# TOWNSHIP OF LONDONDERRY, DAUPHIN COUNTY, PENNSYLVANIA

### RESOLUTION 2020-03

A RESOLUTION BY THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF LONDONDERRY, DAUPHIN COUNTY, PENNSYLVANIA AUTHORIZING AN ACT 537 SPECIAL STUDY.

WHEREAS, the Township of Londonderry, Dauphin County, Pennsylvania (the "Township"), is a is a second class township and a municipality existing under laws of the Commonwealth of Pennsylvania; and

WHEREAS, Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act," as amended, and the Rules and Regulations of the Department of Environmental Protection (Department) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, requires the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, The Township has prepared an Act 537 Special Study which provides revisions for sewage facilities detailed in the latest revision of the Township's Act 537 Plan Update; and

WHEREAS, the Township finds that the revisions presented by the Special Study described above conforms to applicable zoning, subdivision, other municipal ordinances and plans and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Supervisors of the Township of Londonderry, Dauphin County, Pennsylvania that:

- 1. The Township hereby adopts and submits to the Department of Environmental Protection for its approval as a revision to the "Official Plan" of the municipality, the above referenced Special Study. The Township hereby assures the Department of the complete and timely implementation of the said plan as required by law. (Section 5, Pennsylvania Sewage Facilities Act as amended).
- 2. The revisions to be implemented and key implementation dates identified in the Special Study include the following:
  - a. Provision of public sewers to SR 230 Area (Sewer Districts 2 & 3 as identified in the Special Study) and to convey all flow to the existing Derry Township Municipal Authority (DTMA) Southwest Wastewater Treatment Plant. The key implementation activities/dates include: perform design, and obtain all permits, clearances, and agreements necessary for construction of Phases I and II within one (1) year from the date of Special Study approval, construct sewer system to serve Phases I and II in 1-3 years from the date of Plan approval, and construct sewer facilities to serve areas included in the Special Study's "Follow-Up Phases III-V" 3-9 years from the date of Plan approval.
  - b. Updates to nullify any mention of sewage flow from the Township to the Middletown Borough WWTP in permitting, funding, or other related documents.

## **CERTIFICATE**

I, the undersigned Secretary of the Township of Londonderry, Dauphin County, Pennsylvania (the "Township"), hereby certify that: the foregoing is a true and correct copy of an Resolution that duly was adopted by affirmative vote of a majority of all members of the Board of Supervisors of the Township at a meeting duly held on the 6th day of January, 2020; said Resolution duly has been recorded in the minute book of the Board of Supervisors of the Township; and said Resolution has not been amended, altered, modified or repealed as of the date of this Certificate.

I further certify that the Board of Supervisors of the Township met the advance notice requirements of the Sunshine Act, 65 Pa. C.S. §701 et seq., as amended, by advertising the time and place of said meeting and by posting prominently a notice of said meeting at the principal office of the Township or at the public building in which said meeting was held.

WITNESS my hand and the seal of the Township on January 6, 2020.

By:\_\_\_\_

(Assistant) Secretary

(SEAL)

DULY RESOLVED AND ADOPTED this 6th day of January, 2020, at a regular meeting of the Board of Supervisors of the Township of Londonderry, Dauphin County, Pennsylvania, in lawful session duly assembled.

ATTEST:

TOWNSHIP OF LONDONDERRY, Dauphin County, Pennsylvania

(Assistant) Secretary

Vice) Chair of Board of Supervisors

(SEAL)



# Londonderry Township Dauphin County, Pennsylvania

Act 537 Official Sewage Facilities Plan Special Study

December 2019

DRAFT

BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.

# **TABLE OF CONTENTS**

SUBJ	<u>PA</u>	GE
1.0	Executive Summary	1
2.0	Implementation Schedule	1
3.0	Special Study Narrative	3
	3.1 Summary of Alternative 8A 3.2 DTMA Southwest WWTP 3.3 Flow Projections 3.4 Alternative 8A – Costs and Funding 3.5 Administrative Organization and Legal Authority for Implementation 3.6 Selected Alternative and Special Study Comments	3 4 4

# **APPENDICES**

Appendix A	Correspondence to Mr. Letavic dated July 23, 2019
Appendix B	Alternative 8A
Appendix C	Table C-1 – C-3
Appendix D	Public Notice Londonderry Township Act 537 Plan Update Adoption

# 1.0 EXECUTIVE SUMMARY

The 2016 Sewage Facilities Plan Update for Londonderry Township outlined various sewer planning alternatives to provide public sewer to residents of the Township. Initially, the Township elected to go with Alternative 8B to provide public sewer to the existing needs area as well as those areas along SR 230 planned for growth. This alternative detailed that all sewage flows, aside from those originating in Londonderry Estates, would be conveyed to the Middletown Borough Wastewater Treatment Plant (WWTP). However, no municipal agreement with Middletown Borough or SUEZ could be reached.

Therefore, Londonderry Township has worked with the Derry Township Municipal Authority (DTMA) to negotiate terms of an agreement and has received a will-serve letter for the initial flows to be generated by Phase I of the sanitary sewer extension. This Special Study serves to revise the selected structural alternative from Alternative 8B to Alternative 8A. Under alternative 8A, all sewage flow from the Township would be directed to the DTMA Southwest WWTP. Additionally, previously planned traditional neighborhood developments at Lytle Farms (North) and School Heights Village have been revised to commercial warehouses generating significantly less wastewater. Other commercial developments are planned at the current Saturday's Market and off of Hertzler Road near Conewago Creek. Lytle Farms (South) remains planned to be developed into a mixed-density residential development.

The construction of the sewer facilities for Alternative No. 8A has been divided into five (5) phases. The first two phases will establish the sewer main from the DTMA Southwest WWTP extending to Hertzler Road in the vicinity of the Cedar Manor Mobile Home Park (MHP). Follow-up phases will be completed to provide sewer service to existing needs areas as defined the 2016 Sewage Facilities Plan Update. Developer funding has been secured for Phases 1 and II. Funding is still required for the follow-up Phases. The DTMA SW WWTP will require upgrades prior to servicing complete build-out of the sewer main. DTMA can provide capacity for Phases 1 and II immediately and will perform upgrades to the SW WWTP prior to the Township extending sewer to service the remaining phases (please refer to the implementation schedule). Upon completion of Phases I and II, the newly constructed sewer facilities will be dedicated to DTMA for ownership and operation.

# 2.0 IMPLEMENTATION SCHEDULE

The following activities shall be undertaken to ensure successful implementation of the selected alternatives within the specified timeframes:

Construction	of Public Sewers to Serve Sewer District No. 2 and Sewer District No. 3: Alternative 8A
Date of Completion	Activity
01/2020	Special Study Submitted to DEP

Completion of DTMA Southwest WWTP Upgrade Evaluation and Special Study
Submit Water Quality Management (WQM) Part II Permit(s) to DEP for Phases I and II
Completion of Preliminary Design for Phases I and II
WQM Permit Approval, Completion of Final Design for Phases I and II, Advertise Bids for Phase I and II Facilities Construction
Completion of Design Plans and Specifications for DTMA SW WWTP Improvements Project
Award Bid for Phase I and II Facilities Construction, Advertise Bids for DTMA SW WWTP Upgrades
Begin Construction Phase I and Phase II Facilities
Begin Construction of DTMA SW WWTP Upgrades
Complete Construction of Phase I and Phase II Facilities
Construction of DTMA SW WWTP Upgrades Complete
DTMA Southwest WWTP Upgrade Fully Operational
Connection of Pine Manor and Cedar Manor Mobile Home Parks
Begin Preliminary Design for Braeburn and Deodate Sewer Extensions (Phases III and IV)
Submit WQM Permit(s) to DEP for Phases III and IV
Submit PENNVEST Application for Phases III and IV
Begin Construction for Phases III and IV Facilities*
Complete Construction of Phase III and IV Facilities*
Begin Preliminary Design for Colebrook, Crestview Mobile Home Park, and Newberry Road Sewer Extension (Phase V)
Submit WQM Permit(s) to DEP for Phase V
Submit PENNVEST Application for Phase V
Begin Construction for Phase V Facilities*
Complete Construction of Phase V Facilities*

<sup>\*</sup> Schedule based on receipt of favorable funding from PENNVEST (within affordability calculations). Additional time will be needed if re-application for funding is required.

# 3.0 SPECIAL STUDY NARRATIVE

# 3.1 SUMMARY OF ALTERNATIVE 8A

The 2016 Sewage Facilities Plan Update for Londonderry Township outlined various sewer planning alternatives to provide public sewer to residents of the Township. Initially, the Township elected to go with Alternative 8B to provide public sewer to the existing needs area as well as those areas along SR 230 planned for growth. This alternative detailed that all sewage flows, aside from those originating in Londonderry Estates, would be conveyed to the Middletown Borough WWTP. However, no municipal agreement with Middletown Borough or SUEZ could be reached.

Therefore, Londonderry Township has pursued Alternative 8A. The Township has worked with the Derry Township Municipal Authority (DTMA) to negotiate terms of an agreement and has received a will-serve letter for the initial flows to be generated by Phase I of the sanitary sewer extension (refer to Appendix A for copy of July 23, 2019 correspondence from DTMA).

This Special Study serves to revise the selected structural alternative from Alternative 8B to Alternative 8A. Under alternative 8A, all sewage flow from the Township would be directed to the DTMA Southwest Wastewater Treatment Plant (WWTP) (refer to Appendix B for copy of Alternative 8A Exhibit). Additionally, previously planned traditional neighborhood developments at Lytle Farms (North) and School Heights Village have been revised to commercial developments generating significantly less wastewater than previously planned uses. Other commercial developments are planned at the current Saturday's Market and along Hertzler Road near Conewago Creek. Lytle Farms (south) remains planned to be developed into a mixed-density residential development consistent with previous planning.

The construction of the sewer facilities for Alternative No. 8A has been divided into five (5) phases. This is necessary due to: 1) Private developer funding of Phases I and II; 2) Schedule for upgrading the DTMA Southwest WWTP, and 3) public funding of remaining needs area(s).

The first phase will include sewer mains and pump stations generally serving the SR 230 corridor from Lytle Farms to Deodate Road and will include conveyance of sewer from the Lytle Farms (SR 230) Pump Station to the DTMA Southwest WWTP. Phase II will include construction of a pump station (Hertzer Pump Station) to provide service to a new commercial development east of Hertzler Road and the existing Cedar Manor Mobile Home Park (MHP).

Phases III, IV, and V will provide sanitary sewer service to Braeburn, Deodate North, Deodate South, Colebrook and Crestview MHP, and Newberry Road, respectively consistent with the approved Act 537 Plan.

### 3.2 DTMA SOUTHWEST WWTP

The DTMA Southwest WWTP is located within Londonderry Township along Swatara Creek in Sewer District 1. Though the facility is located in Londonderry Township, it is owned and operated by DTMA. The DTMA Southwest WWTP currently serves Londonderry residents in Sewer District 1 only. The plant also serves residents of Derry Township and Lower Swatara Township. The DTMA

Southwest WWTP is permitted to discharge into the Swatara Creek under National Pollutant Discharge Elimination System (NPDES) Permit No. PA0082392. The current permitted annual discharge flow is 0.600 million gallons per day (MGD). The existing WWTP process units consist of oxidation ditches, grit removal, activated sludge, final clarifier, and disinfection prior to discharge into the Swatara Creek.

Based on correspondence with DTMA, it was determined that the Southwest WWTP has approximately 236,000 GPD of capacity remaining; however, with planned growth and connections (including those from the Township), the WWTP is expected to be over its hydraulic capacity by 2025. As a result, the WWTP will require upgrades before service can be provided for all five (5) phases included in Alternative 8A. DTMA has agreed to provide 74,000 GPD capacity to serve Phases I and II and have committed to a schedule for the evaluation, planning, permitting, and construction of an upgrade to the WWTP to provide the remaining required capacity for Alternative 8A (refer to Appendix A). DTMA will be submitting a separate Special Study to address this upgrade.

## 3.3 FLOW PROJECTIONS

The flow projections for Alternative 8A have been revised from the 2016 Sewage Facilities Plan Update, as previously noted, as a result in the change in zoning use from traditional neighborhood development to commercial (C2) for the School Heights Village and Lytle Farms north tract. This revision significantly reduces the amount of wastewater to be generated from these developments.

The flow projections for Alternative 8A are shown in Table 1 below and are further detailed by individual drainage basin. Please refer to Appendix C for detailed flow projections.

Table 3-1: Alternative 8A Flow Projections								
Schedule	Total Flow Projections to DTMA Southwest WWTP	Serving						
2021	73,040	Phases I & II						
2023	208,480	Phases I & II(1)						
2025 - 2029	619,080	Phases III - V						

<sup>(1)</sup> Includes connection of Pine Manor and Cedar Manor Mobile Home Parks

## 3.4 ALTERNATIVE 8A – COSTS AND FUNDING

Estimates of probable construction costs and overall project costs for the collection and conveyance system are presented in Table 3- below:

# Table 3-2: Londonderry Township Alternative 8A Collection and Conveyance System Costs

### ALTERNATIVE 8A - CONCEPTUAL LEVEL PROJECT COST ESTIMATE FOR LONDONDERRY TOWNSHIP FLOW TO DTMA - CONVEYANCE DECEMBER 2019

ITEM NO.	DESCRIPTION	EST.	UNIT	UNIT	EXTENSION
	ACTION OF THE PROPERTY OF THE	QUANTITY		PRICE	
1	MORILIZATION © 50/		76 760		T
	MOBILIZATION @ 5%	1	L.S.	\$374,000.00	
	TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @	1	L.S.	\$374,000.00	\$374,000.00
3	2.5%	1	L.S.	\$187,000.00	\$187,000.00
GRAVIT	TY SEWER (SWATARA CREEK ROAD TO WWTP)				
4	24" PVC MAIN - AGGREGATE FILL	600	L.F.	\$150.00	\$90,000.00
5	4' DIAMETER PRECAST CONCRETE MANHOLE	3	EA.	\$15,000.00	\$45,000.00
GRAVIT	TY SEWER (TOLLHOUSE ROAD TO LYTLE PS)				
6	18" PVC MAIN - AGGREGATE FILL	6,500	L.F.	\$135.00	\$877,500.00
7	4' DIAMETER PRECAST CONCRETE MANHOLE	33	EA.	\$15,000.00	\$487,500.00
PUMP S	STATION - LYTLE FARMS				
8	PUMP STATION	1	L.S.	\$1,200,000.00	\$1,200,000.00
9	10" FORCE MAIN - AGGREGATE FILL	12,350	L.F.	\$110.00	\$1,358,500.00
10	FORCE MAIN AIR RELEASE CHAMBER	6	EA.	\$12,000.00	\$74,100.00
11	10" FORCE MAIN STREAM CROSSING	150	L.F.	\$220.00	\$33,000.00
PUMP S	STATION - DEODATE ROAD				
12	PUMP STATION	1	L.S.	\$500,000.00	\$500,000.00
13	8" FORCE MAIN AGGREGATE FILL	8,500	L.F.	\$90.00	\$765,000.00
14	FORCE MAIN AIR RELEASE CHAMBER	4	EA.	\$10,800.00	\$43,740.00
15	8" FORCE MAIN STREAM CROSSING	25	L.F.	\$195.00	\$4,875.00
RESTOR	RATION	1			1 , 11-1-1-1
16	TEMPORARY PAVING	24,600	L.F.	\$15.00	\$369,000.00
17	VEGETATIVE RESTORATION	3,350	L.F.	\$8.00	\$26,800.00
18	PRIVATE ROAD RESTORATION	600	L.F.	\$40.00	\$24,000.00
19	MUNICIPAL PAVING RESTORATION	9,000	L.F.	\$50.00	\$450,000.00
20	PENNDOT PAVING RESTORATION	15,000	L.F.	\$75.00	\$1,125,000.00
			P	HASE 1 ESTIMATED CONSTRUCTION COSTS	\$8,409,015.00
				CONSTRUCTION CONTINGENCY @ 20%	\$1,681,800.00
			E	NGINEERING, ADMIN, & LEGAL FEES @ 20%	\$2,018,200.00
				TOTAL ESTIMATED PHASE 1 COSTS	\$12,109,015.00
				FINAL ROUNDED	\$12,110,000.00
	A CONTRACT OF A	ATE ROAD P	STION:	Translation of the second	
21	MOBILIZATION @ 5%	1	L.S.	\$77,000.00	\$77,000.00
22	TRAFFIC MAINTENANCE & PROTECTION @ 5%	1	L.S.	\$77,000.00	\$77,000.00
23	EROSION AND SEDIMENTATION CONTROL @ 2.5%	1	L.S.	\$38,000.00	\$38,000.00
PUMP S	TATION - HERTZLER ROAD				
24	PUMP STATION	1	L.S.	\$400,000.00	\$400,000.00
25	6" FORCE MAIN AGGREGATE FILL	7,000	L.F.	\$70.00	\$490,000.00
26	FORCE MAIN AIR RELEASE CHAMBER	4	EA.	\$9,600.00	\$38,400.00
27	6" FORCE MAIN STREAM CROSSING	150	L.F.	\$175.00	\$26,250.00

RESTO	DRATION		-		
28	TEMPORARY PAVING	7,000	L.F.	\$15.00	\$105,000,0
29	VEGETATIVE RESTORATION	0	L.F.	\$19.00	\$105,000.0
30	MUNICIPAL PAVING RESTORATION	1,800	L.F.		\$0.0
31	PENNDOT PAVING RESTORATION	5,200	L.F.	\$50.00	\$90,000.0
_		0,200		\$75.00 PHASE 2 ESTIMATED CONSTRUCTION	\$390,000.0
				COSTS	\$1,731,650.0
				CONSTRUCTION CONTINGENCY @ 20%	\$346,300.0
				ENGINEERING, ADMIN, & LEGAL FEES @	\$415,600.0
				20% TOTAL ESTIMATED PHASE 2 COSTS	\$2,493,550.0
				FINAL ROUNDED	\$2,494,000.0
	(clo):	CHO RELA	SEIVAND		32,454,000.0
		A STATE OF THE PARTY OF THE PAR		TOTAL ESTIMATED CONSTRUCTION COSTS	- January II date
					\$10,140,665.0
				CONSTRUCTION CONTINGENCY @ 20%	\$2,028,100.0
				ENGINEERING, ADMIN, & LEGAL FEES @ 20%	\$2,433,800.00
				TOTAL ESTIMATED PROJECT COSTS	\$14,602,565.00
	THE PROPERTY OF THE PROPERTY O	Talika wan	311000	FINAL ROUNDED	\$14,610,000.00
43	MOBILIZATION @ 5%		- Carlo	The state of the s	The Roy
44	TRAFFIC MAINTENANCE & PROTECTION @ 5%	1	L.S.	\$2,000.00	\$2,000.00
	EROSION AND SEDIMENTATION CONTROL @	1	L.S.	\$2,000.00	\$2,000.00
45	2.5%	1	L.S.	\$1,000.00	\$1,000.00
GRAVIT	Y SEWER - N. DEODATE				
46	8" PVC MAIN - AGGREGATE FILL	300	L.F.	\$110.00	\$33,000.00
47	8" X 6" WYE	0	EA.	\$95.00	\$0.00
48	6" SERVICE LATERAL - AGGREGATE FILL	0	L.F.	\$100.00	\$0.00
49	6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	0	EA.	\$450.00	\$0.00
50	CLAY DIKE	1	EA.	A CONTRACTOR OF THE CONTRACTOR	***************************************
51	MANHOLE - 4 FT DIAMETER	2	EA.	\$250.00	\$250.00
52	MANHOLE FRAME AND COVER		EA.	\$3,500.00	\$7,000.00
RESTOR				\$500.00	\$1,000.00
62	TEMPORARY PAVING	0	L.F.	04.00	
63	VEGETATIVE RESTORATION	300	L.F.	\$15.00	\$0.00
64	PRIVATE ROAD RESTORATION	0		\$8.00	\$2,400.00
65	MUNICIPAL PAVING RESTORATION		L.F.	\$40.00	\$0.00
	MONION ALT AVING RESTORATION	0	L.F.	\$50.00	\$0.00
				ESTIMATED CONSTRUCTION COSTS	\$48,650.00
				CONSTRUCTION CONTINGENCY @ 20%	\$9,700.00
				ENGINEERING, ADMIN, & LEGAL FEES @ 20%	\$11,700.00
				TOTAL ESTIMATED PHASE 4 COSTS	\$70,050.00
				FINAL ROUNDED	\$71,000.00
<b>137</b>	AND	ODATH HRA	E URN	AND BELLIANORE AND SOME	
43	MOBILIZATION @ 5%	1	L.S.	\$222,000.00	\$222,000.00
44	TRAFFIC MAINTENANCE & PROTECTION @ 5%	1	L.S.	\$222,000.00	\$222,000.00
45	EROSION AND SEDIMENTATION CONTROL @	1	L.S.	100 (100 (100 (100 (100 (100 (100 (100	
RAVITY	2.5% ( SEWER - N. DEODATE			\$111,000.00	\$111,000.00
46	8" PVC MAIN - AGGREGATE FILL	1800	1.5		
47	8" X 6" WYE		L.F.	\$110.00	\$198,000.00
48	6" SERVICE LATERAL - AGGREGATE FILL	17	EA.	\$95.00	\$1,615.00
	6" SERVICE LATERAL CLEANOUT - SUITABLE	510	L.F.	\$100.00	\$51,000.00
49	FILL	17	EA.	\$450.00	\$7,650.00
50	CLAY DIKE	8	EA.	\$250.00	

51	MANHOLE - 4 FT DIAMETER	9	EA.	\$3,500.00	\$31,500
52	MANHOLE FRAME AND COVER	9	EA.	\$500.00	\$4,500
LOW P	RESSURE SEWER - N. DEODATE			199	
	LOW PRESSURE SEWER MAIN - AGGREGATE FILL	1,800	L.F.	\$110.00	\$198,000
	LOW PRESSURE SEWER LATERAL	360	L.F.	\$40.00	\$14,400
	LOW PRESSURE SEWER LATERAL				
	CONNECTION	12	EA.	\$600.00	\$7,200
	TERMINAL CLEANOUT	4	EA.	\$1,750.00	\$7,000
	SIMPLEX GRINDER PUMP	12	EA.	\$7,500.00	\$90,000
	TY SEWER - BRAEBURN				
46	8" PVC MAIN - AGGREGATE FILL	4300	L.F.	\$110.00	\$473,000
47	8" X 6" WYE	27	EA.	\$95.00	\$2,565
48	6" SERVICE LATERAL - AGGREGATE FILL	810	L.F.	\$100.00	\$81,000
49	6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	27	EA.	\$450.00	\$12,150
50	CLAY DIKE	21	EA.	\$250.00	\$5,250
51	MANHOLE - 4 FT DIAMETER	22	EA.	\$3,500.00	
52	MANHOLE FRAME AND COVER	22	EA.		\$77,000
	RESSURE SEWER - BRAEBURN			\$500.00	\$11,000
	LOW PRESSURE SEWER MAIN - AGGREGATE		T 1		
	FILL	3,600	L.F.	\$110.00	\$396,000
	LOW PRESSURE SEWER LATERAL	660	L.F.	\$40.00	\$26,400
	LOW PRESSURE SEWER LATERAL CONNECTION	22	EA.	\$600.00	\$13,200
	TERMINAL CLEANOUT		-		
	SIMPLEX GRINDER PUMP	4	EA.	\$1,750.00	\$7,000
DAVIT	Y SEWER - PINE MANOR	22	EA.	\$7,500.00	\$165,000
	T		т т		<b>,</b>
46	8" PVC MAIN - AGGREGATE FILL	4000	L.F.	\$110.00	\$440,000
47	8" X 6" WYE	72	EA.	\$95.00	\$6,840
48	6" SERVICE LATERAL - AGGREGATE FILL	2,160	L.F.	\$100.00	\$216,000
49	6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	72	EA.	\$450.00	\$32,400
50	CLAY DIKE	19	EA.	\$250.00	\$4,750
51	MANHOLE - 4 FT DIAMETER	20	EA.	\$3,500.00	\$70,000
52	MANHOLE FRAME AND COVER	20	EA.	\$500.00	\$10,000
)W PR	RESSURE SEWER - PINE MANOR	20	Crt.	\$300.00	\$10,000
	LOW PRESSURE SEWER MAIN - AGGREGATE	1 2 2			
	FILL	2,700	L.F.	\$110.00	\$297,000
	LOW PRESSURE SEWER LATERAL	1,440	L.F.	\$40.00	\$57,600.
	LOW PRESSURE SEWER LATERAL CONNECTION	48	EA.	\$600.00	\$28,800
	TERMINAL CLEANOUT	4	EA.	\$1,750.00	\$7,000
	SIMPLEX GRINDER PUMP	48	EA.	\$7,500.00	\$360,000.
STOR	RATION			V.(000.00	<b>\$</b> 000,000.
62	TEMPORARY PAVING	18,200	L.F.	\$15.00	\$273,000.
63	VEGETATIVE RESTORATION	0	L.F.	\$8.00	\$0.
64	PRIVATE ROAD RESTORATION	14,600	L.F.	\$40.00	\$584,000.
65	MUNICIPAL PAVING RESTORATION	3,600	L.F.		
			L.F.	\$50.00   ESTIMATED CONSTRUCTION COSTS	\$180,000.
					\$5,004,820.
				CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @	\$1,001,000. \$1,201,200.
				20% TOTAL ESTIMATED PHASE 4 COSTS	
					\$7,207,020. \$7,208,000.
				FINAL ROUNDED	

43	MOBILIZATION @ 5%	1	L.Ş.	\$56,000.00	\$56,000.00
44	TRAFFIC MAINTENANCE & PROTECTION @ 5%	1	L.S.	\$56,000.00	\$56,000.00
45	EROSION AND SEDIMENTATION CONTROL @ 2.5%	1	L.S.	\$28,000.00	\$28,000.0
GRAVI	TY SEWER - N. DEODATE				
46	8" PVC MAIN - AGGREGATE FILL	2000	L.F.	\$110.00	\$220,000.0
47	8" X 6" WYE	40	EA.	\$95.00	\$3,800.00
48	6" SERVICE LATERAL - AGGREGATE FILL	1,200	L.F.	\$100.00	\$120,000.00
49	6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	40	EA.	\$450.00	\$18,000.0
50	CLAY DIKE	9	EA.	\$250.00	\$2,250.00
51	MANHOLE - 4 FT DIAMETER	10.000	EA.	\$3,500.00	\$35,000.0
52	MANHOLE FRAME AND COVER	10	EA.	\$500.00	\$5,000.0
LOW P	RESSURE SEWER - N. DEODATE		1		Ψ0,000.0
	LOW PRESSURE SEWER MAIN - AGGREGATE	1,600	L.F.	2110.00	6470 000 0
	FILL		-	\$110.00	\$176,000.00
	LOW PRESSURE SEWER LATERAL	960	L.F.	\$40.00	\$38,400.00
	LOW PRESSURE SEWER LATERAL CONNECTION	32	EA.	\$600.00	\$19,200.00
	TERMINAL CLEANOUT	4	EA.	\$1,750.00	\$7,000.00
	SIMPLEX GRINDER PUMP	32	EA.	\$7,500.00	\$240,000.00
RESTO	RATION				
62	TEMPORARY PAVING	3,600	L.F.	\$15.00	\$54,000.00
63	VEGETATIVE RESTORATION	0	L.F.	\$8.00	\$0.00
64	PRIVATE ROAD RESTORATION	0	L.F.	\$40.00	\$0.00
٠.		7 0 000	L.F.	\$50.00	\$180,000.00
65	MUNICIPAL PAVING RESTORATION	3,600	L	\$30.00	\$100,000.00
- 157	MUNICIPAL PAVING RESTORATION	3,600		ESTIMATED CONSTRUCTION COSTS	
- 157	MUNICIPAL PAVING RESTORATION	3,600			\$572,650.00
	MUNICIPAL PAVING RESTORATION	3,600		ESTIMATED CONSTRUCTION COSTS	\$572,650.00 \$114,500.00
- 157	MUNICIPAL PAVING RESTORATION	3,800	<u> </u>	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @	\$572,650.00 \$114,500.00 \$137,400.00
65				ESTIMATED CONSTRUCTION COSTS  CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00
65	Aliche V. cto			ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00
65				ESTIMATED CONSTRUCTION COSTS  CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00
65	MOBILIZATION @ 5% TRAFFIC MAINTENANCE & PROTECTION @ 5%	n i i i i i i i i i i i i i i i i i i i	χ <b>ή</b> ουληγίο <b>χ</b>	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00
65	HEATION @ 5%	ина <b>но</b> юка <b>н</b> о	L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00
65 43 44 45	MOBILIZATION @ 5% TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED \$94,000.00 \$94,000.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00
65 43 44 45	MOBILIZATION @ 5% TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @ 2.5%	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED \$94,000.00 \$94,000.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$94,000.00
65 43 44 45 GRAVIT	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP	1 1 1	L.S. L.S. L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00
43 44 45 GRAVIT 46	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL	1 1 1 1 1	L.S. L.S. L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$110.00 \$95.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$94,000.00 \$47,000.00 \$7,600.00
43 44 45 GRAVIT 46 47	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE	1 1 1 4900 80	L.S. L.S. L.S. L.S.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED \$94,000.00 \$94,000.00 \$47,000.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00
43 44 45 GRAVIT 46 47 48	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	1 1 1 1 4900 80 2,400 80	L.S. L.S. L.S. L.F. EA. L.F.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED \$94,000.00 \$94,000.00 \$47,000.00 \$95.00 \$100.00 \$450.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00
43 44 45 GRAVIT 46 47 48 49 50	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE	1 1 1 1 4900 80 2,400 80 24	L.S. L.S. L.S. L.F. EA. L.F. L.F.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$950.00 \$250.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00 \$36,000.00
43 44 45 <b>GRAVIT</b> 46 47 48 49 50 51	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER	1 1 1 1 4900 80 2,400 80 24 25	L.S. L.S. L.S. L.F. EA. L.F. EA. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$95.00 \$100.00 \$250.00 \$3,500.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00 \$36,000.00 \$87,500.00
43 44 45 GRAVIT 46 47 48 49 50 51 52	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER	1 1 1 1 4900 80 2,400 80 24	L.S. L.S. L.S. L.F. EA. L.F. L.F.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$950.00 \$250.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00 \$36,000.00 \$87,500.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP	1 1 1 1 4900 80 2,400 80 24 25 25	L.S. L.S. L.S. L.F. EA. L.F. EA. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$950.00 \$100.00 \$250.00 \$3,500.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00 \$36,000.00 \$87,500.00 \$12,500.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL	1 1 1 1 4900 80 2,400 80 24 25 25 25	L.F. L.F. EA. L.F. EA. EA. EA. L.F.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$450.00 \$250.00 \$3,500.00 \$500.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$240,000.00 \$87,500.00 \$12,500.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55 56	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  G" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE	1 1 1 1 4900 80 2,400 80 24 25 25 25	L.F. EA. L.F. EA. L.F. EA. EA. EA. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$95.00 \$100.00 \$250.00 \$3,500.00 \$500.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$36,000.00 \$87,500.00 \$12,500.00 \$7,600.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55 56 57	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL	1 1 1 1 1 4900 80 2,400 80 24 25 25 25 2400 80 2,400	L.F. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$950.00 \$250.00 \$3,500.00 \$110.00 \$95.00 \$110.00 \$95.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$87,500.00 \$12,500.00 \$7,600.00 \$240,000.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55 56	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  G" SERVICE LATERAL CLEANOUT - SUITABLE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE	1 1 1 1 4900 80 2,400 80 24 25 25 25	L.F. EA. L.F. EA. L.F. EA. EA. EA. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$95.00 \$100.00 \$250.00 \$3,500.00 \$500.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$87,500.00 \$12,500.00 \$7,600.00 \$240,000.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55 56 57	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5% EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL	1 1 1 1 1 4900 80 2,400 80 24 25 25 25 2400 80 2,400	L.F. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$950.00 \$250.00 \$3,500.00 \$110.00 \$95.00 \$110.00 \$95.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00 \$94,000.00 \$47,000.00 \$7,600.00 \$36,000.00 \$12,500.00 \$264,000.00 \$264,000.00 \$36,000.00 \$36,000.00 \$36,000.00 \$36,000.00
43 44 45 GRAVIT 46 47 48 49 50 51 52 GRAVIT 55 56 57	MOBILIZATION @ 5%  TRAFFIC MAINTENANCE & PROTECTION @ 5%  EROSION AND SEDIMENTATION CONTROL @ 2.5%  Y SEWER - CRESTVIEW MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  CLAY DIKE  MANHOLE - 4 FT DIAMETER  MANHOLE FRAME AND COVER  Y SEWER - COLEBROOK ROAD MHP  8" PVC MAIN - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  8" X 6" WYE  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL - AGGREGATE FILL  6" SERVICE LATERAL CLEANOUT - SUITABLE FILL	1 1 1 1 4900 80 2,400 80 24 25 25 25 2400 80 2,400 80	L.F. EA. L.F. EA. L.F. EA. L.F. EA. L.F. EA. EA. EA.	ESTIMATED CONSTRUCTION COSTS CONSTRUCTION CONTINGENCY @ 20% ENGINEERING, ADMIN, & LEGAL FEES @ 20% TOTAL ESTIMATED PHASE 4 COSTS FINAL ROUNDED  \$94,000.00 \$94,000.00 \$47,000.00 \$110.00 \$95.00 \$100.00 \$250.00 \$3,500.00 \$500.00 \$110.00 \$95.00 \$110.00 \$95.00 \$110.00 \$95.00	\$572,650.00 \$114,500.00 \$137,400.00 \$824,550.00 \$825,000.00

RESTO	DRATION		-		***		
62	TEMPORARY PAVING	2,400	L.F.	\$15.00	\$36,000.0		
63	VEGETATIVE RESTORATION	0	L.F.	\$0.00	\$0.0		
64	PRIVATE ROAD RESTORATION	4,900	L.F.	\$40.00	\$196,000.0		
65	MUNICIPAL PAVING RESTORATION	2,400	L.F.	\$50.00	\$120,000.0		
				ESTIMATED CONSTRUCTION COSTS	\$2,113,950.0		
				CONSTRUCTION CONTINGENCY @ 20%	\$422,800.0		
				ENGINEERING, ADMIN, & LEGAL FEES @ 20%	\$507,400.0		
				TOTAL ESTIMATED PHASE 4 COSTS	\$3,044,150.0		
Sich and and				FINAL ROUNDED	\$3,045,000.0		
Why parce	A Paragraphy of the second cold	1.(1) 1/4 1/(010	<b>DEMICAL</b>	PAGE AND	The second		
32	MOBILIZATION @ 5%	1	L.S.	\$39,000.00	\$39,000.0		
33	TRAFFIC MAINTENANCE & PROTECTION @ 5%	1	L.S.	\$39,000.00	\$39,000.0		
34	EROSION AND SEDIMENTATION CONTROL @ 2.5%	1	L.S.	\$20,000.00	\$20,000.0		
PUMP S	STATION - LOCUST LANE						
35	PUMP STATION	1	L.S.	\$325,000.00	\$325,000.0		
36	6" FORCE MAIN - AGGREGATE FILL	2,800	L.F.	\$70.00	\$196,000.0		
37	FORCE MAIN AIR RELEASE CHAMBER	2	EA.	\$9,600.00	\$19,200.0		
38	6" FORCE MAIN STREAM CROSSING	0	L.F.	\$175.00	\$0.0		
RESTO	RATION						
39	TEMPORARY PAVING	2,800	L.F.	\$15.00	\$42,000.0		
40	VEGETATIVE RESTORATION	0	L.F.	\$8.00	\$0.0		
41	MUNICIPAL PAVING RESTORATION	300	L.F.	\$50.00	\$15,000.0		
42	PENNDOT PAVING RESTORATION	2,500	L.F.	\$75.00	\$187,500.00		
		••••		ESTIMATED CONSTRUCTION COSTS	\$882,700.00		
				CONSTRUCTION CONTINGENCY @ 20%	\$176,500.0		
ENGINEERING, ADMIN, & LEGAL FEES @							
				TOTAL ESTIMATED PHASE 3 COSTS	\$1,271,000.0		
				FINAL ROUNDED	\$1,271,000.0		
		HEALT WIN	y. 41 (clo): 4				
				ESTIMATED CONSTRUCTION COSTS	\$2,996,650.0		
				CONSTRUCTION CONTINGENCY @ 20%	\$599,300.0		
				ENGINEERING, ADMIN, & LEGAL FEES @ 20%	\$719,200.0		
				TOTAL ESTIMATED PHASE 3 COSTS	\$4,315,150.0		
				FINAL ROUNDED	\$4,316,000.0		

### NOTES:

- 1. Gravity sewer main is assumed to be 11' depth.
- 2. 4' diameter manholes are assumed to be 11' depth.
- 3. Force main crossing is assumed to be bore & jack w/casing pipe.
- 4. Temporary paving is assumed to be 2" of 19.5mm HMA.
- 5. Municipal paving restoration is assumed to be 3" 25mm base and 1.5" 9.5mm wearing (Trench only).
- 6. PennDOT paving restoration is assumed to be 5" 37.5mm base and 2" 12.5mm wearing (Trench only).
- 7. The Lytle Farm pump station is assumed to be a dry pit, submersible style pump station.
- 8. The Deodate Road pump station is assumed to be a Gorman-Rupp suction lift style pump station.
- 9. The Hertzler Road pump station is assumed to be a submersible lift style pump station.
- 10. Cost estimate does not include cost to buy capacity from the DTMA WWTP.
- 11. Cost estimate does not include cost for required upgrades to the DTMA WWTP.

be solely responsible for permitting, design, and planning associated with the implementation of the Southwest WWTP Improvements Project. Since DTMA will have ownership of the both the collection and conveyance system and the treatment plant, DTMA will implement their own tapping and service fees to be applied to Londonderry Township residents connecting to the Route 230 Sewer Main.

It is also expected that DTMA will complete an evaluation to consider establishing a special rate district for customers in Londonderry Township to offset any additional costs related to payment of debt service for the construction of the WWTP upgrades and increased costs (if any) for the operation and maintenance of the new facilities to be constructed as part of Alternative 8A.

DTMA's existing rates are as follows:

# III. SEWER RATES (effective March 1, 2018)

- A. For Metered Establishments Billed Monthly
  - 1. A flat charge of \$11.80 per month shall be made for each billing unit.
  - Additionally, a charge shall be made of \$5.60 for each 1,000 gallons of metered water consumption.
- B. For Non-Metered Establishments
  - 1. A flat rate of \$43.00 per billing unit per month.

Any projected increases are not known at this time and are therefore not included.

The Township may elect to include a special purpose component to the tapping fee for refunding components of the private developer contributions or to help defray capital costs for Phases III through V, depending on the funding received.

Funding has not yet been secured for Phases III – V. The costs of these phases is expected to be funded by a combination of funding sources, which may include tapping and capacity fees, PENNVEST funding, Commonwealth Financing Authority funding, funding from other private developers, or public financing through the Township.

Table 3-3: provides three (3) potential funding sources for the construction of the sewer collection and conveyance systems. This alternative includes full build-out of the EDUs shown in the flow projections, a \$1,200 per EDU special purpose tapping fee, the private developer contribution of \$14.6MM (full construction of Phases I and II), and a user delinquency rate of 5%.

The potential user rates should be used for funding comparisons only and must be reviewed prior to the initiation of each Phase or following submission of any funding application or receipt of private developer contributions. Additionally, it is important to note that the impact from DTMA's upgrade to the Southwest WWTP and the consequences of the additional operation and maintenance expenses (if any) as a result of the new facilities may have an impact on the establishment of user rates by DTMA.

- 12. The Locust Lane and Newberry Road pump stations are assumed to be submersible lift style pump stations.
- 13. Laterals/conveyance facilities cost for new developments assumed to be covered by developers.
- 14. Cedar Manor MHP Connection costs assume existing MHP collection system will be used and public sewer will bypass private WWTP.
- 15. Sanitary sewer laterals assumed to be an average of 30 feet long.
- 16. Manholes assumed to be required every 200' for gravity sewer line.

Far and away the largest source of up-front revenue for the project is developer funding. Developer funding will cover the costs of initial design and construction costs for Phases I and II.

It is critical for the Township to obtain as much up-front revenue as possible to in order to reduce the total amount of the project that must be financed. In the past, there were several federal programs that provided grants for these types of projects. Over the years, these programs have been gradually eliminated as the federal government has transferred most of the financial responsibility for these programs to the state and local level. Competition for these funds is strong and the majority of grant money is generally funneled to the most economically distressed communities. As a result, most up-front revenue is now generated locally through connection and tapping fees as well as contributions by private developers.

Developer funding has been secured for Phases I and II, reducing the overall construction cost to the public by approximately \$14.6MM. Additionally, the initial capacity in the DTMA Southwest WWTP is being paid for directly by the participating developers.

Tapping fees may also be considered by the Township to secure up-front revenue. The three (3) components to the tapping fee include capacity, collection, and special purpose.

It is anticipated that funding for the DTMA Southwest WWTP upgrades will come from a capacity fee charged to new connections in Londonderry Township by DTMA. DTMA's current capacity fee is as follows:

# B. Tapping Fee

- 1. Capacity Part (Capacity Fee): (for permits issued on or after July 1, 2018)
  - a. \$2,400 for each Single Family Dwelling (228.9 gpd)
  - \$1,975 for each unit of a Multi-Family Apartment Dwelling or where adequate documentation of water usage exists Multi-Family Apartment Dwellings may be charged at the Nonresidential per gallon rate below (188.1 gpd).
  - c. \$10.50 for each gallon of capacity in Nonresidential Establishments

A detailed cost estimate for the WWTP upgrades has not yet been established. However, as the project implementation for the Southwest WWTP Improvements Project proceeds, it is anticipated that DTMA may increase their tapping fee to offset the costs for the WWTP upgrades. DTMA will

				Lenc	Lender A					1									
	Est Total Project									Lender B									
Funding Scenario	Cost	Financed (1)	Assumed	Loan Amount Rate	Rate	Term (Years)	Annual DS	Amount Financed via	Assumed	Loan Amount	Rate	Term	Annual DS	nua l	Total O&N	Total O&M Total Annual No. of Annual Cost Monthly Cost	No. of	Annual Cost N	Monthly Cost
Option A - PENNVEST Financing - Dual PV Rounds	/ Rounds	の一個では、						Loan/Grant		-		(cara)		8		Cost	EDUS	EDUS Per EDU" Per EDU"	Per EDU (2)
W/ Full Eligible Grant	000 0E0 75 S	200000		CHANNEL	WES!	Section 1	STATE OF STREET, STATE OF STREET, STATE OF STREET, STATE OF STATE OF STREET, STATE OF STREET, STATE OF STREET,	2000年日東京日本	年の元の日本の	PENNVEST	IVEST								
W/ 50% of Eligible Grant W/ 25% of Eligible Grant Distant Single Bond Issue	\$ 27,030,000 \$ 10,020,000 \$ 4,087,500 \$ 92,500 \$ 27,030,000 \$ 10,020,000 \$ 2,043,750 \$ 2,966,250	27,030,000 \$ 10,020,000 \$ 4,087,500 \$ 922,500 27,030,000 \$ 10,020,000 \$ 2,043,750 \$ 2,966,250	\$ 4,087,500 \$ 2,043,750	\$ (3,165,000) 1 \$ 922,500 1 \$ 2,966,250 1	1.00%	30 30	\$ (122,638) \$ 35,745 \$ 114,937	(122,638) \$ 5,010,000 \$ 8,175,000 \$ (3,165,000) 35,745 \$ 5,010,000 \$ 4,087,500 \$ 922,500 114,937 \$ 5,010,000 \$ 2,043,750 \$ 2,966,750	\$ 8,175,000 \$ 4,087,500 \$ 2,043,750	\$ (3,165,000) \$ 922,500 \$ 2,966,250	1.00%		30 (\$122,638) 30 \$35,745 30 \$114,937	(\$245,276) \$71,490 \$229,873	\$ 581,452 \$ 581,452 \$ 581,452	(\$245,276) \$ 581,452 \$ 336,176 \$71,490 \$ 581,452 \$ 652,942 \$229,873 \$ 581,452 \$ 811,325	814 814	\$435 \$844 \$1,049	\$36 \$70
Full Bond Financing	\$ 000 05E 01 \$ 000 05E 75 \$	200000					Section of the sectio		The second second	The second second second	をからの	Name of the least	A COUNTY OF STREET	STATE OF THE PERSON NAMED	<b>电影图图</b>		STATE OF THE PARTY		The second second
Option C - PENNYEST/Bond Financing - Single PV Round	ingle PV Round			1 5.00%   Sond	5.00%	30	30 \$ 671,981		¥	NA	NA	8	NA	5 671,981	\$ 581,452	671,981 \$ 581,452 \$1,253,433	814	\$1,621	\$135
W/ Full Eligible Grant	\$ 27,200,000 \$ 10,200,000 \$	5 10 200 000	\$	250000			Contract towns of the Contract	North-Month-Seaton	College of the second	LSEAMINED	WEST	はない			September 1995			The second second	
W/ 50% of Eligible Grant W/ 25% of Eligible Grant	\$ 27,200,000 \$ 10,200,000 \$ 27,200,000 \$ 10,200,000	\$ 10,200,000		\$ 250,000	4.50%	3 05		15,348 \$ 9,950,000 \$ 9,950,000 \$ 15,348 \$ 9,950,000 \$ 4,975,000 \$ 4,975,000	\$ 9,950,000 \$ 4,975,000	\$ 4,975,000	1.00%	3 3	\$0 S \$192,772 S	\$ 15,348 \$ 208,120	\$ 581,452 \$ 581,452	\$0 \$ 15,348 \$ 581,452 \$ 596,800 192,772 \$ 208,120 \$ 581,452 \$ 789,572	814 814	\$772 \$1,021	\$64 \$85
Amount Financed equals Total Project Cost less Tapping Fee Contributions of \$1,200 and Developer Contributions of \$2,46MM     Assumes 5% delinquency rate on user fees	Costless Tapping Fi	e Contributions	of \$1,200 and [	eveloper Contr	ributions	of ~\$14.6N	MM	13,348   \$ 9,950,000 \$ 2,487,500   \$ 7,462,500	5 2,487,500	\$ 7,462,500	1.00%		30 \$289,158	\$ 304,506	\$ 581,452	289,158 \$ 304,506 \$ 581,452 \$ 885,957	814	\$1,146	\$95

Herbert, Rowland & Grubic, Inc. December 2019 Providing a cost effective public service to protect and enhance the water environment and quality of life for our local and regional community

RELIABLY

RESPONSIVELY PROFESSIONALLY

July 23, 2019

Mr. Steve Letavic, Manager Londonderry Township 783 S. Geyers Church Road Middletown, Pennsylvania 17057

RE:

S.R. 230 Corridor Sanitary Sewer Extension

Treatment Capacity Request Review

Londonderry Township

Dear Mr. Letavic:

I am writing in response to your letter dated June 19, 2019 requesting treatment capacity to serve the short and long-term wastewater treatment needs of the S.R. 230 Corridor Project ("Project") in Londonderry Township ("Township"). This response is based on the information provided in your letter and our July 3rd meeting held at the DTMA office.

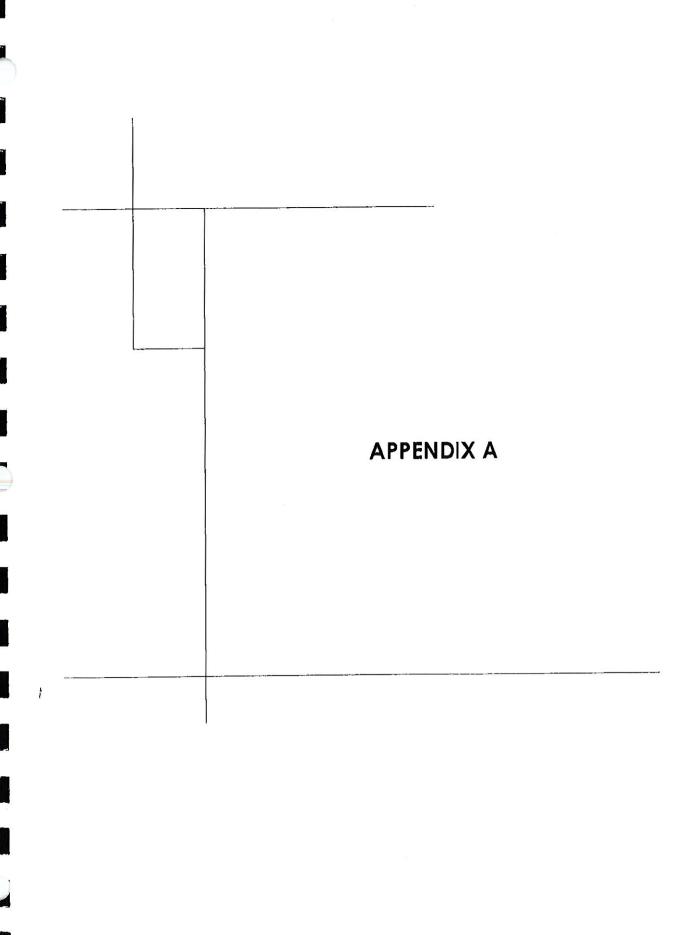
Currently, the DTMA Southwest Wastewater Treatment Plant (SW WWTP) has approximately 178,000 GPD (average daily flow - ADF) of capacity remaining. Therefore, the SW WWTP has adequate treatment capacity to serve the Township's immediate capacity request of 74,000 GPD. This letter will further confirm that the additional wastewater flows of 74,000 GPD will not create a current or future five-year projected hydraulic or organic overload at the SW WWTP.

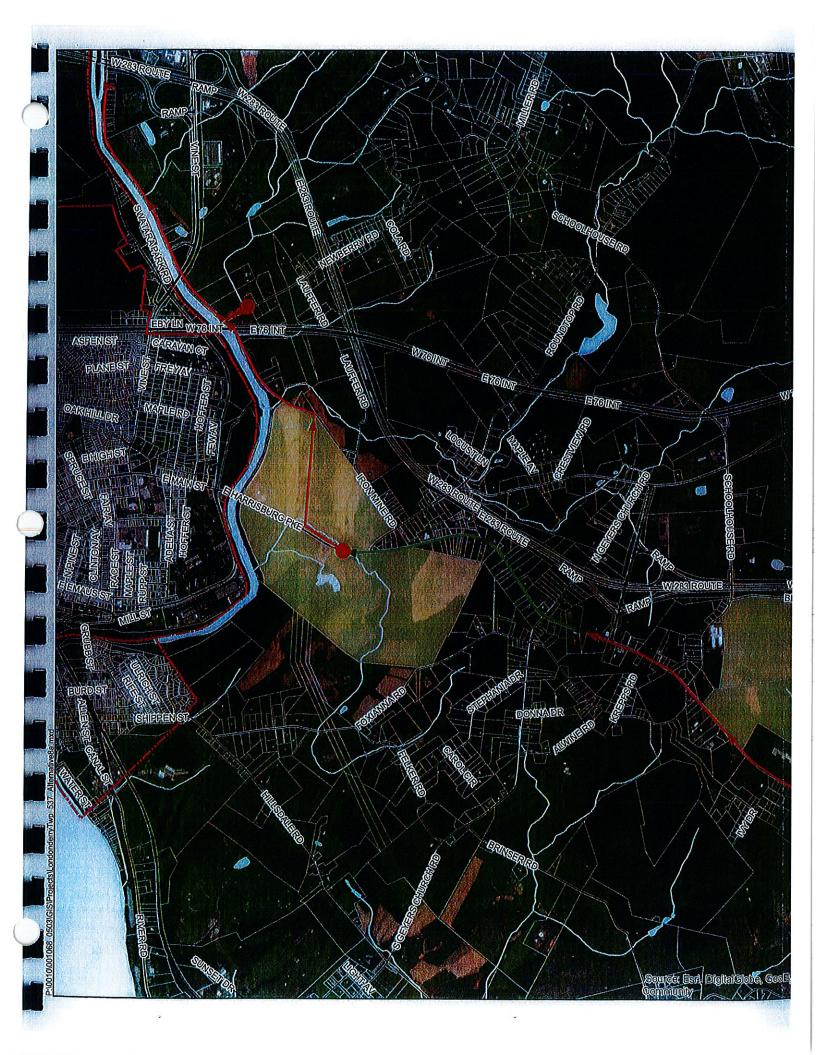
The DTMA policy on capacity commitment is to provide requested capacity on a "first come, first served" basis to customers who have paid the applicable upfront Capacity Fees. Treatment capacity is not guaranteed until payment of the required capacity fee is received and a Capacity Agreement is executed. Our current capacity fee is \$10.50 per gallon of capacity requested.

The projected long-term wastewater flows for Alternative 1 or 2 will ultimately exceed the available hydraulic capacity at the SW WWTP. Consequently, it will be necessary for the SW WWTP to be upgraded to account for the additional hydraulic and organic loadings required to serve the longterm wastewater needs of the Project.

At the July 22, 2019 DTMA Board meeting, Staff presented your treatment capacity request letter, a summary of the remaining capacity and future flow projections at the SW WWTP, and a preliminary schedule to upgrade and expand the SW WWTP to meet the capacity needs for the Project and for other growth in the service area. The Board provided their concurrence for DTMA to provide the short-term capacity request of 74,000 gallons per day. The Board also directed the Staff to work with the Township to develop a plan to meet the intermediate and long-term S.R. 230 Corridor wastewater treatment capacity needs.







Costs for building sewers, individual residential grinder pumps (as applicable), and costs associated with providing service to individual properties will be the responsibility of each individual property owner.

# 3.5 ADMINISTRATIVE ORGANIZATION AND LEGAL AUTHORITY FOR IMPLEMENTATION

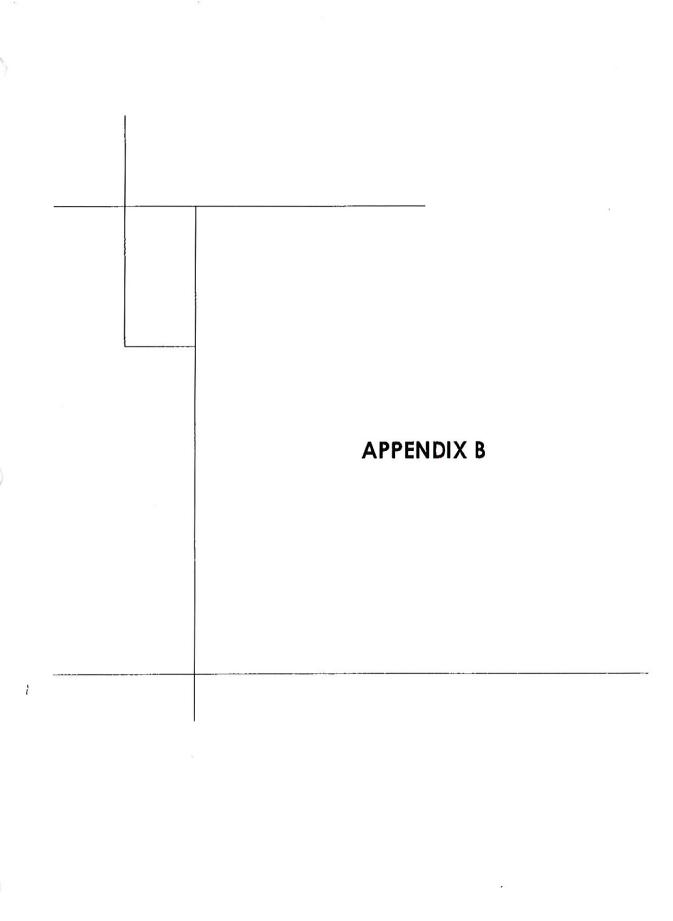
As previously discussed, the newly constructed sewer facilities will be dedicated to DTMA for ownership and operation. This is expected to occur following the design, permitting, and construction of each phase of the implementation for Alternative 8A. DTMA will be directly responsible for all operation and maintenance activities associated with the new facilities upon accepting dedication.

The Township is required to obtain any necessary rights-of-way, easements, or properties to implement the proposed improvements. Any land requirements, in the form of rights-of-way, easements, or additional properties will be acquired through negotiation procedures between the Township and the property owner. In circumstances where a suitable compensation cannot be negotiated, condemnation procedures may be utilized to acquire properties for use in construction of public facilities. The necessity for acquisition of property would be further evaluated during the final design phase of any collection and conveyance facilities.

### 3.6 SELECTED ALTERNATIVE AND SPECIAL STUDY COMMENTS

The State Route 230 sewer main will be constructed following treatment Alternative 8A, as detailed in the 2016 Plan Update. In addition, the selected conveyance methods for the system shall include Alternatives 2B, 3B, 4A, 5B, and 6A in accordance with the approved 2016 Plan Update.

In conclusion, the primary purpose of this Special Study is to change the treatment alternative used by Londonderry Township from Alternative 8B to Alternative 8A, in effect, by switching the treatment facility from the Middletown Borough WWTP to the DTMA Southwest WWTP. Other updates such as identifying the private developer funding sources and updates to the flow projections within the previously approved planning/service areas were also made. All remaining selected alternatives identified in the 2016 Plan Update remain in effect.



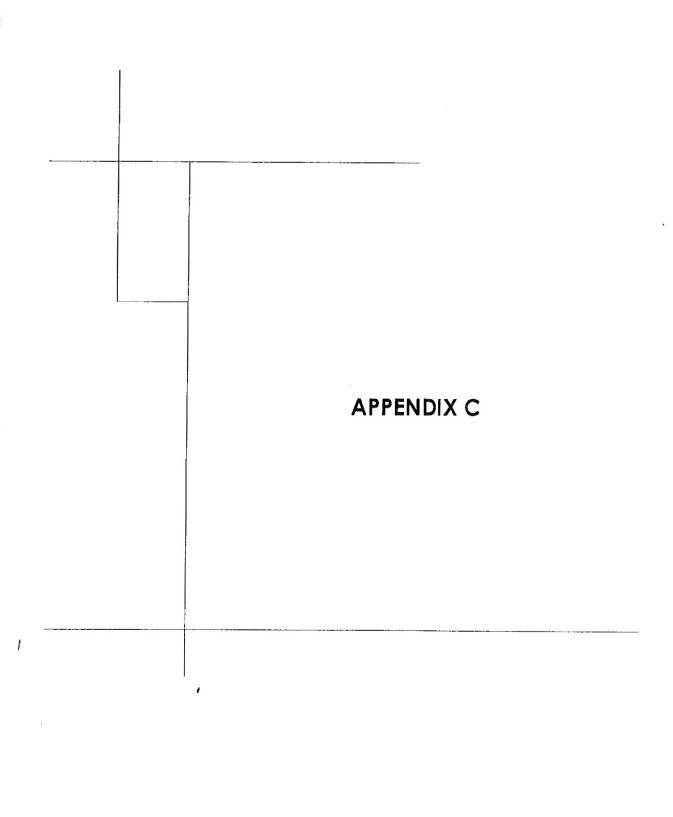


Table C-1: 2021 - Initial Flow Projections to DTMA Southwest WWTP

		akan ike wasila s Malak wasila wasi	23. 1. 110 MA. 16 A. CGX - 11 NO. 18 A.	TO RESIDENCE	viv.
	Warehouses (Vision-Group Elizabethtown)	260	134.6	35,000	[3]
		Total	134.6	35,000	•
	Hertzler Road Pump Station		134.6	35,000	
	School Heights Village	260	46.2	12,000	(6)
*:	Salurdays Market	260	11.5	3,000	(6)
		Total	192.3	50,000	• • •
					r tu (i hwaji) Tu dayaran
-	Deodate Road Pump Station		192.3	50,000	
2	E. Harrisburg Pike	260	54	14,040	[4]
8.40	Lytle Farms (North)	260	34.6	9,000	[6]
		Total	280 9	73,040	

- Footnotes
  [1] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on the average daily flow at the WWTP from 2/2011 to

- [1] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on the average daily flow at the WWTP from 2/2011 to 10/2011.

  [2] Build-out EDUs revised based on maximum number of spots available according to the Dauphin County Parcel Viewer.

  [3] IAW November 33, 2019 Meeting with Leff Camp; Vision Group/Based on 900 employees

  [4] In accordance with the Act 537 Plan.

  [5] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on 195 gpd/EDU

  [6] IAW November 13, 2019 meeting with CDRES Inclustrial Partners; Flow per 59

  [7] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on the average daily flow at the WWTP from 4/2011 to 11/2011.

  [8] Build-out flow per email correspondence dated March 8, 2019.

Table C-2: 2023 - Flows to DTMA Southwest WW/TP

	From Adjusting the Land Art of the range		North Committee (Committee)		
5	Cedar Manor Mobile Park Horne	260	324	84,240	(1) (2)
	Warehouses (Jeff Camp & Eric Revene)	260	134.6	35,000	(3)
		Total	458.6	119,240	
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	Hertzler Road Pump Station				
4	Pine Manor Mobile Park Home	•	458.6	119,240	12421247
•		260	120	31,200	[2] (5)
	School Heights Village	260	45.2	12,000	[6]
1.5	Salurdays Market	260	885	23,000	(6) ,
		Total	713.2	185,440	
		Sandlich E.		No. alek (M. Dec. 10) An Company	
	Deodate Road Pump Station		713.2	185,440	* * * * * * * * * * * * * * * * * * * *
2	E. Harrisburg Pike	260	54		
	Lytle Farms (North)		75	14,040	[4]
90	eyes reinis (norm)	260	34.6	9,000	[6]
		Total	801.8	208,480	

- [1] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on the average daily flow at the WWTP from 2/2011 to 10/2011

- [2] Build-out EDUs revised to be seen on any group or spots available according to the Dauph in County Parcel Viewer.

  [3] IAW November 13, 2019 Meeting with Jeff Camp; Vision Group/Based on 900 employees

  [4] In accordance with the Act 537 Plan.

  [5] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on 195 gpd/EDU.

  [6] IAW November 13, 2019 meeting with CORES Industrial Partners; Flow per SF for 3,000 and 20,000 for future commercial use
- [7] Build-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Plan. Build-out flow defined in the Act 537 Plan was based on the average daily flow at the WWTP from 4/2011 to 11/2011 [8] Build-out flow per email correspondence dated March 8, 2019.

# PUBLIC NOTICE LONDONDERRY TOWNSHIP ACT 537 PLAN UPDATE ADOPTION

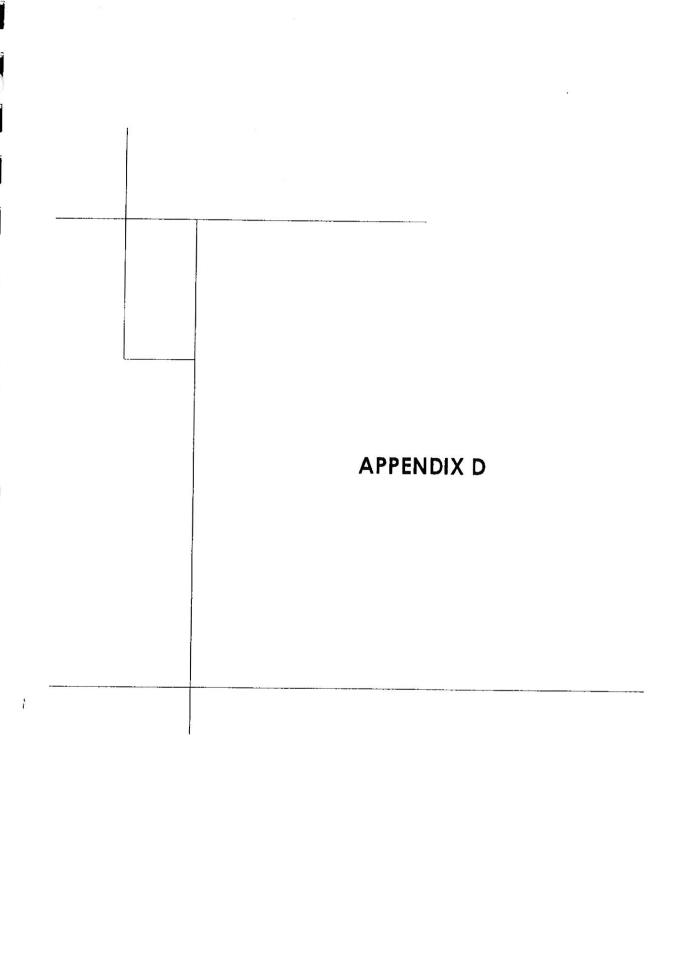
Notice is hereby given that the Londonderry Township Board of Supervisors, Dauphin County, Pennsylvania proposes to adopt a Special Study pursuant to Act 537 following a thirty (30) day public comment period beginning December 4, 2019 and ending January 3, 2020.

The purpose of the Special Study is to revise the most ACT 537 Sewage Facilities Plan Update based on recent revisions to the Township zoning along SR 230 and a change in sewage treatment alternative. The newly selected alternative for the Special Study includes:

- (1) Construction of public sewers to serve existing properties and proposed development along Pennsylvania State Route 230 from Lytle Farms to Hertzler Road with conveyance of all wastewater to the Derry Township Municipal Authority (DTMA) Southwest Wastewater Treatment Plant (WWTP) for treatment and disposal. Funding for the first two phases of construction has already been secured with private funds. Monthly user fees are estimated at \$43 per equivalent dwelling unit (EDU) as a stand-alone project;
- (2) Construction of public sanitary sewer facilities to serve other areas of need in Sewer District No. 2 and Sewer District No. 3 with conveyance of all wastewater to the DTMA Southwest WWTP for treatment over a period of 9 years. This alternative is contingent upon additional developer contributions and overall funding. Monthly user fees are estimated at \$43 to \$95 depending on overall financing.

Individuals interested in reviewing a copy of the Special Study may do so at the Londonderry Township Municipal Building located at 783 S. Geyers Church Road, Middletown, PA. Given the minor nature of the updates outlined in the Special Study, no public hearing will be held. The public may submit written comments on the Special Study to the Township Board of Supervisors, c/o Township Manager, Steve Letavic, 783 S. Geyers Church Road, Middletown, PA 17057 or e-mail at <a href="mailto:sletavic@londonderrypa.org">sletavic@londonderrypa.org</a>. The Plan Update is anticipated to be adopted by the Township during their regularly scheduled Board of Supervisors meeting at the Township Municipal Building on Monday, January 6, 2020 pending receipt of comments.

Steve Letavic, Township Manager Londonderry Township



	Ceder Manor Mobile Park Home Warehouses [Jaff Camp & Eric Revene]	250	374	84,240	[1](2)
		250 Total	134.6 458.6	35,000 119,240	[3]
	. M. S. Carlottomak with a second out	arte de accesa	Active Settlem	The section	
	The state of the s			T TOTAL PROPERTY	4-1
:	Hertzler Road Pump Station		458.6	119.240	
1	Braeburn	160	49	12,740	[4]
7	N. Deadate Road	260	29	7,540	[4]
2	Pine Manor Mobile Park Home	260	120	11,200	(2) (5)
	5. Deodate Road School Heights Village	260	72	18,720	[4]
		260	45.2	12,000	[6]
	Saturdays Market	260	84.5	23,000	[6]
		Fotal	463.2	226,440	
		anne grafie a k Martin i de la companya de la compa		eranari. T	i anian
2	Crestriew Village Mobile Park Home	260	\$ 12 - 1125/T.H.1200.64	44.070751711000.	13.00
2	Colebrook Road	260	10	20,800	[2] [7]
		Total	160	43,600	[4]
		engaran en	r. Albanillari	8.600 (2005) 1500	di etteri
		Triery N	er - Aran Sila and the s Lange of the reserves	daga ayan karala Karalangan sa	4.458
	Debusie Rose Fump Station		463.2	224,440	6 3 (%) 7 3 (%)
	Locust Lane Pump Station	:	463.2 160		d a Sky
2	Locust Lane Pump Station  E. Harrisburg Pike	260	863.2 160 54	224,440	4 2 See
2	Locust Lane Pump Station  E Harrisburg Pite  Lytie Farms [Horth]	250 250	863.2 160 54 34.6	224,440 41,500	[4]
2	Locust Lane Pump Station  E. Harrisburg Pike	260	863.2 160 54	224,440 41,500 14,040	

- Footnotes

  [1] Buld-out liew revised to be based on 280 gpd/EDU as defined in the Act 537 Pian. Build-out flow defined in the Act 537 Pian was based on the average daily flow as the WWTP from 2/2011 to 10/2011

  [2] Buld-out liew revised based on maximum number of spots available according to the Dauphin County Parcel Viewer.

  [3] AW November 13, 2013 Meeting with left Care, Within Group/Blased on 800 employees

  [4] in accordance with the Act 537 Pian.

  [5] Buld-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Pian. Build-out flow defined in the Act 537 Pian was based on 195 gpd/EDU.

  [6] MAY November 13, 2013 meeting with CoRES industrial Partners; flow per 5r for 1,000 and 20,000 for future commercial use

  [7] Buld-out flow revised to be based on 260 gpd/EDU as defined in the Act 537 Pian. Build-out flow defined in the Act 537 Pian was based on the average daily flow at the WWTP from 4/2011 to 11/2011.

  [8] Buld-out flow per email correspondence dated March 8, 2019.

Mr. Steve Letavic July 23, 2019 Page 2

DTMA's commitment to provide short and long-term treatment capacity needs for the Project will, in the near future, require formal Sewer Service Agreement(s) between the Township, DTMA and likely the developer of the proposed project in Londonderry Township. It would be beneficial for all parties to develop a Memorandum of Understanding (MOU) in the near term to develop a framework for the service agreement and identify the objectives, responsibilities, and schedules for all parties.

The following is a preliminary schedule for DTMA to undertake the various steps for addressing the long term wastewater treatment improvements at the SW WWTP:

- SEP 2019 FEB 2020: Perform Engineering study to develop, evaluate, and price alternatives for the expansion and upgrade of the SW WWTP
- APR 2020 JAN 2021: Complete design plans and specifications for SW WWTP expansion and upgrade improvements
- FEB 2021 APR 2021: Advertise and receive Bids for the SW WWTP Improvements Project
- MAY 2021 MAY 2023: Construction of SW WWTP Improvements Project
- JULY 2023: SW WWTP fully operational

As the project implementation proceeds and costs for the SW WWTP upgrades are developed, we will work with our sewer rate consultant to evaluate the current sewer rate structure and to provide various financing and rate analyses for this project. It is however our goal to maintain a uniform sewer rate schedule for all of our customers, including those to be served by the Township's Project.

If you have any questions or require additional information regarding this matter, please do not hesitate to contact me. We look forward to continuing discussions with all parties.

Sincerely,

William G. Rehkop III, P.E.

Da Joteyn

**Facilities Director** 

cc: Andrew Kenworthy, P.E., HRG Wayne Schutz, DTMA

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