CITY OF ALLENTOWN

I&I SOURCE REDUCTION PROGRAM PLAN

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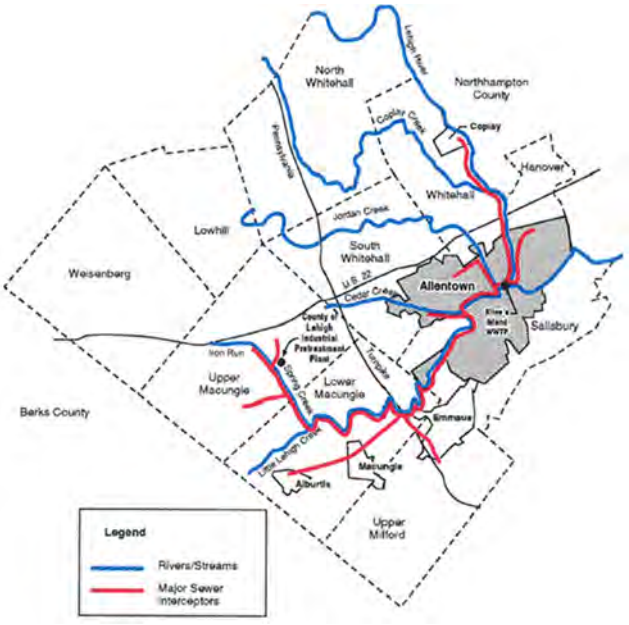
1.0 COLLECTION SYSTEM OVERVIEW

The City of Allentown's (City's) wastewater collection system (collection system) and its Kline's Island Wastewater Treatment Plant (WWTP) have been in operation since 1929 and originally served only residents of the City. Beginning in the late 1950's and continuing through the late 1960's, the City entered into service agreements with surrounding municipalities and authorities for conveyance of wastewater through City-owned trunk sewers and for treatment of wastewater at the KIWWTP. The first signatory agreement was executed with the Borough of Emmaus in 1959. Signatory agreements were subsequently executed with Coplay-Whitehall Sewer Authority, Salisbury Township and South Whitehall Township in 1965, and in 1969 a signatory agreement was executed with the Lehigh County Authority. Due to the need to treat flow from the signatories together with growth within the City, the KIWWTP was expanded to an average flow capacity of 28.5 mgd in 1968 and to 40 mgd in 1978, which is the current average flow capacity of the KIWWTP. The corresponding peak flow capacity of the KIWWTP is 87 mgd.

At the time the original signatory agreements were executed, wastewater was conveyed to the KIWWTP by a total of seven (7) City-owned trunk sewers:

- Lehigh River Trunk Sewer
- Front Street-Union Street Trunk Sewer
- Jordon Creek Trunk Sewer
- Little Lehigh Creek Trunk Sewer
- Emmaus Trunk Sewer
- Trout Creek Trunk Sewer
- District No. 29 Trunk Sewer



As a condition of the construction grant obtained in the mid-1970's to expand the KIWWTP's capacity from 28.5 mgd to 40 mgd, the City and its signatories were required to perform Sewer System Evaluation Surveys (SSESs). As part of the City's SSES performed during that period, the hydraulic conveyance capacity of each trunk sewer was calculated and compared to the estimated capacity required for the year 2025. Based on this analysis, the sewer signatories subsequently constructed the following relief sewers which are owned and operated by the signatories:

- LCA Little Lehigh Creek Relief Sewer
- South Whitehall Relief Sewer
- Salisbury Relief Sewer
- Coplay-Whitehall Lehigh Sewer
- Coplay-Whitehall Jordan Sewer

The City's collection system currently consists of: (1) 285 miles of City-owned sewer pipe, of which 242 miles is 4 to 10-inches in diameter, 22 miles is 12 to 21-inches in diameter and 21 miles is 24-inches and larger in diameter; (2) 7,199 City-owned manholes and 382 privately-owned manholes; and (3) 33,359 connections to City-owned sewers and 18 connections to privately owned sanitary sewers. The table below presents a detailed breakdown of sanitary sewers by diameter and length.

Sewer Diameter (inches)	Sewer Length (feet)	Sewer Diameter (inches)	Sewer Length (feet)
4	10	21	11,566
6	1,745	24	53,805
8	1,155,844	27	10,026
10	117,748	30	9,891
12	34,165	33	2,017
14	1,517	36	28,613
15	31,579	39	1.922
16	703	42	4,977
18	34,613	54	245
20	2,577	60	936

Sewer pipe type includes reinforced concrete, vitrified clay, Polyvinyl Chloride (schedule 40, SDR 26 and SDR 35), cast iron, ductile iron, terra cotta, and reinforced poured in place concrete with tile floor.

2.0 COMPLETED I&I SOURCE REDUCTION ACTIVITES

In 2007, the Environmental Protection Agency (EPA) issued an Administrative Order (AO) to the City of Allentown (City) to eliminate use of the Kline's Island Wastewater Treatment Plant's (KIWWTP's) emergency outfall 003, which EPA considered to be a sanitary sewer overflow (SSO) because it is physically located upstream of the KIWWTP's headworks facilities.

In 2009, the EPA issued an AO to the City and its Signatories which convey flows directly or indirectly to the KIWWTP to address collection system SSOs. Under the 2009 AO, the City and the Signatories were to eliminate the SSOs and demonstrate continual progress toward this end goal. In working toward this goal, over the last decade, the City has undertaken and completed the following activities related to identifying and eliminating sources of infiltration and inflow:

- ADS Environmental Services (ADS) was retained in 2008 to perform a City-wide flow metering program to gain an understanding of the locations and magnitude of Infiltration and Inflow (I/I) entering the sewer collection system. The Flow Monitoring program conducted by ADS Environmental Services resulted in 90 days of flow data at 169 locations. The monitoring period began on 31 July and ended 31 October 2008.

- In 2009, ADS performed targeted flow monitoring on 10 of the original basins from the 2008 study to help locate I&I sources and magnitude in smaller geographic areas. The targeted metering was conducted with 18 ADS flow meters, deployed between April and June of 2009.
- Using the data from the flow monitoring studies in 2008 and 2009, Whitman Requardt and Associates (WR&A) developed and calibrated a hydraulic model of the sewer collection system within the City. This model was the basis of the System Assessment and Phase 1 Corrective Action Plan, developed in 2013, which outlined alternatives for reduction and elimination of SSOs. One of the improvements identified in the Phase 1 Corrective Action Plan was the removal of I&I entering the sewer collection system. Included in the Phase 1 Corrective Action Plan was an I&I removal analysis pin pointing areas where the greatest I&I is present within the City and where removal of excess flows would be most beneficial to reducing and eliminated SSOs.

- Based on the flow monitoring and Phase 1 Corrective Action Plan recommendations, the top twenty basins with approximately 8 percent of the total linear footage of sewers within the City, were identified for having the highest potential impact on SSOs due to excessive I&I. The twenty basins are referred to as the Primary and Secondary Basins, and are shown on Figure 1, located on Page 4. The modeling results from WR&A indicated that flows from these twenty basins have an above-average impact on SSOs system-wide.

- In 2014, the Lehigh County Authority (LCA) contracted with Video Pipe Services, Inc. to perform a Sewer System Evaluation Survey (SSES), consisting of CCTV investigations of the twenty basins in the City identified previously as having the highest potential impacts on SSOs. The investigations included CCTV of the pipe segments in the basins, as well as manhole inspections. A ranking system based on the National Association of Sewer Service Companies (NASSCO) standards was used to quickly determine which pipe segments were in most need of rehabilitation.

- During the CCTV inspections by Video Pipe Services, Inc., LCA and the City wanted to be proactive in addressing severe defects, when they were encountered in the field. As a result, some defects were repaired shortly after completing the CCTV investigations. In addition to point repairs, heavy cleaning was performed for some pipelines. Smoke testing was also performed in selected locations.

- Over the past decade, the City has also undertaken additional sewer inspection and rehabilitation work throughout the collection system. The work performed is detailed in the semi-annual Progress Reports for the EPA Order for Compliance and Request for Information, Docket Number CWA-03-2009-0313DN. The sewer inspection and rehabilitation work has consisted of the following activities:
    - Detailed inspections of approximately 1,800 Manholes
    - Installation of manhole inserts in all 7,199 City-owned manholes
    - Repairs to and lining of over 400 manholes

- CCTV Inspections of over 400,000 linear feet of Sanitary Sewers
- A total of 194 Sewer repairs by excavation and trenchless methods
- CCTV Inspection of storm sewers – no cross connections have been found
- Building and Downspout Inspections and removal of illegal connections
- Ongoing trestle and bridge clearing and root control

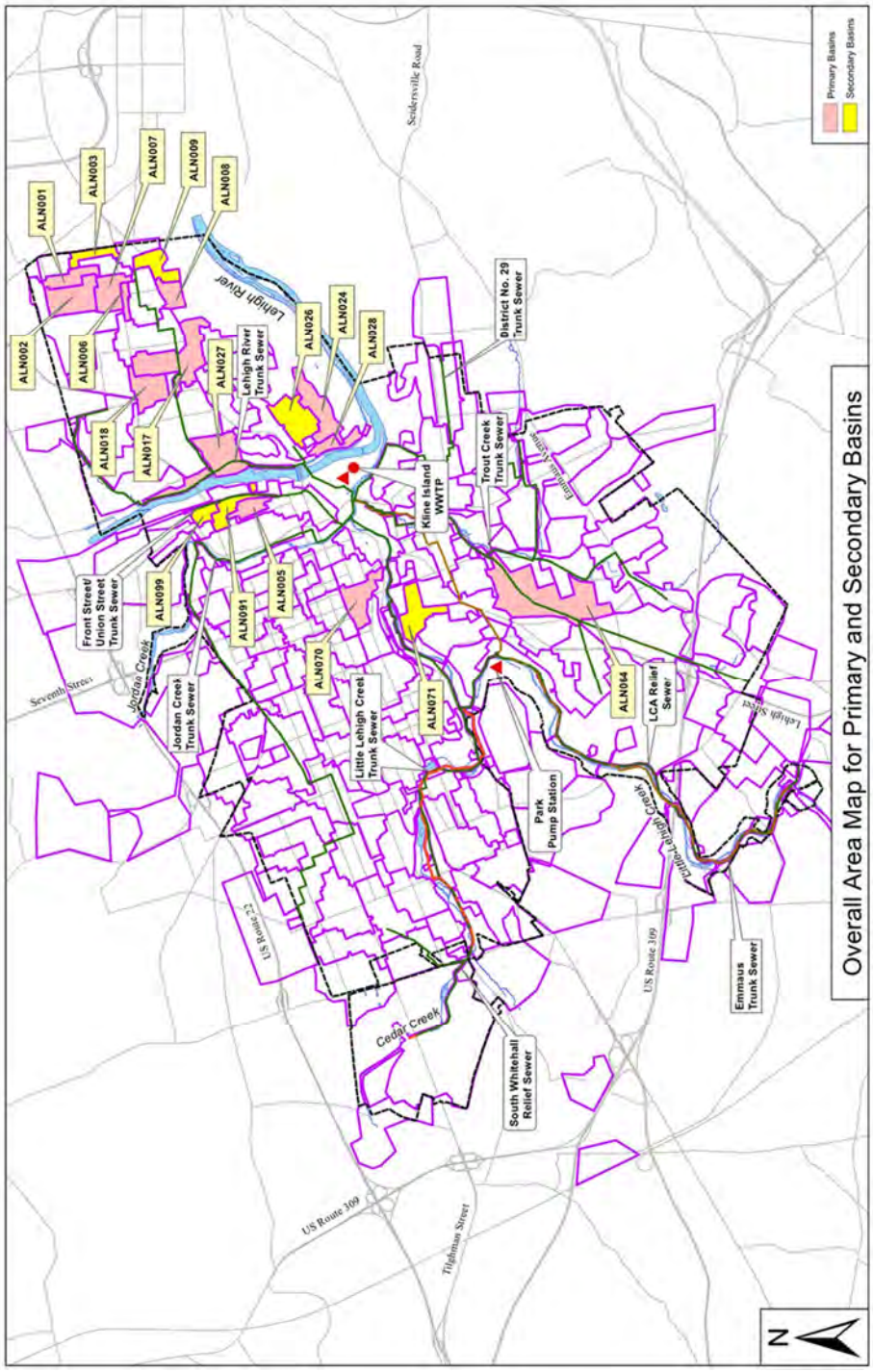


Figure 1: Primary and Secondary Basins

3.0 SOURCE REDUCTION PROGRAM PLAN – 5 YEAR PLAN

The City will implement the remaining I&I source reduction measures identified within the Primary and Secondary Basins, as well as additional areas identified by LCA and City staff, by repairing these previously identified defects and will continue to implement repairs to correct defects identified in the future during its ongoing CCTV program, including the recently identified need for repair of the sewer along Auburn Avenue. The following corrective action types were previously recommended:

- Corrective Action 1 – Heavy or Specialty Cleaning
- Corrective Action 2 – Grouting
- Corrective Action 3 – Lining Point Repair
- Corrective Action 4 – Excavated Point Repair
- Corrective Action 5 – Lining Entire Pipe Segment
- Corrective Action 6 – Complete Pipe Replacement

Some of the corrective actions were previously completed in 2014 by Video Pipe Services shortly after completing the CCTV inspections. For example, all pipe segments that called for Corrective Action 6, complete pipe replacement, have already been repaired.

The remaining source reduction activities within the twenty Primary and Secondary Basins, as well as areas identified by LCA and City staff, have been organized into a 5-Year Plan, with each year focusing on a different geographic region of the City's sewer collection system infrastructure. The proposed Plan starts in Year 1 with the implementation of a significant lining project along the Little Lehigh Creek adjacent to Martin Luther King Jr. Drive (MH K_3_4 to MH 14_DB). The Plan then generally moves to the northeastern sections of the sewer collection system in Year 2 and ends in the southern sections in Year 5.

Note that while a five year plan is presented below, consideration should also be given to an aggressive approach in which all the work is performed as combined annual projects or as one single project. This would result in significant cost savings and a fast-tracked implementation of the improvements. Details of the proposed five year Source Reduction Program are below and outlined for each year of the Plan.

Year 1 Plan

The Year 1 Plan consists of a lining project (Corrective Action 5) for a section of 30-inch sewer identified by LCA and City Staff, located along the Little Lehigh Creek adjacent to Martin Luther King Jr. Drive (MH K_3_4 to MH 14_DB). The table below summarizes the proposed corrective actions and quantities for sewer rehabilitation during Year 1. The total estimated construction cost for this work is approximately $450,000, not including engineering costs or any contingency or allowance for repair additional identified defects.

Source Reduction Program: Year 1					
Basin #	**(1) Heavy or Special Cleaning (LF)**	**(2) Grouting (# of Joints)**	**(3) Lining Point Repairs (#)**	**(4) Excavated Point Repairs (#)**	**(5) Lining Entire Pipe (LF)**
MLK Dr.	-	-	-	-	1,500

The location of the Martin Luther King Jr. Drive 30-inch diameter section of pipe that is described above is shown in Figure 2 below.

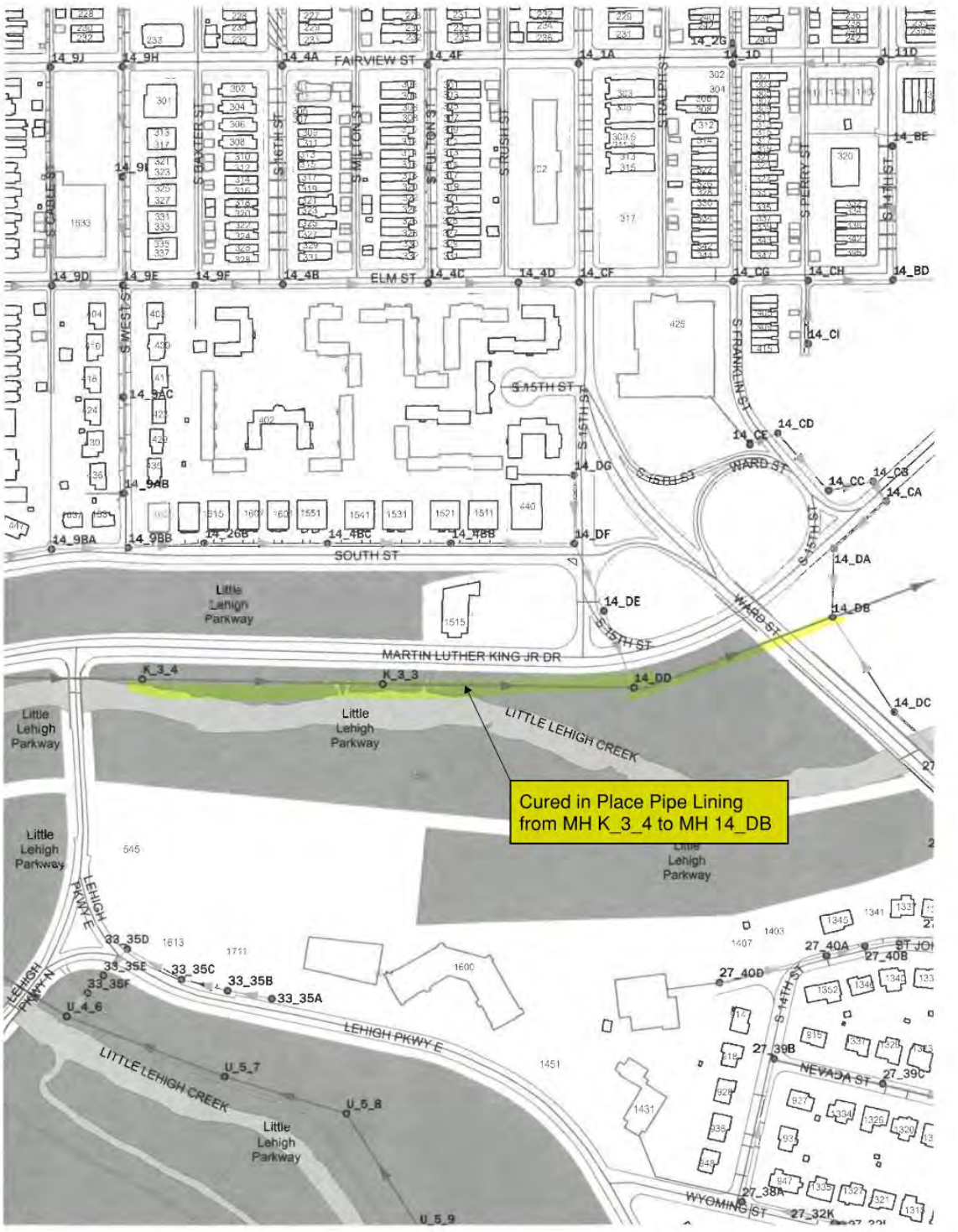


Figure 2. Section of 30" Sewer along Martin Luther King Jr. Drive to be Lined

Year 2 Plan

The Primary and Secondary Basins included in the Year 2 Plan are ALN001, ALN002, ALN003, ALN006, and ALN007, ALN008, ALN009, ALN017, ALN018. These basins are located in the northeast corner of the City's sewer collection system in the vicinity of Union Boulevard and Hanover Avenue. The table below summarizes the proposed corrective actions and quantities for sewer rehabilitation during Year 2. The total estimated construction cost for this work is approximately $505,000, not including engineering costs or any contingency or allowance for repair additional identified defects.

Source Reduction Program: Year 2					
Basin #	**(1) Heavy or Special Cleaning (LF)**	**(2) Grouting (# of Joints)**	**(3) Lining Point Repairs (#)**	**(4) Excavated Point Repairs (#)**	**(5) Lining Entire Pipe (LF)**
ALN001	-	164	3	-	299
ALN002	268	194	2	1	316
ALN003	612	30	3	1	-
ALN006	599	-	-	-	-
ALN007	3,261	201	50	3	-
ALN008	583	37	3	-	-
ALN009	301	161	2	-	-
ALN017	1,334	453	14	-	-
ALN018	537	108	2	1	-

Year 3 Plan

The Primary and Secondary Basins included in the Year 3 Plan are ALN024, ALN026, ALN027, ALN028, and ALN099. These basins are also located along the Lehigh River in the vicinity of the KIWWTP. The table below summarizes the proposed corrective actions and quantities for sewer rehabilitation during Year 3. The total estimated construction cost for this work is approximately $345,000, not including engineering or any contingency for repair of additional identified defects.

Source Reduction Program: Year 3					
Basin #	**(1) Heavy or Special Cleaning (LF)**	**(2) Grouting (# of Joints)**	**(3) Lining Point Repairs (#)**	**(4) Excavated Point Repairs (#)**	**(5) Lining Entire Pipe (LF)**
ALN024	1,362	231	3	-	-
ALN026	963	286	4	-	398
ALN027	2,183	357	46	2	-
ALN028	-	-	3	-	-
ALN099	742	119	1	1	107

Year 4 Plan

The Primary and Secondary Basins included in the Year 4 Plan are ALN005 and ALN091. These two basins are also located just to the west of the Lehigh River and to the north of the KIWWTP. The table on the following page summarizes the proposed corrective actions and

quantities for sewer rehabilitation during Year 4. The total estimated construction cost for this work is approximately $270,000, not including engineering costs or any contingency or allowance for repair of any additional identified defects.

Source Reduction Program: Year 4					
Basin #	**(1) Heavy or Special Cleaning (LF)**	**(2) Grouting (# of Joints)**	**(3) Lining Point Repairs (#)**	**(4) Excavated Point Repairs (#)**	**(5) Lining Entire Pipe (LF)**
ALN005	335	220	7	-	-
ALN091	1,137	217	12	1	255

Year 5 Plan

The Primary and Secondary Basins included in the Year 5 Plan are ALN064, ALN070 and ALN071. These basins are located in the central and southern portions of the City's sewer collection system. In addition, approximately 2,370 linear feet of 18-inch sewer is proposed to be lined adjacent to Auburn Street and Little Lehigh Creek, from MH M_2_1 to MH M_3_9, as part of the Year 5 Plan. A location plan showing this section of pipe to be lined using cured in place technology is presented in Figure 3 on Page 9. The table below summarizes the proposed corrective actions and quantities for sewer rehabilitation during Year 5. The total estimated construction cost for this work is approximately $420,000, not including any contingency or allowance for repair of additional identified defects.

Source Reduction Program: Year 5					
Basin #	**(1) Heavy or Special Cleaning (LF)**	**(2) Grouting (# of Joints)**	**(3) Lining Point Repairs (#)**	**(4) Excavated Point Repairs (#)**	**(5) Lining Entire Pipe (LF)**
ALN064	1,106	168	9	1	-
ALN070	282	-	-	-	-
ALN071	150	-	3	1	-
Auburn St	-	-	-	-	2,372

4.0 5-YEAR PROGRAM BUDGETARY COSTS

The budgetary construction costs described in Section 3.0 were estimated using typical unit costs from previous projects, and based on professional judgement. Attachment A provides the detailed calculations that were the basis of the cost estimates. In addition to the direct construction costs, additional budget should be established for planning, design, bidding and construction administration costs. A contingency and allowance should also be included to correct additional defects that may be identified through ongoing CCTV and other routine maintenance and inspection activities during the 5-year program. The contingency and allowance funds could also be used to continue targeted flow monitoring and inspection work within the City's sewer collection system.

FIGURE 3:
Auburn Street
Sewer Rehabilitation

Lehigh County Authority
Allentown, PA

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609-924-8821 • www.Kleinfelder.com

Sewer Rehabilitation

Drawing Sources:

1. 2018 ESRI Basemaps
2. 2011 City of Allentown Inspected Sanitary Manholes Map

PROJECT #:	6278E
DRAWN:	July 2018
DRAWN BY:	ELD
CHECKED BY:	BJF
FILE NAME:	S:\6278E - COA AO Consulting Services\GIS\6278E_AuburnSt.mxd

0 500 1,000
Feet

The table below summarizes the recommended overall budgetary costs for the 5-year program.

Plan Year	Budgetary Construction Cost[1]	Planning and Design (10%)	Bidding and Construction Administration (20%)	Contingency and Allowances (25%)	Total Budgetary Cost
Year 1	$450,000	$45,000.00	$90,000.0	$112,500.0	**$697,500**
Year 2	$480,000	$48,000.00	$96,000.0	$120,000.0	**$744,000**
Year 3	$340,000	$34,000.00	$68,000.0	$85,000.0	**$527,000**
Year 4	$270,000	$27,000.00	$54,000.0	$67,500.0	**$418,500**
Year 5	$420,000	$42,000.00	$84,000.0	$105,000.0	**$651,000**

[1] Budgetary costs based on typical unit costs and professional judgement, and assume prevailing wage rates

As shown in the table above, the annual total budgetary costs range from approximately $420,000 to $745,000.

The resulting total budgetary cost for the 5-year program is approximately $3.0 million.

5.0 PROGRAM SCHEDULE

As previously discussed, the source reduction program can be implemented over the course of five years. It is anticipated that the EPA review process could take up to six months. As a result, the following schedule has been developed outlining the timeframe for planning/design, bidding, and construction for each year of the source reduction program, starting in January 2020.

Plan Year	Planning and Design Timeframe	Bidding Timeframe	Construction Timeframe
Year 1	January – March 2020	April – May 2020	June – December 2020
Year 2	January – March 2021	April – May 2021	June – December 2021
Year 3	January – March 2022	April – May 2022	June – December 2022
Year 4	January – March 2023	April – May 2023	June – December 2023
Year 5	January – March 2024	April – May 2024	June – December 2024

However, as previously stated, consideration should be given to completing the proposed sewer rehabilitation work more aggressively, which would have the following significant benefits:

- Cost savings associated with economies of scale.
- Reduced administrative costs.
- Reduction in costs associated with project bidding services.
- Reduced contractor mobilizations.
- Reduced construction inspection and construction administration services costs.
- RDII reductions will be realized sooner, with associated quicker reductions to SSOs at the KIWWP.

ATTACHMENT A

Budgetary Cost Details

City of Allentown Sewer Rehabilitation Program
5-Year Program Construction Cost Summary

	# Pipe Segments	Total Length (ft)	Est. Direct Cost	W/ O&P
Year 1	1	1,500	$ 375,000	$ 450,000
Year 2	99	22,581	$ 401,814	$ 482,176
Year 3	59	14,016	$ 285,695	$ 342,834
Year 4	30	7,202	$ 223,772	$ 268,526
Year 5	30	6,651	$ 351,962	$ 422,354

Unit Costs

Corrective Action #	Diameter	Unit Price	Unit	Notes
1	8	$ 3.00	LF	
1	10	$ 3.00	LF	
1	12	$ 3.00	LF	
1	18	$ 3.00	LF	
1	20	$ 4.50	LF	
1	21	$ 4.50	LF	
1	24	$ 4.50	LF	
1	36	$ 10.00	LF	
2	8	$ 80.00	EA	Assume 1 joint every 8 ft
2	10	$ 100.00	EA	Assume 1 joint every 8 ft
2	12	$ 125.00	EA	Assume 1 joint every 8 ft
2	20	$ 150.00	EA	Assume 1 joint every 8 ft
2	21	$ 150.00	EA	Assume 1 joint every 8 ft
2	24	$ 175.00	EA	Assume 1 joint every 8 ft
2	36	$ 200.00	EA	Assume 1 joint every 8 ft
3	8	$ 3,500.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	10	$ 3,750.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	12	$ 4,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	15	$ 5,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	18	$ 5,500.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	20	$ 6,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	21	$ 6,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
3	24	$ 7,500.00	EA	Assume 1 repair per segment, unless verified with CCTV
4	8	$ 20,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
4	12	$ 20,000.00	EA	Assume 1 repair per segment, unless verified with CCTV
5	8	$ 40.00	LF	Resin Liner, Includes bypass and cleaning
5	18	$ 100.00	LF	Resin Liner, Includes bypass and cleaning
5	20	$ 150.00	LF	Resin Liner, Includes bypass and cleaning
5	30	$ 250.00	LF	Resin Liner, Includes bypass and cleaning

1	Heavy or special cleaning
2	Grouting
3	lining point repair
4	excavated point repair
5	lining entire pipe segment
6	complete pipe replacement

Construction Cost Calculations

				Values				
Repair Year	Basin #	Corrective Action Option	Sewer Diam (in)	Count of # of Laterals	Number of Segments	Sum of Length (ft)	# Joints	Cost Estimate
Year 1	**MLK Dr**	5	30		1	1,500	188	$ 375,000.00
Year 1 Total					**1**	**1,500**		$ 375,000.00
Year 2	**ALN001**	2	8	3	3	726	91	$ 7,280.00
			10	1	1	320	40	$ 4,000.00
		3	8	1	1	295	37	$ 3,500.00
			10	1	1	320	40	$ 3,750.00
		5	8	2	2	616	77	$ 24,640.00
		2,3	10	1	1	267	33	$ 7,050.00
	ALN002	2	8	5	5	1,281	160	$ 12,800.00
		3	8	2	2	373	47	$ 7,000.00
		4	8	1	1	308	39	$ 20,000.00
		5	8	1	1	316	39	$ 12,632.80
		1,2	8	1	1	268	33	$ 3,442.83
	ALN003	1	8	1	1	94	12	$ 280.83
			12	1	1	280	35	$ 839.43
		3	12	3	3	756	94	$ 12,000.00
		4	12	1	1	161	20	$ 20,000.00
		1,2	8	1	1	239	30	$ 3,116.97
	ALN006	1	8	2	2	598	75	$ 1,795.44
	ALN007	1	8	9	9	1,559	195	$ 4,676.31
			10	1	1	201	25	$ 602.61
			12	1	1	129	16	$ 387.30
		2	8	3	3	773	97	$ 7,760.00
		3	8	1	1	198	25	$ 3,500.00
			10	1	1	200	25	$ 3,750.00
		1,2	8	3	3	661	83	$ 8,623.57
			12	1	1	175	22	$ 3,275.36
		1,4	8	1	1	235	29	$ 40,706.32
			12	1	1	301	38	$ 20,902.22
	ALN008	3	8	2	2	453	57	$ 7,000.00
		1,2	8	1	1	295	37	$ 3,845.18
		1,3	8	1	1	288	36	$ 4,363.25
	ALN009	2	8	1	1	202	25	$ 2,000.00
			12	3	3	783	98	$ 12,250.00
		3	8	1	1	273	34	$ 3,500.00
			10	1	1	80	10	$ 3,750.00
		1,2	8	1	1	301	38	$ 3,941.80
	ALN017	1	8	5	5	1,068	133	$ 3,203.37
			10	1	1	266	33	$ 797.67
		2	8	6	6	1,509	189	$ 15,120.00
			10	2	2	210	26	$ 2,600.00
			24	2	2	764	95	$ 16,625.00
		3	8	4	4	690	86	$ 1,000.00
			10	1	1	154	19	$ 3,750.00
			24	1	1	324	40	$ 7,500.00
		1,2	10	1	1	97	12	$ 1,489.98
		1,3	10	1	1	105	13	$ 4,063.56
		2,3	8	5	5	878	110	$ 26,300.00
			10	1	1	163	20	$ 5,750.00
	ALN018	1	8	2	2	468	59	$ 1,405.05
			10	1	1	69	9	$ 206.70
		2	8	1	1	311	39	$ 3,120.00
			10	1	1	246	31	$ 3,100.00
		3	8	1	1	310	39	$ 200.00
		4	8	1	1	317	40	$ 20,000.00
		2,3	8	1	1	310	39	$ 6,620.00
Year 2 Total				**99**	**99**	**22,581**		**$ 401,813.55**

Year 3	**ALN024**	1	8	3	3	545	68	$ 1,633.53
		2	8	4	4	808	101	$ 8,080.00
			12	1	1	225	28	$ 3,500.00
		3	8	2	2	653	82	$ 10,500.00
		1,2	8	3	3	558	70	$ 7,274.69
			12	2	2	259	32	$ 4,776.13
	ALN026	1	10	1	1	191	24	$ 574.32
		2	8	5	5	1,138	142	$ 11,360.00
		3	8	3	3	873	109	$ 10,500.00
		5	8	1	1	398	50	$ 15,904.80
		1,2	8	2	2	771	96	$ 9,994.29
		2,3	8	1	1	375	47	$ 7,260.00
	ALN027	1	8	3	3	567	71	$ 1,701.78
			36	1	1	458	57	$ 4,580.30
		2	8	1	1	267	33	$ 2,640.00
			36	4	4	1,255	157	$ 31,400.00
		1,2	36	2	2	791	99	$ 27,714.70
		1,2,3	8	1	1	264	33	$ 6,931.13
		1,3	24	1	1	103	13	$ 7,962.78
		2,4	8	1	1	281	35	$ 42,800.00
	ALN028	3	24	2	2	673	84	$ 22,500.00
	ALN099	1	8	5	5	742	93	$ 2,226.15
		2	8	5	5	949	119	$ 9,520.00
		3	8	2	2	265	33	$ 7,000.00
		4	8	1	1	423	53	$ 20,000.00
		5	8	2	2	184	23	$ 7,360.80
Year 3 Total				**59**	**59**	**14,016**		**$ 285,695.40**
Year 4	**ALN005**	2	8	3	3	725	91	$ 7,280.00
		3	8	5	5	995	124	$ 17,500.00
		1,2	8	2	2	338	42	$ 4,374.48
		2,3	8	2	2	700	87	$ 13,960.00
	ALN091	1	8	2	2	378	47	$ 1,133.97
		2	8	1	1	236	29	$ 2,320.00
			20	1	1	55	7	$ 1,050.00
		3	8	3	3	758	95	$ 14,000.00
			18	1	1	207	26	$ 5,500.00
			20	2	2	636	80	$ 12,000.00
		4	8	1	1	252	32	$ 40,000.00
		5	8	1	1	255	32	$ 10,183.20
		1,2	8	1	1	246	31	$ 3,217.13
		1,2,3	18	1	1	294	37	$ 11,931.97
		1,3	20	1	1	220	27	$ 6,988.11
		2,3	8	1	1	256	32	$ 6,060.00
			20	1	1	331	41	$ 12,150.00
		2,5	20	1	1	321	40	$ 54,123.00
Year 4 Total				**30**	**30**	**7,202**		**$ 223,771.86**
Year 5	**ALN064**	1	8	1	1	191	24	$ 1,530.72
			21	1	1	386	48	$ 1,737.81
		2	8	1	1	304	38	$ 3,040.00
			21	2	2	347	43	$ 6,450.00
		3	8	3	3	471	59	$ 10,500.00
			15	1	1	199	25	$ 5,500.00
			21	2	2	599	75	$ 12,000.00
		1,2	21	1	1	321	40	$ 7,444.28
		1,3	8	1	1	208	26	$ 7,622.95
		2,3	8	1	1	174	22	$ 5,260.00
		2,4	8	1	1	196	24	$ 21,920.00
	ALN070	1	8	1	1	282	35	$ 845.97
	ALN071	3	8	3	3	453	57	$ 10,500.00
		1,4	8	1	1	150	19	$ 20,450.24
	Auburn St	5	18		10	2,372	296	$ 237,160.00
Year 5 Total				**20**	**30**	**6,651**		**$ 351,961.97**
Grand Total				**208**	**219**	**51,950**	**TOTAL**	**$ 1,638,242.78**