GOMER SEWER IMPROVEMENT AREA

GENERAL STUDY FOR WASTEWATER COLLECTION, CONVEYANCE & TREATMENT ALTERNATIVES

APRIL, 2015

PREPARED FOR

ALLEN COUNTY SANITARY ENGINEERING DEPARTMENT

PREPARED BY

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1.0 INTRODUCTION AND PURPOSE

The Gomer Sewer Improvement Area is an unincorporated area located along Pike Run in Sugar Creek Township. The Ohio Environmental Protection Agency has documented nuisance conditions within the area which have violated OAC 3745-1-04 (State Water Quality Standards) due to off lot discharge of sanitary wastes. Individual homes are served by cesspools, septic tanks or on-site home units which discharge off-site to various storm sewer outlets.

The Allen County Commissioners are the responsible body for the planning, financing and operating publicly owned wastewater collection and treatment works in the planning area. The Allen County Commissioners established the Allen County Sanitary Engineering Department to oversee these duties for their office.

2.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of this study, a summary is described below:

1. The present discharge of untreated sewage causes public health hazards and odor problems.

2. Most of the home sites do not have adequate lot area to install leaching fields to prevent off lot discharge.

3. There are 150 user equivalents within the area.

In summary, a total of eight design options with varying alternatives were considered:

Option A - All Gravity w/ west end Pump Station to American II WWTP
Option B - All Gravity w/ central Pump Station to American II WWTP
Option C – Combination Gravity & Low Pressure Collection w/ Pump Station to American II WWTP
Option D - All Gravity w/ Pump Station to On-Site WWTP
Option E - All Low Pressure Collection to On-Site WWTP
Option F – All Airvac Collection to On-Site WWTP
Option G - All Low Pressure Collection w/ Pump Station to American II WWTP
Option H – All Airvac Collection w/ Pump Station to American II WWTP

After evaluating the economic, environmental and social costs related to alternatives for collecting, transporting and treating sanitary flows, it is recommended that Option C, a combination of gravity sanitary sewers and low pressure collection with individual grinder pumps and a pump station with 6” force main be installed to collect and transport collected sanitary flows to the American #2 Wastewater Treatment Plant for treatment.

The preliminary project estimate for the recommended facilities is $3,096,030. The cost per user equivalent is estimated to be $20,640 which is excessive. Further study is recommended to determine feasibility and affordability to the property owners located within the service area.

3.0 PROJECT HISTORY AND SCOPE OF STUDY

The Gomer Sewer Improvement Area is located in Sugar Creek Township, Allen County, Ohio. Since unincorporated, this area falls under the jurisdiction of the Allen County Sanitary Engineering Department with regards to sanitary wastes and its collection, treatment and disposal.

The area is served by individual on lot systems with on lot and off lot discharges. Based on Ohio Environmental Protection Agency (OEPA) tests conducted in August of 2010 the E.coli sample results exceed the geometric mean of 161cfu/100ml and a maximum value of 523cfu/100ml for Class B primary contact recreation water. Additional testing conducted by the Allen County Sanitary Engineer's Office on September 20, 2012, July 15, 2013, July 29, 2013 and August 15, 2013 confirmed OEPA's initial assessment that water quality issues exist and need to be addressed. E.coli sample results ranged from 626(MPN) to more than 7260(MPN) – far in excess of the maximum allowed value of 523cfu/100ml. Please note that MPN (most probable number) does correlate with the cfu/ml (colony forming units per milliliter) See Appendix A.

The following is a summary of history for the project:

1. While conducting a water quality survey of Pike Run in 2010, OEPA obtained stream samples within the Gomer area. While obtaining these samples, nuisance conditions were noted in and along the streams indicating unsanitary conditions resulting from inadequately or untreated wastewater discharges from the unsewered area of Gomer. The results of the samples confirmed an excess level of E. coli present and that nuisance conditions existed indicating violations of water quality standards as addressed later in this General Plan.

2. By letter dated July 10, 2012, the OEPA contacted the Allen County Commissioners regarding their findings in the Gomer area. The OEPA requested that Allen County respond in writing as to how the water quality violations will be addressed.

3. After receipt of the July 10, 2012 letter from OEPA, Allen County conducted additional field testing on September 20, 2012. Further testing including a subdivision south of Gomer was done July 15, 2013, July 29, 2013 and August 5, 2013 to determine the scope of the problem and to confirm that the water quality standards were being violated.

4. In August of 2013 Kohli & Kaliher Associates, Inc. was authorized by the Allen County Sanitary Engineering Department to complete items concerning the

unincorporated area known as Gomer located in Sugar Creek Township, and determine how best to serve the Gomer Sewer Improvement Area with collection, conveyance and treatment facilities. The boundaries for the Study Area are as shown on Plate No. 1. See Appendix B.

The following is a scope of the project:

1. Participate in meetings with potential users located in area.

2. Prepare map of study area with legal description.

3. Prepare database of parcels found within the study area.

4. Prepare recap of information generated to establish and justify boundaries.

5. Develop alternatives on how to best serve the proposed Gomer Sewer Improvement Area with collection, conveyance and treatment facilities.

6. Select the plan which will best serve the area.

7. Present the preliminary design for the selected plan(s).

See copies of correspondence in Appendix A.

4.0 PROPOSED SEWER DISTRICT BOUNDARIES

Factors considered establishing boundaries for the proposed sewer district included:

1. Water Quality
   Testing of the water found in the streams as well as water discharged from various pipes indicates that inadequately treated wastewater is being discharged off-site from development within the area.

2. Lot Size
   Today, the Allen County Health Department requires a minimum of 2.5 acres to build a new home and construct a leach field system with no off-site sanitary discharges. Many of the lots within the platted area contain 0.2± acres. There is not adequate area to construct an on-site leaching system with no off-lot discharge.

3. Density of Development
   The density of development along roadway frontage must be adequate to support the construction of the collection system. Long sections of vacant roadway frontage would be better served by 2.5 acre parcels with on-lot leaching systems.

4. Industrial Flows
   There are no sources of industrial flows to consider.

The proposed Gomer Sewer Improvement Area is as outlined on Plate No. 1 with Legal Description described in Appendix B. As the adjacent open areas develop the sewer district may be expanded as necessary to pick up these areas.

5.0 CHARACTERISTICS OF STUDY AREA

Gomer is a platted development located in the northern parts of Sections 28 and 29, Sugar Creek Township, Allen County, Ohio. There are many small parcels (section land) located around the platted area which spills over into Sections 20 and 21.

In general, the platted lots are 66' x 132' or approximately 0.20 acres each. The platted area is approximately 90% developed.

The size of the adjacent parcels range from less than 1 acre to 5 acres not including crop land.

The Wales-Ohio Project web site indicates that Gomer was first settled in Sugar Creek Township in 1833. It was platted in 1870. It had a substantial Welsh population in the late 1800s, but remains as an unincorporated area today.

Sugar Creek Township has been zoned since 1988. Most of the ground in Gomer is zoned R-1 residential. Some lots on the west side of Gomer Road at Lincoln Highway are zoned B-2 business and a grain elevator on Lincoln Highway is zoned M industrial. See Appendix C.

The majority of the development is residential with a pizza place and a bank located at the intersection of Lincoln Highway and Gomer Road. A couple of small business or commercial type buildings are scattered along Gomer Road and Lincoln Highway. A review of County Auditor records indicates there are 136 residential and 11 non-residential units within the proposed Gomer Sewer District.

A review of the parcel database found in Appendix D indicates:

133 each one – family dwelling
2 each two – family dwelling
1 apartment building (4 units)
1 each church
1 each school (vacant)
2 government
7 other – business, commercial, etc.
10 outbuildings/utility/outdoor use
6 agriculture
18 each - vacant

The topography of the area slopes toward Pike Run which runs through the developed areas. The majority of the east end of the developed area is in the floodplain.

The 100 year flood elevations and flood plain have been determined as shown in Appendix F – Flood Insurance Rate Map 39003C0200D. The floodplain ranges from elevation 773 to elevation 780.

The top of rock elevation at Pike Run and Lincoln Highway is 757 to 760 per recent bridge plans. Estimated bottom of pump station elevation for an all gravity collection system is 746 which is possibly 11' to 14' into rock. An all low pressure collection system or combined gravity and low pressure collection system can provide considerable construction cost savings through shallow sewer construction and the avoidance of rock excavation.

The soils found in the area are of the Blount -Glynwood-Pewamo association. The soil survey for Allen County, Ohio indicates this association is "Very deep, level to strongly sloping, somewhat poorly drained, moderately well drained, and very poorly drained soils that formed in till". The primary soil classifications in the Gomer area are Blg1A1 and Blg1B1 which have Very Limited absorption ratings.

6.0 WATER USE DESIGNATION AND WATER QUALITY ATTAINMENT

The Gomer area is located within the upper Ottawa River Water Shed, part of the Maumee River Basin.

By Ohio Administrative Code (OAC) 3745-1-11, the Ohio Environmental Protection Agency (OEPA) has designated "Use Designations" for the water bodies within the Maumee River Drainage Basin and has established water quality standards for the area.

The use designation for the Ottawa River at Gomer is warm water aquatic life habitat (WWH), water supply and primary contact recreation. Pike Run is a Class B primary contact recreation water system.

The water is suitable as a water supply for:

1. Agricultural-suitable for irrigation and livestock watering without treatment
2. Industrial-suitable for commercial and industrial uses, with or without treatment.

According to the Biological and Water Quality Study of the Ottawa River and Principal Tributaries 2010 report provided by Ohio EPA, the results portrayed significant recovery in comparison with previous survey results. Nearly every community biometric was (Ecological Assessment Study EAS/2012-12-13 Ottawa River Basin Survey April 2013) improved, including a decrease in both the frequency and magnitude of diseased fish, which reached levels characterized as highly elevated in 1996. Presently, all sites were found to support a fish attainment fully consistent with Pike Run's existing modified warm water habitat (MWH) aquatic life use designation. These improvements were directly attributable to the American-Bath WWTP being installed in 1996.

Despite MWH attainment in 2010, the macroinvertebrate community quality condition in Pike Run declined significantly in Gomer at the Lima–Gomer Rd. bridge (RM 0.48). High E. coli bacteria concentrations exceeding the PCR criterion were documented in Pike Run at Gomer. As the result of septic inputs from the unsewered community of Gomer, total EPT and sensitive taxa diversity decreased by > 50%.

Pike Run is on the list of prioritized impaired waters in the "OEPA 2014 Integrated Water Quality Monitoring and Assessment Report" due to non-attainment of human health and recreation assessment criteria. See Appendix A.

7.0 WASTEWATER TREATMENT PLANT EFFLUENT LIMITATIONS

Contact with the OEPA indicates that the effluent limits for a continuous discharge to the upper Ottawa River Basin would be:

Parameter	30-Day Limits	7-Day Limits	Max-Min Limits
$CBOD_s$	10 mg/l	15 mg/l	---
TSS	12 mg/l	18 mg/l	---
Ammonia-Summer - Winter	1.0 3.0	1.5 4.5	--- ---
Dissolved Oxygen	---	---	6.0 mg/l minimum
Total Residual Chlorine	---	---	0.038 mg/l maximum
pH	---	---	6.5 – 9.0 SU
Fecal Coliform	126 fcu/100ml	284 fcu/100ml	

8.0 ECONOMIC, DEMOGRAPHIC AND LAND USE DATA

The Gomer Sewer Improvement Area is located approximately 5½ miles west of Cairo along Lincoln Highway between Sandy Point Road and the Ottawa River. It is 8½ miles north of Lima along Gomer Road between U.S.30 and Lincoln Highway. The area is located in Sugar Creek Township and is <u>not</u> incorporated. But much of the area has been platted into lots.

Some business or commercial type development is spread mostly along Gomer Road and Lincoln Highway. No increase in commercial development is anticipated due to location of larger commercial areas near Lima.

None of the businesses located within the Improvement Area produce any discernable amount of industrial wastes that would be discharged to the sewer system.

A school building on Lincoln Highway owned by the Elida Local School District is no longer used as a school. It is occasionally used as a community center. Its treatment plant receives minimal maintenance.

The parcel sizes within the Improvement Area range from 66' x 132' (0.20 acres) in the platted areas and from less than 1 acre to 5 acres, not including crop land, for unplatted areas.

Please see Appendix D (and summary of data in Section 5.0, page 4 of this report) for a review of the tax parcel information for the Improvement Area.

A review of the population history for Sugar Creek Township including Gomer (an unincorporated area) indicates that the population has increased approximately 10 percent from 1960 thru 2010 (50 years).

The 2010 Census Data for Sugar Creek Township indicates that there were 138 households with an average of 2.63 persons in each. The parcel data indicated 138 housing units. (133 single-family, 2 two-family units and a 3 unit apartment building). With an average of 2.63 people per unit, the estimated 2010 population for the Improvement Area would be 364. Population projections from the RPC indicates that the Sugar Creek Township population for the year 2020 will be 1309 based upon the past township growth or 1260 based upon the past growth for Allen County. The projected population for the Improvement Area would be 372. The population history and projections are shown below;

POPULATION AND PERCENT CHANGE
SUGAR CREEK TOWNSHIP

Year	Sugar Creek Township	% Change	Gomer
1960	1166		
		+3.7	
1970	1209		
		+2.7	
1980	1242		
		+5.6	
1990	1311		
		+1.4	
2000	1330		356
		-3.7	
2010	1283		364
		+2.0	
2020	*1309-by Township Trend	Growth	372
	*1260-by County Trend	Shrink	357

* Projected by Lima Allen County Regional Planning

9.0 WATER USES, QUALITY, AND ENVIRONMENTAL CONDITIONS

There are no public water systems serving the development within the planning area. Each home or building is served by an individual well.

The present discharge of untreated sewage to the surface waters found in the planning area causes public health hazards and nuisance problems.

In general, the topography slopes toward Pike Run. Pike Run flows east to west generally parallel to Lincoln Highway. It crosses from the north to the south side of Lincoln Highway near the east end of Gomer and then back to the north side of Lincoln Highway in the middle of the Gomer area. Land use includes residential, some lite business-commercial-industrial and agricultural. See Appendix E

The soils found in the area are of the Blount -Glynwood-Pewamo association. The soil survey for Allen County, Ohio indicates this association is "Very deep, level to strongly sloping, somewhat poorly drained, moderately well drained, and very poorly drained soils that formed in till".

The National Wetlands Inventory as shown on the U.S. Fish and Wildlife Services website indicates no significant wetlands within the area.

A review of USEPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) indicates that there are no hazardous or toxic waste sites in the area.

The Ottawa River has not been designated as a wild, scenic or recreational river.

Due to the extent of agricultural and residential development in the area, there should be little to no impact on fish or wildlife habitats.

Contact with the Allen County Regional Planning Commission concerning archaeological and historical sites within the study area indicates that there are two archaeological sites along the Ottawa River west of the proposed sewer district. There are five buildings classified as historical structures within the proposed district. See Appendix F.

Pike Run at Gomer is on the list of prioritized impaired waters in the "OEPA 2014 Integrated Water Quality Monitoring and Assessment Report" due to non-attainment of human health and recreation assessment criteria. See Appendix A.

10.0 FUTURE SERVICE CONDITIONS

Of 181 tax parcels found in the planning area, only 24 (13 percent) are listed as vacant or used for agricultural purposes. The vacant areas would not support a large population growth within the Improvement Area.

Based upon population projections of 364 at present to 372 over the next 20 years and available vacant land that is not in the floodplain, residential growth within the Gomer Improvement Area will be at a minimum increase.

The projected flow from the present Gomer Sewer Improvement Area is 60,000 gpd based upon the following counts found in the area:

	Flow/Gpd	User Equivalent
133 each single-family homes @ 400 gpd	53,200 gpd	133
2 each two-family homes @ 800 gpd	1,600 gpd	4
1 apartment building (4 units) @ 1200 gpd	1200 gpd	3
1 each church @ 400 gpd	400 gpd	1
1 each school @ 0 gpd (closed)	0 gpd	
9 each business/commercial/gov. units @ 400 gpd	3,600 gpd	9
Design Flow from Existing Development	60,000 gpd	150

A design flow of 60,000 gpd will be used as the basis for design.
The type of sanitary waste from the area would be domestic with a typical strength of 200 to 220 mg/l for $CBOD_s$ and total suspended solids. The daily design load for each would be 110.1 pounds.

Future industrial flows could increase the strength of the waste stream, but no future industrial flows are anticipated.

11.0 ALTERNATIVES TO CONSIDER FOR ESTABLISHMENT OF OPTIONS FOR REDUCING OR ELIMINATING SANITARY WASTE FROM PLANNING AREA

Alternatives to be considered for reducing or eliminating the discharge of sanitary wastes from the planning area to Pike Run and the Ottawa River will include examination of the following items:

For Treatment:

- Upgrading private on-site septic tank systems with leaching tile field
- Construct a centralized treatment plant
- Pump waste to appropriate wastewater treatment plant nearby

For Collection and Conveyance:

- Conventional Gravity Sewer to a pump station

Low Pressure Sewer*
Combination of Gravity and Low Pressure to a pump station
Vacuum Collection System*
*The need for a pump station and force main would depend on treatment method.

The implications of the "no action" plan were also considered. The "no action" plan would mean that the present off site discharge from failed on site treatment systems would continue. The present health hazards and nuisance conditions would continue causing water quality violations.

Treatment and reuse of wastewater flow is not a viable alternative since no opportunities exist for the reuse of non-potable water. To consider the alternatives, preliminary costs were developed and combinations of treatment and collection facilities were considered for the selected options.

11.1 TREATMENT ALTERNATIVES

As noted in the effluent limitations, limits have been established for continuous discharge treatment facilities. The following provides more detail as to the treatment alternatives to be considered.

11.1.1 ON-SITE TREATMENT SYSTEMS

At the present time, each residential unit has some type of septic tank system. The testing programs completed to date indicate that many of the systems discharge off-site.

The present requirements of the Combined Allen County General Health District for the installation of household sewage disposal systems require that:

1. Minimum lot size of 2½ acres for a new home site.
2. On-site systems to include septic tank and leaching tile field with curtain drain.
3. There will be no off-site discharge of sanitary wastewater.

Based on the size of the majority of the individual parcels found in the "Improvement Area", on-site treatment systems will not be an acceptable alternative to provide wastewater treatment for the individual sites.

11.1.2 CONSTRUCTION OF CENTRALIZED TREATMENT PLANT

The effluent limits provided for a continuous discharge to Pike Run require a biological treatment system with filtration and post aeration or a sequencing batch reactor (SBR) type facility which combines biological treatment and clarification within the same reactor (tank). The individual treatment processes are controlled by a Process Control Panel with programmed logic to operate the treatment facilities.

A SBR type facility would not require a large site. The site should be somewhat isolated from residential development due to potential odors and noise.

The treatment scheme to utilize a SBR type facility would include:

Pumping to the site
Gravity flow through mechanical cleaned fine screen
Site pumping facility
Duplex SBR tanks
Flow control to regulate discharge from batch
UV equipment for disinfection
Post Aeration
Outlet to Pike Run

Side stream facilities would include:

Sludge holding facilities
Screenings handling and disposal

A preliminary site was selected north of Lincoln Highway at the north side of the planning area as noted on Plate No. 2 for consideration. See Appendix G.

11.1.3 UTILIZATION OF EXISTING TREATMENT PLANT

The Gomer Sewer Improvement Area is somewhat isolated from adjacent areas with sanitary sewer service. Approximate distances to adjacent areas with service include:

Village of Cairo/American Bath WWTP	4.9 miles
Village of Elida	4.8 miles
City of Delphos	7.5 miles
American #2 WWTP	4.3 miles

The Village of Cairo already has an association with the Allen County Sanitary Engineering Department. Existing Allen County facilities at Cairo include a pump station that pumps Cairo waste 4.0 miles through an eight inch force main to a sewer that carries the flow to the American Bath Wastewater Treatment Plant for treatment. The pump station and force main would require upgrades to handle the 74% increase in flow and double pumping the flow from Gomer would not be as efficient as other options available.

Delphos and Elida will <u>not</u> be considered as viable options since there are no existing treatment agreements, and those options would mean longer force mains and upgrades to their respective facilities.

American #2 WWTP is the preferred option to study to take advantage of the utilization of an existing treatment plant to treat Gomer's wastewater effluent.

11.2 COLLECTION AND CONVEYANCE SYSTEM ALTERNATIVES

The area can be served by three methods for collecting flow.
Conventional Gravity Sewer to a pump station
Low Pressure Collection System *
Vacuum Collection System*
Combination of Gravity and Low Pressure to a pump station
*The need for a pump station and force main would depend on treatment method.

11.2.1 GRAVITY SEWER

The area can be served by conventional gravity sewer for collecting flow. Sewer depths would reach up to 30'±. A pump station could be located along Lincoln Highway west of Gomer Road with a force main transporting flow to the site of treatment. Since Gomer is built around a hill, the depth of sewers needed to get through high spots in town would cause this method to have the highest excavation and restoration costs.

11.2.2 LOW PRESSURE SYSTEM

Collection by low pressure sewer depends upon a pump located at each user's site. The pump outlets into a small diameter pressure pipe which transports flow to the outlet site. Depending on the location chosen for treatment, a pump station may be needed. It would be located along Lincoln Highway west of Gomer Road with a force main transporting flow to the site of treatment.

11.2.3 COMBINED GRAVITY SEWER AND LOW PRESSURE SYSTEM

Preliminary investigations indicate that by collecting flows from the area east of Pike Run by low pressure, the gravity sewer depth west of Pike Run could be raised by 8 to 13 feet. A pump station would be located along Lincoln Highway west of Gomer Road with a force main transporting flow to the site of treatment.

11.2.4 VACUUM SEWER SYSTEM

The area can be served by a vacuum collection system for collecting flow. Collection by vacuum assist would place a vacuum valve pit in a location able to serve two users. A central vacuum pump would provide the vacuum needed to draw the waste from the pit. The collection pipes are laid similarly to conventional gravity with the exception that they can be shallower. The pipes are laid in a saw tooth pattern with the vacuum lifting the waste over the peaks. Depending on the location chosen for treatment, a pump station may be needed. It would be located along Lincoln Highway west of Gomer Road with a force main transporting flow to the site of treatment.

11.3 PUMP COLLECTED FLOW TO AMERICAN #2 WASTEWATER TREATMENT PLANT FOR TREATMENT

A pump station and force main will be required to transport the collected flow to the treatment site or point of connection to the receiving wastewater system.

Based on a design flow of 60,000 gpd, the pumps would be sized for a flow of 210 gpm *(PF=$3^{1}/_{3}$) ($^{24}/_{16}$). The Total Discharge Head (TDH) design is based upon elevation differences, head loss due to flow in the force main and head losses through the pump station piping. *OEPA Permit to Install – Peaking Factor

Based on the topography of the Service Area, a pump station would be located along Lincoln Highway west of Gomer Road.

The force main size would be 6" based upon a flow of 210 gpm. The force main material would be PVC or HDPE. The preference would be HDPE installed by horizontal directional drilling (HDD) methods.

The design characteristics for each with a design flow of 210 gpm are as follows:

6" PVC C900 DR 18
I.D. = 6.09" Velocity = 2.31 fps HL = 0.444'/100' C = 120
6" HDPE DIPS – DR11
I.D. = 5.373" Velocity = 2.97 fps HL = 0.817'/100' C = 120

See Appendix G Exhibit A

12.0 OPTION DEVELOPMENT FOR PLAN SELECTION

The alternate options have been studied relative to environmental impacts, conveyance, treatment, and cost to determine the preferred option, without public input. After the public has been given the opportunity to comment, the options will be expanded to reflect the comments from the public.

12.1 ENVIRONMENTAL IMPACTS OF ALTERNATIVES

12.1.1 COLLECTION, CONVEYANCE AND PUMPING TO TREATMENT FACILITIES

Each of the alternatives considered include a sanitary sewer collection system to collect flow from the service area. Most include a pump station with force main to transport the collected flows to the treatment site or the receiving sewer located on the American No.2 treatment plant site. In general, the environmental impacts for collection would be the same for each alternative and include:

- Dust and noise during construction
- Soil erosion during construction
- Traffic disruption during construction
- Electrical energy necessary to operate pump station
- Standby electrical source during electrical outages
- Operation and maintenance of collection facilities

12.1.2 TREATMENT

The SBR (continuous discharge) Treatment will require a NPDES Permit.

The SBR Treatment depends upon an energy source for the treatment processes. Also the processes can be modified to produce a better effluent.

This alternative also requires the dedication of farm land for the WWTP site.

Pumping to the American No.2 WWTP will require no modifications to the existing treatment plant.

12.2 COSTS

12.2.1 CONSTRUCTION COST

To prepare preliminary costs, a preliminary design will have to be prepared for each scenario considered for collection and treatment. These scenarios and their construction cost estimates can be found in Appendix G and include:

Option A - All Gravity w/ west end Pump Station to American II WWTP
Option B - All Gravity w/ central Pump Station to American II WWTP
Option C – Combination Gravity & Low Pressure Collection w/ Pump Station to American II WWTP
Option D - All Gravity w/ Pump Station to On-Site WWTP
Option E - All Low Pressure Collection to On-Site WWTP
Option F – All Airvac Collection to On-Site WWTP
Option G - All Low Pressure Collection w/ Pump Station to American II WWTP
Option H – All Airvac Collection w/ Pump Station to American II WWTP

12.2.2 SUMMARY OF DESIGN AND CONSTRUCTION COST ESTIMATES FOR YEAR 2015

	DESIGN AND CONSTRUCTION COST	CONST. COST RANK
Option G - All Low Pressure Collection w/south end Pump Station to American II WWTP	$ 3,079,005.00	1
Option C - Gravity & Low Pressure Collection w/west end Pump Station to American II WWTP	$ 3,096,030.00	2
Option H – All Airvac Collection w/ Pump Station to American II WWTP	$ 3,507,940.00	3
Option E - All Low Pressure Collection to On-Site WWTP	$ 3,838,625.00	4
Option B - All Gravity w/ central Pump Station to American II WWTP	$ 4,200,860.00	5
Option F – All Airvac Collection to On-Site WWTP	$ 4,211,240.00	6
Option A - All Gravity w/ west end Pump Station to American II WWTP	$ 4,492.845.00	7
Option D - All Gravity w/ Pump Station to On-Site WWTP	$ 5,415,345.00	8

12.2.3 ESTIMATE FOR SBR WASTE WATER TREATMENT FACILITY

See Appendix G Figure 2

12.2.4 ECONOMIC EVALUATION OF ALTERNATIVES

Economic evaluations for the alternatives considered have been performed to determine the most cost effective alternative utilizing construction cost and operating and maintenance cost for a 20 year life cycle cost summary and 40 year project life. Also the equivalent annual cost was calculated as another measure of the most cost effective alternative. The following interest rates were used to perform the life cycle and equivalent annual cost:

Construction Inflation (5 year average cost index ENR) 2.5%
Yearly Power Cost increases (Bureau of Labor Statistics Producer Price Index 5 year average) 2.2%
Yearly Labor Increase (Employment Cost Index by the BLS 5 year average) 2.1%
Discount Rate (Consumer Price Index 5 year average) 2.0%
Economic evaluations of the alternatives considered are compiled in Table No. 1 shown below.

TABLE NO. 1
ECONOMIC EVALUATION FOR ALTERNATIVES CONSIDERED

		1	2	3	4	5
OPTION	**CONST. COST RANKING**	**2015 CONSTRUCTION COST**	**2020 CONSTRUCTION COST***	**VALUE[1] 2020**	**EQUIVALENT ANNUAL COST****	**EQUIVALENT[1] COST RANKING**
C	2	$3,096,030	$3,498,514	$2,604,619	$159,298	1
B	5	$4,200,860	$4,746,972	$2,813,882	$172,098	2
A	7	$4,492,845	$5,076,914	$2,978,853	$182,186	3
H	3	$3,507,940	$3,963,972	$3,211,885	$196,438	4
F	6	$4,211,240	$4,758,701	$3,258,209	$199,271	5
D	8	$5,415,345	$6,119,340	$3,318,960	$202,990	6
G	1	$3,079,005	$3,479,276	$3,494,701	$213,735	7
E	4	$3,838,625	$4,337,646	$3,572,845	$218,515	8

$* (1+i)^k = (1.025)^5 = 1.13 * (Column 1) = Column 2$

**$\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = 0.06116 * (Column 3) = Column 4$

[1]Value: Construction Cost plus Operation and Maintenance minus remaining useful life (salvage value) See Appendix G for Details

From the table above Option "C" is the least life cycle cost option and the second least construction cost option.
Option "G" is the least construction cost option but the second most expensive life cycle cost option due to the high maintenance and operational cost of the 150 grinder pumps.

Options "A" and "B" have the third and second least life cycle cost and the seventh and fifth least construction cost. These gravity options have low life cycle cost due to the minimal maintenance cost, however, these options require placing sewers and the pump station up to 30' deep. These deep excavations pose potential hazards, rock excavation, cost overruns, and lowering area water tables which may affect area wells. Therefore these options are not recommended.

Options "D", "E", and "F" involve an on-site wastewater treatment plant. Since the American II wastewater treatment plant is available to accept wastewater from Gomer without the need for modification, analysis indicates that it is more economical to pump the wastewater to American II than build a local wastewater treatment plant at Gomer.

Options "F" and "H" involve the AirVac system and these are fourth and fifth in the life cycle cost ranking. The nature of the clayey local soil is to change volume due to varying moisture content. Therefore the AirVac system is susceptible to loss of vacuum due to pipe damage from soil induced stresses from soil volume

changes with changing moisture content. Option "F" and "H" are not recommended.

Option "C" offers the least life cycle costs, the second least construction costs, standard depth of sewer and pump station construction (8' to 18' deep) and reduces the number of grinder pumps from 150 for all low pressure to 50 pumps for the combination of the low pressure system and gravity system. Option "C" is the recommended option.

13.0 DESIGN

13.1 DESCRIPTION OF DESIGN FOR PREFERRED OPTION "C"

The proposed facilities include:

a. combined gravity – low pressure collection system
b. pump station with force main to American No.2 WWTP

The gravity portion of the collection system would be constructed with 8" PVC gravity sewer placed at a minimum grade of 0.40 percent. Precast concrete manholes would be provided at all intersections of pipes, at changes in pipe grade and at a maximum spacing of 400 feet along runs of pipe.
The low pressure pump collection system would include small diameter pressure piping installed by horizontal directional drilling. A grinder pump in a sump chamber would be installed near each users building discharge. A control box would be mounted on their building and the electrical service connected to their electric meter.

The main pump station will be designed in accordance to the present Allen County Standards with a pump capacity of 210 gpm. An underground submersible pump factory built station with duplex pumps, each with a capacity for 210 gpm would be provided. Telemetry, bypass pump connections and standby generator connections would be provided.

A 6" diameter PVC force main would be constructed between the pump station and the American No.2 wastewater treatment facilities to transport the collected flows for treatment. For 210 gpm flow at 262 feet TDH capacity, the flow velocity would be 2.99 feet per second. A minimum flow of 2 feet per second is required to prevent depositing of solids in the force main.

14.0 ESTIMATE OF PROJECT DESIGN & CONSTRUCTION COST FOR PREFERRED OPTION "C" - See Appendix G for Cost Data

The preliminary estimate of capital costs for OPTION " C" is $3,096,030 based on the following items:

14.1 CONSTRUCTION

Collection System	($872,290 + $551,640)	=	$1,423,930
Pump Station and Force Main			$1,392,500
Total Construction			$2,816,430

14.2 DESIGN OF COLLECTION, CONVEYANCE, PUMP STATION AND FORCE MAIN

Preliminary Design	10,000 + 5,000	=	$15,000
Field Survey Topo	38,000 + 19000	=	57,000
Soil Investigations	9,000 + 4,000	=	13,000
Final Design	42,000 + 39,000 + 20,000	=	101,000
Obtain Permits (PTI, NOI)	1,100 + 1,000	=	2,100
Prepare Easements	5,000 + 18,000	=	23,000
Bidding and Award	5,000 + 4,500	=	9,500
Total Design			$220,600

14.3 CONSTRUCTION ADMINISTRATION

Construction Admin & Shop Drawing Review	15,000 + 15,000	=	$30,000
Inspection by Owner			0
Construction Layout	8,000 + 13,000	=	21,000
Record Drawings	4,000 + 4,000	=	8,000
Total Construction Administration			$59,000

14.4 SUMMARY OF PROJECT COST ESTIMATES

Total Construction	$2,816,430
Total Design	$220,600
Total Construction Administration	$59,000
Total Design & Constr. Admin. & Construction	$3,096,030

14.5 COSTS PER USER FOR CONSTRUCTION AND DESIGN OF PREFERRED OPTION "C"

Based upon an estimated 150 user equivalents and a project cost of $3,096,030, the cost would be $20,640 per user equivalent. To reduce the per equivalent user cost to an acceptable level, Allen County will need to research funding assistance options to reduce cost per user equivalent to an affordable acceptable level.

15.0 ESTIMATE OF OPERATION & MAINTENANCE COST

See Appendix G for Cost Data

15.1 COSTS FOR TREATMENT

Based upon the County's present sewer rate of $49.50 per month for 1 UE, the annual income would be $89,100. [($49.50)(150 UE)(12 Months) = $89,100]

The estimated average daily usage is 250 gal/day per UE. The estimated annual cost for treatment is $27,238. [(250 gal/day)(150 UE)(365 days)($0.00199/gal) = $27,238]

Based upon an estimated 150 user equivalents and an annual treatment cost of $27,238, the monthly cost would be $15.13 per user equivalent. [($27,238/150/12=$15.13)]

15.2 O&M COSTS FOR COLLECTION AND CONVEYANCE

The estimated annual O&M and related cost for these facilities is $52,314 based on the following items:

Low Pressure & Gravity Collection & Force Main	$2,864
Pump Stations (Power, Yr. Maintenance, Capital Investment)	$20,918
Grinder Pumps (Yearly & Corrective Maintenance)	$28,532
Total Collection and Conveyance O&M Cost	$52,314

Based upon an estimated 150 user equivalents and annual O&M cost of $52,314 the cost would be $29.06 per user equivalent. [($52,314/150/12=$29.06)]

15.3 COSTS PER USER FOR OPERATION &MAINTENANCE OF PREFERRED OPTION "C"

Total cost of treatment and O&M = $15.13 + $29.06 = $44.19

16.0 FINANCING OF THE PROPOSED PROJECT

Wastewater projects in Allen County are usually financed by special assessment bonds or some type of revenue bond.

To make projects more affordable, outside financial assistance is usually requested from state and/or federal agencies based upon the local median household income from the U.S. Census data or local income surveys.

Grants and loans are available from some government agencies while other agencies only provide grants and others loans. Government agencies to consider for assistance include:

Federal Government Agencies

USDA Rural Development – grant and/or loan
Department of Housing and Urban Development – CDBC grant

State Government Agencies
Ohio Water Development Agency – loans
Ohio Water Pollution Control Loan Fund – low interest loans
Ohio Department of Development - grant or loan
Ohio Public Works Commission – grant and loan

17.0 IMPLEMENTATION STEPS WITH TENTATIVE SCHEDULE

To proceed to provide the facilities to serve the Gomer Service Area, Allen County will need to complete the following items on the schedule shown:

1. Submit this "General Study" to the Ohio Environmental Protection Agency for review and approval. April 2015

2. Hold Public Informational Meeting. June 2015

3. Complete "Salary Survey" of residents within the area to determine eligibility for federal and/or state grants. By November 2010

4. Complete potential sources for financial assistance to lower the local costs to provide the facilities. December 2016

5. Authorize the design of the proposed facilities. July 2017

6. Hold Informational Meeting. February 2018

7. Finalize the evaluation and feasibility of the project based on funding assistance. March 2018.

8. Submit construction drawings and specifications to the Ohio EPA to obtain a Permit to Install (PTI). April 2018

9. Hold Public Meeting or Assessment Hearing as needed. June 2018

10. Advertise for bids, receive bids, award contracts. August 2018

11. Obtain interim financing. September 2018

12. Begin construction. September 2018

13 Complete construction. September 2019

14. Facilities become operational. January 2020

APPENDIX A

OHIO EPA AND ALLEN COUNTY TEST RESULTS AND CORROSPONDENCE

Environmental
Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Re: Allen County
Unincorporated Hamlet of Gomer
Unsewered Area

July 10, 2012

Allen County Board of Commissioners
P.O. Box 1243
Lima, Ohio 45802

Dear Commissioners:

During the Ottawa River TMDL assessment in 2010, 11 samples for *E. coli* analysis were collected from Pike Run at Lima-Gomer Road between May 12, 2010, and October 13, 2010. The geometric mean of these samples was 3,144 cfu/100 ml. The geometric mean is calculated from two or more samples and is used as the basis for determining recreation use attainment status when more than one sample is collected. The *E. coli* criteria that apply to Pike Run, a Class B primary contact recreation water, include a geometric mean of 161 cfu/100 ml and a maximum value of 523 cfu/100 ml.

A public health nuisance, as defined in Ohio Administrative Code 3745-1-04 (F), exists when water samples exceed 576 *E. coli* cfu/100 ml in two or more samples when five or fewer samples are collected, or in more than 20 percent of the samples when more than five samples are taken. Although the Public Health Nuisance field forms were not completed to document odor, color or other visual manifestations of raw or poorly treated sewage, the low flow conditions and *E. coli* counts provide evidence of unsanitary conditions resulting from inadequately or untreated wastewater discharges from the unsewered area of Gomer.

Table of *E. coli* sample results collected from Pike Run at Lima-Gomer Road during the Ottawa River TMDL assessment in 2010:

Date	CFU per 100 ml
5/12/10	1600
5/26/10	1050
6/16/10	2490
6/23/10	2280
6/29/10	6900
7/28/10	3450
8/04/10	4200
8/11/10	7700
8/18/10	6100
9/15/10	6900
10/13/10	959

Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402-9398

419 | 352 8461
419 | 352 8468 (fax)
www.epa.ohio.gov

On June 28, 2012, a reconnaissance evaluation of the discharge(s) from the Unsewered area of Gomer to Pike Run was conducted. A discharge from two PVC pipes below the bridge on the north side of Gomer on Lima-Gomer road was observed. The discharges were observed to be adding color, odor, and turbidity to waters of the State and were, therefore, in violation of Ohio Administrative Code 3745-1-04. Pictures from that evaluation are enclosed for your review.

Within 90 days of the date of this letter, please inform this office as to how these water quality issues will be addressed and the timeline for eliminating the public health nuisance. If we do not hear from you within the 90 day time frame or if your proposed actions do not adequately address our concerns, we will recommend that the Director of Ohio EPA take enforcement actions to bring the unsewered area of Gomer into compliance. If you have any questions or would like to set up a meeting with our office, please contact Mr. Justin Williams at (419) 373 – 3022.

Yours truly,

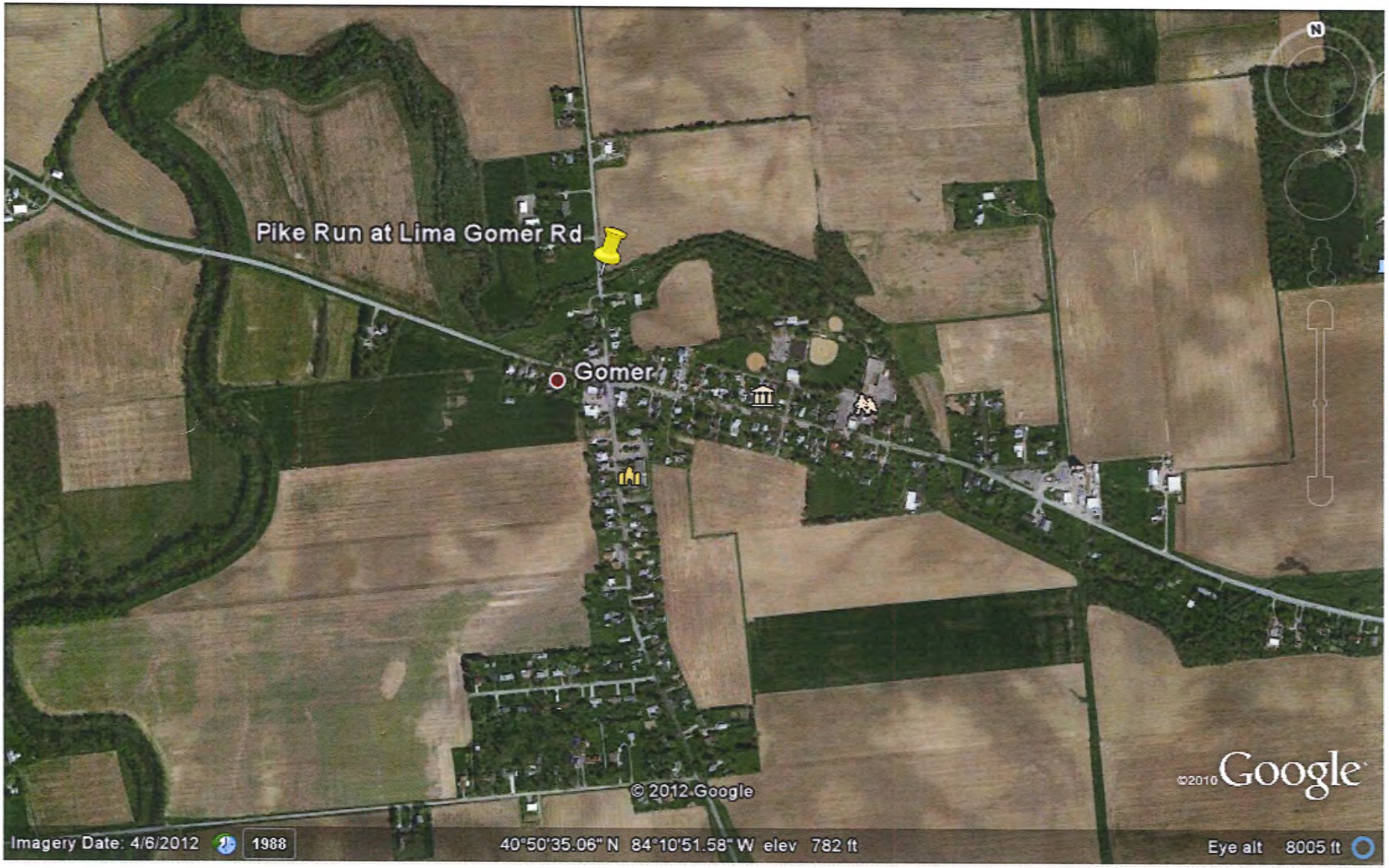
Elizabeth A. Wick, P.E.
Environmental Engineer/Section Manager
Division of Surface Water

JAW/jlm

Enclosures

pc: Mr. Stephen Kayatin, P.E., Allen County Sanitary Engineering Department
Allen County Health Department
File

Sample Location for Pike Run @ Gomer Road; Ottawa River TMDL June-August, 2010



Village of Gomer, Allen County

Water quality criteria for determining attainment of the recreation uses are established in the Ohio Water Quality Standards in Table 7-13 of Ohio Administrative Code (OAC) 3745-1-07, based upon the quantities of bacteria indicators present in the water column. The *E. coli* criteria that apply to PCR Class B streams include a geometric mean of 161 cfu/100 ml and a maximum value of 523 cfu/100 ml. The geometric mean is calculated from two or more samples and is used as the basis for determining recreation use attainment status when more than one sample is collected.

A public health nuisance as defined in OAC 3745-1-04 (F) exists when water samples exceed 576 *E.coli* counts per 100 milliliters in two or more samples when five or fewer samples are collected, or in more than twenty percent of the samples when more than five samples are taken. Samples shall be collected when flow is representative of dry weather conditions, collected at least two hours apart and collected over a time period not to exceed thirty days.

During the Ottawa River TMDL assessment in 2010, eleven samples for *E. coli* analysis were collected from Pike Run at Lima-Gomer Rd. between May 12 and October 13, 2010. The geometric mean of these samples was 3144 cfu/100 ml. Pike Run showed the highest geometric mean among the 20 bacteria sites that were sampled throughout the Ottawa River watershed. Based on this assessment, the stream is not attaining its PCR Class B recreation use designation. Although the Public Health Nuisance field forms were not completed to document odor, color or other visual manifestations of raw or poorly treated sewage, an evaluation of stream flow data showed that stream flows were consistently below the 7Q10 threshold for drought conditions during August and September 2010. The low flow conditions and *E. coli* counts on August 18 and September 15 provide other evidence of unsanitary conditions resulting from inadequately or untreated wastewater discharges from the unsewered area. The table below contains results of all bacteria samples collected in 2010.

Table of *E. coli* sample results collected from Pike Run at Lima-Gomer Road during the Ottawa River TMDL assessment in 2010.

Date	CFU per 100 ml
5/12/10	1600
5/26/10	1050
6/16/10	2490
6/23/10	2280
6/29/10	6900
7/28/10	3450
8/04/10	4200
8/11/10	7700
8/18/10	6100
9/15/10	6900
10/13/10	959

2010 OTTAWA RIVER BASIN WATER QUALITY DATA

DATE	Temp	SpecificCond.-F	D.O.	pH	Conduc-tivity	D.O.	Specific Cond.-L	Alka-linity	TDS	TSS		COD		NO_3 + NO_2		NO_2		NH_3		TKN	TP	SO_4	Cl
	C	uS/cm	mg/L	S.U.	uS/cm	%	uS/cm	mg/L	mg/L	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	mg/L	mg/L	mg/L
								04100007-04-04 Pike Run															
	Pike Run upstream American Bath WWTP (P04P24) - 8.21																						
06/16/10	21.13	732	7.64	7.94	628	86.7	731	183	468	8		27		3.6		0.027		0.057		0.94	0.353	74.2	68.5
06/29/10	20.59	634	7.64	7.87	580	85.1	630	146	394	14		20		2.06		0.038		0.05	K	1	0.111	72.9	66.3
07/26/10	22.24	741	8.14	7.94	702	93.7	748	139	448	5	K	28		1.37		0.02	K	0.05	K	0.78	0.07	90	94.8
08/04/10	24.03	415	6.12	7.8	407	72.8	421	97.1	246	8		20		0.93		0.02		0.05	K	0.47	0.024	41.7	45.3
08/18/10	21.81	722	4.5	7.72	679	51.4	739	141	420	9		20	K	0.1	K	0.02	K	0.079		0.74	0.018	82.5	92.4
	Pike Run at Cole Street (301009) - 7.56																						
06/16/10	20.86	707	7.67	7.87	651	86	719	167	456	8		21		5.04		0.028		0.05	K	1.17	0.206	77.2	64
06/29/10	20.32	661	7.76	7.83	602	86.1	660	143	414	11		21		2.99		0.065		0.092		1.17	0.196	85.2	65.8
07/26/10	22.15	698	8.05	7.92	660	92.5	705	140	424	11		23		2.94		0.021		0.05	K	0.9	0.309	94.9	78.3
08/04/10	23.35	795	6.64	7.77	770	78	807	125	484	7		20	K	4.35		0.021		0.05	K	0.93	0.329	126	89.3
08/18/10	21.37	1020	6.48	7.85	949	73.4	1040	163	626	9		20	K	5.2		0.02	K	0.05	K	1.25	0.733	160	110
	Pike Run at State Road (510160) - 4.61																						
06/16/10	20.52	663	8.09	7.93	606	90.1	669	163	424	12		20	K	6.64		0.021		0.05	K	0.97	0.192	74.3	50
06/29/10	19.82	668	7.96	7.86	602	87.4	667	154	428	17		21		4.68		0.034		0.05	K	0.51	0.227	88.1	59.2
07/26/10	21.63	635	8.22	7.87	594	93.5	641	127	406	10		21		2.77		0.02	K	0.05	K	0.87	0.268	84.9	71.6
08/04/10	23.36	688	6.62	7.81	666	77.9	697	122	412	9		21		2.03		0.02	K	0.05	K	0.63	0.234	93.8	83.3
08/18/10	20.84	910	7.27	7.99	838	81.5	922	169	552	5	K	20	K	2.2		0.02	K	0.05	K	0.97	0.484	135	100
	Pike Run at Lima Gomer Road (P04P10) - 0.84																						
06/16/10	20.14	659	7.85	7.74	598	86.7	664	164	426	34		32		7.98		0.027		0.064		1.14	0.193	72.7	45.4
06/29/10	19.4	642	7.75	7.55	573	84.3	642	165	408	27		20	K	6.06		0.037		0.059		0.58	0.167	80.1	47
07/26/10	21.75	611	7.42	7.76	573	84.6	615	124	382	11		22		3.91		0.033		0.1		0.97	0.227	78.8	70.7
08/04/10	23.46	955	6.46	7.81	927	76.2	973	152	594	10		20	K	3.62		0.026		0.095		1.18	0.461	160	103
08/18/10	21.23	789	6.09	7.89	732	68.8	798	154	468	6		20	K	1.12		0.024		0.141		0.78	0.935	118	85.8

Allen County Ohio

SANITARY ENGINEERING DEPARTMENT
Stephen M. Kayatin, P.E.
Sanitary Engineer

♦3230 N. Cole Street, Lima, Ohio 45801♦Phone: 419-996-4670♦Fax: 419-229-3297♦Website: .allencountyohio.com/san/san.html♦

August 4, 2014

Ms. Elizabeth Wick, P.E.
Section Manager
Ohio EPA Div. of Surface Water
Northwest District Office
347 North Dunbridge Road
Bowling Green, Ohio 43402

RE: Gomer-Pike Run Investigation Area – 2012-2013 Sampling Results

Dear Ms. Wick:

This letter is being written as a follow-up to your October 2012 letter requesting a report to our sampling and testing results for the subject area. Attached is map outlining the sampling locations and test results for the corresponding sampling dates on 9/20/12, 7/15/13, 7/29/13 and 8/5/13. From the results it is apparent there are some water quality issues needing to be addressed. We have hired Kohli & Kaliher Associates, Inc. to conduct a study of alternatives for addressing the water quality violations and establishing a project area of influence. We hope to have a draft report complete by the end of this year.

If you have any questions, or require additional information, please contact my office.

Sincerely,

Stephen Kayatin, PE
Sanitary Engineer

Cc:
Commissioners
Sugar Creek Township Trustees
Dan Bucher, Kohli & Kaliher Associates, Inc.

R:\Sanitary Engineer Shared\Projects\Sewerline Projects & Extensions\Gomer Sewer Improvement Area\EPA Corr\August 4, 2014 OEPA Test Results Follow-up.docx

2012-2013 Gomer Sampling Location

Gomer Overall Sampling Map

GOMER 9/20/12 SAMPLING RESULTS						GOMER 7/15/13 SAMPLING RESULTS	GOMER 7/29/13 SAMPLING RESULTS	GOMER 8/5/13 SAMPLING RESULTS
Sample Site	TSS (mg/L)	CBOD5 (mg/L)	Ammonia (mg/L)	Total Phosphorus (mg/L)	E. Coli (MPN)	E. Coli (MPN)	E. Coli (MPN)	E. Coli (MPN)
CB #1	118.0	10.5	3.05	1.6	>2420	>7260	>7260	5240
CB #2	90.0	8.0	0.10	0.58	172	60	>5611	370
CB #3	DNS	DNS	DNS	DNS	DNS	>7260	>7260	>6827
CB #4	DNS	DNS	DNS	DNS	DNS	>7260	>7260	>7260
CB #5	DNS	DNS	DNS	DNS	DNS	>7260	>7260	>7260
CB #6	DNS	DNS	DNS	DNS	DNS	>5094	617	>4773
PR #1	23.0	10.8	0.06	0.38	1300	2747	4268	4369
PR #2	12.0	<2.5	0.06	0.35	1203	2079	1341	4880
PR #3	5.0	<2.5	0.06	0.31	548	>5274	567	1528
PR #4	13.0	7.6	<0.05	0.29	260	1369	626	1469
PR #5	14.0	<2.5	<0.05	0.31	411	890	771	2236
PR #6	8.0	3.4	<0.05	0.29	548	1149	>7260	1231
SP #1	DNS	DNS	DNS	DNS	DNS	>7260	>7260	>7260

DNS - Did Not Sample

Section L4. Section 303(d) List of Prioritized Impaired Waters

Assessment Unit	Assessment Unit Name	Sq. Mi. in Ohio	Human Health	Recre-ation	Aquatic Life	PDW Supply	Priority Points	Next Field Monitoring	Projected TMDL
05120103 01 02	Gray Branch-Mississinewa River	31.75	3	3	5hx	0	4	2018	2021
05120103 01 03	Jordan Creek-Mississinewa River	25.79	3	3	5hx	0	4	2018	2021
04100003 03 01	Nettle Creek	36.43	1h	3	5hx	0	3	2013	2016
04100003 05 01	Bluff Run-St Joseph River	23.74	5h	3	5hx	0	3	2013	2016
04100003 05 02	Big Run	30.21	5h	3	5hx	0	3	2013	2016
04100003 05 03	Russell Run-St Joseph River	17.98	5h	3	5hx	0	3	2013	2016
04100003 05 06	Sol Shank Ditch-St Joseph River	27.28	5h	3	5hx	0	3	2013	2016
04100004 01 01	Muddy Creek	16.46	5h	3	5hx	0	3	2015	2018
04100004 01 02	Center Branch St Marys River	29.00	5h	3	5hx	0	3	2015	2018
04100004 01 03	East Branch St Marys River	21.26	5h	3	5hx	0	3	2015	2018
04100004 01 04	Kopp Creek	33.82	5h	1	5	0	3	2015	2018
04100004 01 05	Sixmile Creek	17.61	5h	3	5hx	0	3	2015	2018
04100004 02 01	Hussey Creek	12.37	5h	3	5hx	0	3	2015	2018
04100004 02 02	Eightmile Creek	22.45	5h	3	5hx	0	3	2015	2018
04100004 02 03	Blierdofer Ditch	14.57	5h	3	5hx	0	3	2015	2018
04100004 02 04	Twelvemile Creek	23.58	5h	3i	5hx	0	3	2015	2018
04100004 02 05	Prairie Creek-St Marys River	42.22	5h	3i	5hx	0	3	2015	2018
04100006 02 01	Silver Creek-Bean Creek	21.65	3	3	5hx	0	3	2013	2016
04100006 02 03	Old Bean Creek	33.33	3	3	5hx	0	3	2013	2016
04100006 02 04	Mill Creek	40.74	3	3	5hx	0	3	2013	2016
04100006 02 05	Stag Run-Bean Creek	14.45	3	3	5hx	0	3	2013	2016
04100006 03 02	Leatherwood Creek	17.34	5h	3	5hx	0	3	2013	2016
04100006 05 01	Beaver Creek	45.14	5h	3	5hx	0	3	2013	2016
04100006 06 01	Lost Creek	32.33	3	3	5hx	0	3	2013	2016
04100006 06 02	Mud Creek	26.60	1h	3	5hx	0	3	2013	2016
04100006 06 03	Webb Run	20.39	3	3	5hx	0	3	2013	2016
04100007 04 04	Pike Run	13.24	5h	5	1	0	3	2025	2014
04100007 05 01	Sugar Creek	64.14	5h	5	1	0	3	2025	2014
04100007 06 04	Dry Fork-Little Auglaize River	57.07	1	5	3x	0	3	2014	2017
04100008 02 02	The Outlet	38.36	5h	4A	1	3i	3	2020	2023
04100008 90 01	Blanchard River Mainstem (Dukes Run to mouth)	771	5	3	1	3i	3	2020	2023
04100009 05 01	Big Creek	21.52	3	3	5hx	0	3	2016	2019
04100009 05 02	Hammer Creek	25.09	3	3	5hx	0	3	2016	2019
04100009 05 03	Upper Beaver Creek	16.71	3	3	5hx	0	3	2016	2019

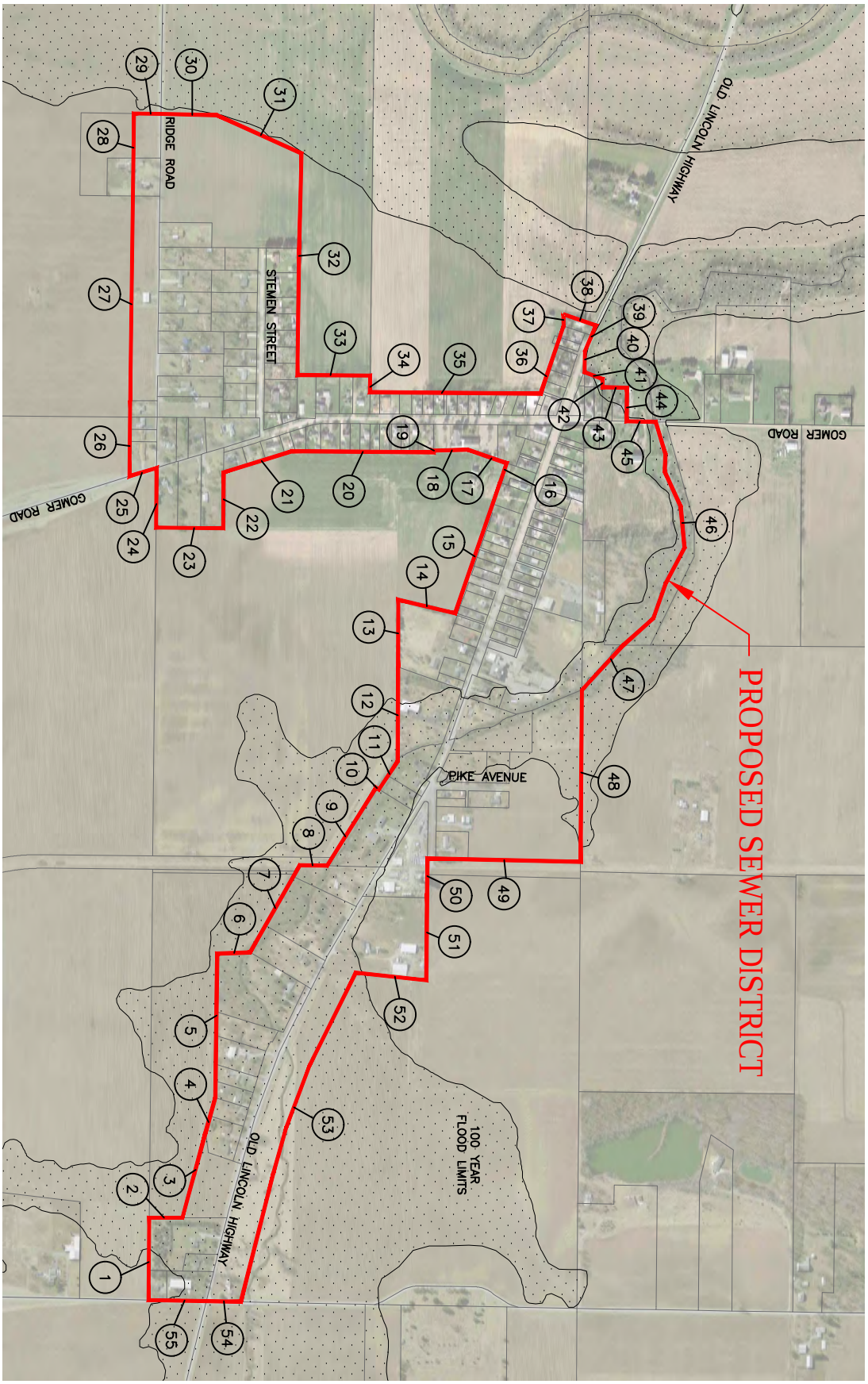
A 9

APPENDIX B

PLATE No.1
AND
LEGAL DESCRIPTION
FOR
PROPOSED GOMER SEWER DISTRICT

D:\ep\ACSE\Gomer\SystemOptions.dwg, Plate 1 Service_Area, 2/24/2015 10:21:56 AM

PLATE No.1 - PROPOSED SEWER DISTRICT



DATE	DRAWN BY	SUBJECT	PROJECT	PREPARED BY	
11-19-14	ARM	SEWER STUDY AREA	GOMER SEWER IMPROVEMENT AREA ALLEN COUNTY, OHIO	KOHLI & KALIHER ASSOCIATES, INC. ENGINEERS AND SURVEYORS 2244 Baton Rouge, Lima, Ohio 45806 419-227-1135	0 300 600 0 5 10 SCALE IN FEET
DRAWING NO. —	CHECKED BY BWA				

GOMER SEWER DISTRICT DESCRIPTION

Parts of Sections 20, 21, 28 and 29 of Township-2-South, Range-6-East, Sugar Creek Township, Allen County, Ohio, described as follows:

BEGINNING at the southeast corner of the northeast quarter of said Section 28;

1. thence westerly with the south line of said northeast quarter of Section 28 a distance of about five hundred (500) feet to the southwest corner of Tax Parcel #26-2800-01-011;

2. thence northerly with the west line of said Tax Parcel #26-2800-01-011 a distance of about two hundred (200) feet to a point that is about two hundred and sixty (260) feet southerly and perpendicular from the centerline of Lincoln Highway;

3. thence northwesterly and parallel with said centerline of Lincoln Highway through Tax Parcel #26-2800-01-011.002 a distance of about five hundred and thirty (530) feet to an angle point in the south line of Tax Parcel #26-2800-01-010, which point is also the southeast corner of Lot 135 of Crates Subdivision #1, as same is recorded in Plat Book 9, Page 158 in the Allen County Recorder's Office;

4. thence westerly with the south lines of two tax parcels fronting on Lincoln Highway, being Tax Parcel #26-2800-01-010 and #26-2800-01-009 a distance of about two hundred and twenty (220) feet to the southeast corner of Tax Parcel #26-2800-01-009.001;

5. thence westerly with the south lines of five tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2800-01-009.001, #26-2800-01-008, #26-2800-01-007, 26-2800-01-006.001 and #26-2800-01-006, a distance of about eight hundred and eighty (880) feet to the southwest corner of Tax Parcel #26-2800-01-006;

6. thence northerly with the west line of said Tax Parcel #26-2800-01-006 a distance of about of about two hundred (200) feet to the southeast corner of Tax Parcel #26-2800-01-005.001;

7. thence northwesterly with the south lines of three tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2800-01-005.001, #26-2800-01-005 and #26-2800-01-004 a distance of about six hundred and ten (610) feet to the southwest corner of Tax Parcel #26-2800-01-004;

8. thence northerly with the west line of said Tax Parcel #26-2800-01-004 a distance of about of about one hundred and seventy (170) feet to the southeast corner of Tax Parcel #26-2800-02-001;

9. thence northwesterly with the south line of said Tax Parcel #26-2800-02-001 a distance of about of about five hundred and sixty (560) feet to the southwest corner of Tax Parcel #26-2800-02-001;

10. thence northeasterly with the west line of said Tax Parcel #26-2800-02-001 a distance of about of about twenty (20) feet to the southeast corner of Tax Parcel #26-2806-03-001, which point is in the centerline of Pike Run;

11. thence northwesterly with the meandering centerline of Pike Run, being also the south line of two tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2806-03-001 and #26-2806-03-004, a distance of about two hundred and twenty (220) feet to the southeast corner of Tax Parcel #26-2806-03-005;

12. thence diverging from the centerline of Pike Run and westerly with the south lines of two tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2806-03-005 and #26-2806-03-008 a distance of about nine hundred and seventy (970) feet to the southwest corner of Tax Parcel #26-2806-03-008;

13. thence northerly with the west line of said Tax Parcel #26-2806-03-008 a distance of about of about three hundred and sixty (360) feet to the south line of a sixteen-foot alley running easterly and westerly along the south line of nine parcels fronting on Lincoln Highway;

14. thence westerly with said south line of sixteen-foot alley a distance of about six hundred and fifty (650) feet

to the west end of said south line, which point is also an angle point in the south boundary of Tax Parcel #26-2806-03-020;

15. thence westerly with the south lines of two tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2806-03-020 and #26-2806-03-023 a distance of about one hundred and ninety (190) feet to the southwest corner of Tax Parcel #26-2806-03-023;

16. thence continuing westerly with an extension of the previous course a distance of about one hundred and thirty (130) feet to a point in the east line of Tax Parcel #26-2806-03-029 that is about sixty (60) feet southerly from the northeast corner of Tax Parcel #26-2806-03-029;

17. thence southwesterly with the east lines of two tax parcels fronting on Gomer Road, being Tax Parcel #26-2806-03-029 and #26-2806-03-031, a distance of about two hundred and fifty (250) feet to an angle point in the east line of Tax Parcel #26-2806-03-031;

18. thence southerly with the east line of Tax Parcel #26-2806-03-031 a distance of about two hundred and ten (210) feet to the southeast corner of Tax Parcel #26-2806-03-031, which point is also in the north line of Tax Parcel #26-2806-03-032;

19. thence easterly with the north line of said Tax Parcel #26-2806-03-032 a distance of about ten (10) feet to the northeast corner of Tax Parcel #26-2806-03-032;

20. thence southerly with the east lines of fourteen tax parcels fronting on Gomer Road, being Tax Parcels #26-2806-03-032, #26-2806-03-033, #26-2806-03-034, #26-2806-03-035, #26-2806-03-035.001, #26-2806-03-036, #26-2806-03-037, #26-2807-01-001, #26-2807-01-002, #26-2807-01-003, #26-2807-01-005, #26-2807-01-006, #26-2807-01-007 and #26-2807-01-008 a distance of about eight hundred and sixty (860) feet to an angle point in the east line of Tax Parcel #26-2807-01-008;

21. thence southeasterly with the east lines of four tax parcels fronting on Gomer Road, being Tax Parcel #26-2807-01-008, #26-2807-01-009, #26-2807-01-010, and #26-2807-01-011, a distance of about four hundred and forty (440) feet to the southeast corner of Tax Parcel #26-2807-01-011, which point is also in the north line of Tax Parcel #26-2807-01-012.001;

22. thence easterly with the north line of said Tax Parcel #26-2807-01-012.001 a distance of about three hundred and forty (340) feet to the northeast corner of said Tax Parcel #26-2807-01-012.001;

23. thence southerly with the east lines of three tax parcels fronting on Gomer Road, being Tax Parcels #26-2807-01-012.001, #26-2807-01-012, and #26-2807-01-012.002, a distance of about four hundred and ten (410) feet to the southeast corner of Tax Parcel #26-2807-01-012.002;

24. thence westerly with the south line of said Tax Parcel #26-2807-01-012.002 a distance of about three hundred and sixty (360) feet to the intersection of the centerlines of Gomer Road and Ridge Road, which point is also the northeast corner of Tax Parcel #26-2800-03-002;

25. thence southeasterly with said centerline of Gomer Road and with the east line of Tax Parcel #26-2800-03-002 a distance of about one hundred and seventy (170) feet to the southeast corner of Tax Parcel #26-2800-03-002;

26. thence westerly with the south lines of four tax parcels fronting on Gomer Road or Ridge Road, being Tax Parcels #26-2800-03-002, #26-2800-03-003, #26-2800-03-004 and #26-2900-04-001, a distance of about four hundred and sixty (460) feet (entering into the southeast quarter of Section 29 at about 360 feet) to the southwest corner of Tax Parcel #26-2900-04-001;

27. thence continuing westerly with an extension of the previous course into Tax Parcel #26-2900-04-003, at a record distance of 165.5 feet southerly from and parallel with the centerline of Ridge Road, a distance of about twelve hundred and fifty (1250) feet to a point in the east line of Tax Parcel #26-2900-04-003.001;

28. thence continuing westerly with an extension of the previous course, through Tax Parcel #26-2900-04-003.001 and back into Tax Parcel #26-2900-04-003, a distance of about five hundred (500) feet to a point in the west line of a parcel that was previously known as Tax Parcel #26-2900-04-003, as same was shown on the 2005 version of the Allen County Tax Maps;

29. thence northerly with the west line of said parcel that was previously known as Tax Parcel #26-2900-04-003 a record distance of 165.5 feet to the northwest corner of said Tax Parcel #26-2900-04-003, which point is in the centerline of Ridge Road;

30. thence continuing northerly with an extension of the previous course into Tax Parcel #26-2900-01-002 a distance of about three hundred and forty (340) feet;

31. thence northeasterly deflecting about twenty three (23) degrees easterly from the previous course a distance of about five hundred and sixty (560) feet to the extended north line of Stemen Number 1 Subdivision, as same is recorded at Plat Book 9, Page 14 in the Allen County Recorder's Office;

32. thence easterly with said extended line, and with the north lines of seven tax parcels fronting on Stemen Street, being Tax Parcels #26-2908-02-010, #26-2908-02-009, #26-2908-02-008, #26-2908-02-007, #26-2908-02-006, #26-2908-02-005 and #26-2908-02-004, a distance of about thirteen hundred and fifty (1350) feet to the southwest corner of Tax Parcel #26-2908-01-004;

33. thence northerly with the west lines of four tax parcels fronting on Gomer Road, being Tax Parcels #26-2908-01-004, #26-2908-01-003, #26-2908-01-002 and #26-2908-01-001, a distance of about four hundred and forty (440) feet to the northwest corner of Tax Parcel #26-2908-01-001, which point is also in the south line of Tax Parcel #26-2900-01-001;

34. thence easterly with the south line of Tax Parcel #26-2900-01-001 a distance of about one hundred (100) feet to the southwest corner of Tax Parcel #26-2905-01-021;

35. thence northerly with the west lines of thirteen tax parcels fronting on Gomer Road, being Tax Parcels #26-2905-02-021, #26-2905-02-020, #26-2905-02-018, #26-2905-02-017, #26-2905-02-016, #26-2905-02-015, #26-2905-02-014, #26-2905-02-013, #26-2905-02-012, #26-2905-02-011, #26-2905-02-010, #26-2905-02-009 and #26-2905-02-009.004 a distance of about one thousand and forty (1040) feet, passing through two access strips from Gomer Road to Tax Parcel #26-2900-01-001, to the northwest corner of Tax Parcel #26-2905-02-009.004, which point is also in the south line of the Original Plat of Gomer, as same is recorded at Plat Book 2, Page 52 in the Allen County Recorder's Office;

36. thence northwesterly with the south lines of four tax parcels fronting on Lincoln Highway, being Tax Parcels #26-2905-02-007, #26-2905-02-006, #26-2905-02-005 and #26-2905-02-002, while passing through the south part of Tax Parcel #26-2905-02-003 (which also fronts on Lincoln Highway), a distance of about four hundred and thirty (430) feet to the northwest corner of Tax Parcel #26-2905-02-002;

37. thence westerly with the south line of Tax Parcel #26-2905-02-001 a distance of about seventy (70) feet to the southwest corner of Tax Parcel #26-2905-02-001;

38. thence northeasterly with the west line of Tax Parcel #26-2905-02-001 a distance of about two hundred and ten (210) feet, entering into the southeast quarter of said Section 20 at a distance of about 140 feet, to the northwest corner of Tax Parcel #26-2905-02-001, which point is also in the centerline of Lincoln Highway;

39. thence southeasterly with said centerline of Lincoln Highway a distance of about one hundred and seventy (170) feet to the south line of the southeast quarter of said Section 20;

40. thence easterly with said south line of the southeast quarter of Section 20 a distance of about one hundred and thirty (130) feet to the southwest corner of Tax Parcel #26-2000-04-005;

41. thence northeasterly with the west line of Tax Parcel #26-2000-04-005 a distance of about one hundred (100) feet to the northwest corner of Tax Parcel #26-2000-04-005;

42. thence easterly with the north line of Tax Parcel #26-2000-04-005 a distance of about fifty (50) feet to the northeast corner of Tax Parcel #26-2000-04-005, which point is also in the west line of Tax Parcel #26-2000-04-007;

43. thence northerly with the west line of Tax Parcels #26-2000-04-007 and #26-2000-04-009 a distance of about one hundred and fifty (150) feet to the northwest corner of Tax Parcel #26-2000-04-009;

44. thence easterly with the north line of Tax Parcel #26-2000-04-009 a distance of about two hundred and five (205) feet to the northeast corner of Tax Parcel #26-2000-04-009, which point is also in the centerline of Gomer Road;

45. thence northerly with said centerline of Gomer Road a distance of about one hundred and seventy (170) feet to the centerline of the Pike Run;

46. thence entering into the southwest quarter of said Section 21, generally easterly and upstream with the meandering centerline of said Pike Run, a distance of about fifteen hundred and ten (1510) feet to the east line of Tax Parcel #26-2100-03-003;

47. thence continuing with the meandering centerline of said Pike Run and now also with the northeast line of Tax Parcel #26-2100-03-006 a distance of about three hundred and seventy (370) feet to the north line of the northwest quarter of said Section 28;

48. thence diverging from the centerline of the creek and easterly with said north line of northwest quarter of Section 28, which line is also the north line of Tax Parcel #26-2806-01-002, a distance of about one thousand and fifty (1050) feet to the northeast corner of Tax Parcel #26-2806-01-002;

49. thence southerly with the easterly lines of two tax parcels with frontage on Cambria Street, being Tax Parcel #26-2806-01-002 and #26-2806-01-003 and continuing across the end of Cambria Street, a distance of about nine hundred and thirty (930) feet to the south line of Cambria Street, which line is also the north line of Tax Parcel #26-2806-02-003;

50. thence easterly with the northerly line of Tax Parcel #26-2806-02-003 a distance of about two hundred and forty (240) feet to the northeast corner of Tax Parcel #26-2806-02-003;

51. thence continuing easterly with an extension of the north line of Tax Parcel #26-2806-02-003, into Tax Parcel #26-2800-01-002, a distance of about five hundred (500) feet;

52. thence southerly deflecting about ninety six (96) degrees southerly from the previous course a distance of about four hundred and thirty (430) feet to a point within Tax Parcel #26-2800-01-002 that is two hundred (200) feet northerly and perpendicular from the centerline of Lincoln Highway;

53. thence generally southeasterly at 200 feet northerly from and parallel with said centerline of Lincoln Highway a distance of about twenty one hundred and thirty (2130) feet through Tax Parcel #26-2800-01-002 to the centerline of Sandy Point Road;

54. thence southerly with said centerline of Sandy Point Road a distance of about two hundred and five (205) feet to the centerline of Lincoln Highway;

55. thence continuing southerly with said centerline of Sandy Point Road and the east lines of two tax parcels fronting on Sandy Point Road, being Tax Parcels #26-2800-01-013 and #26-2800-01-014 a distance of about three hundred and fifty (350) feet to the south line of the northeast quarter of Section 28 and the POINT OF BEGINNING.

This description is based on scaled distances from the county tax maps, with some reference to the plats of recorded subdivisions, and does not represent any new field work by Kohli & Kaliher Associates, Inc.

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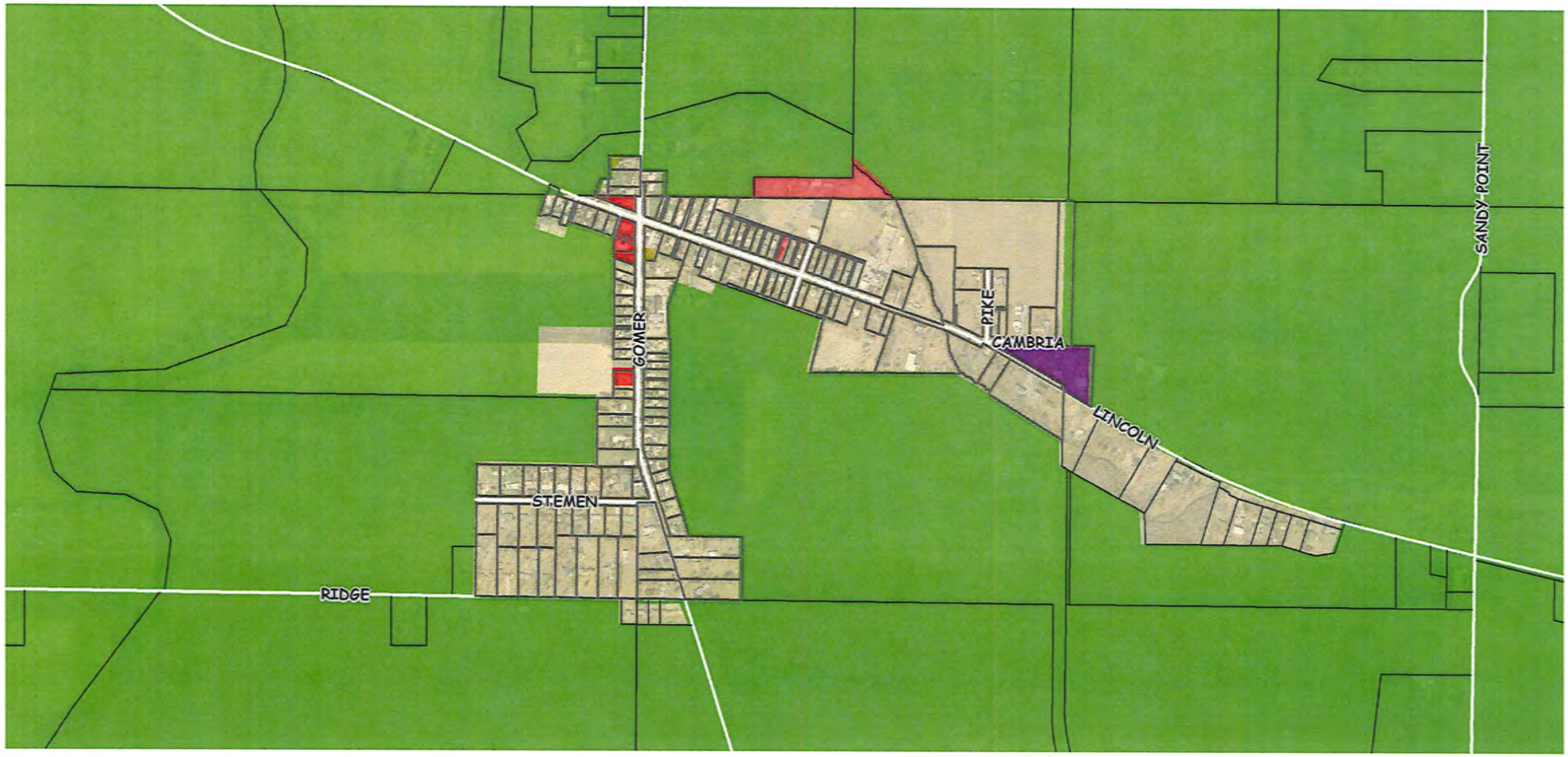
Michael G. Buettner
Registered Surveyor No. 6881
(SEAL)

APPENDIX C

ZONING MAP

2014 GOMER ZONING MAP



Gomer Zoning

A-1	B-2
M	R-1
B-1	R-2

0 500 1,000 Feet

N

December, 2014

C1

APPENDIX D

PARCEL DATA
WITHIN THE
PROPOSED SEWER DISTRICT

PROPERTY OWNERS - TAX PARCEL INFORMATION

PARCEL No	PROPERTY OWNER	PARCEL ADDRESS		OWNER ADDRESS		USE CODE	COMMENT
26200004002000.00	LUGIBIHL THOMAS JAY	W LINCOLN HWY	GOMER OH 45809	7535 GOMER RD	GOMER OH 45809	501 Vacant	
26200004003000.00	JOSTPILLE C DALE & ELAINE K TRUSTEES	W LINCOLN HWY	GOMER OH 45809	6295 W LINCOLN HV	FORT JENNINGS OH 45	501 Vacant	
26200004005000.00	MUMMA ANTHONY M & FARAH L	GOMER RD	GOMER OH 45809	4340 W LINCOLN HV	GOMER OH 45809	501 Vacant	
26200004006000.00	FOGT BETTY L	7511 GOMER RD	GOMER OH 45809	7511 GOMER RD	GOMER OH 45809	511 Single	Basement
26200004007000.00	STUDER MARY KAY	7523 GOMER RD	GOMER OH 45809	6301 WATKINS RD	LIMA OH 45807	511 Single	Basement
26200004009000.00	LUGIBILL THOMAS JAY	7535 GOMER RD	GOMER OH 45809	7535 GOMER RD	GOMER OH 45809	511 Single	PT Basement
26210003003000.00	RAINE DONNA M WRAY @3	7560 GOMER RD	GOMER OH 45809	1200 PIRAGUA DR	COLUMBUS OH 43207	512 Single	PT Basement
26210003004000.00	SCHIMPF CHRIS & BRITTANY	7530 GOMER RD	GOMER OH 45809	7530 GOMER RD	GOMER OH 45809	511 Single	Basement
26210003005000.00	LUGIBIHL LYNN SUMMERS & SCOTT E	7518 GOMER RD	GOMER OH 45809	7535 GOMER RD	GOMER OH 45809	511 Single	Crawl
26210003006000.00	SUGAR CREEK TWP TRUSTEES	GOMER RD	GOMER OH 45809	4130 W LINCOLN HV	GOMER OH 45809	630 Exemt	Playground
26280001002000.00	WATKINS BETTY L TRUSTEE	3300-3720 W LINCOLN H	LIMA OH 45807	3300 W LINCOLN HV	ELIDA OH 45807	111 Farm	Crawl
26280001004000.00	STONE ROAD ENTERPRISES LLC	3765 W LINCOLN HWY	LIMA OH 45807	7125 N WEST ST	LIMA OH 45807	599 Other	Mobile Home
26280001005000.00	WATKINS WILLARD RODNEY & NANCY JOANN	W LINCOLN HWY	LIMA OH 45807	3720 W LINCOLN HV	ELIDA OH 45807	599 Other	Barn & Woods
26280001005001.00	WATKINS W RODNEY	3681 W LINCOLN HWY	LIMA OH 45807	3720 W LINCOLN HV	ELIDA OH 45807	511 Single	Basement
26280001006000.00	BROUGHTON AUSTIN STEVEN	3649 W LINCOLN HWY	LIMA OH 45807	634 W HAZEL AVE	LIMA OH 45801	511 Single	Crawl
26280001006001.00	MON PECULE	3573 W LINCOLN HWY	LIMA OH 45807	3573 W LINCOLN HV	LIMA OH 45807	511 Single	Crawl
26280001007000.00	SUEVER MICHAEL A	3551 W LINCOLN HWY	LIMA OH 45807	3551 W LINCOLN HV	LIMA OH 45807	511 Single	Crawl
26280001008000.00	HAWKEY MICHAEL J	3533 W LINCOLN HWY	LIMA OH 45807	3533 W LINCOLN HV	LIMA OH 45807	511 Single	Crawl
26280001009000.00	BOWERMAN TIMOTHY J & MARYANNE D	W LINCOLN HWY	LIMA OH 45807	3519 W LINCOLN HV	LIMA OH 45807	501 Vacant	
26280001009001.00	BOWERMAN TIMOTHY J & MARYANNE D	3519 W LINCOLN HWY	LIMA OH 45807	3519 W LINCOLN HV	LIMA OH 45807	511 Single	Crawl
26280001010000.00	SCIRANKA STANLEY A & KIMBERLY J	3491 W LINCOLN HWY	GOMER OH 45809	3491 W LINCOLN HV	GOMER OH 45809	511 Single	Crawl
26280001011000.00	B & K OF GOMER LLC	3355 W LINCOLN HWY	LIMA OH 45807	3355 W LINCOLN HV	ELIDA OH 45807	511 Single	Crawl
26280001011002.00	LUGIBIHL THOMAS J	W LINCOLN HWY	LIMA OH 45807	7535 GOMER RD	GOMER OH 45809	111 Ag	Crops
26280001011003.00	LUGIBIHL THOMAS J	W LINCOLN HWY	GOMER OH 45809	7535 GOMER RD	GOMER OH 45809	501 Vacant	
26280001012000.00	DONOHO CURT M & SHARON A	3321 W LINCOLN HWY	LIMA OH 45807	3321 W LINCOLN HV	LIMA OH 45807	511 Single	Crawl
26280001013000.00	FISHER GLENN D & LINDA K	7015 SANDY POINT RD	LIMA OH 45807	2876 HUMMINGBIR	LIMA OH 45807	480 Commercial warehouses	
26280001014000.00	MCGHEE MATTHEW	7001 SANDY POINT RD	LIMA OH 45807	7001 SANDY POINT	LIMA OH 45807	511 Single	Basement
26280002001000.00	MCCLEARY KENT E & ELIZABETH J	3835 W LINCOLN HWY	GOMER OH 45809	3835 W LINCOLN HV	LIMA OH 45807	511 Single	Basement
26280002002000.00	MORRIS WILLIAM ROBERT	GOMER RD	GOMER OH 45809	1971 W 5TH AVE	COLUMBUS OH 43212	199 Ag	Crops & Barn
26280003001000.00	SUNNY HILLS FARMS INC	GOMER RD	LIMA OH 45807	3535 LLOYD RD	LIMA OH 45807	110 Ag	Crops
26280003002000.00	MULLENHOUR WAYNE N & ANITA L TRUSTEES	4251 RIDGE RD	LIMA OH 45807	4251 RIDGE RD	LIMA OH 45807	511 Single	Basement
26280003003000.00	FOX JENNIFER L	4275 RIDGE RD	LIMA OH 45807	4275 RIDGE RD	LIMA OH 45807	511 Single	PT Basement
26280003004000.00	BENEDICT ABRAM R	4297 RIDGE RD	LIMA OH 45807	4297 RIDGE RD	LIMA OH 45807	511 Single	PT Basement
26280601001000.00	CLEVENGER JAMES R @3	CAMBRIA ST	GOMER OH 45809	3810 CAMBRIA ST	GOMER OH 45809	501 Vacant	
26280601002000.00	VANDEMARK KENT D & JOLA	3860 CAMBRIA ST	GOMER OH 45809	3860 CAMBRIA ST	GOMER OH 45809	111 Farm	PT Basement
26280601002001.00	FORD PAUL JR & JULIANNA	7390 PIKE AVE	GOMER OH 45809	7390 PIKE AVE	GOMER OH 45809	510 Single	Basement
26280601003000.00	VANDEMARK DON M & BETTY J TRUSTEES	3830 CAMBRIA ST	GOMER OH 45809	3830 CAMBRIA ST	LIMA OH 45807	510 Single	Crawl
26280601005000.00	BOCKEY DOUGLAS L & LEANNE M	CAMBRIA ST	GOMER OH 45809	3894 CAMBRIA ST	GOMER OH 45809	500 Vacant	
26280601006000.00	BOCKEY DOUGLAS L & LEANNE M	3894 CAMBRIA ST	GOMER OH 45809	3894 CAMBRIA ST	GOMER OH 45809	510 Single	Crawl
26280601007000.00	BICE JASON D & STACEY M	3900 W LINCOLN HWY	GOMER OH 45809	3900 W LINCOLN HV	GOMER OH 45809	511 Single	PT Basement
26280601011000.00	KLINE MARK A JR & MICHELLE R	7395 PIKE AVE	GOMER OH 45809	7395 PIKE AVE	GOMER OH 45809	510 Single	Crawl
26280601012000.00	VANDEMARK KENT & JOLA	W LINCOLN HWY	GOMER OH 45809	3860 CAMBRIA ST	ELIDA OH 45807	501 Vacant	
26280601013000.00	BATES JAMES R	4000 W LINCOLN HWY	GOMER OH 45809	4230 ELIDA RD	LIMA OH 45807	511 Single	Basement
26280601013001.00	CRAWFORD MICHAEL S	3980 W LINCOLN HWY	GOMER OH 45809	4200 W LINCOLN HV	GOMER OH 45809	501 Vacant	
26280601014000.00	ELIDA LOCAL SD BD OF EDUCATION	4024 W LINCOLN HWY	LIMA OH 45807	4380 SUNNYDALE ST	LIMA OH 45807	650 Exempt	School
26280601014001.00	SUGAR CREEK TWP TRUSTEES	NICHOLAS AVE	LIMA OH 45807	4130 W LINCOLN HV	GOMER OH 45809	630 Exemt	Fire/Dept/Playground
26280601015000.00	ELIDA LOCAL S D BD OF EDUCATION	W LINCOLN HWY	GOMER OH 45809	4380 SUNNYDALE ST	LIMA OH 45807	650 Exempt	Parking

PARCEL No	PROPERTY OWNER	PARCEL ADDRESS		OWNER ADDRESS		USE CODE	COMMENT
26280601016000.00	SCHIMPF JOHN E & FAITH A	4062 W LINCOLN HWY	GOMER OH 45809	4062 W LINCOLN HV	GOMER OH 45809	511 Single	Crawl
26280601017000.00	RILEY JOHN	4068 LINCOLN HWY	GOMER OH 45809	4068 LINCOLN HWY	GOMER OH 45809	511 Single	PT Basement
26280601018000.00	EVANS PAMELA S	4076 W LINCOLN HWY	GOMER OH 45809	4076 W LINCOLN HV	GOMER OH 45809	510 Single	Crawl
26280601019000.00	GRAHAM TRINKA M	4084 W LINCOLN HWY	GOMER OH 45809	4084 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601020000.00	RAINE DONNA M WRAY @3	4092 W LINCOLN HWY	GOMER OH 45809	1200 PIRAGUA DR	COLUMBUS OH 43207	510 Single	PT Basement
26280601021000.00	SCHIMPF ANDREW P & LAURETTE	4106 W LINCOLN HWY	GOMER OH 45809	4106 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601022000.00	MULLINS ELMER D JR & AMI M	4114 W LINCOLN HWY	GOMER OH 45809	4114 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601023000.00	SUGAR CREEK TWP TRUSTEES TOWNSHIP HOUSE	4130 W LINCOLN HWY	GOMER OH 45809	4130 W LINCOLN HV	pt	630 Exemt	TwpHall
26280601024000.00	WOOD CRAIG A & LINDA G	4138 W LINCOLN HWY	GOMER OH 45809	4138 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601025000.00	CLEVENGER MARNA K	4150 W LINCOLN HWY	GOMER OH 45809	4150 W LINCOLN HV	GOMER OH 45809	510 Single	Basement
26280601026000.00	LUGIBIHL THOMAS JAY & KIMBERLY S	4162 W LINCOLN HWY	GOMER OH 45809	7535 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26280601027000.00	JOSEPH PAMELA K	4174 W LINCOLN HWY	GOMER OH 45809	4174 W LINCOLN HV	GOMER OH 45809	520 Two	Pt Basement
26280601028000.00	MOOR MARILYN J	4180 W LINCOLN HWY	GOMER OH 45809	4180 W LINCOLN HV	GOMER OH 45809	520 Two	Pt Basement
26280601029000.00	DICKREDE VIOLA E	4192 W LINCOLN HWY	GOMER OH 45809	3830 LLOYD RD	LIMA OH 45807	510 Single	Basement
26280601030000.00	CRAWFORD MICHAEL S	4200 W LINCOLN HWY	GOMER OH 45809	4200 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601031000.00	BONITO SANDI K & ANTHONY J	W LINCOLN HWY	GOMER OH 45809	4230 W LINCOLN HV	GOMER OH 45809	500 Vacant	
26280601031001.00	WASHAM PATRICK A & MICHELLE A	4218 W LINCOLN HWY	GOMER OH 45809	2121 S KEMP RD	LIMA OH 45806	510 Single	PT Basement
26280601032000.00	BONITO ANTHONY J	4230 W LINCOLN HWY	GOMER OH 45809	4230 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601033000.00	SISTERS THREE FARM LLC	4242 W LINCOLN HWY	GOMER OH 45809	4076 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601034000.00	BREECE WILLIAM L & BRENDA S	4252 W LINCOLN HWY	GOMER OH 45809	4252 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280601035000.00	STEMEN PROPERTIES LLC	4268 W LINCOLN HWY	GOMER OH 45809	18991 GALVIN RD	MIDDLE POINT OH 458	510 Single	PT Basement
26280601036000.00	UNITED TELEPHONE CO OF OHIO	W LINCOLN HWY	LIMA OH 45807	PO BOX 7909	OVERLAND PARK KS 66	489 Commercial / Utility	
26280601037000.00	LEHMANN ALAN D	W LINCOLN HWY	GOMER OH 45809	4400 RIDGE RD	LIMA OH 45807	480 Commercial warehouses	
26280602003000.00	JENNINGS GOMER EQUITY INC	3798-3862 W LINCOLN H	GOMER OH 45809	3798 W LINCOLN HV	GOMER OH 45809	390 Grain Elevator	
26280603001000.00	COOK DANIEL R & DENISE A	3885 W LINCOLN HWY	GOMER OH 45809	3901 W LINCOLN HV	GOMER OH 45809	511 Single	PT Basement
26280603004000.00	COOK DANIEL R & DENISE A	3901 W LINCOLN HWY	GOMER OH 45809	3901 W LINCOLN HV	GOMER OH 45809	511 Single	PT Basement
26280603005000.00	EVANS THOMAS E & WILMA B	3961 W LINCOLN HWY	GOMER OH 45809	3961 LINCOLN HWY	GOMER OH 45809	511 Single	Crawl
26280603006000.00	GRAHAM DANIEL J & JANICE K	4001 W LINCOLN HWY	GOMER OH 45809	4001 W LINCOLN HV	GOMER OH 45809	511 Single	Crawl
26280603007000.00	KNIPPEN ABBY M	4017 W LINCOLN HWY	GOMER OH 45809	4218 W LINCOLN HV	GOMER OH 45809	511 Single	Crawl
26280603008000.00	CHRISTLIEB KEVIN D & DAWN L	4033 W LINCOLN HWY	GOMER OH 45809	4033 W LINCOLN HV	GOMER OH 45809	511 Single	PT Basement
26280603009000.00	SANDY RUTH A	4049 W LINCOLN HWY	GOMER OH 45809	4049 W LINCOLN HV	ELIDA OH 45807	511 Single	PT Basement
26280603010000.00	PAUFF MATTHEW J & KARI A	4065 W LINCOLN HWY	GOMER OH 45809	4065 W LINCOLN HV	GOMER OH 45809	511 Single	Basement
26280603011000.00	DYKE CAROLYN S	4073 W LINCOLN HWY	GOMER OH 45809	4073 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603012000.00	SMITH RONALD E	4081 W LINCOLN HWY	GOMER OH 45809	4081 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603013000.00	NUSBAUM MATTHEW & HEATHER	4095 W LINCOLN HWY	GOMER OH 45809	PO BOX 10	VAUGHNSVILLE OH 458	510 Single	PT Basement
26280603014000.00	AMMON JORDAN L	4105 W LINCOLN HWY	GOMER OH 45809	4105 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603015000.00	MORRIS WILLIAM ROBERT	4115 W LINCOLN HWY	GOMER OH 45809	1971 W 5TH	COLUMBUS OH 43212	599 Other	Garage & House
26280603016000.00	MORRIS WILLIAM R	4129 W LINCOLN HWY	GOMER OH 45809	1971 W 5TH AVE	COLUMBUS OH 43212	510 Single	PT Basement
26280603017000.00	MORRIS WILLIAM ROBERT	4137 W LINCOLN HWY	GOMER OH 45809	1971 W 5TH AVE	COLUMBUS OH 43212	500 Vacant	
26280603018000.00	WRAY JOHN & CHARITY	4151 W LINCOLN HWY	GOMER OH 45809	4151 W LINCOLN HV	GOMER OH 45809	510 Single	Crawl
26280603020000.00	BRITT MARTHA J	4175 W LINCOLN HWY	GOMER OH 45809	4175 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603023000.00	BADEN EDWARD L TRUSTEE	4201 W LINCOLN HWY	GOMER OH 45809	4201 W LINCOLN HV	GOMER OH 45809	510 Single	Crawl
26280603024001.00	STERLING PAMELA S & CHRISTOPHER E	4221 W LINCOLN HWY	LIMA OH 45807	4221 W LINCOLN HV	LIMA OH 45807	510 Single	Basement
26280603026000.00	SMITH GARY MICHAEL	4241 W LINCOLN HWY	GOMER OH 45809	4241 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603026001.00	SMITH GARY MICHAEL	W LINCOLN HWY	GOMER OH 45809	4241 W LINCOLN HV	GOMER OH 45809	500 Vacant	
26280603027000.00	COOPER AMANDA I	4253 W LINCOLN HWY	GOMER OH 45809	4253 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26280603028000.00	LEHMANN ALAN DEAN	4283-4285 W LINCOLN H	GOMER OH 45809	4400 RIDGE RD	LIMA OH 45807	401 Apts	
26280603029000.00	GOMER UNITED CHURCH OF CHRIST	7370 GOMER RD	GOMER OH 45809	7350 GOMER RD	GOMER OH 45809	510 Single	Crawl

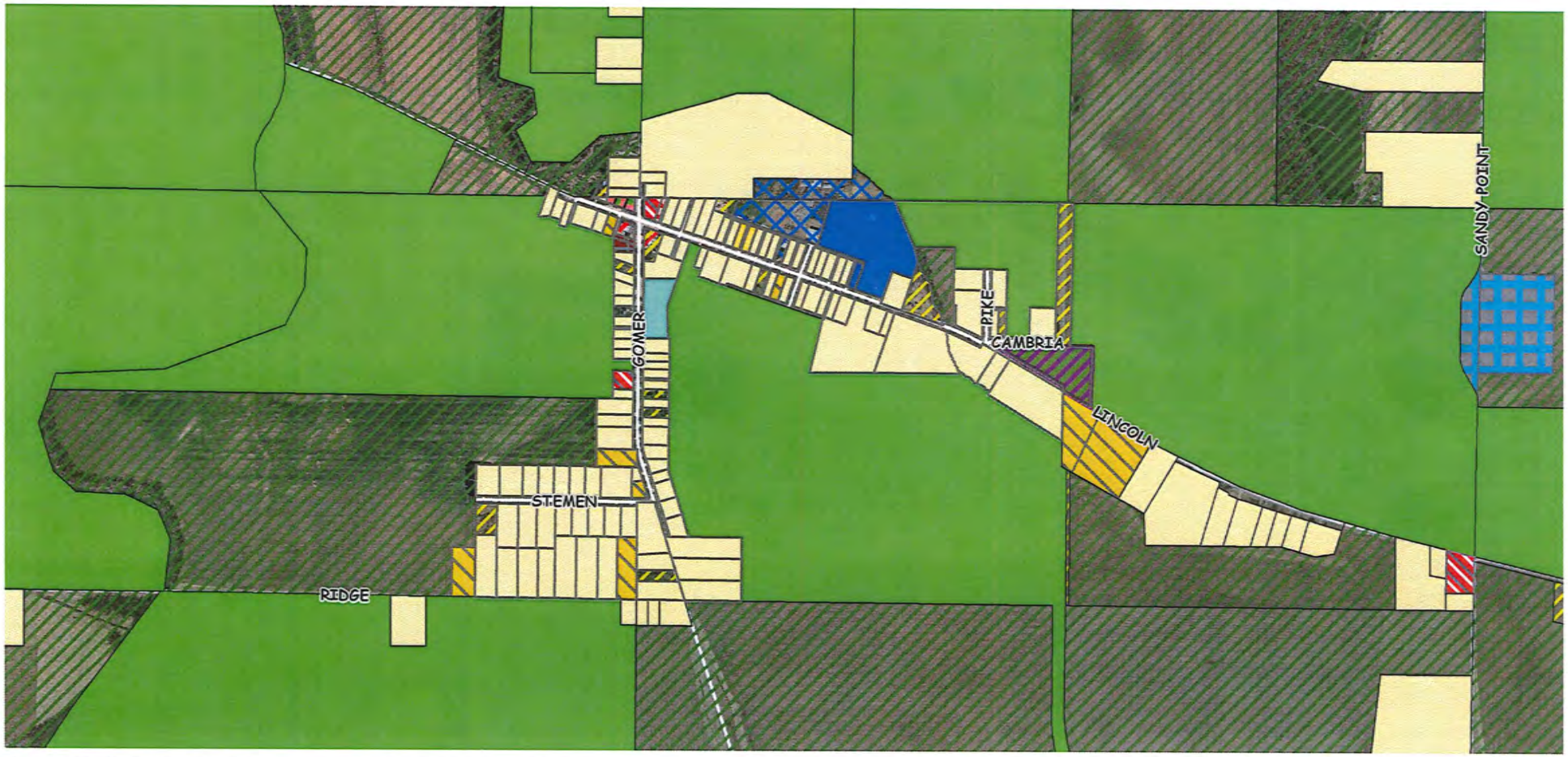
PARCEL No	PROPERTY OWNER	PARCEL ADDRESS		OWNER ADDRESS		USE CODE	COMMENT
26280603031000.00	GOMER UNITED CHURCH OF CHRIST	7350 GOMER RD	GOMER OH 45809	7350 GOMER RD	GOMER OH 45809	685 Church	
26280603032000.00	EVANS BRYAN T & KERI R	7308 GOMER RD	GOMER OH 45809	7308 GOMER RD	GOMER OH 45809	511 Single	PT Basement
26280603033000.00	CLEVENGER JAMES D & KAREN M	7300 GOMER RD	GOMER OH 45809	7300 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26280603034000.00	HUNT PATRICIA A	7288 GOMER RD	GOMER OH 45809	7288 GOMER RD	GOMER OH 45809	510 Single	Basement
26280603035000.00	ROBERTS ROGER S	7274 GOMER RD	GOMER OH 45809	7274 GOMER RD	GOMER OH 45809	510 Single	Crawl
26280603035001.00	ROBERTS ROGER S	GOMER RD	LIMA OH 45807	7274 GOMER RD	GOMER OH 45809	501 Vacant	
26280603036000.00	SMITH HOWARD J JR	7266 GOMER RD	GOMER OH 45809	7266 GOMER RD	GOMER OH 45809	510 Single	Crawl
26280603037000.00	ALTENBURGER KEITH A & MARIANNE	GOMER RD	GOMER OH 45809	7244 GOMER RD	LIMA OH 45807	501 Vacant	
26280701001000.00	ALTENBURGER KEITH A & MARIANNE	7244 GOMER RD	GOMER OH 45809	7244 GOMER RD	LIMA OH 45807	510 Single	Crawl
26280701002000.00	WILSON MICHELLE R	GOMER RD	GOMER OH 45809	7222 GOMER RD	GOMER OH 45809	501 Vacant	
26280701003000.00	WILSON MICHELLE R	7222 GOMER RD	GOMER OH 45809	7222 GOMER RD	GOMER OH 45809	510 Single	Basement
26280701005000.00	SHERRICK MATTHEW D	7198 GOMER RD	GOMER OH 45809	5438 RIVER RIDGE S	LIMA OH 45807	511 Single	PT Basement
26280701006000.00	DODDS BARBARA A & LARRY L	7180 GOMER RD	GOMER OH 45809	7180 GOMER RD	GOMER OH 45809	510 Single	Crawl
26280701007000.00	HEMENWAY JOANNE Y	7154 GOMER RD	LIMA OH 45807	7154 GOMER RD	LIMA OH 45807	510 Single	Crawl
26280701008000.00	LUEBRECHT MATTHEW J & TERRY D	7138 GOMER RD	LIMA OH 45807	7000 DEFIANCE TRL	DELPHOS OH 45833	510 Single	Crawl
26280701009000.00	KERSHNER BRIAN L	7114 GOMER RD	LIMA OH 45807	7114 GOMER RD	LIMA OH 45807	510 Single	PT Basement
26280701010000.00	HOEHN KURT E	7100 GOMER RD	LIMA OH 45807	7100 GOMER RD	LIMA OH 45807	510 Single	Slab
26280701011000.00	MALEY ROBERT & DORIS	7070 GOMER RD	LIMA OH 45807	7070 GOMER RD	ELIDA OH 45807	510 Single	PT Basement
26280701012000.00	DYER JOHN T & SUSAN L	7030 GOMER RD	LIMA OH 45807	7030 GOMER RD	ELIDA OH 45807	511 Single	Basement
26280701012001.00	ARTHUR RICHARD C & DONNA J	7060 GOMER RD	LIMA OH 45807	7060 GOMER RD	LIMA OH 45807	511 Single	Basement
26280701012002.00	HANSON ROBERT R	7000 GOMER RD	LIMA OH 45807	7000 GOMER RD	ELIDA OH 45807	511 Single	PT Basement
26280702004000.00	ERICKSON BENJAMIN D	7075 GOMER RD	LIMA OH 45807	7075 GOMER RD	LIMA OH 45807	511 Single	Basement
26280702006000.00	SUEVER CYNTHIA A	7045 GOMER RD	LIMA OH 45807	7045 GOMER RD	LIMA OH 45807	510 Single	Crawl
26280702007000.00	GUDAKUNST DAVID W	GOMER RD	GOMER OH 45809	7015 GOMER RD	LIMA OH 45807	501 Vacant	
26280702008000.00	GUDAKUNST DAVID W	7015 GOMER RD	LIMA OH 45807	7015 GOMER RD	LIMA OH 45807	510 Single	Crawl
26290001001000.00	ARTHUR RICHARD C & DONNA J	GOMER RD	GOMER OH 45809	7060 GOMER RD	LIMA OH 45807	199 Ag	Crops & Barn
26290001002000.00	BUETTNER STEVEN C & YVONNE J	RIDGE RD	GOMER OH 45809	8145 ROBINSON RD	FORT JENNINGS OH 45	110 Ag	Crops
26290001003000.00	OVERHOLT R BRIAN & SHARON K	RIDGE RD	GOMER OH 45809	4405 STEMEN RD	LIMA OH 45807	599 Other	Barn no Crops
26290004001000.00	BROOKS DARIN L	4301 RIDGE RD	LIMA OH 45807	4301 RIDGE RD	LIMA OH 45807	511 Single	Basement
26290004003000.00	ALGER RICHARD J	RIDGE RD	LIMA OH 45807	4430 RIDGE RD	LIMA OH 45807	199 Ag	Crops
26290004003001.00	EDWARDS MARTIN & ROSALIND	4565 RIDGE RD	LIMA OH 45807	4565 RIDGE RD	LIMA OH 45807	511 Single	PT Basement
26290501001000.00	BRENTLINGER JOEL D & JAMES M & JOHN D SR	4310 W LINCOLN HWY	GOMER OH 45809	PO BOX 125	VAUGHNSVILLE OH 458	304 Bank	444 Full service banks
26290501002000.00	MUMMA ANTHONY M & FARAH L	4340 W LINCOLN HWY	GOMER OH 45809	4340 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26290502001000.00	YORK-RON INC	4399 W LINCOLN HWY	GOMER OH 45809	1630 N ROSEDALE A	LIMA OH 45805	510 Single	Crawl
26290502002000.00	GILICA MILAN D & CYNTHIA S	4383 W LINCOLN HWY	GOMER OH 45809	4383 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26290502003000.00	JOHNSON MICHAEL C & TIFFANY R	4375 W LINCOLN HWY	GOMER OH 45809	4375 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26290502005000.00	REICHARDT JEFFREY A & ANITA M	4355 W LINCOLN HWY	GOMER OH 45809	4355 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26290502006000.00	BRADY THELMA M	4333 W LINCOLN HWY	GOMER OH 45809	4333 W LINCOLN HV	GOMER OH 45809	510 Single	PT Basement
26290502007000.00	BRADY THELMA M	LINCOLN HWY	GOMER OH 45809	4333 LINCOLN HWY	GOMER OH 45809	599 Other	Garage
26290502008000.00	TYRRELL ALAN D & BETHANY A	4305 W LINCOLN HWY	GOMER OH 45809	4305 W LINCOLN HV	GOMER OH 45809	429 Other	Retail
26290502009000.00	TIERNEY VIRGINIA N	7433 GOMER RD	GOMER OH 45809	7433 GOMER RD	GOMER OH 45809	510 Single	Basement
26290502009002.00	TYRRELL ALAN D & BETHANY A	GOMER RD	GOMER OH 45809	5765 RIDGE RD	LIMA OH 45807	455 Commerc	Parking
26290502009003.00	TYRRELL ALAN D & BETHANY A	GOMER RD	GOMER OH 45809	5765 RIDGE RD	LIMA OH 45807	455 Commerc	Parking
26290502009004.00	ANGLE SCOTT	7439 GOMER RD	GOMER OH 45809	9006 APPLE VALLEY	TAMPA FL 33626	455 Commerc	Garage/Shop
26290502010000.00	TAYLOR MATTHEW L	7405 GOMER RD	GOMER OH 45809	7397 GOMER RD	GOMER OH 45809	500 Vacant	
26290502011000.00	TAYLOR MATTHEW L	7397 GOMER RD	GOMER OH 45809	7397 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26290502012000.00	MORAN KENNETH J	7389 GOMER RD	GOMER OH 45809	7389 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26290502013000.00	MAXWELL DAVID M & SIDNEY	7377 GOMER RD	GOMER OH 45809	7377 GOMER RD	GOMER OH 45809	510 Single	PT Basement

PARCEL No	PROPERTY OWNER	PARCEL ADDRESS		OWNER ADDRESS		USE CODE	COMMENT
26290502014000.00	WELSH SOCIETY OF NW OHIO INC BD OF TRUSTEI	7365 GOMER RD	GOMER OH 45809	4430 RIDGE RD	LIMA OH 45807	680 Charitable	House-Crawl
26290502015000.00	OVERHOLT R BRIAN	7349 GOMER RD	GOMER OH 45809	4405 STEMAN ST	ELIDA OH 45807	510 Single	PT Basement
26290502016000.00	BRENNEMAN TIMOTHY RAY & REBECCA ANNE TR	7341 GOMER RD	GOMER OH 45809	7341 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26290502017000.00	FLICK LARRY J & JANICE A	7323 GOMER RD	GOMER OH 45809	401 E MAIN ST	LIMA OH 45807	510 Single	PT Basement
26290502018000.00	NIESE PEG A & JANET ALGER TRUSTEES	7301 GOMER RD	GOMER OH 45809	5311 ROAD 12	OTTAWA OH 45875	510 Single	PT Basement
26290502020000.00	BENDELE ROBERT G & LINDA J TRUSTEES	7267 GOMER RD	GOMER OH 45809	3033 W LINCOLN HV	ELIDA OH 45807	480 Commercial warehouses	
26290502021000.00	BENDELE ROBERT G & LINDA J TRUSTEES	7255 GOMER RD	GOMER OH 45809	3033 W LINCOLN HV	ELIDA OH 45807	510 Single	Crawl
26290801001000.00	THIEDE MATTHEW A	7241 GOMER RD	GOMER OH 45809	7241 GOMER RD	GOMER OH 45809	510 Single	Basement
26290801002000.00	SANDY GLEN R & VERONA A TRUSTEES	7225 GOMER RD	GOMER OH 45809	7225 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26290801003000.00	JACK STEVEN M	7195 GOMER RD	GOMER OH 45809	7195 GOMER RD	GOMER OH 45809	510 Single	PT Basement
26290801004000.00	SHAEFFER JEFFERY A & MARY JANE	GOMER RD	GOMER OH 45809	3021 WHIPPOORWI	LIMA OH 45807	599 Other	Barn no Crops
26290802001000.00	GUTIERREZ MARGARITA	7141 GOMER RD	GOMER OH 45809	1415 TREBOR DR	LIMA OH 45805	511 Single	PT Basement
26290802002000.00	SANTAMARIA MARGARITA	7121 GOMER RD	LIMA OH 45807	1415 TREBOR DR	LIMA OH 45805	599 Other	Mobile Home
26290802003000.00	LARIMORE DANIEL J	4352 STEMEN ST	GOMER OH 45809	4352 STEMEN ST	ELIDA OH 45807	510 Single	Basement
26290802004000.00	WALTERS PHILIP D	4330 STEMEN ST	LIMA OH 45807	5401 RIVER TRL	LIMA OH 45807	510 Single	PT Basement
26290802005000.00	LUHN PERRY S & KATHLEEN A	4374 STEMEN ST	GOMER OH 45809	4374 STEMEN ST	GOMER OH 45809	510 Single	Crawl
26290802006000.00	SAYGER SANDRA EBELING	4396 STEMEN ST	GOMER OH 45809	4396 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290802007000.00	LONGBRAKE BRITTANY NICOLE	4410 STEMEN ST	GOMER OH 45809	4410 STEMEN ST	ELIDA OH 45807	510 Single	Crawl
26290802008000.00	NEELEY SABRINA G	4422 STEMEN ST	GOMER OH 45809	4422 STEMEN ST	GOMER OH 45809	510 Single	Crawl
26290802009000.00	GRANT JANICE I	4450 STEMEN ST	GOMER OH 45809	4450 STEMEN ST	LIMA OH 45807	510 Single	Basement
26290802010000.00	LONGBRAKE WILLIAM D & BRENDA L	4486 STEMEN ST	GOMER OH 45809	4486 STEMEN ST	LIMA OH 45807	510 Single	PT Basement
26290803001000.00	ADAMS GLEN & NANCY	4315 STEMEN ST	LIMA OH 45807	4315 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290803002000.00	FALKE SHANE R & MICHELLE N	4333 STEMEN ST	GOMER OH 45809	4333 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290803003000.00	PATTON JAMES M & STEPHANIE E	4351 STEMEN ST	GOMER OH 45809	4351 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290803004000.00	BLANTON JAMES H	4373 STEMEN ST	GOMER OH 45809	PO BOX 167533	OREGON OH 43616	510 Single	Crawl
26290803005000.00	RAGER BENJAMIN E & BRUCE E	4395 STEMEN ST	GOMER OH 45809	4395 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290803006000.00	OVERHOLT R BRIAN & SHARON K	4405 STEMEN ST	LIMA OH 45807	4405 STEMEN ST	LIMA OH 45807	510 Single	PT Basement
26290803007000.00	DAVIS FREDRICK C & SHIRLEY S	4435 STEMEN ST	GOMER OH 45809	4435 STEMEN ST	LIMA OH 45807	510 Single	Crawl
26290803008000.00	OVERHOLT ROBERT E & LOIS R	4467 STEMEN ST	GOMER OH 45809	4467 STEMEN ST	GOMER OH 45809	510 Single	Crawl
26290803009000.00	OVERHOLT R BRIAN & SHARON K	STEMEN ST	GOMER OH 45809	4405 STEMEN ST	LIMA OH 45807	500 Vacant	
26290803010000.00	OVERHOLT R BRIAN & SHARON K	4480 RIDGE RD	GOMER OH 45809	4405 STEMEN ST	LIMA OH 45807	511 Single	Crawl
26290803011000.00	DANIELS LISA	4466 RIDGE RD	GOMER OH 45809	4466 RIDGE RD	GOMER OH 45809	511 Single	Crawl
26290803012000.00	ALGER MARY L	4430 RIDGE RD	LIMA OH 45807	4430 RIDGE RD	LIMA OH 45807	511 Single	Basement
26290803013000.00	LEHMANN ALAN & JUDY KAY	4400 RIDGE RD	LIMA OH 45807	4400 RIDGE RD	LIMA OH 45807	511 Single	Basement
26290803014000.00	MARTIN JEFFREY J & DONNA M	4380 RIDGE RD	LIMA OH 45807	4380 RIDGE RD	LIMA OH 45807	511 Single	Basement
26290803015000.00	THURSTON TIMOTHY D & LINDA L	4350 RIDGE RD	LIMA OH 45807	4350 RIDGE RD	ELIDA OH 45807	511 Single	Basement
26290803016000.00	METZGER SUZANNE L	4320 RIDGE RD	LIMA OH 45807	4320 RIDGE RD	LIMA OH 45807	511 Single	Basement
26290803017000.00	METZGER SUZANNE L	RIDGE RD	LIMA OH 45807	4320 RIDGE RD	LIMA OH 45807	599 Other	Barn no Crops

APPENDIX E

LAND USE

2014 GOMER LAND USE MAP



- 100; 110 (Agriculture Vacant)
- 101; 111; 199 (Agriculture)
- 390 (Grain Elevator)
- 401 (Commercial 4 to19 Apartments)
- 420; 425; 429 (Shopping Center/Retail)
- 444 (Commercial Bank)
- 455; 456 (Commercial Parking)
- 480 (Commercial Office/Warehouse)
- 489; 499 (Commercial Utility/Other Structure)
- 500; 501; 502; 503 (Residential Vacant)
- 510; 511; 512; 513 (Residential Single-Family)
- 520; 521 (Residential Two-Family)
- 599 (Residential Other)
- 610; 620; 630; 640 (Government)
- 650 (Board of Education)
- 685 (Place of Worship)
- 690 (Cemetery)

0 500 1,000 Feet

N

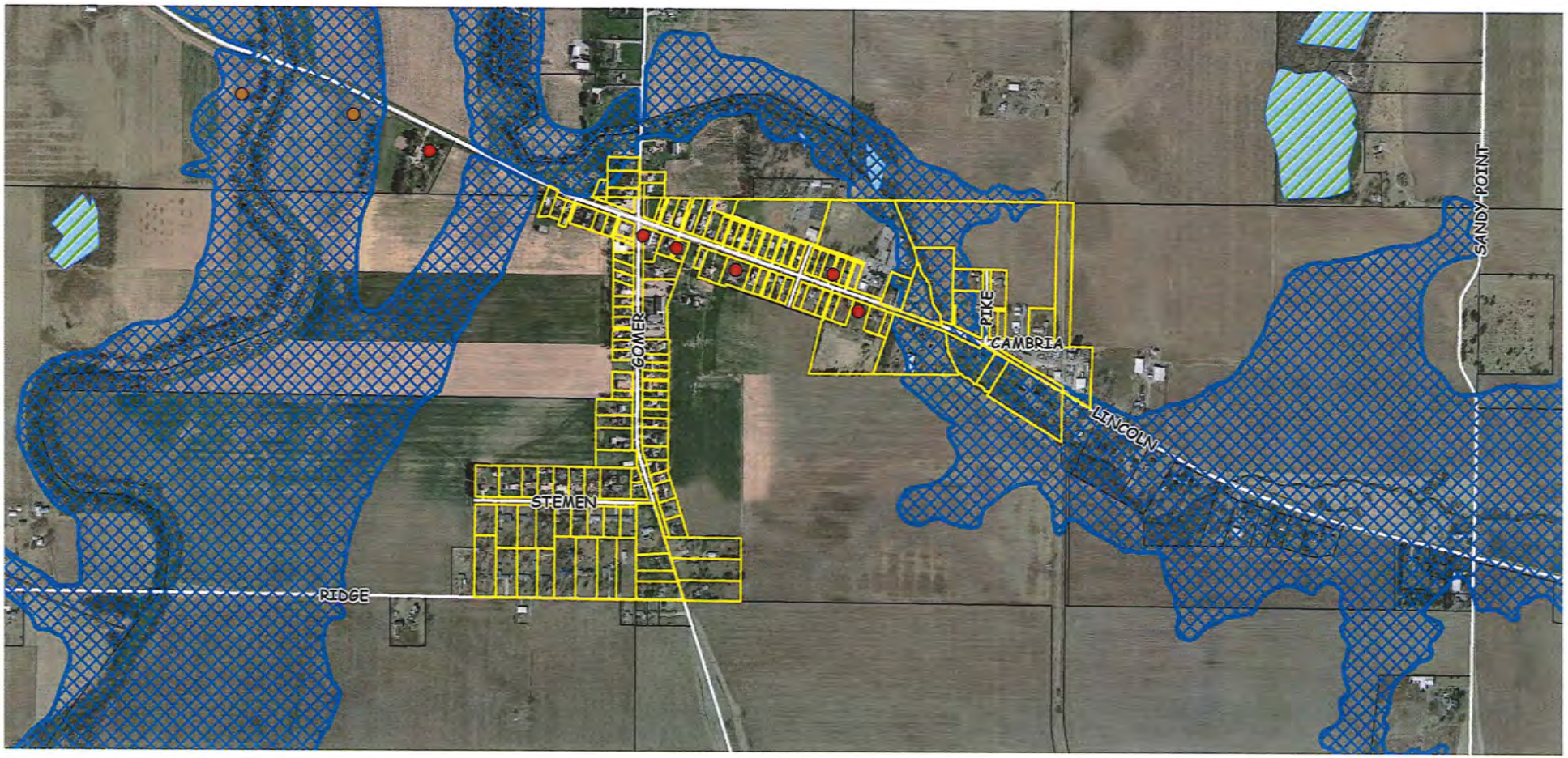
RPC

December, 2014

APPENDIX F

FEATURES OF INTEREST
HISTORICAL SITES, FLOODPLAIN
AND WETLANDS

2014 GOMER FEATURES OF INTEREST



F1

Historical Structure

Archaeology Sites

Floodplain

Wetlands

Parcels of Gomer

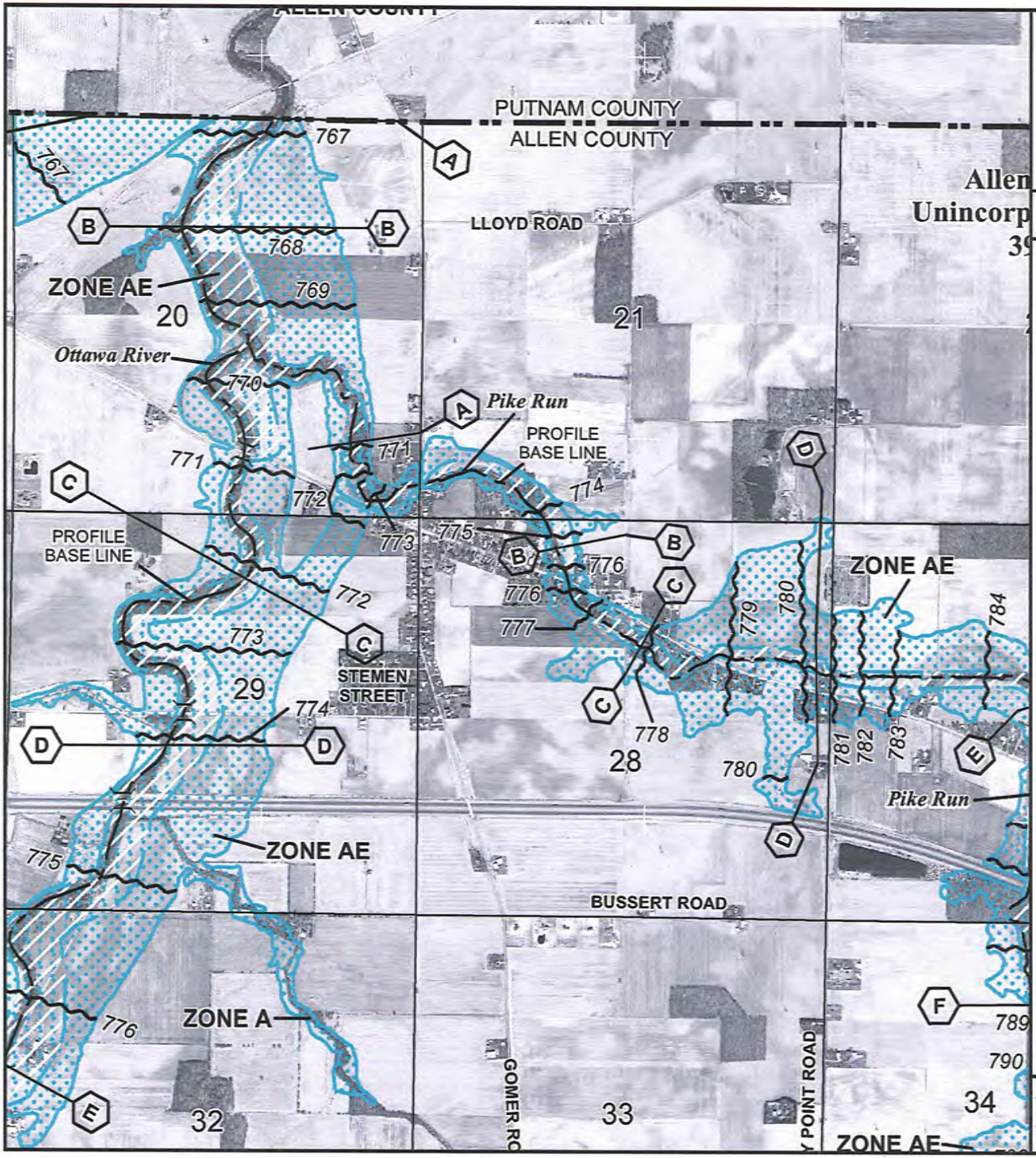
Other Parcels

0 500 1,000 Feet

N

RPC

December, 2014



MAP SCALE 1" = 2000'

1000 0 2000 4000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0200D

FIRM

FLOOD INSURANCE RATE MAP

ALLEN COUNTY, OHIO AND INCORPORATED AREAS

PANEL 200 OF 375

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALLEN COUNTY	390758	0200	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
39003C0200D

EFFECTIVE DATE
MAY 2, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

F2

APPENDIX G

SERVICE OPTIONS
AND
CONSTRUCTION COST ESTIMATES

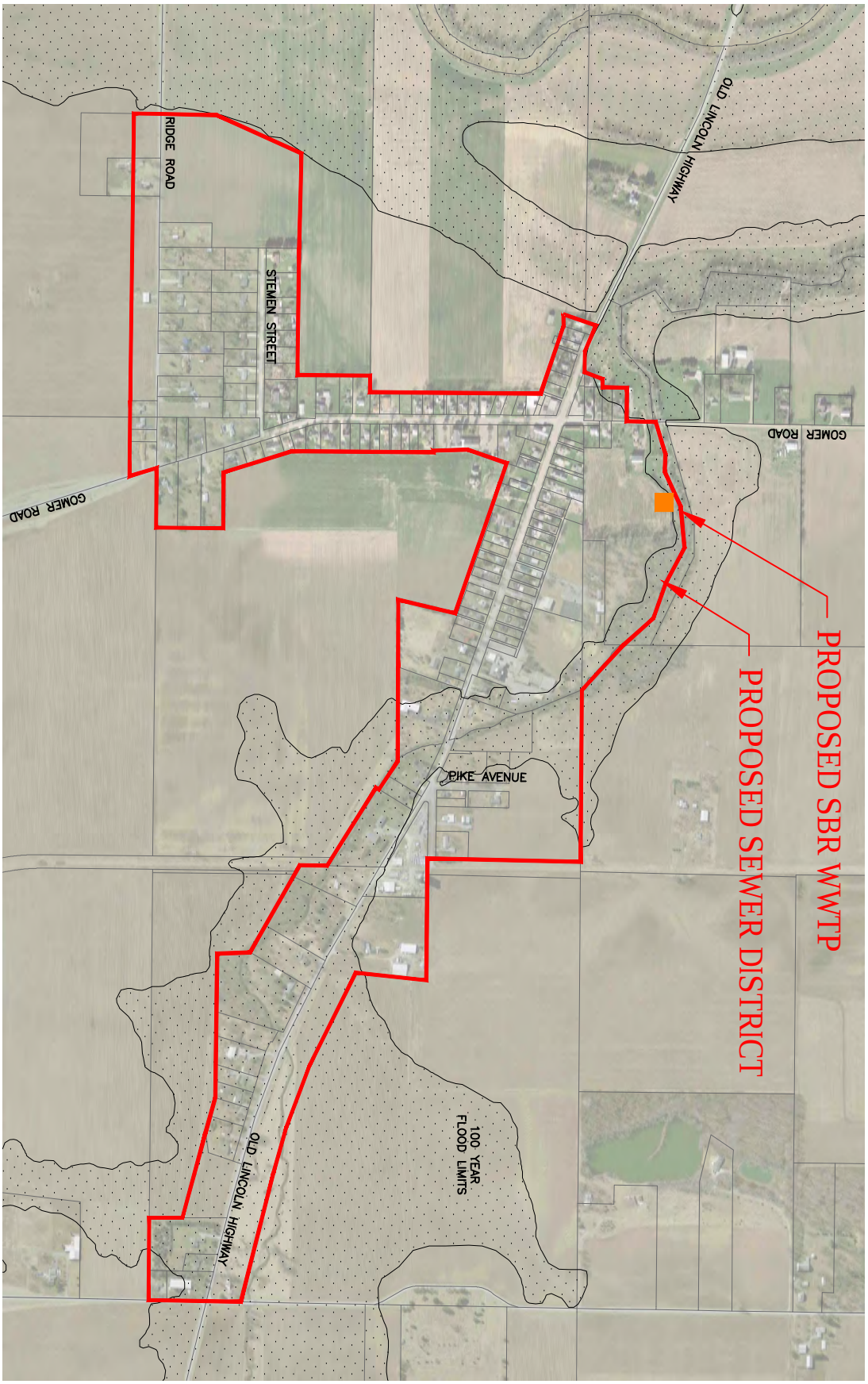
Appendix G

Service Options and Construction Cost Estimates

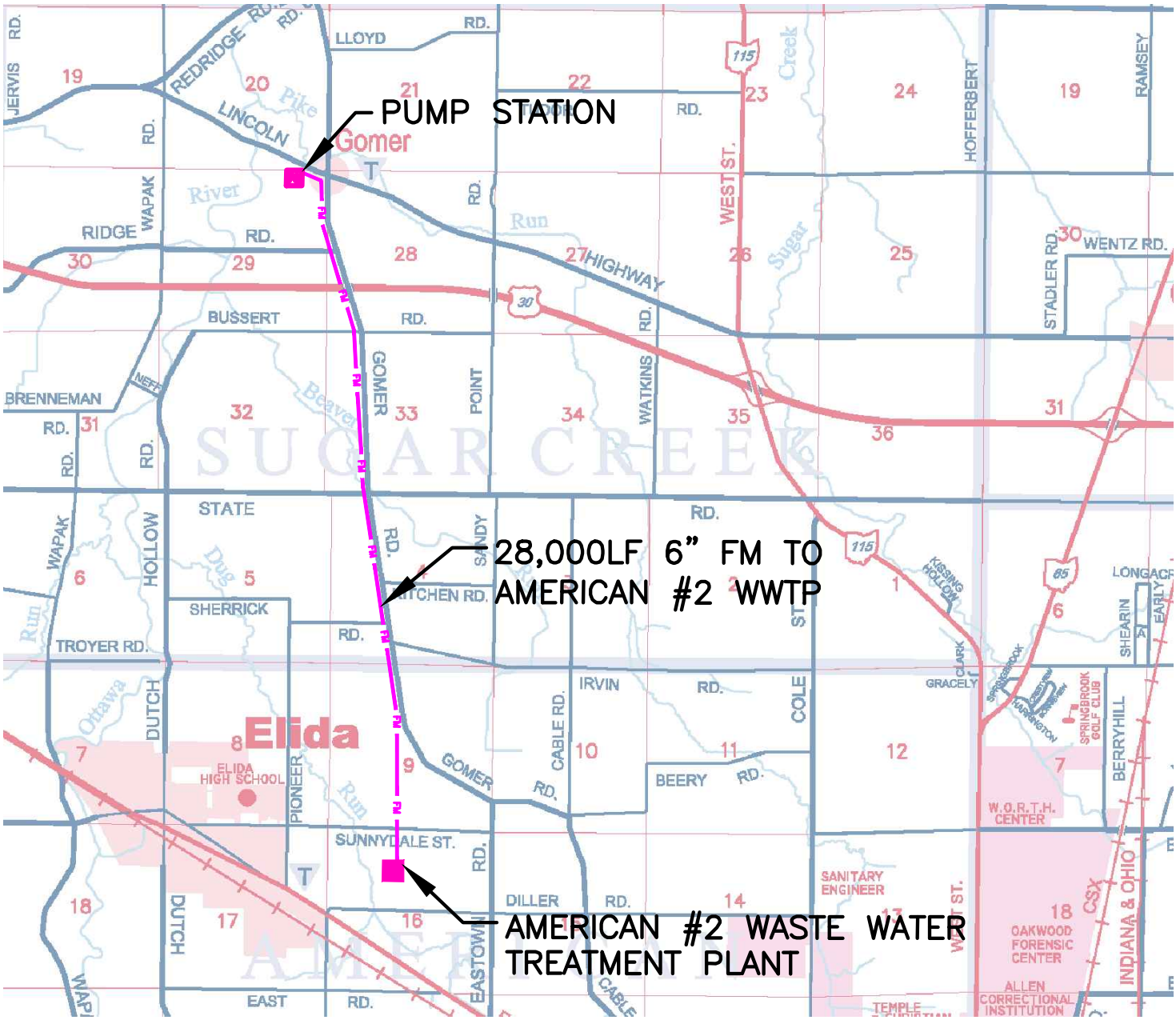
Plate No. 2 – Proposed SBR Wastewater Treatment Plant Site
Exhibit A – Force Main to American #2 WWTP
Figure 2 – Estimate for SBR Treatment Facility
Economic Evaluation of Alternatives A-F 20 year Life Cycles
Interest Rates for Economic Evaluations Options A-H
Option A – 2020 Project Worth at Time of Construction/Annual Cost
Option A – 2015 Construction Cost
Option B – 2020 Project Worth at Time of Construction/Annual Cost
Option B – 2015 Construction Cost
Option C – 2020 Project Worth at Time of Construction/Annual Cost
Option C – 2015 Construction Cost
Option D – 2020 Project Worth at Time of Construction/Annual Cost
Option D – 2015 Construction Cost
Option E – 2020 Project Worth at Time of Construction/Annual Cost
Option E – 2015 Construction Cost
` Option F – 2020 Project Worth at Time of Construction/Annual Cost
Option F – 2015 Construction Cost
Option G – 2020 Project Worth at Time of Construction/Annual Cost
Option G – 2015 Construction Cost
Option H – 2020 Project Worth at Time of Construction/Annual Cost
Option H – 2015 Construction Cost
Option A-H Plan Sheets

D:\ep\ACSE\Gomer\SystemOptions.dwg, Plate 2 WWTP Site, 2/24/2015 8:29:18 AM

PLATE No.2 - PROPOSED SBR WASTE WATER TREATMENT PLANT SITE



DATE	DRAWN BY	SUBJECT	PROJECT	PREPARED BY	SCALE IN FEET
11-19-14	ARM	SEWER STUDY AREA	GOMER SEWER IMPROVEMENT AREA ALLEN COUNTY, OHIO	KOHLI & KALIHER ASSOCIATES, INC. ENGINEERS AND SURVEYORS 2244 Bolton Rouge, Lima, Ohio 45806 419-227-1135	0 300 600 0 5 10
DRAWING NO. —	CHECKED BY BWA				



KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

EXHIBIT A – FORCE MAIN TO AMERICAN #2 WWTP

ESTIMATE FOR SBR TREATMENT FACILITY

Land		$95,000
5 Acres @ 10,000	$75,000	
Surveys & Appraisals	$20,000	
Site Work		$200,000
10,000 cy Excavation & Embankment @ $5	$50,000	
2,000 sy Drives & Parking @ $50	$100,000	
4 Acres Leveling & Seeding @ $5000	$20,000	
Landscaping Budget	$10,000	
1,000 lf Fencing @ $20	$20,000	
Building- Storage		$100,000
Building Allowance	$80,000	
Equipment Allowance	$20,000	
Post Aeration	$70,000	$70,000
UV Disinfection	$60,000	$60,000
Outfall		$10,000
200 lf 8" @$45	$9,000	
1 each Headwall @ $1,000	$1,000	
SBR		$500,000
Equipment	$250,000	
Installation	$175,000	
Concrete Tanks	$150,000	
Sludge Holding		$200,000
Equipment	$75,000	
Installation	$50,000	
Concrete Tanks	$75,000	
Subtotal		$1,235,000
Yard Piping (10%)		$200,000
Electrical Work (15%)		$300,000
Miscellaneous (15%)		$300,000
Preliminary Estimate for Construction		$2,035,000
Other Items		$198,000
Soils Investigation	$3,000	
Surveys	$10,000	
Engineering Design	$135,000	
Construction Administration	$50,000	
Preliminary Estimate for Costs		$2,233,000

Figure 2

ECONOMIC EVALUATION OF ALTERNATIVES
40 YEAR LIFE – 20 YEAR LIFE CYCLE

Option A - All Gravity (Max. 30' Deep) west end Pump Station to American II WWTP
Option B - All Gravity (Max. 27' Deep) central Pump Station to American II WWTP
Option C – Combination Gravity (Max. 17' Deep) & Low Pressure Collection w/ Pump Station to American II WWTP
Option D - All Gravity (Max. 30" Deep) west end Pump Station to On-Site WWTP
Option E - All Low Pressure Collection to On-Site WWTP

Option F – All Airvac Collection to On-Site WWTP
Option G - All Low Pressure Collection west end Pump Station to American II WWTP
Option H – All Airvac Collection Pump Station to American II WWTP

INTEREST RATES FOR ECONOMIC EVALUATIONS FOR OPTION A-H:

YEAR OF PROPOSED CONSTRUCTION	2020
STUDY PERIOD	20 YEAR
CONSTRUCTION INFLATION (5-YR. AVERAGE ENR)	2.5%
YEARLY POWER COST INCREASE (PRODUCER PRICE INDEX BY BLS (PPI) 5 YEAR AVERAGE	2.2%
YEARLY LABOR INCREASE - EMPLOYMENT COST INDEX (ECI) BY BLS 5 YEAR AVERAGE	2.1%
DISCOUNT RATE – CONSUMER PRICE INDEX (CPI-U) 5 YEAR AVERAGE	2.0%

OPTION A

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
GRAVITY COLLECTION SYSTEM **(CAPITAL COST)**	$2,919,345	$(1.025)^5 = 1.13$	$3,298,859	$201,758
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$1,573,500	$(1.025)^5 = 1.13$	$1,778,055	$108,745
TREATMENT FACILITIES **(CAPITAL COST)**	0	0	0	0
CAPITAL COST – SUB TOTAL	$4,492,845		$5,076,914	$310,503
O&M COST				
COLLECTION SYSTEM – YEARLY MAINTENANCE	$80,500	$(1.021)^5 = 1.11$	$89,355	$5,465
PUMP STATION POWER	$124,719	$(1.022)^5 = 1.12$	$139,685	$8,543
PUMP STATION YEARLY MAINTENANCE COST	$182,284	$(1.021)^5 = 1.11$	$202,335	$12,375
FORCE MAIN ANNUNAL MAINTENANCE	$8,127	$(1.021)^5 = 1.11$	$9,021	$552
SUB TOTAL			**$5,517,310**	**$337,438**
REMAINING USEFUL LIFE VALUE			**-2,538,457**	**-155,252**
TOTAL OPTION A 2020 PROJECT WORTH AND ANNUAL COST			**$2,978,853**	**$182,186**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION A - ALL GRAVITY (Max 30' Deep)
WEST END PUMP STATION TO AM#2 WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	PS & FORCE MAIN
201	CLEARING AND GRUBBING	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 30,000.00	$ 30,000.00	$ 20,000.00	$ 10,000.00
659	SEEDING AND MULCHING	38000	SY	$ 2.00	$ 76,000.00	$ 40,000.00	$ 36,000.00
901	6" SANITARY SEWER	3000	LF	$ 45.00	$ 135,000.00	$ 135,000.00	$ -
901	8" SANITARY SEWER	12845	LF	$ 75.00	$ 963,375.00	$ 963,375.00	$ -
902	SANITARY MANHOLE TYPE A	634	VF	$ 275.00	$ 174,350.00	$ 174,350.00	$ -
902	SANITARY MANHOLE TYPE B	50	VF	$ 300.00	$ 15,000.00	$ 15,000.00	$ -
902	CHIMNEY SEAL, MANHOLE DISH	38	EA	$ 400.00	$ 15,200.00	$ 15,200.00	$ -
902	CLEAN OUT WITH COVER	150	EA	$ 400.00	$ 60,000.00	$ 60,000.00	$ -
903	ROCK EXCAVATION	3100	CY	$ 100.00	$ 310,000.00	$ 310,000.00	$ -
909	6" LATERAL INSTALLED BY HDD	3000	LF	$ 30.00	$ 90,000.00	$ 90,000.00	$ -
912	GRANULAR BACKFILL	29000	CY	$ 20.00	$ 580,000.00	$ 580,000.00	$ -
915	8" X 6" SEWER CONNECTION	150	EA	$ 150.00	$ 22,500.00	$ 22,500.00	$ -
915	6" SANITARY RISER	306	VF	$ 20.00	$ 6,120.00	$ 6,120.00	$ -
917	ASHPALT DRIVE REPAIR	300	SY	$ 30.00	$ 9,000.00	$ 9,000.00	$ -
917	CONCRETE DRIVE REPAIR	70	SY	$ 50.00	$ 3,500.00	$ 3,500.00	$ -
917	STONE DRIVE REPAIR	2000	SY	$ 10.00	$ 20,000.00	$ 20,000.00	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	4500	SY	$ 60.00	$ 270,000.00	$ 270,000.00	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	28000	LF	$ 40.00	$ 1,120,000.00	$ -	$ 1,120,000.00
2000	PROVIDE AND INSTALL PUMP STATION	1	EACH	$ 225,000.00	$ 225,000.00	$ -	$ 225,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
02703	WATER WELLS RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 12,500.00	$ 12,500.00
	DRAINAGE RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 12,500.00	$ 12,500.00
	TOTAL				**$ 4,205,045.00**	$ 2,774,045.00	$ 1,431,000.00

	DESIGN COST			
	COLLECTION SYSTEM			
	PRELIMINARY DESIGN	$ 10,000.00		
	FIELD SURVEY - TOPO	$ 38,000.00		
	SOIL INVESTIGATION	$ 15,000.00		
	FINAL DESIGN	$ 46,200.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,100.00		
	PREPARE EASMENTS	$ 4,500.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 7,000.00		
	RECORD DRAWINGS	$ 4,000.00		
	TOTAL	$ 145,300.00	$ 145,300.00	$ -

	PUMP STATION AND FORCE MAIN DESIGN COST			
	PRELIMINARY DESIGN	$ 5,000.00		
	FIELD SURVEY - TOPO	$ 19,000.00		
	SOIL INVESTIGATION	$ 4,000.00		
	FINAL DESIGN	$ 39,000.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,000.00		
	PREPARE EASMENTS	$ 18,000.00		
	FINAL DESIGN - PUMP STATION	$ 20,000.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 13,000.00		
	RECORD DRAWINGS	$ 4,000.00		
	TOTAL	$ 142,500.00	$ -	$ 142,500.00
	TOTAL DESIGN COST	$ 287,800.00		
	TOTAL DESIGN & CONSTRUCTION COST	**$ 4,492,845.00**	$ 2,919,345.00	$ 1,573,500.00

OPTION B

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
GRAVITY COLLECTION SYSTEM **(CAPITAL COST)**	$2,627,360	$(1.025)^5 = 1.13$	$2,968,917	$181,579
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$1,573,500	$(1.025)^5 = 1.13$	$1,778,055	$108,746
TREATMENT FACILITIES **(CAPITAL COST)**	0	0	0	0
CAPITAL COST – SUB TOTAL	$4,200,860		$4,746,972	$290,325
O&M COST				
COLLECTION SYSTEM – YEARLY MAINTENANCE	$80,500	$(1.021)^5 = 1.11$	$89,355	$5,465
PUMP STATION POWER	$124,719	$(1.022)^5 = 1.12$	$139,685	$8,543
PUMP STATOIN YEARLY MAINTENANCE COST	$182,284	$(1.021)^5 = 1.11$	$202,335	$12,375
FORCE MAIN ANNUNAL MAINTENANCE	$8,127	$(1.021)^5 = 1.11$	$9,021	$552
SUB TOTAL			**$5,187,368**	**$317,260**
REMAINING USEFUL LIFE VALUE			**-2,373,486**	**-145,162**
TOTAL OPTION B 2020 PROJECT WORTH AND ANNUAL COST			**$2,813,882**	**$172,098**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION B - ALL GRAVITY (Max 27' Deep)
CENTRAL PUMP STATION TO AM#2 WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	PS & FORCE MAIN
201	CLEARING AND GRUBBING	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 30,000.00	$ 30,000.00	$ 20,000.00	$ 10,000.00
659	SEEDING AND MULCHING	38000	SY	$ 2.00	$ 76,000.00	$ 40,000.00	$ 36,000.00
901	6" SANITARY SEWER	3000	LF	$ 40.00	$ 120,000.00	$ 120,000.00	$ -
901	8" SANITARY SEWER	13030	LF	$ 70.00	$ 912,100.00	$ 912,100.00	$ -
902	SANITARY MANHOLE TYPE A	652	VF	$ 275.00	$ 179,300.00	$ 179,300.00	$ -
902	SANITARY MANHOLE TYPE B	50	VF	$ 300.00	$ 15,000.00	$ 15,000.00	$ -
902	CHIMNEY SEAL, MANHOLE DISH	39	EA	$ 400.00	$ 15,600.00	$ 15,600.00	$ -
902	CLEAN OUT WITH COVER	150	EA	$ 400.00	$ 60,000.00	$ 60,000.00	$ -
903	ROCK EXCAVATION	1200	CY	$ 100.00	$ 120,000.00	$ 120,000.00	$ -
909	6" LATERAL INSTALLED BY HDD	3000	LF	$ 30.00	$ 90,000.00	$ 90,000.00	$ -
912	GRANULAR BACKFILL	27000	CY	$ 20.00	$ 540,000.00	$ 540,000.00	$ -
915	8" X 6" SEWER CONNECTION	150	EA	$ 150.00	$ 22,500.00	$ 22,500.00	$ -
915	6" SANITARY RISER	253	VF	$ 20.00	$ 5,060.00	$ 5,060.00	$ -
917	ASPHALT DRIVE REPAIR	300	SY	$ 30.00	$ 9,000.00	$ 9,000.00	$ -
917	CONCRETE DRIVE REPAIR	70	SY	$ 50.00	$ 3,500.00	$ 3,500.00	$ -
917	STONE DRIVE REPAIR	2000	SY	$ 10.00	$ 20,000.00	$ 20,000.00	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	4500	SY	$ 60.00	$ 270,000.00	$ 270,000.00	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	28000	LF	$ 40.00	$ 1,120,000.00	$ -	$ 1,120,000.00
2000	PROVIDE AND INSTALL PUMP STATION	1	EACH	$ 225,000.00	$ 225,000.00	$ -	$ 225,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
02703	WATER WELLS RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 12,500.00	$ 12,500.00
	DRAINAGE RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 12,500.00	$ 12,500.00
	TOTAL				**$ 3,913,060.00**	$ 2,482,060.00	$ 1,431,000.00

	COLLECTION SYSTEM DESIGN COST		
	COLLECTION SYSTEM		
	PRELIMINARY DESIGN	$ 10,000.00	
	FIELD SURVEY - TOPO	$ 38,000.00	
	SOIL INVESTIGATION	$ 15,000.00	
	FINAL DESIGN	$ 46,200.00	
	OBTAIN PERMITS (PTI, NOI)	$ 1,100.00	
	PREPARE EASMENTS	$ 4,500.00	
	BIDDING AND AWARDING	$ 4,500.00	
	CONSTRUCTION PHASE		
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00	
	INSPECTION (BY OWNER)	$ -	
	CONSTRUCTION LAYOUT	$ 7,000.00	
	RECORD DRAWINGS	$ 4,000.00	
	TOTAL	$ 145,300.00	
			$ 145,300.00
	PUMP STATION AND FORCE MAIN DESIGN COST		
	PRELIMINARY DESIGN	$ 5,000.00	
	FIELD SURVEY - TOPO	$ 19,000.00	
	SOIL INVESTIGATION	$ 4,000.00	
	FINAL DESIGN	$ 39,000.00	
	OBTAIN PERMITS (PTI, NOI)	$ 1,000.00	
	PREPARE EASMENTS	$ 18,000.00	
	FINAL DESIGN - PUMP STATOIN	$ 20,000.00	
	BIDDING AND AWARDING	$ 4,500.00	
	CONSTRUCTION PHASE		
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00	
	INSPECTION (BY OWNER)	$ -	
	CONSTRUCTION LAYOUT	$ 13,000.00	
	RECORD DRAWINGS	$ 4,000.00	
	TOTAL	$ 142,500.00	
			$ 142,500.00
	TOTAL DESIGN COST	$ 287,800.00	
	TOTAL DESIGN & CONSTRUCTION COST	**$ 4,200,860.00**	$ 2,627,360.00 $ 1,573,500.00

OPTION C

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST
GRAVITY COLLECTION SYSTEM **(CAPITAL COST)**	$989,690	$(1.025)^5 = 1.13$	$1,118,350	$68,398
LP COLLECTION SYSTEM **(CAPITAL COST)**	$211,340	$(1.025)^5 = 1.13$	$238,814	$14,606
50 GRINDER PUMPS **(CAPITAL COST)**	$360,000	$(1.025)^5 = 1.13$	$406,800	$24,880
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$1,535,000	$(1.025)^5 = 1.13$	$1,734,550	$106,085
TREATMENT FACILITIES **(CAPITAL COST)**	0	0	0	0
CAPITAL COST – SUB TOTAL	$3,096,030		$3,498,514	$213,969
O&M COST				
GRAVITY COLLECTION – YEARLY MAINTENANCE	$30,000	$(1.021)^5 = 1.11$	$33,300	$33,300 $4,511 $9,021 $46,832 ($46,832)(.06116) = 2,864
LOW PRESSURE COLLECTION – YEARLY MAINTENANCE	$4,064	$(1.021)^5 = 1.11$	$4,511	
FORCE MAIN – YEARLY MAINTENANCE	$8,127	$(1.021)^5 = 1.11$	$9,021	
PUMP STATION POWER YEARLY MAINT.	 $124,719 $182,284	 $(1.022)^5 = 1.12$ $(1.021)^5 = 1.11$	 $139,685 $202,335 $342,020	($342,020)(.06116) = 20,918
GRINDER PUMP YEARLY & CORRECTIVE MAINTENANCE COST	$420,280	$(1.021)^5 = 1.11$	$466,510	($466,510)(.06116) = 28,532
SUB TOTAL			**$4,353,876**	**266,283**
REMAINING USEFUL LIFE VALUE			**-1,749,257**	**-106,985**
TOTAL OPTION C 2020 PROJECT WORTH AND ANNUAL COST			**$2,604,619**	**$159,298**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION C - GRAVITY (Max 17' Deep) & LPCS
WEST END PUMP STATION TO AM#2 WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	GRAVITY COLLECTION	LOW PRESSURE COLLECTION	PUMP STATION & FORCE MAIN
201	CLEARING AND GRUBBING	1	LS	$ 9,000.00	$ 9,000.00	$ 3,000.00	$ 1,000.00	$ 5,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 9,000.00	$ 9,000.00	$ 3,000.00	$ 1,000.00	$ 5,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 22,000.00	$ 22,000.00	$ 10,000.00	$ 2,000.00	$ 10,000.00
659	SEEDING AND MULCHING	30000	SY	$ 2.00	$ 60,000.00	$ 18,000.00	$ 6,000.00	$ 36,000.00
1020	3" HDPE INSTALLED BY HDD	3240	LF	$ 11.00	$ 35,640.00	$ -	$ 35,640.00	$ -
1020	2" HDPE INSTALLED BY HDD	4100	LF	$ 10.00	$ 41,000.00	$ -	$ 41,000.00	$ -
1020	1 1/2" LATERAL INSTALLED BY HDD	4000	LF	$ 8.00	$ 32,000.00	$ -	$ 32,000.00	$ -
1020	LATERAL KIT	50	EACH	$ 1,000.00	$ 50,000.00	$ -	$ 50,000.00	$ -
1020	ISOLATION VALVE	10	EACH	$ 1,300.00	$ 13,000.00	$ -	$ 13,000.00	$ -
1020	FLUSH STATION	6	EACH	$ 1,000.00	$ 6,000.00	$ -	$ 6,000.00	$ -
2001	PUMP UNIT	50	EACH	$ 6,000.00	$ 300,000.00	$ -	$ 300,000.00	$ -
	ELECTRICAL HOOKUP	50	EACH	$ 1,200.00	$ 60,000.00	$ -	$ 60,000.00	$ -
901	6" SANITARY SEWER	500	LF	$ 40.00	$ 20,000.00	$ 20,000.00	$ -	$ -
901	8" SANITARY SEWER	5400	LF	$ 50.00	$ 270,000.00	$ 270,000.00	$ -	$ -
902	SANITARY MANHOLE TYPE A	230	VF	$ 275.00	$ 63,250.00	$ 63,250.00	$ -	$ -
902	CHIMNEY SEAL, MANHOLE DISH	17	EA	$ 400.00	$ 6,800.00	$ 6,800.00	$ -	$ -
902	CLEAN OUT WITH COVER	100	EA	$ 400.00	$ 40,000.00	$ 40,000.00	$ -	$ -
909	6" LATERAL INSTALLED BY HDD	1000	LF	$ 30.00	$ 30,000.00	$ 30,000.00	$ -	$ -
912	GRANULAR BACKFILL	8700	CY	$ 20.00	$ 174,000.00	$ 174,000.00	$ -	$ -
915	8" X 6" SEWER CONNECTION	100	EA	$ 150.00	$ 15,000.00	$ 15,000.00	$ -	$ -
915	6" SANITARY RISER	58	VF	$ 20.00	$ 1,160.00	$ 1,160.00	$ -	$ -
917	ASPHALT DRIVE REPAIR	126	SY	$ 30.00	$ 3,780.00	$ 3,780.00	$ -	$ -
917	CONCRETE DRIVE REPAIR	28	SY	$ 50.00	$ 1,400.00	$ 1,400.00	$ -	$ -
917	STONE DRIVE REPAIR	840	SY	$ 10.00	$ 8,400.00	$ 8,400.00	$ -	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	3000	SY	$ 60.00	$ 180,000.00	$ 180,000.00	$ -	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	28000	LF	$ 40.00	$ 1,120,000.00	$ -	$ -	$ 1,120,000.00
2000	PROVIDE AND INSTALL PUMP STATION (FM TO AM#2 WWTP)	1	EACH	$ 200,000.00	$ 200,000.00	$ -	$ -	$ 200,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 10,000.00	$ 10,000.00	$ 2,500.00	$ 2,500.00	$ 5,000.00
02703	WATER WELLS RESTORATION	1	LS	$ 20,000.00	$ 20,000.00	$ 10,000.00	$ -	$ 10,000.00
	DRAINAGE RESTORATION	1	LS	$ 15,000.00	$ 15,000.00	$ 12,000.00	$ 1,500.00	$ 1,500.00
	TOTAL				**$ 2,816,430.00**	$ 872,290.00	$ 551,640.00	$ 1,392,500.00

DESIGN COST					
COLLECTION SYSTEM					
PRELIMINARY DESIGN	$ 10,000.00	$ 8,500.00	$ 1,500.00		
FIELD SURVEY - TOPO	$ 38,000.00	$ 32,300.00	$ 5,700.00		
SOIL INVESTIGATION	$ 9,000.00	$ 8,000.00	$ 1,000.00		
FINAL DESIGN	$ 42,000.00	$ 35,700.00	$ 6,300.00		
OBTAIN PERMITS (PTI, NOI)	$ 1,100.00	$ 900.00	$ 200.00		
PREPARE EASMENTS	$ 5,000.00	$ 4,300.00	$ 700.00		
BIDDING AND AWARDING	$ 5,000.00	$ 4,300.00	$ 700.00		
CONSTRUCTION PHASE					
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00	$ 13,000.00	$ 2,000.00		
INSPECTION (BY OWNER)	$ -				
CONSTRUCTION LAYOUT	$ 8,000.00	$ 7,000.00	$ 1,000.00		
RECORD DRAWINGS	$ 4,000.00	$ 3,400.00	$ 600.00		
TOTAL	$ 137,100.00	$ 117,400.00	$ 19,700.00	$ -	

PUMP STATION AND FORCE MAIN DESIGN COST					
PRELIMINARY DESIGN	$ 5,000.00				$ 5,000.00
FIELD SURVEY - TOPO	$ 19,000.00				$ 19,000.00
SOIL INVESTIGATION	$ 4,000.00				$ 4,000.00
FINAL DESIGN	$ 39,000.00				$ 39,000.00
OBTAIN PERMITS (PTI, NOI)	$ 1,000.00				$ 1,000.00
PREPARE EASMENTS	$ 18,000.00				$ 18,000.00
FINAL DESIGN - PUMP STATION	$ 20,000.00				$ 20,000.00
					$ -
BIDDING AND AWARDING	$ 4,500.00				$ 4,500.00
					$ -
CONSTRUCTION PHASE					$ -
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00				$ 15,000.00
INSPECTION (BY OWNER)	$ -				$ -
CONSTRUCTION LAYOUT	$ 13,000.00				$ 13,000.00
RECORD DRAWINGS	$ 4,000.00				$ 4,000.00
TOTAL	$ 142,500.00				
TOTAL DESIGN COST	$ 279,600.00	$ -	$ -		$ 142,500.00
TOTAL DESIGN & CONSTRUCTION COST	**$ 3,096,030.00**	$ 989,690.00	$ 571,340.00		$ 1,535,000.00

OPTION D

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
GRAVITY COLLECTION SYSTEM **(CAPITAL COST)**	$2,925,845	$(1.025)^5 = 1.13$	$3,306,205	$202,207
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$282,500	$(1.025)^5 = 1.13$	$319,225	$19,526
TREATMENT FACILITIES **(CAPITAL COST)**	$2,207,000	$(1.025)^5 = 1.13$	$2,493,910	$152,528
CAPITAL COST – SUB TOTAL	$5,415,345		$6,119,340	$374,261
O&M COST				
COLLECTION SYSTEM – YEARLY MAINTENANCE	$80,500	$(1.021)^5 = 1.11$	$89,355	$5,465
PUMP STATION POWER	$61,260	$(1.022)^5 = 1.12$	$68,611	$4,196
PUMP STATION YEARLY MAINTENANCE COST	$91,283	$(1.021)^5 = 1.11$	$101,324	$6,197
SUB TOTAL			**$6,378,630**	**$390,119**
REMAINING USEFUL LIFE VALUE			**-3,059,670**	**-187,129**
TOTAL OPTION D 2020 PROJECT WORTH AND ANNUAL COST			**$3,318,960**	**$202,990**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4) = COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION D - ALL GRAVITY (Max 30' Deep)
WEST END PUMP STATION TO ONSITE WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	PUMP STATION & FORCE MAIN	TREATMENT PLANT
201	CLEARING AND GRUBBING	1	LS	$ 9,000.00	$ 9,000.00	$ 5,000.00	$ 1,000.00	$ 3,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 9,000.00	$ 9,000.00	$ 5,000.00	$ 1,000.00	$ 3,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 21,000.00	$ 21,000.00	$ 20,000.00	$ 1,000.00	$ -
659	SEEDING AND MULCHING	21000	SY	$ 2.00	$ 42,000.00	$ 40,000.00	$ 2,000.00	$ -
901	6" SANITARY SEWER	3000	LF	$ 45.00	$ 135,000.00	$ 135,000.00	$ -	$ -
901	8" SANITARY SEWER	12845	LF	$ 75.00	$ 963,375.00	$ 963,375.00	$ -	$ -
902	SANITARY MANHOLE TYPE A	634	VF	$ 275.00	$ 174,350.00	$ 174,350.00	$ -	$ -
902	SANITARY MANHOLE TYPE B	50	VF	$ 300.00	$ 15,000.00	$ 15,000.00	$ -	$ -
902	CHIMNEY SEAL, MANHOLE DISH	38	EA	$ 400.00	$ 15,200.00	$ 15,200.00	$ -	$ -
902	CLEAN OUT WITH COVER	150	EA	$ 400.00	$ 60,000.00	$ 60,000.00	$ -	$ -
903	ROCK EXCAVATION	3100	CY	$ 100.00	$ 310,000.00	$ 310,000.00	$ -	$ -
909	6" LATERAL INSTALLED BY HDD	3000	LF	$ 30.00	$ 90,000.00	$ 90,000.00	$ -	$ -
912	GRANULAR BACKFILL	29000	CY	$ 20.00	$ 580,000.00	$ 580,000.00	$ -	$ -
915	8" X 6" SEWER CONNECTION	150	EA	$ 150.00	$ 22,500.00	$ 22,500.00	$ -	$ -
915	6" SANITARY RISER	306	VF	$ 20.00	$ 6,120.00	$ 6,120.00	$ -	$ -
917	ASHPALT DRIVE REPAIR	300	SY	$ 30.00	$ 9,000.00	$ 9,000.00	$ -	$ -
917	CONCRETE DRIVE REPAIR	70	SY	$ 50.00	$ 3,500.00	$ 3,500.00	$ -	$ -
917	STONE DRIVE REPAIR	2000	SY	$ 10.00	$ 20,000.00	$ 20,000.00	$ -	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	4500	SY	$ 60.00	$ 270,000.00	$ 270,000.00	$ -	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	1400	LF	$ 40.00	$ 56,000.00	$ -	$ 56,000.00	$ -
2000	PROVIDE AND INSTALL PUMP STATION	1	EACH	$ 175,000.00	$ 175,000.00	$ -	$ 175,000.00	$ -
	WASTEWATER TREATMENT PLANT	1	LS	$ 2,000,000.00	$ 2,000,000.00	$ -	$ -	$ 2,000,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 5,000.00	$ 5,000.00	$ 4,000.00	$ 500.00	$ 500.00
02703	WATER WELLS RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 12,500.00	$ 12,500.00	$ -
	DRAINAGE RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 20,000.00	$ 2,500.00	$ 2,500.00
	TOTAL				**$ 5,041,045.00**	$ 2,780,545.00	$ 251,500.00	$ 2,009,000.00

DESIGN COST				
COLLECTION SYSTEM				
PRELIMINARY DESIGN	$ 10,000.00			
FIELD SURVEY - TOPO	$ 38,000.00			
SOIL INVESTIGATION	$ 15,000.00			
FINAL DESIGN	$ 46,200.00			
OBTAIN PERMITS (PTI, NOI)	$ 1,100.00			
PREPARE EASMENTS	$ 4,500.00			
BIDDING AND AWARDING	$ 4,500.00			
CONSTRUCTION PHASE				
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00			
INSPECTION (BY OWNER)	$ -			
CONSTRUCTION LAYOUT	$ 7,000.00			
RECORD DRAWINGS	$ 4,000.00			
TOTAL	$ 145,300.00	$ 145,300.00		
LOCAL PUMP STATION				
PRELIMINARY DESIGN	$ 3,000.00			
FIELD SURVEY - TOPO	$ 2,500.00			
SOIL INVESTIGATION	$ 3,000.00			
FINAL DESIGN	$ 15,000.00			
OBTAIN PERMITS (PTI, NOI, NPDES)	$ 2,000.00			
PREPARE EASMENTS	$ 1,000.00			
TOTAL	$ 26,500.00			
BIDDING AND AWARDING	$ 500.00			
CONSTRUCTION PHASE				
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 2,000.00			
INSPECTION (BY OWNER)	$ -			
CONSTRUCTION LAYOUT	$ 1,500.00			
RECORD DRAWINGS	$ 500.00			
TOTAL	$ 4,500.00			
TOTAL DESIGN COST	$ 31,000.00		$ 31,000.00	
WASTEWATER TREATMENT PLANT DESIGN				
PRELIMINARY DESIGN	$ 25,000.00			
FIELD SURVEY - TOPO	$ 2,000.00			
SOIL INVESTIGATION	$ 3,000.00			
FINAL DESIGN	$ 110,000.00			
OBTAIN PERMITS (PTI, NOI, NPDES)	$ 10,000.00			
PREPARE EASMENTS	$ 2,000.00			
BIDDING AND AWARDING	$ 18,000.00			
CONSTRUCTION PHASE				
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 11,000.00			
INSPECTION (BY OWNER)	$ -			
CONSTRUCTION LAYOUT	$ 8,000.00			
RECORD DRAWINGS	$ 9,000.00			
TOTAL	$ 198,000.00			$ 198,000.00
TOTAL DESIGN COST	$ 374,300.00			
TOTAL DESIGN & CONSTRUCTION COST	$ 5,415,345.00	$ 2,925,845.00	$ 282,500.00	$ 2,207,000.00

OPTION E

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
LOW PRESSURE COLLECTION SYSTEM **(CAPITAL COST)**	$1,634,125	$(1.025)^5 = 1.13$	$1,846,561	$112,936
TREATMENT PLANT **(CAPITAL COST)**	$2,204,500	$(1.025)^5 = 1.13$	$2,491,085	$152,355
CAPITAL COST – SUB TOTAL	$3,838,625		$4,337,646	$265,290
O&M COST				
LOW PRESSURE COLLECTION FORCE MAIN ANNUAL MAINT.	$4,064	$(1.021)^5 = 1.11$	$4,511	$276
GRINDER PUMP YEARLY MAINT. CORRECTIVE MAINT.	$1,260,821	$(1.021)^5 = 1.11$	$1,399,511	$85,594
SUB TOTAL			**$5,741,668**	**$351,160**
REMAINING USEFUL LIFE VALUE			**-2,168,823**	**-132,645**
TOTAL OPTION E 2020 PROJECT WORTH AND ANNUAL COST			**$3,572,845**	**$218,515**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION E - ALL LPCS TO ONSITE WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	LOW PRESSURE COLLECTION SYSTEM	TREATMENT PLANT
201	CLEARING AND GRUBBING	1	LS	$ 5,000.00	$ 5,000.00	$ 2,000.00	$ 3,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 5,500.00	$ 5,500.00	$ 2,500.00	$ 3,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ -
659	SEEDING AND MULCHING	5000	SY	$ 2.00	$ 10,000.00	$ 10,000.00	$ -
1020	4" HDPE INSTALLED BY HDD	3950	LF	$ 13.00	$ 51,350.00	$ 51,350.00	$ -
1020	3" HDPE INSTALLED BY HDD	6325	LF	$ 11.00	$ 69,575.00	$ 69,575.00	$ -
1020	2" HDPE INSTALLED BY HDD	3170	LF	$ 10.00	$ 31,700.00	$ 31,700.00	$ -
1020	1 1/2" LATERAL INSTALLED BY HDD	6000	LF	$ 8.00	$ 48,000.00	$ 48,000.00	$ -
1020	LATERAL KIT	150	EACH	$ 1,000.00	$ 150,000.00	$ 150,000.00	$ -
1020	ISOLATION VALVE	18	EACH	$ 1,300.00	$ 23,400.00	$ 23,400.00	$ -
1020	FLUSH STATION	7	EACH	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ -
2001	PUMP UNIT	150	EACH	$ 6,000.00	$ 900,000.00	$ 900,000.00	$ -
	ELECTRICAL HOOKUP	150	EACH	$ 1,200.00	$ 180,000.00	$ 180,000.00	$ -
	WASTEWATER TREATMENT PLANT	1	LS	$ 2,000,000.00	$ 2,000,000.00	$ -	$ 2,000,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 5,000.00	$ 5,000.00	$ 4,500.00	$ 500.00
	TOTAL				**$ 3,491,525.00**	$ 1,485,025.00	$ 2,006,500.00

	DESIGN COST			
	COLLECTION SYSTEM			
	PRELIMINARY DESIGN	$ 10,000.00		
	FIELD SURVEY - TOPO	$ 38,000.00		
	SOIL INVESTIGATION	$ 8,000.00		
	FINAL DESIGN	$ 50,000.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,100.00		
	PREPARE EASMENTS	$ 4,500.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 20,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 7,000.00		
	RECORD DRAWINGS	$ 6,000.00		
	TOTAL	$ 149,100.00	$ 149,100.00	
	WASTEWATER TREATMENT PLANT DESIGN			
	PRELIMINARY DESIGN	$ 25,000.00		
	FIELD SURVEY - TOPO	$ 2,000.00		
	SOIL INVESTIGATION	$ 3,000.00		
	FINAL DESIGN	$ 110,000.00		
	OBTAIN PERMITS (PTI, NOI, NPDES)	$ 10,000.00		
	PREPARE EASMENTS	$ 2,000.00		
	BIDDING AND AWARDING	$ 18,000.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 11,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 8,000.00		
	RECORD DRAWINGS	$ 9,000.00		
	TOTAL	$ 198,000.00		$ 198,000.00
	TOTAL DESIGN COST	$ 347,100.00		
	TOTAL DESIGN & CONSTRUCTION COST	**$ 3,838,625.00**	$ 1,634,125.00	$ 2,204,500.00

OPTION F

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
AIRVAC COLLECTION SYSTEM **(CAPITAL COST)**	$2,001,740	$(1.025)^5 = 1.13$	$2,261,966	$138,342
WWTP TREATMENT PLANT (**CAPITAL COST)**	$2,209,500	$(1.025)^5 = 1.13$	$2,496,735	$152,700
CAPITAL COST – SUB TOTAL	$4,211,240		$4,758,701	$291,042
O&M COST				
YEARLY POWER	$153,147	$(1.022)^5 = 1.12$	$171,524	$10,490
YEARLY MAINT.	$637,238	$(1.021)^5 = 1.11$	$707,334	$43,260
SUB TOTAL			**$5,637,559**	**$344,792**
REMAINING USEFUL LIFE VALUE			**-2,379,350**	**-145,521**
TOTAL OPTION F 2020 PROJECT WORTH AND ANNUAL COST			**$3,258,209**	**$199,271**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION F - ALL AIRVAC COLLECTION TO ONSITE WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	TREATMENT PLANT
201	CLEARING AND GRUBBING	1	LS	$ 8,000.00	$ 8,000.00	$ 5,000.00	$ 3,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 8,000.00	$ 8,000.00	$ 5,000.00	$ 3,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 20,000.00	$ 20,000.00	$ 20,000.00	$ -
659	SEEDING AND MULCHING	18000	SY	$ 2.00	$ 36,000.00	$ 36,000.00	$ -
	6" VACUUM MAIN	6400	LF	$ 35.00	$ 224,000.00	$ 224,000.00	$ -
	4" VACUUM MAIN	7270	LF	$ 32.00	$ 232,640.00	$ 232,640.00	$ -
	3" SERVICE LATERAL	1500	LF	$ 30.00	$ 45,000.00	$ 45,000.00	$ -
	6" ISOLATION VALVE	7	EACH	$ 1,500.00	$ 10,500.00	$ 10,500.00	$ -
	4" ISOLATION VALVE	8	EACH	$ 1,200.00	$ 9,600.00	$ 9,600.00	$ -
	HYBRID VALVE PIT (2 USERS PER UNIT)	75	EACH	$ 4,600.00	$ 345,000.00	$ 345,000.00	$ -
	1 SET SPECIAL TOOLS	1	LS	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ -
	1 SET SPARE PARTS	1	LS	$ 6,000.00	$ 6,000.00	$ 6,000.00	$ -
	1 TRAILER MOUNTED VACUUM PUMP	1	LS	$ 24,000.00	$ 24,000.00	$ 24,000.00	$ -
	1 STANDARD VACUUM STATION	1	LS	$ 395,900.00	$ 395,900.00	$ 395,900.00	$ -
912	GRANULAR BACKFILL	9000	CY	$ 20.00	$ 180,000.00	$ 180,000.00	$ -
917	ASPHALT DRIVE REPAIR	300	SY	$ 30.00	$ 9,000.00	$ 9,000.00	$ -
917	CONCRETE DRIVE REPAIR	70	SY	$ 50.00	$ 3,500.00	$ 3,500.00	$ -
917	STONE DRIVE REPAIR	2000	SY	$ 10.00	$ 20,000.00	$ 20,000.00	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	3900	SY	$ 60.00	$ 234,000.00	$ 234,000.00	$ -
1010	6" FORCE MAIN	450	LF	$ 40.00	$ 18,000.00	$ 18,000.00	$ -
	WASTEWATER TREATMENT PLANT	1	LS	$ 2,000,000.00	$ 2,000,000.00	$ -	$ 2,000,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 5,000.00	$ 5,000.00	$ 4,500.00	$ 500.00
	DRAINAGE RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 20,000.00	$ 5,000.00
	TOTAL				**$ 3,864,140.00**	$ 1,852,640.00	$ 2,011,500.00

	DESIGN COST			
	COLLECTION SYSTEM			
	PRELIMINARY DESIGN	$ 10,000.00		
	FIELD SURVEY - TOPO	$ 38,000.00		
	SOIL INVESTIGATION	$ 8,000.00		
	FINAL DESIGN	$ 50,000.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,100.00		
	PREPARE EASMENTS	$ 4,500.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 20,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 7,000.00		
	RECORD DRAWINGS	$ 6,000.00		
	TOTAL	$ 149,100.00	$ 149,100.00	
	WASTEWATER TREATMENT PLANT DESIGN			
	PRELIMINARY DESIGN	$ 25,000.00		
	FIELD SURVEY - TOPO	$ 2,000.00		
	SOIL INVESTIGATION	$ 3,000.00		
	FINAL DESIGN	$ 110,000.00		
	OBTAIN PERMITS (PTI, NOI, NPDES)	$ 10,000.00		
	PREPARE EASMENTS	$ 2,000.00		
	BIDDING AND AWARDING	$ 18,000.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 11,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 8,000.00		
	RECORD DRAWINGS	$ 9,000.00		
	TOTAL	$ 198,000.00		$ 198,000.00
	TOTAL DESIGN COST	$ 347,100.00		
	TOTAL DESIGN & CONSTRUCTION COST	**$ 4,211,240.00**	$ 2,001,740.00	$ 2,209,500.00

OPTION G

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
LOW PRESSURE COLLECTION SYSTEM INCLUDING GRINDER PUMPS **(CAPITAL COST)**	$1,636,505	$(1.025)^5 = 1.13$	$1,849,251	$113,100
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$1,442,500	$(1.025)^5 = 1.13$	$1,630,025	$99,692
TREATMENT PLANT **(CAPITAL COST)**	0	0	0	0
CAPITAL COST – SUB TOTAL	$3,079,005		$3,479,276	$212,792
O&M COST				
LOW PRESSURE COLLECTION YEARLY MAINTENANCE	$4,064	$(1.021)^5 = 1.11$	$4,511	$275
GRINDER PUMP YEARLY MAINT CORRECTIVE MAINT	$1,260,821	$(1.021)^5 = 1.11$	$1,399,511	$85,594
PUMP STATION POWER COST YEARLY MAINT. FORCE MAIN ANNUAL COST	$124,719 $182,284 $8,127	$(1.022)^5 = 1.12$ $(1.021)^5 = 1.11$ $(1.021)^5 = 1.11$	$139,685 $202,335 $9,021	$8,543 $12,375 $552
SUB TOTAL			**$5,234,339**	**$320,131**
REMAINING USEFUL LIFE VALUE			**-1,739,638**	**-106,396**
TOTAL OPTION G 2020 PROJECT WORTH AND ANNUAL COST			**$3,494,701**	**$213,735**

$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION G - ALL LPCS
SOUTH END PUMP STATION TO AM#2 WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	PUMP STATION & FORCE MAIN
201	CLEARING AND GRUBBING	1	LS	$ 7,000.00	$ 7,000.00	$ 2,000.00	$ 5,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 7,500.00	$ 7,500.00	$ 2,500.00	$ 5,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 15,000.00	$ 15,000.00	$ 5,000.00	$ 10,000.00
659	SEEDING AND MULCHING	23000	SY	$ 2.00	$ 46,000.00	$ 10,000.00	$ 36,000.00
1020	4" HDPE INSTALLED BY HDD	4660	LF	$ 13.00	$ 60,580.00	$ 60,580.00	$ -
1020	3" HDPE INSTALLED BY HDD	3875	LF	$ 11.00	$ 42,625.00	$ 42,625.00	$ -
1020	2" HDPE INSTALLED BY HDD	4310	LF	$ 10.00	$ 43,100.00	$ 43,100.00	$ -
1020	1 1/2" LATERAL INSTALLED BY HDD	7500	LF	$ 8.00	$ 60,000.00	$ 60,000.00	$ -
1020	LATERAL KIT	150	EACH	$ 1,000.00	$ 150,000.00	$ 150,000.00	$ -
1020	ISOLATION VALVE	18	EACH	$ 1,300.00	$ 23,400.00	$ 23,400.00	$ -
1020	FLUSH STATION	7	EACH	$ 1,000.00	$ 7,000.00	$ 7,000.00	$ -
2001	PUMP UNIT	150	EACH	$ 6,000.00	$ 900,000.00	$ 900,000.00	$ -
	ELECTRICAL HOOKUP	150	EACH	$ 1,200.00	$ 180,000.00	$ 180,000.00	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	26000	LF	$ 40.00	$ 1,040,000.00	$ -	$ 1,040,000.00
2000	PROVIDE AND INSTALL PUMP STATION	1	EACH	$ 200,000.00	$ 200,000.00	$ -	$ 200,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
	TOTAL				**$ 2,792,205.00**	$ 1,491,205.00	$ 1,301,000.00

DESIGN COST			
COLLECTION SYSTEM			
PRELIMINARY DESIGN	$ 10,000.00		
FIELD SURVEY - TOPO	$ 38,000.00		
SOIL INVESTIGATION	$ 15,000.00		
FINAL DESIGN	$ 46,200.00		
OBTAIN PERMITS (PTI, NOI)	$ 1,100.00		
PREPARE EASMENTS	$ 4,500.00		
BIDDING AND AWARDING	$ 4,500.00		
CONSTRUCTION PHASE			
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
INSPECTION (BY OWNER)	$ -		
CONSTRUCTION LAYOUT	$ 7,000.00		
RECORD DRAWINGS	$ 4,000.00		
TOTAL	$ 145,300.00	$ 145,300.00	

PUMP STATION AND FORCE MAIN DESIGN COST			
PRELIMINARY DESIGN	$ 5,000.00		
FIELD SURVEY - TOPO	$ 19,000.00		
SOIL INVESTIGATION	$ 3,000.00		
FINAL DESIGN	$ 39,000.00		
OBTAIN PERMITS (PTI, NOI)	$ 1,000.00		
PREPARE EASMENTS	$ 18,000.00		
FINAL DESIGN PUMP STATION	$ 20,000.00		
BIDDING AND AWARDING	$ 4,500.00		
CONSTRUCTION PHASE			
SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
INSPECTION (BY OWNER)	$ -		
CONSTRUCTION LAYOUT	$ 13,000.00		
RECORD DRAWINGS	$ 4,000.00		
TOTAL	$ 141,500.00		$ 141,500.00
TOTAL DESIGN COST	$ 286,800.00		
TOTAL DESIGN & CONSTRUCTION COST	**$ 3,079,005.00**	$ 1,636,505.00	$ 1,442,500.00

OPTION H

ITEM	PRESENT WORTH 2015	F2020/P2015	2020 VALUE AT TIME OF CONSTRUCTION	ANNUAL COST*
AIRVAC COLLECTION SYSTEM (**CAPITAL** COST)	$1,985,440	$(1.025)^5 = 1.13$	$2,243,547	$137,215
PUMP STATION & 6" FORCE MAIN **(CAPITAL COST)**	$1,522,500	$(1.025)^5 = 1.13$	$1,720,425	$105,221
TREATMENT FACILITIES **(CAPITAL COST)**	0	0	0	0
CAPITAL COST – SUB TOTAL	$3,507,940		$3,963,972	$242,436
O&M COST - AIRVAC				
YEARLY POWER	$153,147	$(1.022)^5 = 1.12$	$171,524	$10,490
YEARLY MAINT.	$637,238	$(1.021)^5 = 1.11$	$707,334	$43,260
O&M COST - PUMP STATION				
POWER COST	$124,719	$(1.022)^5 = 1.12$	$139,685	$8,543
YEARLY MAINT.	$182,284	$(1.021)^5 = 1.11$	$202,335	$12,375
FORCE MAIN ANNUAL MAINT.	$8,127	$(1.021)^5 = 1.11$	$9,021	$552
SUB TOTAL			**$5,193,871**	**$317,656**
REMAINING USEFUL LIFE VALUE			**-1,981,986**	**-121,218**
TOTAL OPTION H 2020 PROJECT WORTH AND ANNUAL COST			**$3,211,885**	**$196,438**

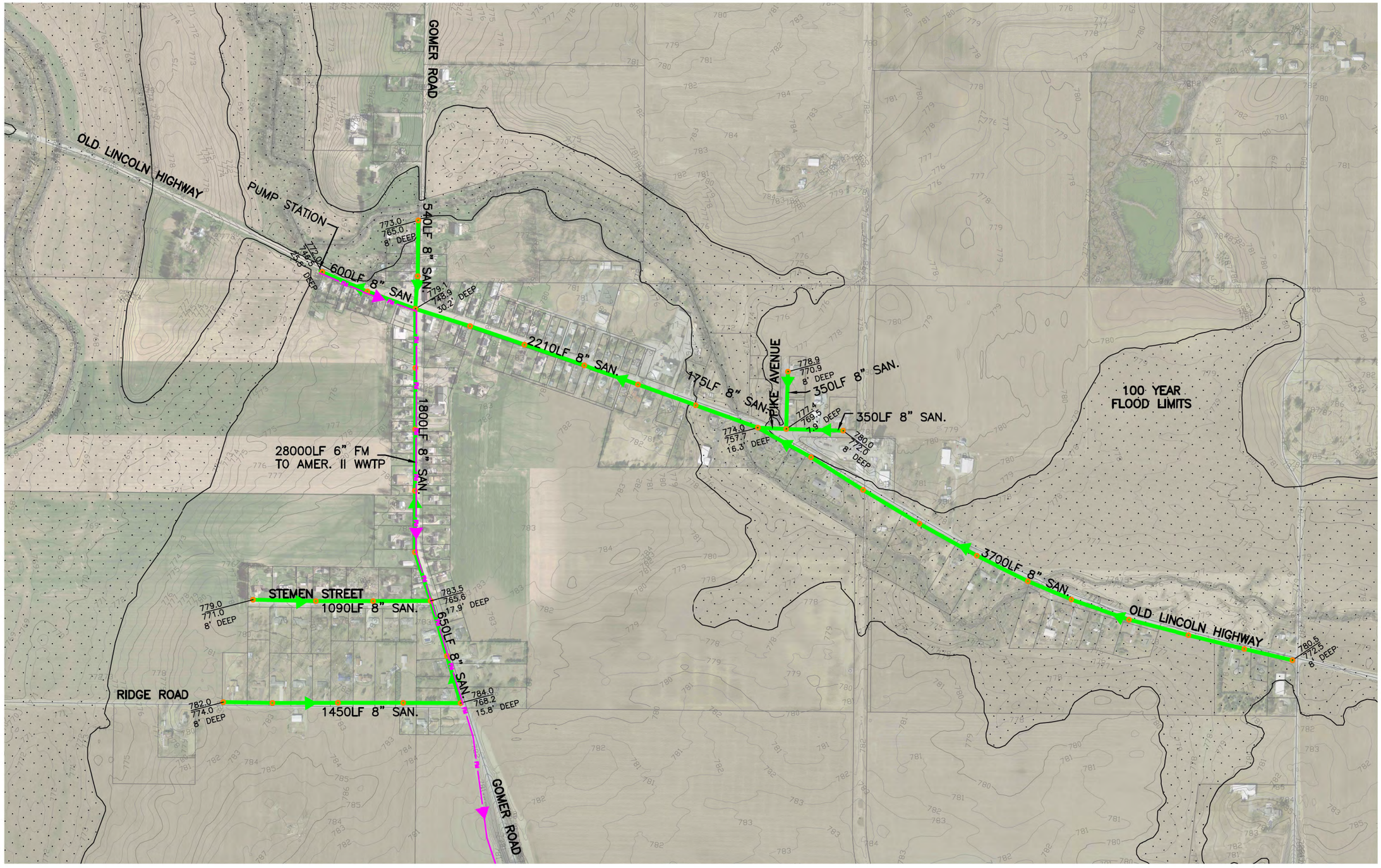
$$*\frac{i}{1-(1+i)^{-k}} = \frac{.02}{1-(1.02)^{-20}} = .06116 \text{ (COL. 4)} = \text{COL. 5}$$

GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO
PRELIMINARY ESTIMATE FOR CONSTRUCTION
OPTION H - ALL AIRVAC COLLECTION
PUMP STATION TO AM#2 WWTP

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL AMOUNT	COLLECTION SYSTEM	PUMP STATION & FORCE MAIN
201	CLEARING AND GRUBBING	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
207	TEMPORARY SEDIMENT AND EROSION CONTROL	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
614	MAINTAINING TRAFFIC	1	LS	$ 30,000.00	$ 30,000.00	$ 20,000.00	$ 10,000.00
659	SEEDING AND MULCHING	36000	SY	$ 2.00	$ 72,000.00	$ 36,000.00	$ 36,000.00
	6" VACUUM MAIN	6400	LF	$ 35.00	$ 224,000.00	$ 224,000.00	$ -
	4" VACUUM MAIN	7270	LF	$ 32.00	$ 232,640.00	$ 232,640.00	$ -
	3" SERVICE LATERAL	1500	LF	$ 30.00	$ 45,000.00	$ 45,000.00	$ -
	6" ISOLATION VALVE	7	EACH	$ 1,500.00	$ 10,500.00	$ 10,500.00	$ -
	4" ISOLATION VALVE	8	EACH	$ 1,200.00	$ 9,600.00	$ 9,600.00	$ -
	HYBRID VALVE PIT (2 USERS PER UNIT)	75	EACH	$ 4,600.00	$ 345,000.00	$ 345,000.00	$ -
	1 SET SPECIAL TOOLS	1	LS	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ -
	1 SET SPARE PARTS	1	LS	$ 6,000.00	$ 6,000.00	$ 6,000.00	$ -
	1 TRAILER MOUNTED VACUUM PUMP	1	LS	$ 24,000.00	$ 24,000.00	$ 24,000.00	$ -
	1 STANDARD VACUUM STATION	1	LS	$ 395,900.00	$ 395,900.00	$ 395,900.00	$ -
912	GRANULAR BACKFILL	9000	CY	$ 20.00	$ 180,000.00	$ 180,000.00	$ -
917	ASHPALT DRIVE REPAIR	300	SY	$ 30.00	$ 9,000.00	$ 9,000.00	$ -
917	CONCRETE DRIVE REPAIR	70	SY	$ 50.00	$ 3,500.00	$ 3,500.00	$ -
917	STONE DRIVE REPAIR	2000	SY	$ 10.00	$ 20,000.00	$ 20,000.00	$ -
917	ASPHALT ROADWAY TRENCH REPAIR	3900	SY	$ 60.00	$ 234,000.00	$ 234,000.00	$ -
1010	6" FORCE MAIN INSTALLED BY HDD	28000	LF	$ 40.00	$ 1,120,000.00	$ -	$ 1,120,000.00
2000	PUMP STATION	1	LS	$ 200,000.00	$ 200,000.00	$ -	$ 200,000.00
3000	PRE-CONSTRUCTION VIDEO	1	LS	$ 10,000.00	$ 10,000.00	$ 5,000.00	$ 5,000.00
	DRAINAGE RESTORATION	1	LS	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ -
	TOTAL				**$ 3,221,140.00**	$ 1,840,140.00	$ 1,381,000.00

	DESIGN COST			
	COLLECTION SYSTEM			
	PRELIMINARY DESIGN	$ 10,000.00		
	FIELD SURVEY - TOPO	$ 38,000.00		
	SOIL INVESTIGATION	$ 15,000.00		
	FINAL DESIGN	$ 46,200.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,100.00		
	PREPARE EASMENTS	$ 4,500.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 7,000.00		
	RECORD DRAWINGS	$ 4,000.00		
	TOTAL	$ 145,300.00	$ 145,300.00	

	PUMP STATION AND FORCE MAIN DESIGN COST			
	PRELIMINARY DESIGN	$ 5,000.00		
	FIELD SURVEY - TOPO	$ 19,000.00		
	SOIL INVESTIGATION	$ 3,000.00		
	FINAL DESIGN - FORCE MAIN	$ 39,000.00		
	OBTAIN PERMITS (PTI, NOI)	$ 1,000.00		
	PREPARE EASMENTS	$ 18,000.00		
	FINAL DESIGN - PUMP STATION	$ 20,000.00		
	BIDDING AND AWARDING	$ 4,500.00		
	CONSTRUCTION PHASE			
	SHOP DRAWING REVIEW, PAY REQUESTS, QUESTIONS	$ 15,000.00		
	INSPECTION (BY OWNER)	$ -		
	CONSTRUCTION LAYOUT	$ 13,000.00		
	RECORD DRAWINGS	$ 4,000.00		
	TOTAL	$ 141,500.00		$ 141,500.00
	TOTAL DESIGN COST	$ 286,800.00		
	TOTAL DESIGN & CONSTRUCTION COST	$ 3,507,940.00	$ 1,985,440.00	$ 1,522,500.00



OPTION A - ALL GRAVITY W/ WEST END PUMP STATION TO AMERICAN II WWTP

Proposed Sewer System
Manhole
Proposed Force Main

0 0 300 5 600 10
SCALE IN FEET

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. -

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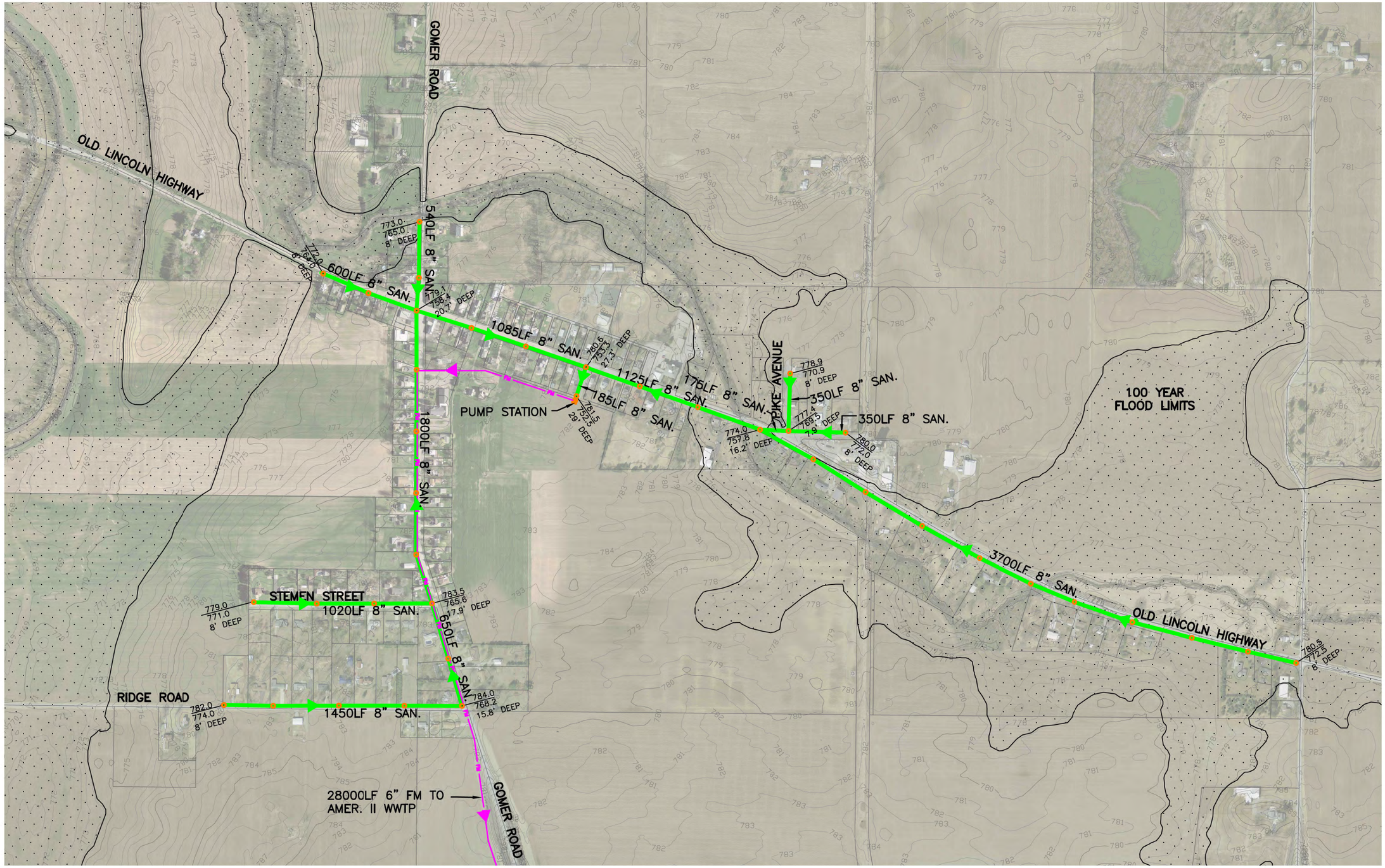

OPTION B - ALL GRAVITY W/ CENTRAL PUMP STATION TO AMERICAN II WWTP

Proposed Sewer System
Manhole
Proposed Force Main

SCALE IN FEET
0 300 600
0 5 10

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. —

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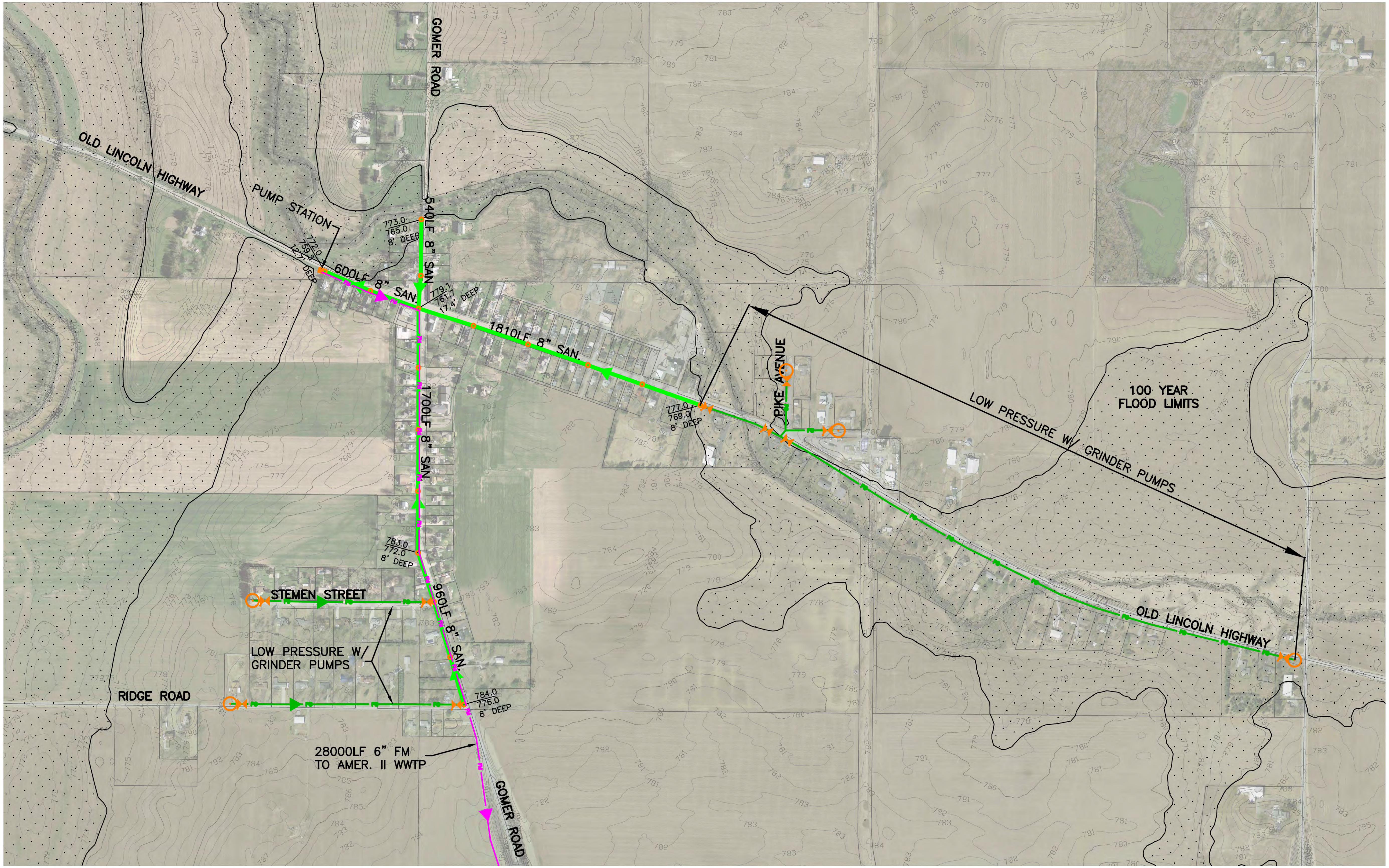


OPTION C - GRAVITY & LOW PRESSURE COLLECTION W/ WEST END PUMP STATION TO AMERICAN II WWTP

- Proposed Pressure System
- Valve
- Clean Out
- Proposed Sewer System
- Manhole
- Proposed Force Main

SCALE IN FEET: 0 300 600

PREPARED BY: KOHLI & KALIHER ASSOCIATES, INC. ENGINEERS AND SURVEYORS 2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT: GOMER SEWER IMPROVEMENT AREA ALLEN COUNTY, OHIO

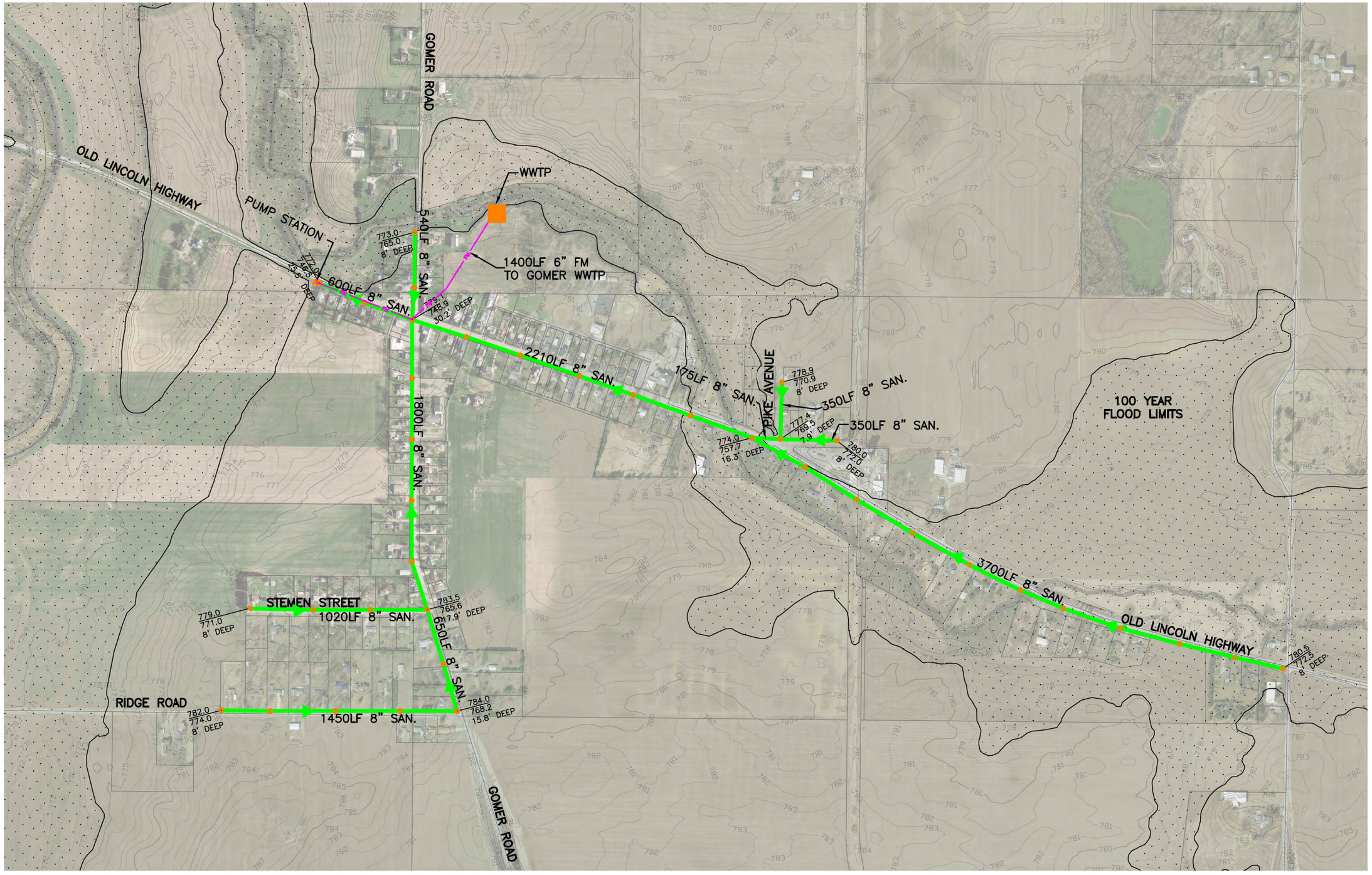
SUBJECT: SEWER SYSTEM STUDY

DRAWN BY: ARM

CHECKED BY: BWA

DATE: 11-19-14

DRAWING NO.: 1



OPTION D - ALL GRAVITY W/ WEST END
PUMP STATION TO ON-SITE WWTP

Proposed Sewer System
Manhole
Proposed Force Main

SCALE IN FEET
0 300 600
0 5 10

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. 1

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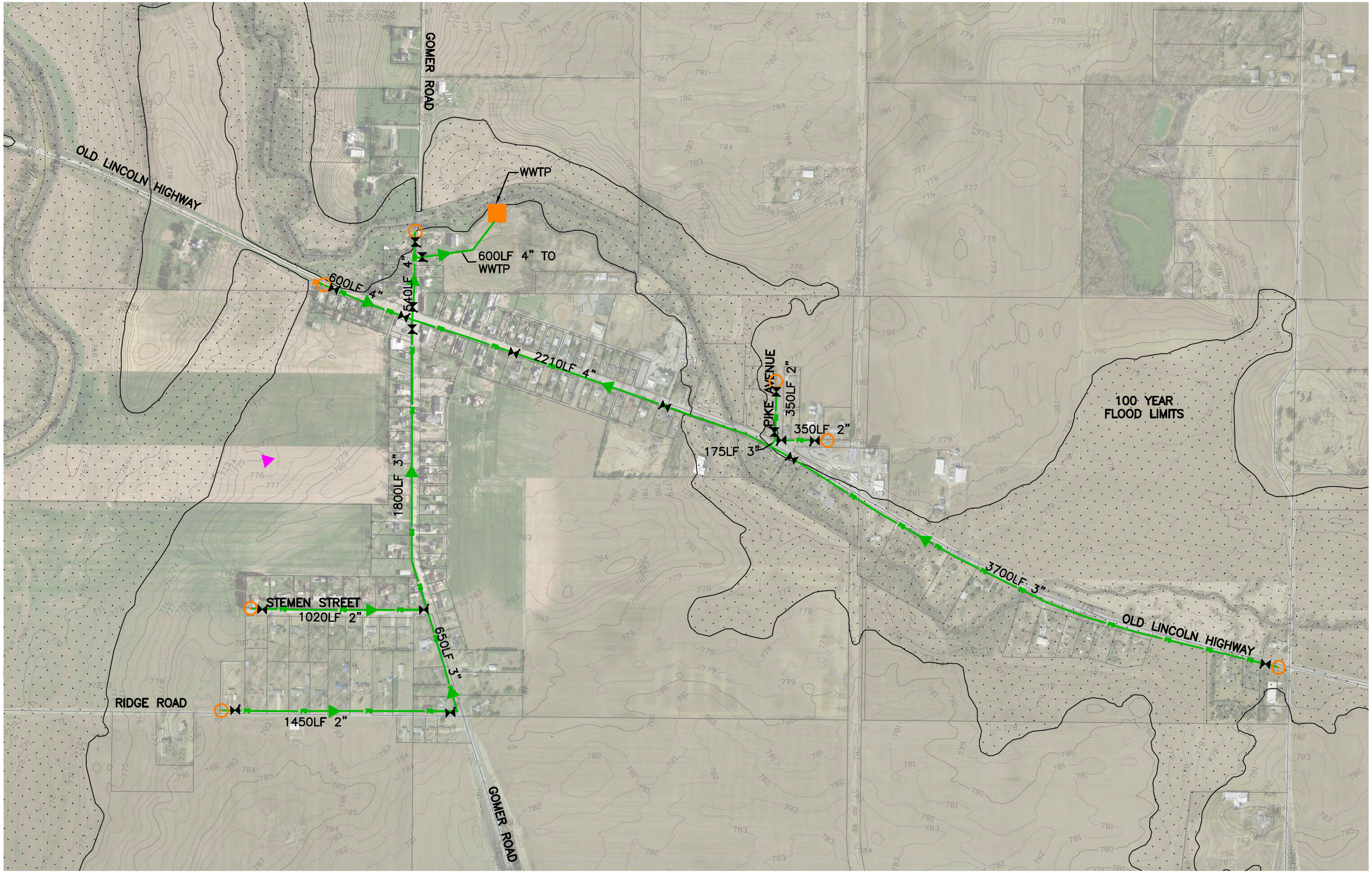


OPTION E - ALL LOW PRESSURE COLLECTION TO ON-SITE WWTP

Valve
Clean Out
Proposed Pressure System
Proposed Force Main

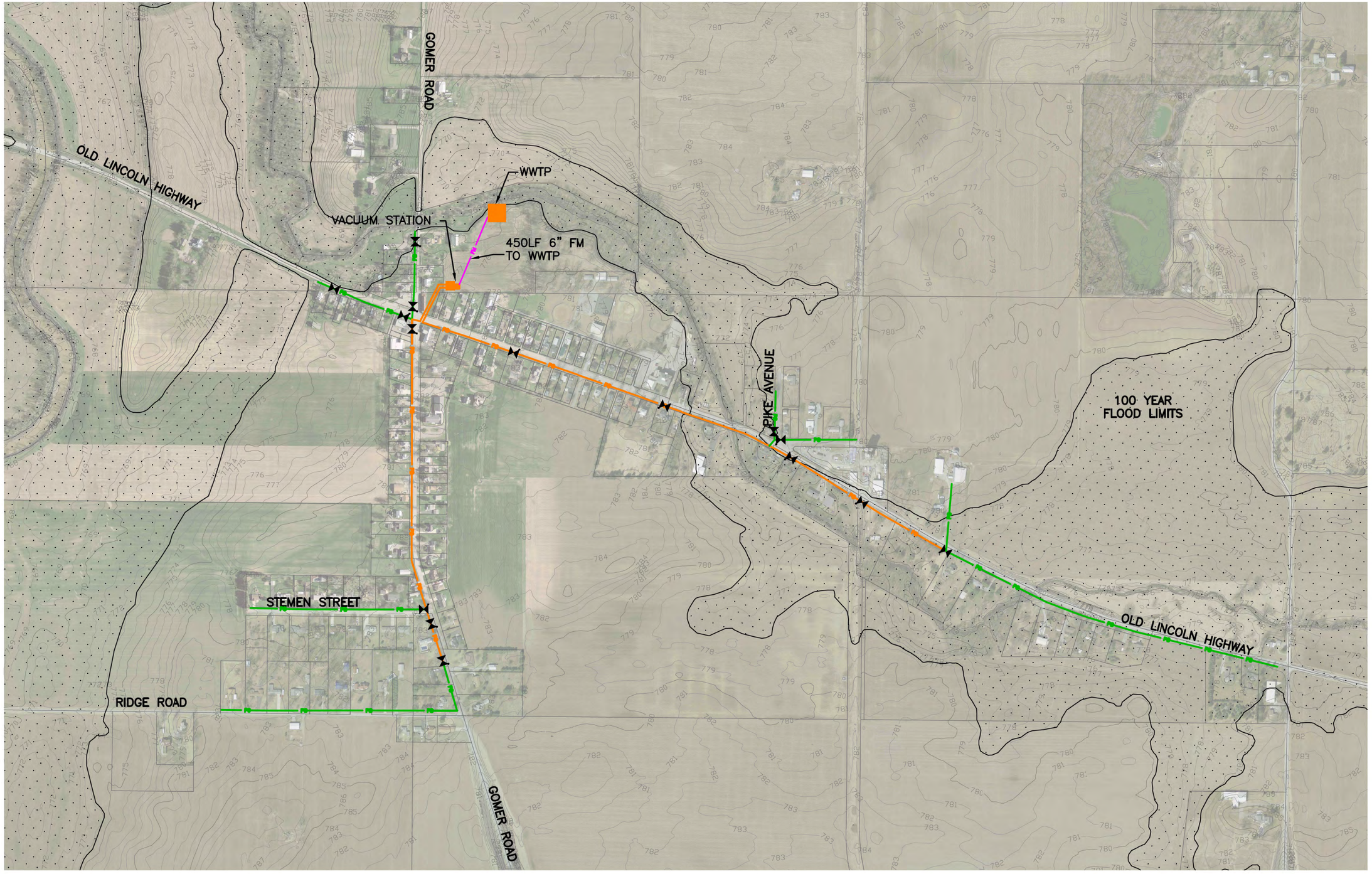
0 300 600
SCALE IN FEET

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. -



OPTION F - ALL AIRVAC COLLECTION TO ON-SITE WWTP

Isolation Valve
Proposed Force Main
Proposed 4" AIRVAC System
Proposed 6" AIRVAC System

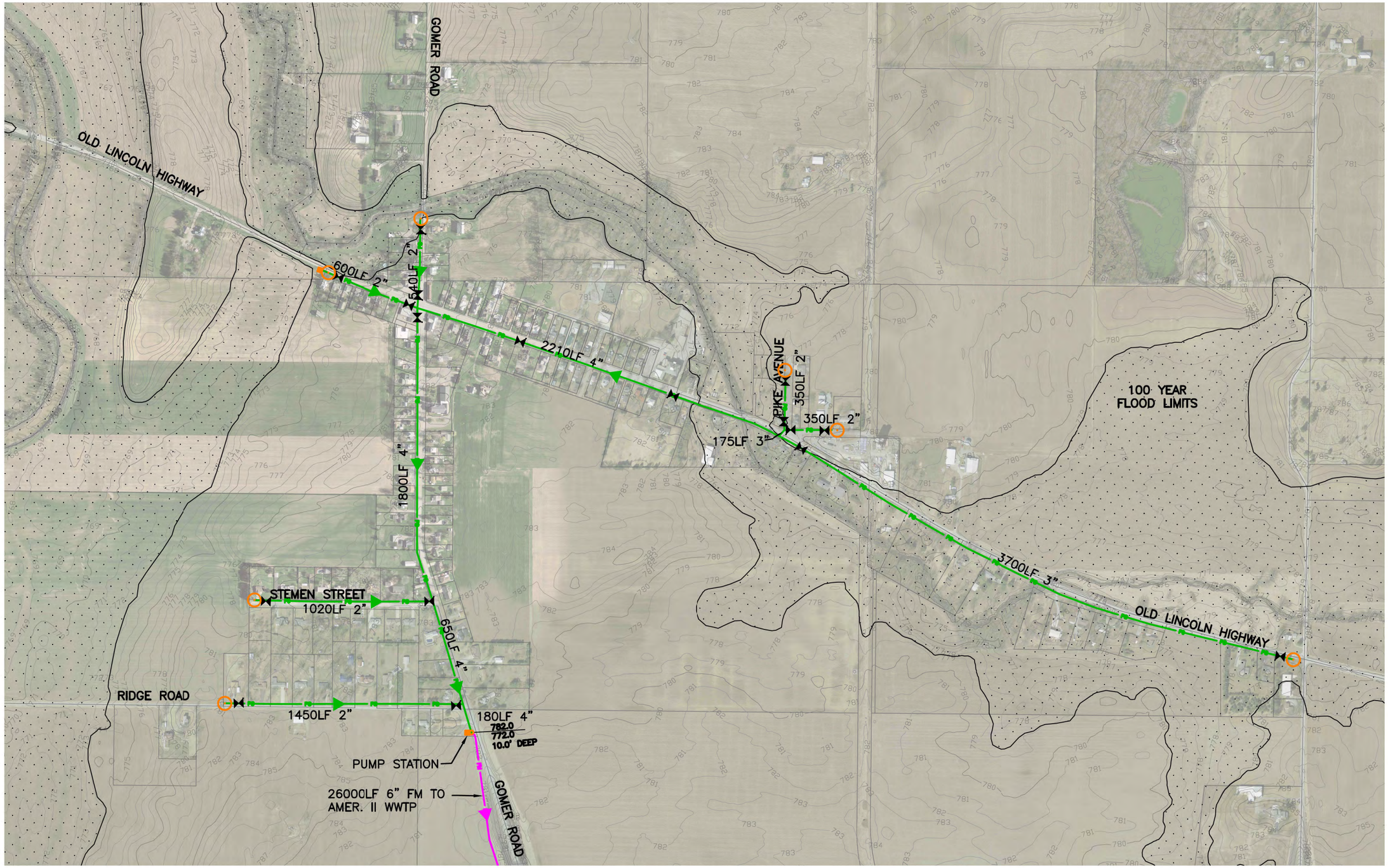
SCALE IN FEET
0 5 10 300 600

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. –



OPTION G - ALL LOW PRESSURE COLLECTION W/ PUMP STATION TO AMERICAN II WWTP

Valve
Clean Out
Proposed Pressure System
Proposed Force Main

SCALE IN FEET
0 300 600
0 5 10

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. -

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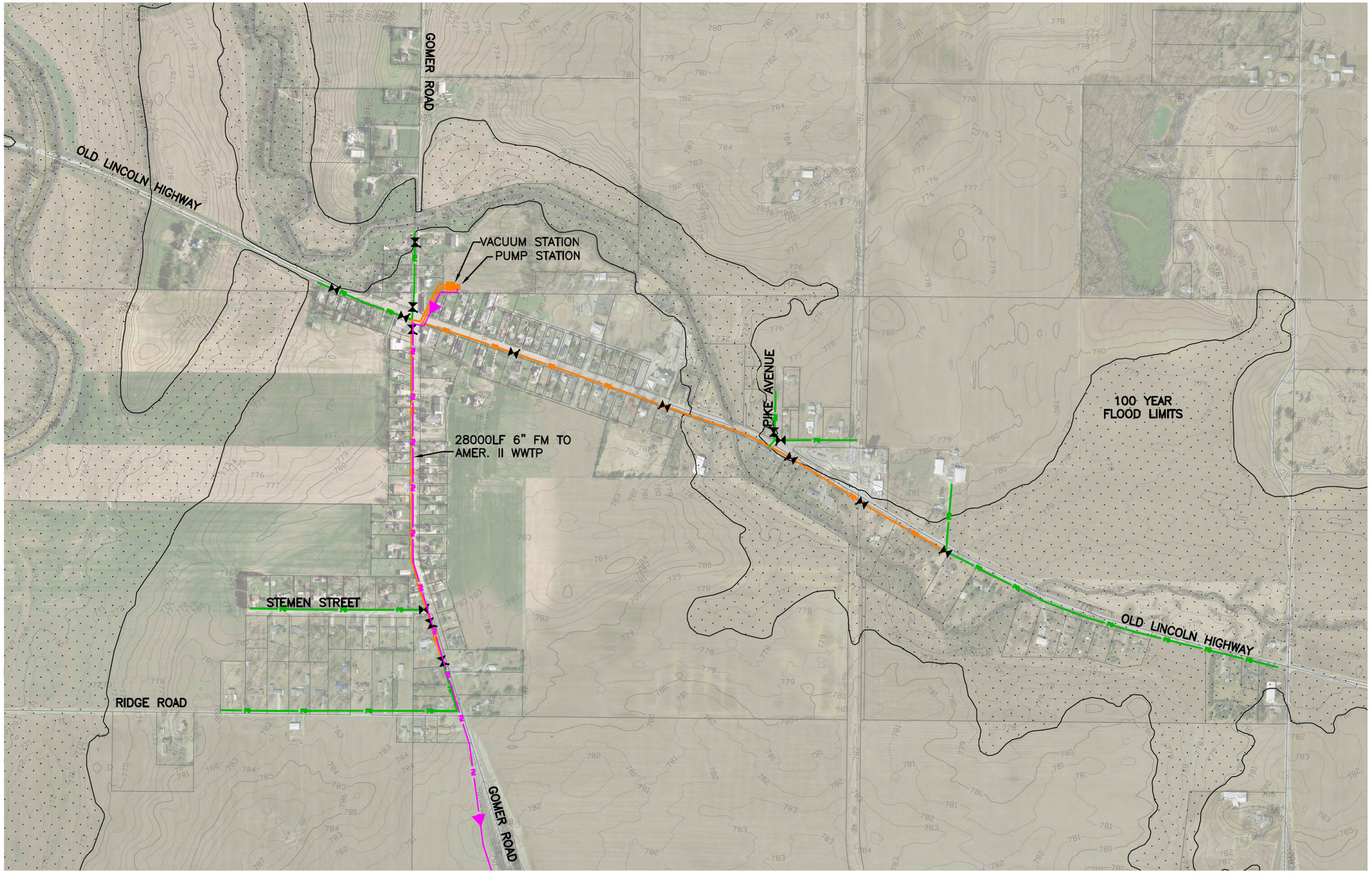

OPTION H - ALL AIRVAC COLLECTION W/ PUMP STATION TO AMERICAN II WWTP

Isolation Valve
Proposed Force Main
Proposed 4" AIRVAC System
Proposed 6" AIRVAC System

SCALE IN FEET
0 5 10 300 600

PREPARED BY
KOHLI & KALIHER ASSOCIATES, INC.
ENGINEERS AND SURVEYORS
2244 Baton Rouge, Lima, Ohio 45805 419-227-1135

PROJECT
GOMER SEWER IMPROVEMENT AREA
ALLEN COUNTY, OHIO

SUBJECT
SEWER SYSTEM STUDY

DRAWN BY ARM
CHECKED BY BWA
DATE 11-19-14
DRAWING NO. –