Permit-to-Install/Plan Approval Application

Sanitary Sewers

FOR AGENCY USE ONLY	
Application Number:	Date Received: / /

Applicant: Bridgewater Church
Facility Owner: First Church of God of Hamilton Ohio
Ultimate owner (if different):
Application/Plans Prepared by: The Kleingers Group – Steve Korte
Project Name: Bridgewater Church Sanitary Sewer Extension

1. Project Description

a. Describe the location, size and current development of the area to be served. List street address, township, county, and include longitude and latitude coordinates in describing location. The location of the site is two 5-6 acre vacant lots to the west of Bridgewater Church at 3100 Princeton Rd. in Fairfield Township, Ohio within Butler County. Latitude: N 39º23'31.74" W 84º30'42.45"

b. What is the possibility that future sanitary sewer extensions will connect to the sanitary sewers which are the subject of this application? This is a possibility in the future.

c. Are there any pump stations included as part of this sewer construction? ☐ Yes ☒ No
*(If **Yes**, fill out attachment to Form B1)*

d. Indicate type(s) of sewers proposed (check all that apply):

☒ Conventional gravity ☐ Small diameter gravity (w/septic tanks) ☐ Pressure (GP or STEP)
☐ Vacuum ☐ Siphon ☐ Force main (must include pump station)

2. Pipe Specifications

Please identify each type (as indicated in 1d above) and size of pipe included in this project.

Type	Pipe Size	Pipe Material	Material * Specification	Joint* Specification	Bedding** Classification	Minimum Slope	Pipe Length	Maximum Manhole Spacing
Gravity	8"	PVC-SDR-35	ASTM D 3034	ASTM D 3212	ASTM D2321-2	1.91%	727'	256'

* List ASTM, AWWA, or ANSI specification number. For any specification that does not appear on Ohio EPA's pipe specification list, the applicant shall submit the standard for approval with the Permit-to-Install.
** 100 percent to pass ¾-1.0 inch sieve. ASTM C-12 (A, B, C), D-2321 (IA, IB, II, III), or other.
Ohio EPA Approvable Pipe Specification List: http://www.epa.ohio.gov/dsw/pti/PipeSpecs.aspx

3. Design Flow in Proposed Sewer

Identify flows expected at start-up (for example, currently existing flows plus design flow for this project) and the flows expected at design (for example, start-up flows plus flows from future phases of development) at terminus of proposed sewer.

	Average Daily Flow		Peak Hourly Flow	
Start-Up Flows (based on immediate area served)	0.003	MGD	0.012	MGD
Design Flows (based on planned area served)	0.0115	MGD	0.046	MGD
Hydraulic Capacity of Sewer	**1.08**	MGD	**1.08**	MGD

Assumptions used to calculate above flows: *(check all that apply)*		**Start-Up**		**Design**	
☐ Residential Population at:	gal/home*		homes		homes
☐ Residential Population at:	gal/cap/day		people		people
☒ Non-Residential Flows (for example commercial, industrial, etc.):		0.003	MGD	0.0115	MGD
☐ Computer Flow Modeling Results (attach explanation and data)					

**120 gallon/bedroom in accordance w/ OAC 3745-42-05 unless additional information is submitted*

4. Receiving Wastewater Treatment Facility

a. What treatment facility will be receiving flow from these sewers?

Present treatment facility average daily flow _____ MGD (based on /20 (month/year) ADF)*

Proposed treatment facility average daily flow (based on present average daily flow plus all connections currently under construction or being designed) _____ MGD

Design average daily flow of the treatment facility _____ MGD (based on _____ design year)

b. Does the treatment facility have adequate capacity to treat anticipated flows from existing sewers plus the proposed sewers based on the sewer's design capacity? ☐ Yes ☐ No
If **No**, on a separate sheet, please describe the steps being taken to ensure that the treatment facility has adequate capacity. Include specific work items and schedules as appropriate.

c. Is there intent to expand the treatment facility to treat additional flows? ☐ Yes ☐ No

**Note: Flow data to be no older than one calendar year from date of PTI submission*

5. Sewer Design

a. Are the sewers deep enough to serve all adjacent basements? (refer to GLUMRB, *Recommended Standards for Wastewater Facilities*, 2004, Section 33.2) ☒ Yes ☐ No

If **No**, please explain how the basements will be served:

b. Are sewers at a sufficient depth to prevent freezing? (GLUMRB Section 33.2) ☒ Yes ☐ No

If **No**, please explain how freezing will be prevented:

c. Where small sewers join larger ones, have the inverts of the larger sewers been lowered sufficiently to maintain the same energy gradient? (GLUMRB Section 33.6) ☐ Yes ☐ No ☒ N/A

d. Have provisions been made to protect sewers against displacement by erosion and impact at velocities over 15 fps? (GLUMRB Section 33.45) ☐ Yes ☐ No ☒ N/A

e. Are sewers with slopes greater than 20 percent secured with concrete anchors (or equal), spaced as required? (GLUMRB Section 33.46) ☐ Yes ☐ No ☒ N/A

f. Are there any overflows or bypasses upstream of the point of connection that may be impacted by the flows from the new sewer? ☐ Yes* ☒ No

g. Are there any sanitary overflows or bypasses or combined sewer overflows downstream of the point of connection? ☐ Yes* ☒ No

** (If **Yes** to f. or g., on a separate sheet provide a description of the exact location of any overflows or bypasses)*

h. Is the force main designed to withstand water hammer pressures and associated cyclic reversal of stresses that are expected with the cycling of wastewater pump stations? (GLUMRB Section 49.4) ☐ Yes ☐ No ☒ N/A

If **No**, please explain:

6. Stream Protection

a. Are there any stream crossings? (If **Yes**, fill out the stream evaluation addendum) ☐ Yes* ☒ No

If **Yes,**

1. How many crossings are made? (GLUMRB Section 36.14) Number of crossings: _____
2. Are the crossings perpendicular to the stream? (GLUMRB Section 36.14) ☐ Yes ☐ No
3. Are crossings to be made at previously disturbed areas? ☐ Yes ☐ No
4. Is the streambed substrate composed primarily of solid rock, sand and gravel, or silt? ☐ Rock ☐ Sand/gravel ☐ Silt
5. In areas of steep slope or unstable soils, are the sewers located on more level, terraced areas? ☐ Yes ☐ No ☐ N/A
6. Are the sewers at a sufficient depth to protect the sewer line? (GLUMRB Section 36.11) ☐ Yes ☐ No ☐ N/A

b. Do any sewers run parallel to any streams? ☐ Yes* ☒ No

If **Yes,**

1. Is there any woody vegetation along the stream banks? ☐ Yes ☐ No
2. Are the sewers and construction easements located outside of the vegetated areas? ☐ Yes ☐ No ☐ N/A
3. In areas of steep slope or unstable soils, are the sewers located on more level, terraced areas? ☐ Yes ☐ No ☐ N/A

** If the response to either a. or b. is **Yes**, please provide the specific measures in the detail plans and specifications that will be used to ensure that damage to the stream corridor is minimized to the greatest extent possible and that the stream corridor is restored to original condition.*

7. Manhole Design

a. Manhole type (precast cast-in-place, etc.): Pre-Cast Concrete

b. Material specification (ASTM): ASTM C-478

c. Joint specification (ASTM): ASTM C-443

d. Are watertight frames and covers used wherever manhole tops may be flooded by street runoff or high water? (GLUMRB Section 34.6) ☐ Yes ☐ No ☒ N/A

If **No**, explain*:

e. Are manholes provided at the upstream end of each line? (GLUMRB Section 34.1) ☒ Yes ☐ No

If **No**, explain*:

f. Are manholes provided at all changes in size, grade, and alignment? (GLUMRB Section 34.1) ☒ Yes ☐ No

If **No**, explain*:

g. Are manholes provided at all sewer intersections? (GLUMRB Section 34.1) ☒ Yes ☐ No

If **No**, explain*:

h. Are drop manholes provided where the entrance sewer invert is 24 inches or more above the manhole invert? (GLUMRB Section 34.2) ☐ Yes ☐ No ☒ N/A

If **No**, explain*:

i. Are inlet/outlet pipes connected with gasketed flexible watertight connections? (GLUMRB Section 34.6) ☒ Yes ☐ No

If **No**, explain*:

** Attach any additional sheets necessary for explanations.*

8. Protection of Water Supplies

a. Are there any physical connections between the sewer and a public or private potable water supply system (including all appurtenances)? (GLUMRB Section 38.1) ☐ Yes ☒ No

b. Are any existing public waterworks units (for example public supply wells, water treatment facilities, storage facilities) within 200 feet of the proposed sewer or any private wells within 50 feet of the proposed sewer? (GLUMRB Section 38.2) ☐ Yes ☒ No

If **Yes**, specify the plan sheets on which the sources are shown:

If **Yes**, will sewers be encased or constructed of watertight pipe? ☐ Encased ☐ Watertight

c. Are the sewers at least 10 feet horizontally separated from water lines? (GLUMRB Section 38.31) ☒ Yes ☐ No

If **No**, please specify the plan sheets where these conditions are not met & describe the measures taken to ensure protection of the water system:

d. When crossing water mains, are the sewers at least 18 inches below water lines? ☒ Yes ☐ No

If **No**, please specify the plan sheets on which these conditions are not met and describe the measures taken to ensure protection of the water system:

9. Installation and Testing

a. Installation Inspector:

Name: Butler County Water & Sewer Firm:

Street Address: 130 High Street Phone: (513) 887 - 3066

City: Hamilton State: OH Zip: 45011

b. What type of sewer leakage test will be used? (GLUMRB 33.9) ☐ Hydrostatic ☒ Air

Page numbers in specifications for testing requirements of gravity and pressure sewers:

c. Is flexible pipe deflection testing specified? (GLUMRB 33.85) ☒ Yes ☐ No ☐ N/A

Page numbers in specifications for testing requirements of flexible pipe: Section 3820 pg.1

d. What type of manhole testing will be used? (GLUMRB Section 34.7) Vacuum

Page numbers in specifications for testing requirements of manholes: Section 3840 pgs. 1-2

10. Sewer Use Ordinance

A statement that "Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited" must be shown on the plans. Copies of the ordinances or regulations providing for the enforcement of this requirement must be on file with Ohio EPA.

a. An ordinance/regulation to this effect was adopted on: 2/14/2014 (date).

b. Enforcement of this ordinance/regulation is the responsibility of:

Name: Marth A. Shelby, P.E.

Title: Director

c. It is the opinion of the engineer submitting these plans that adequate enforcement of this ordinance/regulation is being properly carried out. ☒ Yes ☐ No ☐ Unknown

11. Authorities

a. Plans for the proposed installation of a county, village, or municipal sewer that is tributary to a sewage treatment plant with another political entity must be accompanied by written consent of both entities.

Is a written inter-municipal agreement attached? ☐ Yes ☐ No ☒ N/A

If **No**, state what form of consent is provided:

12. Submittals:

This application must include the following unless otherwise directed by Ohio EPA:

☒ Four copies of the detail plans including profile and plan views of all sewers (shown on the same sheet), existing (as applicable) and proposed pump station facilities, incorporating all of the details outlined in Section 20.1, 20.2 and 20.3 of *Recommended Standards for Wastewater Facilities*.

☒ Two copies of complete technical specifications.

☒ Two copies of the Application including Form A, pertinent B & C form(s), and antidegradation addendum (if applicable)

13. The foregoing data is a true statement of facts pertaining to this proposed sanitary sewer installation.

Date: / / Signed: P.E.

Plans prepared by: Steve Korte, The Kleingers Group