/2018	12/31/2016	
Green 2 – 410	Engineering Start:	3/18/2019	Prior to 1/1/2014	
acres of GI Control	Engineering Completion:	3/18/2023		
	Substantial Completion:	3/18/2024		
2017 - 2024	Engineering Start		Prior to 1/1/2014	Complete
2017 - 2024 Demolitions				
Demontions		3/18/2018		
Green Demolition	Engineering Start		Prior to 1/1/2014	Complete
Pilot Project	Engineering Completion			Complete
FIIOLFIOJECI	Substantial Completion		7/31/2017	Complete
PUSH Blue Projects	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2018	7/1/2015	Complete
Carlton Street	Engineering Start		Prior to 1/1/2014	Complete
Porous Asphalt	Engineering Completion		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2018	7/25/2014	Complete
Fillmore Avenue	Engineering Start		Prior to 1/1/2014	Complete
Porous Parking	Engineering Completion		Prior to 1/1/2014	Complete
Lots and Green Lots	Substantial Completion	3/18/2018	4/23/2015	Complete

Attachment A to the Semi-Annual Status Report: September 2017

Work Completed in Current and Projection of Work to be Performed in Next Reporting Periods

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Ohio Street	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2018	12/1/2014	Complete
Kenmore Avenue	Engineering Start		4/30/2014	Complete
	Engineering Completion		4/20/2015	Complete
	Substantial Completion	3/18/2018	3/1/2017	Complete
Genesee Street	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		6/8/2015	Complete
	Substantial Completion	3/18/2018	6/1/2017	Complete
Allen Street	Engineering Start		Prior to 1/1/2014	Green infrastructre will no longer be implemented
	Engineering Completion			as part of the Allen Street streetscape project due
	Substantial Completion	3/18/2018		to site constraints.
Niagara Street	Engineering Start		Prior to 1/1/2014	Complete
Phase 1: Elmwood Street to Virgina	Engineering Completion		3/19/2014	Complete
Street	Substantial Completion	3/18/2018	12/1/2016	Complete
Niagara Street	Engineering Start		Prior to 1/1/2014	Complete
Phase 2: Virgina Street to Porter	Engineering Completion		6/3/2015	Complete
Avenue	Substantial Completion	3/18/2018		
Niagara Street Phase 4: Porter	Engineering Start		10/28/2015	Complete
Avenue to Ontario	Engineering Completion			
Street	Substantial Completion	3/18/2018		
Green 3 – 375	Engineering Start:	3/18/2023		
acres of GI Control	Engineering Completion:	3/18/2028		
	Substantial Completion:	3/18/2029		
Green 4 – 263	Engineering Start:	3/18/2028		
acres of GI Control	Engineering Completion:	3/18/2033		
	Substantial Completion:	3/18/2034		

Attachment A to the Semi-Annual Status Report: September 2017

Work Completed in Current and Projection of Work to be Performed in Next Reporting Periods

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
Gray Projects				
CSOs 014/15 – Erie Basin In-line	Engineering Start		Prior to 1/1/2014	Complete
storage and optimization	Engineering Completion		Prior to 1/1/2014	Complete
projects	Notice to Proceed	3/18/2014	Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2015	12/29/2014	Complete
SPPs 206A&B	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		5/30/2014	Complete
	Substantial Completion	3/18/2015	12/29/2014	Complete
SPP 035	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		Prior to 1/1/2014	Complete
	Substantial Completion	3/18/2015	5/31/2014	Complete
SPP 036	Engineering Start		Prior to 1/1/2014	Complete
	Engineering Completion		Prior to 1/1/2014	Complete
	Notice to Proceed		5/30/2014	Complete
	Substantial Completion	3/18/2015	12/5/2014	Complete
CSO 013 – Satellite storage,	Engineering Start	3/18/2019		
conveyance, FM &	Engineering Completion	3/18/2020		
PS	Notice to Proceed	3/18/2020		
	Substantial Completion	3/18/2022		

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
North Relief –	Engineering Start	3/18/2019	5/15/2015	Complete; See 4.4.
Interceptor	Engineering Completion	3/18/2022		
	Notice to Proceed	3/18/2022		
	Substantial Completion	3/18/2026		
CSOs 010, 008/010,	Engineering Start	3/18/2021		
061, 004 –	Engineering Completion	3/18/2023		
Underflow capacity	Notice to Proceed	3/18/2023		
upsizing	Substantial Completion	3/18/2024		
SPP 337 (CSO 053)	Engineering Start	3/18/2023		
 Satellite storage, 				
conveyance, FM &	Engineering Completion	3/18/2025		
PS	Notice to Proceed	3/18/2025		
	Substantial Completion	3/18/2027		
SPP 336A&B (CSO	Engineering Start	3/18/2024		
053) – Satellite				
storage,	Engineering Completion	3/18/2026		
conveyance, FM &	Notice to Proceed	3/18/2026		
PS	Substantial Completion	3/18/2029		
Jefferson Avenue	Engineering Start	3/18/2025		
& Florida Street (CSO 053) –	Engineering Completion	3/18/2027		
Satellite storage, conveyance and	Notice to Proceed	3/18/2027		
FM	Substantial Completion	3/18/2030		
CSO 055 – Satellite		3/18/2027		
storage,	Engineering Completion:	3/18/2030		
-	Notice to Proceed:	3/18/2030		
PS	Substantial Completion:	3/18/2034		

Project Name	Project Milestone	AO Project Deadline	Actual Completion Dates	Project Status
CSOs 028/044/047 - Satellite storage,	Engineering Start:	3/18/2028	Dutes	
conveyance, FM &	Engineering Completion:	3/18/2031		
PS	Notice to Proceed:	3/18/2031		
	Substantial Completion:	3/18/2034		
CSO 052 – Satellite	Engineering Start:	3/18/2030		
storage,	Engineering Completion:	3/18/2032		
conveyance, FM &	Notice to Proceed:	3/18/2032		
PS	Substantial Completion:	3/18/2034		
CSO 064 – Satellite	Engineering Start:	3/18/2030		
storage,	Engineering Completion:	3/18/2032		
conveyance, FM &	Notice to Proceed:	3/18/2032		
PS	Substantial Completion:	3/18/2034		

Attachment B to the Semi-Annual Status Report: September 2017

Detailed Project Descriptions

Project Name	Project Description	Project Purpose*
Phase I Projects		
CSO 060 GI Project	This project consisted of the construction of 4768 CF of rain garden on Windsor, Parkdale and Elmwood Avenues between Bird and Forest Avenues and 39,600 SF of permeable pavement on Clarendon and Claremont Avenues between Bird and Forest Avenues, installation of a Stormceptor unit at Bird Avenue and Granger Place and a total of 6,125 LF of 12-30 inch sewer designed to carry street flow to the existing storm overflow sewer on Forest Avenue from the above mentioned street segments. Additionally, weirs were raised in SPPs 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, and 240.	This project was designed to treat 13,600 cf of stormwater runoff from the 0.9 inch water quality storm event and remove 49.5 cfs of peak flow from the combined sewer system. Thereby reducing overflows through SPPs 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, and 241 to CSO 060. Together with other LTCP projects, this project is projected reduce CSO 060 discharges to Scajaquada Creek based on the 1993 Modified Typical Year (TY) to negligible activations and flow.
Bird/Lang RTC Projects	These RTC projects utilize available capacity of large sewers to provide flow control measures during wet weather events through the use of gates which allow continuous dry weather underflow.	
Bird RTC Project	The Bird RTC Project is located on Bird Avenue between Parkdale Avenue and Hoyt Street.	The Bird RTC project is designed to provide 1.01 MG of storage volume, thereby reducing discharges through SPP 013 to CSO 004. Together with other LTCP projects, this project is projected reduce CSO 004 discharges to the Black Rock Canal based on the TY to 3 activations.
Lang RTC Project	The Lang RTC Project is located on Lang Avenue between Courtland Avenue and Hagen Street.	The Lang RTC project is designed to have a storage volume of 0.84 MG, thereby reducing discharges through SPP 340 to CSO 053. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the 1993 Modified Typical Year (TY) to 4 activations.

Project Name	Project Description	Project Purpose*
Foundation Project	<u>s</u>	
Foundation 1 - Smith Street Storage	Originally envisioned as a single project, these two projects have been separated to realize cost advantages due to the different levels of skill required for the projects and to expedite the sewer separation component.	
CSO No. 026 Sewer Separation	This project consisted of the installation of collection sewers for street receiver flows on Leddy Street, South Park Avenue, Owahn Place, Prenatt Street, Bolton Place, St. Stephen's Place, and Buffalo River Place, tributary to to SPP 88 and 90, in order to discharge these storm flows downstream of regulators, in conjuction with the optimization projects for SPP 217 and SPP 318.	Together with the Smith Street in-line storage project, the Smith Street partial sewer separation project is designed to divert storm flows directly to the Smith Street Drain thereby reducing CSO 026 discharges. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 6 activations or less.
CSO No. 026 RTC Structure	The second contract consists of an in-line storage project which is designed to detain wet weather flows along the western side of Smith Street using a weir structure between the I-190 and the I-190 off ramp within the Smith Street Drain for discharge to the South Interceptor thereby diverting combined sewer flows from CSO 026.	Together with the Smith Street partial sewer separation project, the Smith Street in-line storage project is designed to divert and detain the equivalent of a storage volume of 1.94 MG, thereby reducing CSO 026 discharges. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 6 activations or less.

Project Name	Project Description	Project Purpose*
Foundation 2 - SPP Optimization (20 projects)	Project consists of multiple smaller projects that will overlap in engineering and construction. SEE DETAILS FOLLOWING FOR SPECIFIC PROJECTS	In general, these projects will reduce discharges to the CSOs by detaining flows within the BSA's system through the modification of existing control structures.
SPP 180 Optimization	by 2.0' along its entire length. SPP 180 is located on Delaware Avenue at the intersection with West Delavan. As part of the	The SPP 180 Optimization project was designed to increase the capacity of the CSS at SPP 180 thereby decreasing CSO 006 discharges. Together with other LTCP projects, this project is projected to reduce CSO 006 discharges to the Black Rock Canal based on the TY to 4 activations.
SPP 331 Optimization	SPP331 is located at the intersection of Elmwood Avenue and West Delavan Avenue. Preliminary plans were for the diversion of flows from this point through a new sewer to Bird Avenue along the centerline of Elmwood Avenue. This would have required major disruption of a very high traffic commercial area and was deemed impractical. Plans have been developed to instead divert the same flow that was to have been diverted through this project through a system of localized weir modifications rather than extensive pipe installation. These modifications include raising the weir at SPP 180 by 1.75' and the bench located in SPP 332 on the northeast quadrant of Gates Circle which currently directs dry weather flows into the interceptor will be removed and replaced with a 6.2' weir and restored sewer trough which will direct dry weather flows into the Bird Avenue trunk sewer.	The SPP 331 Optimization project is designed to increase the underflow capacity at SPP 331 thereby decreasing CSO 006 discharges. Together with other LTCP projects, this project is projected to reduce CSO 006 discharges to the Black Rock Canal based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
SPP 036 Optimization	This project consisted of the reconstruction of 35' of 30" sewer associated with SPP 036 to reverse the slope. It was located on Church Street between the off and on ramps of the Skyway (State Route 5).	The SPP 036 Optimization project was designed to increase the underflow capacity at SPP 036 thereby decreasing CSO 015 discharges. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Erie Basin through CSO 015 to 0 activations.
SPP 217 Optimization	In association with the Smith Street partial sewer separation project, this project consisted of the removal of two bottom orifice plates totaling 1.42' in height, increasing the orifice size and conveyance capacity of the Emslie Street Sewer. SPP 217 is located on Emslie Street at its intersection with Eagle Street.	The SPP 217 Optimization project is designed to increase the underflow capacity at SPP 217 thereby decreasing CSO 026 discharges. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.
SPP 318 Optimization	In association with the Smith Street partial sewer separation project, this project consisted of the removal of an orifice plate, increasing the orifice size and conveyance capacity of the Clinton Avenue Sewer. SPP 318 is located east of the intersection of Fillmore Avenue and Clinton Street.	The SPP 318 Optimization project is designed to increase the underflow capacity at SPP 318 thereby decreasing CSO 026 discharges. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.
SPP 097A Optimization	This project consisted of abandoning an inactive combined sewer, converting another to a storm sewer and abandoning the underflow connection. SPP 097A is located at the intersection of the extension of Prenatt and Orlando Streets.	The SPP 097A Optimization project is designed to eliminate SPP 097A thereby decreasing CSO 026 discharges. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.
SPP 122 Optimization	This project consisted of raising of the weir associated with SPP 122 by 0.5' along its entire length. SPP 122 is located on South Legion Drive just north of the intersection with Meriden Street.	The SPP 122 Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 122 thereby decreasing CSO 037 discharges. Together with other LTCP projects, this project is projected to reduce CSO 037 discharges to the Buffalo River based on the TY to 3 activations.

Project Name	Project Description	Project Purpose*
SPP 163 Optimization	The SPP 163 Weir Optimization project consisted of replacing the existing weir with a new weir 0.75' higher. It is located to the East of the intersection of Fillmore Avenue and Northland on Northland Avenue.	The SPP 163 Optimization project is designed to increase the flow volume conveyed by the CSS at SPP 163 thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 165 Optimization	This project consisted of raising of the weir associated with SPP 165 by 0.5' along its entire length. SPP 165 is located on Fillmore Avenue just north of the intersection with East Delavan Street.	The SPP 165 Optimization project was designed to increase the capacity of the CSS at SPP 165 thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 165A Optimization	The weir associated with SPP 165A located at the intersections of Fillmore and Kensington Avenues.	The SPP 165A Optimization project was designed to increase the capacity of the CSS at SPP 165A by raising the weir by 0.75' and upsizing 675' of 15" pipe to 18" pipe to reduce CSOs in association with CSO 053. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 178 Optimization	This project consisted of raising of the weir associated with SPP 178 by 0.5' along its entire length. SPP 178 is located on Masten Avenue just north of the intersection with Northland Avenue.	The SPP 178 Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 178 thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 335B Optimization	This project consisted of raising of the weir associated with SPP 335B by 1.0' along its entire length. SPP 335B is located on Hager Street just south of the intersection with Florida Street.	The SPP 335B Optimization project was designed to increase the flow volume conveyed by CSS at SPP 335B thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
SPP 336A Optimization	This project has been constructed in association with the SPP 331 optimization. The project consist sof removing a sluice gate and orifice plate and modifying the existing structure by changing the existing side channel opening from 24" to 30". SPP 336A is located on Humboldt Parkway North of the Scajaquada Drain.	The SPP 336A Optimization project is designed to increase the underflow capacity of the CSS at SPP 336A thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 341A Optimization	SPP 341A is located on Genesee Street east of Kerns Avenue. This project is on hold pending the results of post-construction monitoring.	The SPP 341A Optimization project would increase the flow volume conveyed by the CSS at SPP 341A thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations. Field conditions may require modification to this planned optimization.
SPP 342B Optimization	This project consisted of raising of the weir associated with SPP 342B by 1.0' along its entire length. SPP 342B is located on Sprenger Avenue adjacent to Schiller Park.	The SPP 342B Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 342B thereby decreasing CSO 053 discharges. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
SPP 001 Optimization	The weir associated with SPP 001 located at the discharge of Cornelius Creek into the Niagara River and tributary to CSO 055 has been raised 1.0' to reduce CSOs.	The SPP 001 Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 001 thereby decreasing CSO 055 discharges. Together with other LTCP projects, this project is projected to reduce CSO 055 discharges to the Niagara River based on the TY to 9 activations.
SPP 183 Optimization	This project consisted of raising of the weir associated with SPP 183 by 2.0' along its entire length. SPP 183 is located at the intersection of Bradley Avenue and Dewitt Street.	The SPP 183 Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 183 thereby decreasing CSO 059 discharges. Together with other LTCP projects, this project is projected to reduce CSO 059 discharges to Scajaquada Creek based on the TY to 0 activations.

Project Name	Project Description	Project Purpose*
SPP 283 Optimization	SPP 283 is located in the median between the I-190 South ramp to Porter Avenue and a service road near the West Side Rowing Club. This project consisted of removing an orifice plate which restricted flows from entering the Swan Trunk and the installation of a new 1.0' tall weir to restrict flows from discharging through CSO 063.	The SPP 283 Optimization project was designed to increase the underflow capacity of the CSS at SPP 283 thereby decreasing CSO 063 discharges. Together with other LTCP projects, this project is projected to reduce CSO 063 discharges to the Niagara River based on the TY to 4 activations.
SPP 211 Optimization	This project consisted of constructing a weir to an elevation above the overflow raised pipe invert at SPP 211. SPP 211 is located at the South East corner of the intersection of Clinton and South Ogden Streets.	The SPP 211 Optimization project was designed to increase the flow volume conveyed by the CSS at SPP 211 thereby decreasing CSO 066 discharges. Together with other LTCP projects, this project is projected to reduce CSO 066 discharges to the Buffalo River based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
Foundation 3 - Remaining RTC (14 sites)	These RTC projects propose to utilize available capacity in the CSS to provide flow control measures during wet weather events through the use of active controls.	In general, these projects are designed to reduce discharges to the CSOs through the detention of flows within the BSA's CSS system.
Hertel Northwest In-Line Storage	This RTC project is proposed to utilize available capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is within the northern of the two large combined sewers which are located under Hertel Avenue.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 055 discharges to the Niagara River based on the TY to 9 activations.
Hertel South In- Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is within the southern of the two large combined sewers which are located under Hertel Avenue.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 055 discharges to the Niagara River based on the TY to 9 activations.
Hertel Northeast In- Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. This project will be located within the northern of the two large combined sewers which are located under Hertel Avenue.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 055 discharges to the Niagara River based on the TY to 9 activations.

Project Name	Project Description	Project Purpose*
Bird East In-Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. This project will be located to the east of the above mentioned Bird RTC project along the same Bird Avenue sewer.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 004 discharges to the Black Rock Canal based on the TY to 3 activations.
East Ferry In-Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is along the Ferry Street sewer upstream of its leaping weir overflow to the Scajaquada Drain north of Florida Street.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
Colorado In-Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is along the Colorado Avenue sewer which runs underneath the manufacturing facility located at 1001 East Delavan Avenue.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
North Bailey In- Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is along Bailey Avenue north of Scajaquada Street.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
South Bailey In- Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is along Bailey Avenue north of Scajaquada Street and south of the afore mentioned North Bailey In-Line Storage project.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
Roslyn In-Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is near Roslyn Street on Lang Avenue.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
Hazelwood (Kay) In- Line Storage	This RTC project, now known as Hazelwood, is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. The proposed project location is on Hazelwood Avenue between East Delavan and Easton Avenues.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.
Amherst Quarry Off-Line Storage	This RTC project proposes to utilize available capacity in the CSS capacity within the inactive Amherst Quarry to provide flow control measures during wet weather events, once downstream capacity is available, flows will then be pumped back into the system. The Amherst Quarry is located in an area bounded by Parkridge Avenue, East Amherst Street, and Hewitt Avenue.	This RTC project is proposed to utilize available capacity of the quarry to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 053 discharges to Scajaquada Creek based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
Fillmore North In- Line Storage	This RTC project is proposed to utilize available capacity in the CSS capacity of a large sewer to provide flow control measures during wet weather events while allowing continuous dry weather underflow. This project is proposed to be located on Fillmore Avenue, however pending the results of post-construction monitoring, it may be eliminated depending on the efficacy of the Smith Street Storage project.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.
Gibson CSO Line Storage	This project is proposed to utilize the available capacity of the CSO pipe downstream of the SPP, but before the discharge point or outfall. It would be designed to convey water to prevent surface flooding and overflows through upstream SPPs. Once the storm event has subsided, it would be designed to dewater back into the combined system. The dewatering rate would be controlled so that it would not cause overflows downstream from the control structure. The proposed project location is on Gibson Street, however pending the results of post-construction monitoring, it may be eliminated depending on the efficacy of the Smith Street Storage project.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.

Project Name	Project Description	Project Purpose*
Montgomery CSO Line Storage	This project is proposed to utilize the available capacity of the CSO pipe downstream of the SPP, but before the discharge point or outfall. It would be designed to convey water to prevent surface flooding and overflows through upstream SPPs. Once the storm event has subsided, it would be designed to dewater back into the combined system. The dewatering rate would be controlled so that it would not cause overflows downstream from the control structure. The proposed project location is along the railroad right-of-way near Montgomery Street, however pending the results of post-construction monitoring, it may be eliminated depending on the efficacy of the Smith Street Storage project.	This RTC project is proposed to utilize available capacity within the collection system to detain flows until downstream capacity becomes available. Together with other LTCP projects, this project is projected to reduce CSO 026 discharges to the Buffalo River based on the TY to 3 activations.
Foundation 4 - Hamburg Drain Optimizations	This project will entail several in-system optimizations, e.g. rerouting of flows, installation of weirs, partial sewer separations etc. and/or green infrastructure to reduce the overflow events at a number of upstream SPPs in order to control flows through CSOs 017, 022, and 064. These optimizations would be located within the Hamburg Basin.	These optimization projects are proposed to increase the flow volume conveyed by the CSS upstream of the SPPs and diverting stormwater flows out of the CSS thereby decreasing CSO 017, 022, and 064 discharges. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Buffalo River through CSO 017 to 4 activations, CSO 022 to 5 activations, and CSO 064 to 3 activations.
Foundation 4 - Hamburg Drain Storage	Together with the Hamburg Drain Optimizations, this project would be designed to provide the equivalent of 5 MG of offline storage. This facility would be located within the Hamburg Basin and may involve the installation of RTCs.	This storage project is proposed to provide off-line storage thereby decreasing CSO 017, 022, and 064 discharges. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Buffalo River through CSO 017 to 4 activations, CSO 022 to 5 activations, and CSO 064 to 3 activations.

Project Name	Project Description	Project Purpose*
WWTP	The proposed project is expected to rehabilitate the existing primary	This project would be designed to provide treatment of wet weather flows
Improvement	clarifiers by adding high rate disenfection and provide additional	and increased secondary treatment capacity.
Project Alternative	secondary clarifiers at the Bird Island WWTP.	
C2		

Project Name	Project Description	Project Purpose*
Green Infrastructur	e Projects	
Green 1 - Pilot Projects – 267- acres of GI control	Projects consist of multiple green infrastructure projects that will overlap in engineering and construction.	In general, this phase is designed to control stormwater flow from 267 acres of impervious area in the various sewer sheds within the targeted areas.
2001-2016 Residential Demolitions	This project consists of the demolition of vacant houses thereby replacing impervious with pervious surfaces.	This project is designed to remove 256 total acres of impervious area and manage all subsequent stormwater on site.
2001-2016 Commercial and Industrial Demolitions	This project consists of the demolition of commercial and industrial structures thereby replacing impervious with pervious surfaces	This project is designed to control stormwater flow from 78 total acres of impervious area.
Green 2 – 410 acres of GI Control	These projects will consist of multiple green infrastructure projects that will overlap in engineering and construction. Details will be provided in the Phase 2 Green Infrastructure Master Plan.	In general, these projects would be designed to retain stormwater flow from 410 acres of impervious area in the various sewer sheds in the targeted areas.
2017 -2024 Demolitions	This project consists of the demolition of vacant and dilapidated structures thereby replacing impervious surface with pervious surface	This project is designed to control stormwater flow for each post demolition vacant lot. Total acreate TBD on a rolling basis depending upon demolitions completed.
Green Demolition Pilot Project	A three year pilot study where the City of Buffalo's demolition specifications were altered to allow for the use of shallow bioretention to increase onsite infiltration	Over the course of the pilot project the revised demolition specifications/bioretention approach was applied to 221 sites impacting a total of 19.03 acres.

Project Name	Project Description	Project Purpose*
	PUSH-Buffalo will install rain gardens, porous pavement and a green roof and distribute rain barrels within the CSO 012 sewershed.	This project is designed to control stormwater flow from 1 acre of impervious area.
Porous Asphalt	This project consisted of the installation of pervious pavement to retain stormwater from the area tributary to the Right-of-Way on Carlton Street between Michigan and Jefferson Avenues in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from a 5.9 acre sewershed.

Project Name	Project Description	Project Purpose*
Fillmore Avenue Porous Parking Lots and Green Lots	This project consisted of the installation of porous pavement parking lots and modified rain gardens to retain stormwater from the area tributary to the Right-of-Way of Fillmore Avenue in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 0.4 total acres of impervious area.
Ohio Street	This project consisted of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way on Ohio Street in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 6.1 total acres of impervious area.
Kenmore Avenue	This project consists of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way on Kenmore Avenue in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 5.17 total acres of impervious area.
Genesee Gateway Project	This project consists of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way on Genesee Street in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 2.8 total acres of impervious area.
Allen Street	This project will consist of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way for the portion of Allen Street between Main Street and Elmwood Avenue in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 2.5 total acres of impervious area.
Niagara Street Phase 1: Elmwood Street to Virgina Street	This project consists of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way for the length of Niagara Street in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 2 total acres of impervious area.

Project Name	Project Description	Project Purpose*
Niagara Street Phase 2: Virgina Street to Porter Avenue	This project consists of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way for the length of Niagara Street in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 7.3 total acres of impervious area.
Niagara Street Phase 4: Porter Avenue to Ontario Street	This project consists of the installation of green infrastructure to retain stormwater from the area tributary to the Right-of-Way for the length of Niagara Street in the City of Buffalo as part of the City's streetscape project.	This project is designed to control stormwater flow from 15 total acres of impervious area in MS4 drainage areas and 25.5 in CSO drainage areas.
Green 3 – 375 acres of GI Control	These projects will consist of multiple green infrastructure projects that will overlap in engineering and construction. Details will be provided in the Phase 2 Green Infrastructure Master Plan.	In general, these projects would be designed to retain stormwater flow from 375 acres of impervious area in the various sewer sheds in the targeted areas.
Green 4 – 263 acres of GI Control	These projects will consist of multiple green infrastructure projects that will overlap in engineering and construction. Details will be provided in the Phase 2 Green Infrastructure Master Plan.	In general, these projects would be designed to retain stormwater flow from 263 acres of impervious area in the various sewer sheds in the targeted areas.

Project Name	Project Description	Project Purpose*
Gray Projects		
CSOs 014/15 – Erie Basin In-line storage and optimization projects SEE DETAILS FOLLOWING FOR SPECIFIC PROJECTS		
SPPs 206A&B	A new 113,000 gallon in-line storage facility was constructed in association with SPPs 206A&B to reduce CSOs at CSO 014. This site is located at Trenton Road/ Village Court north east of Fourth Street.	This project was designed to provide in-line storage thereby decreasing CSO 014 discharges through SPPs 206A&B. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Erie Basin through CSO 014 to 2 activations.
SPP 035	the Genesee Trunk and Swan Trunk sewers to create additional	This project was designed to provide in-line storage thereby decreasing CSO 015 discharges through SPP 35. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Erie Basin through CSO 015 to 0 activations.
SPP 036	This project consisted of the reconstruction of 35' of 30" sewer associated with SPP 036 to reverse the slope. This site is located on Church Street between the off and on ramps of the Skyway bridge (State Route 5).	This sewer reconstruction project was designed to increase the underflow capacity of the CSS thereby decreasing CSO 015 discharges. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Erie Basin through CSO 015 to 0 activations.

Project Name	Project Description	Project Purpose*
storage, conveyance, FM &	CSO 013 is located at the extension of Virginia Street into the Black Rock Canal, the structure is tentatively planned to be built between the last SPP structure and the Canal. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	This storage project would provide off-line storage thereby decreasing CSO 013 discharges. Preliminary design is for a 0.3 MG offline storage facility. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Black Rock Canal through CSO 013 to 4 activations.
North Relief – Interceptor	The original conception of this project was of a deep tunnel relief sewer to run in the vicinity of Niagara Street between Bird Avenue and Albany Street with an additional line connecting the tunnel to the WWTP influent siphon. Preliminary design is for 5,310' of 96"pipe and 571' of 120" pipe. Due to site constraints this project may be redesigned.	The purpose of this project is to reduce discharges through CSOs 004, 011, and 012, by creating a new relief sewer thereby creating offline storage capacity capacity in the CSS. Together with other LTCP projects, this project is projected based on the TY to reduce discharges to the Black Rock Canal through CSO 004 to 3 activations, CSO 011 to 4 activation, and CSO 012 to 2 activations.
061, 004 – Underflow capacity	This project will consist of upsizing of underflow piping to maximize flow to the interceptors. This project is tentatively proposed for between Breckenridge Street and Brace Street along the I-190 with an extension along Brace Street across Niagara Street.	This underflow capacity upsizing project would increase the capacity of the CSS thereby decreasing CSO 010, 008, 061 and 004 discharges. Together with other LTCP projects, this project is projected based on the 1993 Modified Typical Year to reduce discharges to the Black Rock Canal through CSO 004 to 3 activations, CSO 010 to 1 activations, CSO 008 to 0 activations, and CSO 061 to 4 activations.
– Satellite storage,	SPP 337 is located at Colorado Street North of Scajaquada Street. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 53 to the Scajaquada Creek. Preliminary design is for a 0.7 MG off-line storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges to Scajaquada Creek based on the TY to 4 activations.
053) – Satellite	SPP 336A&B are located on Humboldt Parkway on each side of the Scajaquada Drain. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 53 to the Scajaquada Creek. Preliminary design is for a 4.2 MG off-line storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges to Scajaquada Creek based on the TY to 4 activations.

Project Name	Project Description	Project Purpose*
Jefferson Avenue & Florida Street (CSO 053) – Satellite storage, conveyance and FM	The proposed location for this facility is in the vicinity of the intersection of Jefferson Avenue and Florida Street. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 53 to the Scajaquada Creek. Preliminary design is for a 2.6 MG off-line storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges to Scajaquada Creek based on the TY to 4 activations.
storage,	For CSO 055, the proposed storage facility would be located upstream of the regulator, near Military Road. At this location, an offline facility would be constructed and flows above 26 MGD (instantaneous peak) would be diverted from the South Hertel Trunk sewer into the storage facility. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 55 to the Niagara River. Preliminary design is for a 7.5 MG off-line storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges to the Niagara River through CSO 55 based on the TY to 9 activations.
Satellite storage,	The proposed location for this facility is underneath the Tops parking lot between South Park Avenue and the Buffalo River. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 28 to the Buffalo River and through CSOs 047 and 044 to Cazenovia Creek. Preliminary design is for a 2.3 MG off-line storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges based on the TY to 6 activations through CSO 028, 2 activations through CSO 044 and 3 activations through CSO 047.
CSO 052 – Satellite storage, conveyance, FM & PS	The proposed location for this facility is in the vicinity of South Ogden Street between Mineral Springs Road and Cazenovia Creek. The proposed satellite storage facility would consist of a covered, concrete, underground tank.	The purpose of this project is to reduce discharges through CSO 52 to the Buffalo River. Preliminary design is for a 0.6 MG offline storage facility. Together with other LTCP projects, this project is projected reduce CSO discharges to the Buffalo River through CSO 052 based on the TY to 3 activations.

Project Name	Project Description	Project Purpose*
CSO 064 – Satellite	The proposed location for this facility is in the vicinity of the	The purpose of this project is to reduce discharges through CSO 064 to the
		Buffalo River. Preliminary design is for a 0.1 MG off-line storage facility.
•		Together with other LTCP projects, this project is projected reduce CSO
PS	underground tank.	discharges to the Buffalo River through CSO 064 based on the TY to 3
		activations.

*Note: Black Rock Canal Performance Criterion is 4 Activations in the Typical Year Buffalo River Performance Criterion is 6 Activations in the Typical Year Cazenovia Creek - B Performance Criterion is 4 Activations in the Typical Year Cazenovia Creek - C Performance Criterion is 6 Activations in the Typical Year Erie Basin Performance Criterion is 2 Activations in the Typical Year Niagara River Performance Criterion is 9 Activations in the Typical Year Scajaquada Creek - Performance Criterion is 4 Activations in the Typical Year

Attachment C to the Semi-Annual Status Report: September 2017

Public Meeting Materials

NORTHLAND CORRIDOR PROJECT PUBLIC MEETING January 30, 2017; 6:00 PM

AGENDA

- 6:00 Sign-in/Networking
- 6:15 Introductions/Welcome
- 6:30 Presentations
- 7:30 Next Steps & Schedule
- 7:35 Breakout/Q&A
- 8:00 Adjournment

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Northland Corridor Project Public Meeting January 30, 2016 @ 6:00p.m.

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Project Overview

- Deep mill and overlay
- New Curb and Sidewalk
- New Landscape
- Traffic Signal Upgrades
- Utility Modifications
- Green Infrastructure
- Public Art





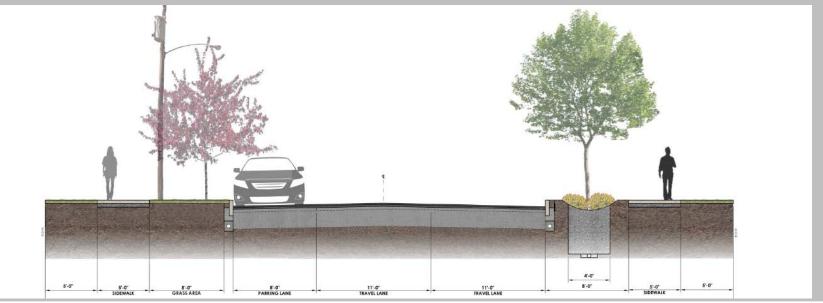






Project Overview

- Pavement to remain 30-ft. wide
 - Two 11-ft. wide lanes
 - One 8-ft. wide parking lane on north side
- New granite curb and new 5-ft. wide sidewalk
- Landscape area between curb and sidewalk widened to 8-ft.
 - Dead or dying trees removed and replaced with new trees
 - Trees in good health to be protected











Traffic Calming Improvements

- Proposed bumpouts at Chelsea, Longview, and Schauf
- New signal at Schauf











Utility Modifications

- Utility Poles
 - Poles will remain on north side
 - New wood poles to be placed 7-ft. from new curb
 - Existing poles will be removed
 - New lighting will be installed on new poles











Green Infrastructure

- Large currently undeveloped area at 577 Northland, near Fillmore, to be repurposed
 - Rain and other surface water will drain towards property
 - Water will be treated using bioswales
 - Trees, landscaping, and pathway may be added











Public Art

Public Art will be included within 577 Northland property or elsewhere on the corridor











<u>Schedule</u>

- Begin utility relocations early 2017
- Project bid late March 2017
- Project award and construction start Spring 2017
- Project completion late 2017 or early 2018

<u>Costs</u>

• Overall – \$3.5M - \$4.5M









Impacts to Community – During Construction

- City approved Construction Inspector will be available either on site or by phone 24-hours/day
- Some enhancements will require rock excavation; rock blasting is not anticipated
- Intermittent disruptions in utility services; customers to be notified in advance
- Short duration street closures possible during utility trenching operations
- Driveways and sidewalks will be closed while concrete is being placed
- Road closure by segments may be utilized to speed up construction; open to local traffic only

Impacts to Community – Post-Construction

- New roadway and sidewalk will enhance corridor
- New traffic signal at Schauf may help to calm traffic
- Utility pole relocation away from edge of roadway may help reduce accidents











NORTHLAND CORRIDOR REDEVELOPMENT AND WORKFORCE TRAINING CENTER

STAKEHOLDERS ADVISORY COMMITTEE

Wednesday, September 28, 2016; 10:30 AM

AGENDA

- 1. Welcome & Introductions Hon. Ulysees O. Wingo, Sr.
- 2. Restore NY Grant Application (D. Stebbins)
- 3. Northland Avenue Street Improvements (J. Bidell)
- 4. Northland Corridor Campus Plan (D. Naetzker)







NORTHLAND CORRIDOR REDEVELOPMENT PROJECT Stakeholders' Advisory Committee

The purpose of the Northland Stakeholders' Advisory Committee is to provide community feedback and perspective on Northland redevelopment activities and plans, and to provide the Northland Redevelopment partners with advice and input on neighborhood planning goals and objectives. The Advisory Committee will complement larger public meetings and other community outreach efforts

Neighborhood (3)

- 1. Beverly Crowell, Northland Beltline Taxpayers Association
- 2. Alonzo Barnes, Delavan-Grider Block Club Coalition
- 3. Ada Hopson Clemons, Masten Block Club Coalition

Churches (3)

- 4. Pastor William Gillison, Mt. Olive Baptist Church
- 5. Pastor Milton French, 2nd Temple Baptist Church
- 6. Rev. Jeffery Carter, Ephesus Ministries
- 7. Rev. Kinzer Pointer, Greater Buffalo United Ministries/Concerned Clergy Coalition of WNY

Community Organizations (5)

- 8. Cornelius Johnson, Citizens Alliance
- 9. Richard Cummings, Jr, Black Chamber of Commerce
- 10. Barbara Carson-Jones, Delavan-Grider Community Center/Metro CDC
- 11. Delores Jacobs, Metro CDC
- 12. Janice McKinnie, True CDC

Neighborhood Businesses (4)

- 13. Jeff Plesh, Plesh Contract Packaging
- 14. Marjorie Bryen, Hard Manufacturing
- 15. Jennifer Parker, Black Capital Network

Key Institutions (5)

- 16. Janique Curry, ECMC
- 17. Modesto Candelario, Buffalo Municipal Housing Authority (BMHA)
- 18. Kimberly Stephens, Bridges Development, Inc. (BMHA affiliate)
- 19. Demone Smith, Buffalo Employment & Training Center

Elected Officials (3)

- 20. State Senator Tim Kennedy (or representative)
- 21. Assemblywoman Crystal Peoples-Stokes (or representative)
- 22. Ulysees O. Wingo, Sr., Masten District Councilmember

City of Buffalo (2)

- 23. Brendan Mehaffy, Executive Director, Office of Strategic Planning (or designee)
- 24. Oswaldo Mestre, Director of Citizen Services

New York State/Sponsors (2)

- 25. Christopher Schoepflin, Regional Director, Empire State Development (or designee)
- 26. Katherine Rougeux, New York Power Authority

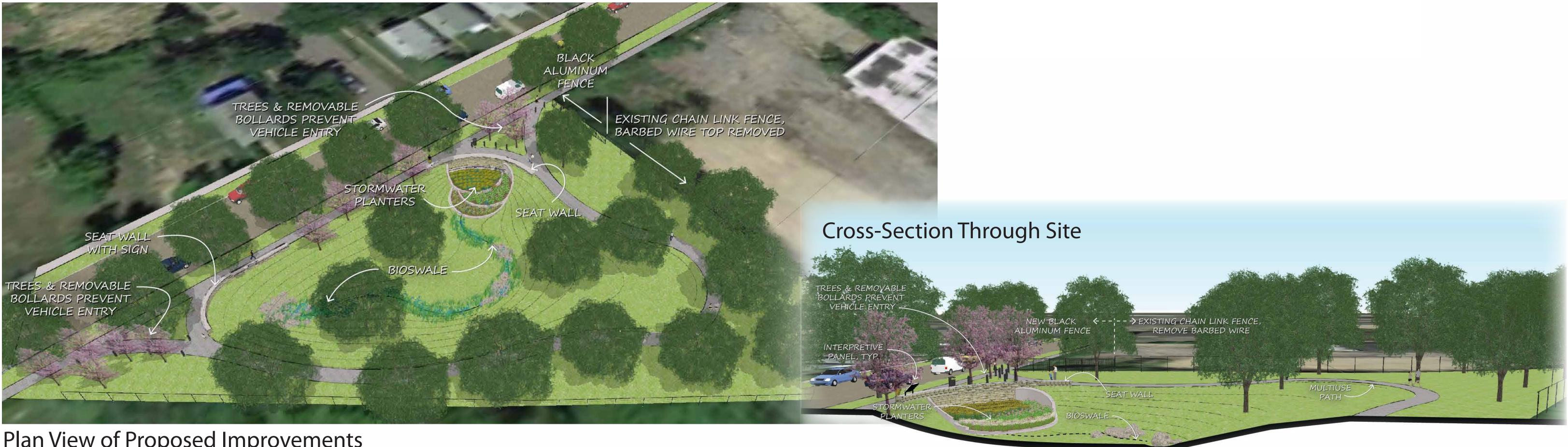
Critical to achieving Mayor Byron W. Brown's vision for the redevelopment of the Northland Corridor is the inclusion of community input as a critical and integral part of the process. Buffalo Urban Development Corporation, the Mayor's Office of Strategic Planning and the entire development team have put together an extensive effort to engage residents and stakeholders in a discussion about the future of the Northland Corridor and the Delavan-Grider neighborhood. In addition to large public meetings, there have also been numerous small group and one-on-one meetings with neighborhood stakeholders and elected officials.

This is a summary of the various methods used to reach interested individuals and organizations:

Public Outreach for the Northland Project	
General Public Meetings	Three public meetings have been held at the Delavan Grider Community Center: October 15, 2015; February 24, 2016 and January 30, 2017. Additional public meetings will be held in the future. Several hundred residents have attended these neighborhood meetings. They have been provided with the status and updates on redevelopment efforts and have been able to provide input on the neighborhood redevelopment strategy. The meetings have included opportunities to sit down in small groups with members of the project team and discuss a range of the strategies for Northland Corridor. Notification of the meetings are accomplished via media advertising (local radio and neighborhood newspapers), social media, postcards and posters delivered to residents and through a variety of neighborhood organizations.
Northland Stakeholders Advisory Committee	The Mayor and BUDC team have organized a Northland Stakeholder Advisory Committee. It is comprised of neighborhood residents, neighborhood businesses, representatives from key community organizations and institutions, local clergy and elected officials. The committee meets periodically to receive updates from the project team and give feedback in return. There have been four stakeholder meetings held to-date.
Northland Section 106 compliance Consultation Meeting	As part of the Federal compliance requirements for Historic Preservation efforts, the BUDC and the architectural team – led by Barbara Campagna - held two meetings to receive input on the BUDC's preservation and mitigation plan for historic resources in the corridor. The consulting parties included both neighborhood and preservation interests.
Northland Business Owners	BUDC has created an ad hoc group of neighborhood business owners in order to keep them informed of plans and activities in the Northland Corridor. Two meetings have been held to-date.

In addition, BUDC and its project team have attended meetings held by several other neighborhood organizations to provide project updates, including the Northland Beltline Taxpayers Association (NBTA) and the Masten District's Block Club Leaders' Second Saturday Breakfast. The BUDC also communicates via social media and the BUDC website.

577 NORTHLAND AVENUE: Green Infrastructure Design Concept



Plan View of Proposed Improvements







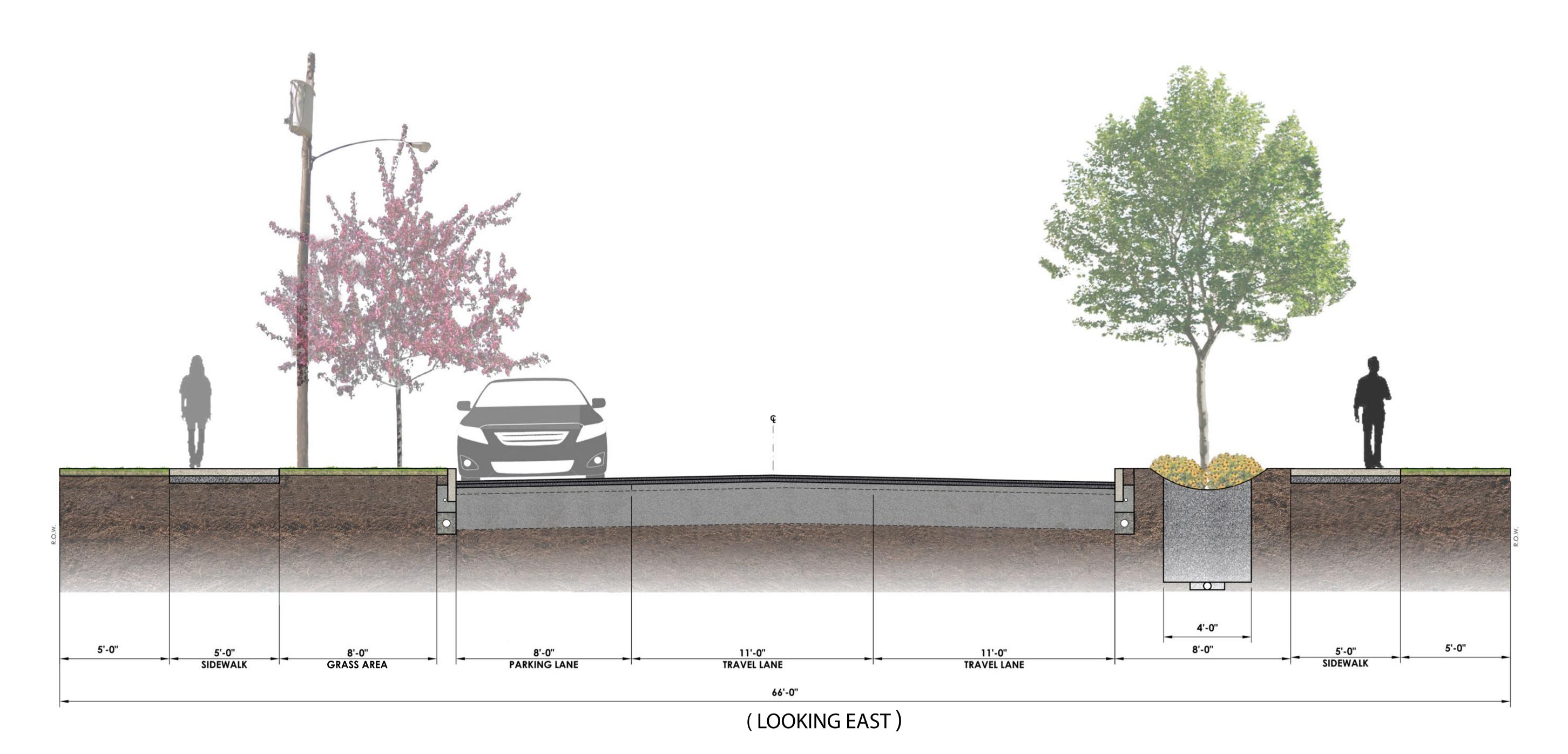




DECEMBER 2016



NORTHLAND AVENUE REHABILITATION / STREETSCAPE FILLMORE AVENUE TO GRIDER STREET











NORTHLAND AVENUE REHABILITATION / STREETSCAPE INTERSECTION IMPROVEMENTS AT NORTHLAND AND SCHAUF



Proposed Intersection Improvements







JANUARY 2017



Northland Corridor
RedevelopmentPUBLIC MEETING #3RescheduledMon1/306-8pm



Delavan-Grider Community Center 877 East Delavan Avenue

www.buffalourbandevelopment.com



Byron W. Brown, Mayor



Andrew M. Cuomo, Governor