HAMILTON-SOUTHEASTERN UTILITIES, INC.

STANDARDS FOR DESIGN AND CONSTRUCTION OF LATERALS

The ideas, designs, drawing, and concepts contained herein are the exclusive intellectual property of Sanitary Management & Engineering Company, Inc. and are not to be used or reproduced in whole or in part, without the written consent of Sanitary Management & Engineering Company, Inc.

CONTENTS

| | 1) | SECTIO | N 1 – GENERAL1 | _ |
|------|---------|--------|--|----------|
| 1.01 | | | Definitions1 | - |
| 1.02 | | | Purpose1 | L |
| 1.03 | | | Applicability2 | <u>)</u> |
| 1.04 | | | Liability and Costs for Project2 | <u>,</u> |
| 1.05 | | | Standards, Specifications, and Details Sheets2 |) |
| 1.06 | | | Drawing Discrepancies and Omissions2 | <u>,</u> |
| 1.07 | | | Notices2 |) - |
| 1.08 | Complia | nce | 2 | |
| | 2) | SECTIO | N 2 - Permit | 5 |
| 2.01 | | | Lateral Connection Permit3 | |
| | 3) | SECTIO | N 3 – Rules and regulations4 | ŀ |
| 3.01 | | | Governing Laws, Codes, and Regulations4 | ł |
| 3.02 | | | Confined Space Entry4 | ł |
| 3.03 | | | Connection of Existing Homes or Buildings4 | ł |
| 3.04 | | | Separation Requirements4 | ł |
| 3.05 | | | Protection of Water Supplies5 | , |
| 3.06 | | | Prohibition of Clear Water Discharges5 | , |
| 3.07 | | | Lateral Specifications6 | ; |

©Copyright 2022 by Sanitary Management & Engineering Company, Inc.

| 3.08 | Inspection/Testing | 7 |
|------|--|----|
| 3.09 | Right of Entry | 7 |
| 3.10 | Maintenance | 8 |
| 3.11 | Notice of Violation | 8 |
| | 4) SECTION 4 – Lateral Construction | |
| 4.01 | Materials | 8 |
| 4.02 | Lateral Installation | 8 |
| 4.03 | I&A Tanks, Grinder Pumps, and Sewage Ejectors to Lateral | 10 |
| | | |

| Appendix A: | Application for Sewer Connection |
|-------------|----------------------------------|
| Appendix B: | Plot Plan Standards |

SECTION 1 - GENERAL

1.01 Definitions

For the purpose of these Design Specifications for Sanitary Sewer Facilities ("Design Specifications"), the following definitions shall apply:

- A. "HSEU" shall mean Hamilton Southeastern Utilities, Inc., the public utility which provides sanitary sewer service in the Project (as hereafter defined) area. HSEU's address is 11901 Lakeside Drive, Fishers, Indiana 46038, and HSEU's phone number is (317) 577-2300.
- **B.** "Engineer" shall mean the engineer for HSEU, which is Sanitary Management & Engineering Company, Inc. ("SAMCO") or SAMCO's engineers. SAMCO's inspector shall be Engineer's representative during construction of the Project. SAMCO's address is 11905 Lakeside Drive, Fishers, Indiana 46038, and SAMCO's phone number is (317) 577-1150.
- C. "Owner" shall mean the property owner of record whose deed is recorded at the Hamilton County Recorder's office. This definition is intended to include all contractors, sub-contractors, and/or agents acting for or on behalf of Owner.
- D. "Contractor" shall mean any construction contractor approved by HSEU to construct, install, maintain, repair, and remove public or private sanitary sewer facilities within the HSEU service area. This definition is intended to include all employees, sub-contractors and/or agents acting for or on behalf of Contractor's company.
- E. "Lateral" shall mean any pipe (gravity or force main) which runs from Owner's buildings, structures, property, or premises to the mainline sewer. Laterals are also commonly known as service pipes, building sewers, and service connections but are herein referred to as laterals.
- F. "Project" shall mean any sanitary sewer facilities constructed within the service area of HSEU and shall include all work necessary for the installation of all sanitary sewer infrastructure and appurtenances in conformity with HSEU approved construction drawings and the standards, specifications, and details of HSEU.
- G. "Conveyed" with regards to sanitary sewer facilities means Projects for which HSEU has received title.
- H. "Private" shall mean Projects from which sewage flows into HSEU's sanitary sewer facilities, but for which title for the sanitary sewer facilities is not to be conveyed to HSEU.
- I. "Completed" shall mean any Projects which are acceptably constructed, tested and through which customer service has been authorized by HSEU. All applicable fees must be paid to HSEU prior to a Project being deemed Completed.

1.02 Purpose

The purpose of these Standards is to define construction requirements of Laterals which are

©Copyright 2022 by Sanitary Management & Engineering Company, Inc.

constructed and operated under typical conditions in HSEU's service area. Depending on field conditions, and the composition and characteristics of the sanitary sewer flow, different or unusual conditions may occur which cannot be anticipated in a document of this nature. Consequently, Engineer may impose additional or special construction requirements under such circumstances. It is also the intent of these Standards to provide interested parties with a concise statement of the policies governing the sanitary sewer connection permit ("Permit").

1.03 Applicability

These Standards are applicable for all Laterals which will be connected to HSEU's sanitary sewer system. This includes Private Projects which will not initially be connected to HSEU's sanitary sewer system but at some future date may be connected to the system.

1.04 Liability and Costs for Project

No direction, field directive or other instruction contemplated by these Design Specifications and/or conducted by others shall accrue any liability, charge, or cost to HSEU, Engineer or Engineer's inspectors. The Utility will not assume responsibility for noncompliance with the referenced specifications as a result of information not provided in these Specifications.

1.05 Standards, Specifications, and Details Sheets

- A. These Standards and HSEU's other standards, specifications and details are subject to revision at any time prior to the start of construction of the Lateral. These documents are also subject to revision at any time during construction when, in Engineer's opinion, those revisions materially affect the maintenance, operation or life of the Lateral.
- **B.** HSEU reserves the right to modify or waive any of these Standards and/or its other standards, specifications, and details in its best interest.

1.06 Drawing Discrepancies and Omissions

- A. Contractor must notify Engineer of any conflicts between these Standards and the construction drawings or HSEU's other standards, specifications, and details. Resolution of any such conflict shall be at Engineer's sole discretion.
- **B.** Any items which are not covered in these Standards, constructions drawings, or HSEU's other standards, specifications, and details, but are required for construction of the Lateral, must be approved by Engineer prior to construction.

1.07 Notices

All notices required by these Standards must be given to both HSEU and Engineer at their respective business offices.

1.08 Compliance

A. Laterals must comply with the latest published edition of American Water Works Association ("AWWA"), American Society for Testing and Materials ("ASTM"), American National Standards Institute ("ANSI"), and Uni-Bell PVC Pipe Institute ("UNI") standards or as indicated in these Standards, whichever is more

stringent.

B. Engineer will make final determinations as to the ability to reasonably comply with these Standards. Failure to comply with HSEU's standards, specifications, details, or field directives/decisions shall be grounds for removal from the HSEU approved contractor list.

SECTION 2 - PERMIT

2.01 Lateral Connection Permit

- A. A Permit must be issued by HSEU for all repairs, modifications, or connections to Laterals. In addition, Permits are required for expansions of existing buildings. All easements required by Engineer must be approved and recorded prior to issuance of Permit.
- **B.** Permit Fee fee as defined in HSEU's current tariff shall be charged on a per Equivalent Dwelling Unit ("EDU") for a permit. Any re-inspection which may be necessary because of defective workmanship or incomplete construction will be assessed a re-inspection fee.
- **C.** Application for Permit A Permit application must be made on the form prescribed by HSEU and available from the utility's office. A copy is also included in Appendix A.
- D. The following information will be required at a minimum on the application:
 - 1. Name and address of Owner.
 - 2. Name, address, and telephone number of Contractor.
 - 3. Address of building to have service if different than Owner's address.
 - 4. A legal description of Owner's property for which the Permit is being requested (copy of deed).
 - 5. Plans for the Lateral and connection consisting of:
 - a. Plot Plan according to HSE's Plot Plan Standards. See Appendix B.
 - b. Connection detail including location of connection and routing of the Lateral.
 - c. Material of construction for the Lateral.
 - d. Elevation of the first floor and lowest point of gravity service. All elevations must be on the same vertical datum as the HSE approved construction plans; therefore, a conversion between different datum may be necessary.
- E. The following may apply for a permit:
 - 1. Home Builder
 - 2. Owner
 - 3. At the discretion of HSEU, persons other than those listed may apply for a permit.

Note: HSEU may deny Permits to any applicant who is currently in violation, or previously violated these Standards or any other HSEU rules, regulations, standards, specifications, or details.

- **F.** Expiration of Permit
 - 1. Permit will expire if work is not initiated within one (1) year from date of issuance. Upon expiration, a new Permit, including payment of Permit fee, will be required.
 - 2. HSEU may, for good cause, extend the duration of the Permit for a reasonable period. Requests

©Copyright 2022 by Sanitary Management & Engineering Company, Inc.

for extension of the Permit period must be submitted in writing to HSEU in advance of the expiration and must state the reason for the request. Forward requests for extension to:

Hamilton Southeastern Utilities, Inc. 11901 Lakeside Drive Fishers, IN 46038 Attention: Permit Technician

SECTION 3 – RULES AND REGULATIONS

3.01 Governing Laws, Codes, and Regulations

- A. Construction practices must meet all applicable laws, codes or regulations and be in accordance with the requirements of all governmental agencies and public entities having jurisdiction.
- **B.** These Standards shall not be considered as a substitute, nor shall they supersede, any state or federal law, code or regulation related to construction of Laterals. In the event of a conflict between any state or federal law, code or regulation governing the design and/or construction of Laterals and these Standards, the more stringent requirement will apply.
- **C.** All persons on site must abide by all Indiana Occupational Safety and Health Administration ("IOSHA") standards including but not limited to "General Construction Practices" and "Trench Safety Standards." The responsibility for safety measures rests solely with Contractor. All excavations must adequately guard the public by barricades, fences, lights, and other such means as necessary.

3.02 Confined Space Entry

All persons, including but not limited to Owners, Contractors, sub-contractors, etc. must abide by HSEU's "General Procedures for Manhole Opening and Entry" or the most recent IOSHA confined space entry standards, whichever is more stringent.

3.03 Connection of Existing Homes or Buildings

- A. Engineer may require all existing homes or buildings to construct a new lateral in accordance with these Standards from the structure's foundation to connection into the main line sewer to obtain sanitary sewer service.
- **B.** Prior to connection of an existing system, Engineer may require, the following testing to identify potential sources of infiltration/inflow (I/I):
 - 1. Low-pressure air test and/or vacuum test on manhole according to HSEU's Sanitary Sewer Standard Specifications.
 - 2. Video camera inspection and/or smoke testing of all lines in the presence of Engineer.
 - 3. Site inspection of Owner's premises, including the interior of buildings.

3.04 Separation Requirements

A. Laterals that parallel a portion of a structure must be a minimum of five (5) feet from the face of the

structure (house/garage).

- B. When laterals parallel a porch or sidewalk, a three (3) feet separation must be maintained.
- **C.** It is recommended that laterals not enter a structure through/under the garage and may do so only with permission of Engineer.
- **D.** Within the subject lot or parcel, Laterals must be installed to maintain a minimum separation of ten (10) feet from boundary lines. Additional separation may be required based upon the depth of the Lateral and/or soil/groundwater conditions.
- E. If a lateral must cross a parcel other than the one it is intended to serve, it must be constructed in a dedicated easement, either platted or recorded by Engineer. Permit will not be issued until Engineer has approved and recorded easement.
- F. Laterals shall be located to avoid the following:
 - 1. Installation below pavement or concrete, including streets, driveways, parking lots, etc.
 - 2. Installation below storm sewer or waterways.
 - 3. Installation below other utilities.
 - 4. Installation below mounding, landscaping, and retaining/landscaping/entrance walls.
 - 5. Horizontal separations from utilities, streets, storm sewers, waterways, buildings, etc. of less than ten (10) feet.

3.05 Protection of Water Supplies

- A. There shall be no physical connections between a lateral and the water supply system or appurtenances thereto which would permit passage of any polluted water into the potable water supply.
- **B.** Laterals shall be laid at least ten (10) feet horizontally from any existing or proposed water line. Distance shall be measured from edge of pipe to edge of pipe.
- **C.** Laterals crossing water lines shall be laid to provide a minimum vertical separation of eighteen (18) inches either above or below the water line.
- D. Where above separations cannot be maintained, lateral shall be constructed to the specifications of Indiana Administrative Code 327 IAC 3-6-9.
- E. Where a water line crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water line.

3.06 Prohibition of Clear Water Discharges

- A. The following sources of clear water shall not be connected to any Lateral:
 - 1. Foundation/footing drains
 - 2. Sump pumps with foundation drains or other clear water sources
 - 3. Roof drains
 - 4. Heat pumps/Geo-thermal discharge

- 5. Cooling water/Steam condensate
 - If an industrial or commercial entity finds it necessary to discharge clear water consisting of cooling water and/or steam condensate into HSEU's sanitary sewer system, and the mainline sewer has capacity to receive such clear water without affecting existing or future users, HSEU may enter into an agreement for such discharge. Agreement will define a metering system and any other requirements deemed necessary to measure the flow. The user rate for such discharges will be calculated as provided by HSEU's established rate schedule.
- 6. Any other sources of clear/unpolluted water
- **B.** If a home or building has a floor or trench drain connected into the Lateral, all site grading must prevent surface water from discharging into sanitary sewers. When floor drains or trench drains are installed in rooms with exterior connections, either a three (3) inch sill must be added to exterior doors, or the finished floor elevation of the rooms must be installed three (3) inches above surrounding finished grade.

C. Dewatering

- Keep excavations free from water until all sanitary sewer facilities are completed. Provide sufficient dikes and de-watering equipment and make satisfactory arrangements for the disposal of the water without undue interference with other work, damage to property or the environment. Water disposal must comply with the regulations of the Environmental Protection Agency ("EPA"), Indiana Department of Environmental Management ("IDEM"), Soil Conservation Service ("SCS") and all other applicable agencies.
- 2. Contractor shall prevent all water from entering the Lateral. If any water enters Completed sanitary sewer facilities, Contractor is responsible to HSEU for the costs of sewage treatment, electrical power, equipment repairs, incidental damages, cleaning and any other costs or expenses related to such entry. In addition, Contractor shall pay HSEU damages per occurrence.
- **3.** Contractor must provide de-watering equipment, shoring or other construction practices deemed necessary by Engineer.

3.07 Lateral Specifications

- A. Laterals must be a minimum of six (6) inches in diameter and sized based on anticipated flows. A lateral servicing a pool house may need to be larger based on peak filter backwash flow.
- **B.** No more than one hundred (100) feet of lateral shall exist outside the boundary of the parcel for which the lateral is designed to service without Engineer's written approval.
- C. No lateral shall exceed two hundred (200) feet in length unless Engineer's written approval is obtained.
- **D.** No more than one (1) building or residence will be permitted to connect to a lateral. Each unit of multitenant residences (i.e. – townhomes, condos, duplexes, etc.) require independent laterals.
- E. Each lateral shall have a removable, extendable backwater valve in the first clean-out downstream of the building. Backwater valve shall be housed in 6-inch PVC clean-out and be readily accessible at all times. Backwater valves shall be Mainline Straight Fit model #ML-SF668, Rectorseal Clean Check model #97026, or engineer approved equal (must maintain a minimum of 4" clear opening through standpipe).

3.08 Inspection/Testing

- A. HSEU requires inspection of all building Laterals.
- **B.** Permit holder shall notify HSEU at least seventy-two (72) hours before inspection is desired.
- C. Engineer will conduct inspections on Laterals during normal schedule working hours.
- D. Contractor will be responsible for ensuring the following items have been completed prior to scheduling the hook-up:
 - 1. Contract for sewer service has been executed.
 - 2. Approved Plot Plan is in HSEU's scanned document file.
 - 3. HSEU connection permit has been issued.
 - 4. All fees have been paid.
- E. Lateral, in its entirety from the foundation to the connection with the mainline or lateral stub, must be exposed for inspection and be constructed in accordance with these Standards. Under no circumstances shall the Lateral be backfilled without an inspection by Engineer.
- **F.** HSEU requires all Laterals be subject to video camera inspection within ninety (90) days of initial installation. Engineer shall inspect for the following:
 - 1. Joint separation/off-set joint
 - 2. Construction debris (stones, broken pipe, mud, etc.) in Lateral or mainline sewer.
 - 3. Properly installed joints.
 - 4. Deformed pipe.
 - 5. Cracks in pipe.
 - 6. Infiltration.
 - 7. Number of fittings between clean-outs.
- **G.** At Engineer's discretion, Laterals may also be inspected by video camera at any time after initial installation. In addition to the video camera inspection, Engineer may require the following additional tests to identify sources of infiltration/inflow (I/I):
 - 1. Low pressure air test
 - 2. Smoke testing
 - 3. Dye test
 - 4. Vacuum test of manhole
 - 5. Flow monitoring
- **H.** At Engineer's discretion, Contractor may be required to clean, repair, or replace defects identified during video camera inspections.

3.09 Right of Entry

Engineer shall have the right of entry to, upon, or through Owner's premises for purposes of inspection of Laterals, or to determine if any sources of clear water are connected to the Lateral.

3.10 Maintenance

Laterals must be maintained in compliance with HSEU's current "Maintenance Specifications for Sewer Facilities."

3.11 Notice of Violation

A. HSEU will issue a "Notice of Violation" whenever it determines that:

- 1. Construction is proceeding in an unsafe manner.
- 2. Construction is occurring in violation of these Standards and/or any other applicable HSEU standards, specifications, or details.
- 3. Sewer construction, for which a Permit is required, is proceeding without a Permit in force.
- 4. Connection of any source of clear water to the Lateral.
- **5.** A discharge, into HSEU's sanitary sewer system, of any prohibited water or wastes as defined in the "Rules and Regulations of Hamilton Southeastern Utilities, Inc." as approved by the Indiana Utility Regulatory Commission ("IURC").
- **B.** Notice of Violation will be in writing and will indicate the location and reason for its issuance. One (1) copy of the Notice will be posted on the property in a conspicuous place and one (1) copy will be delivered to the Permit holder. HSEU may refuse to provide sanitary sewer disposal service or allow work to resume until Engineer issues a written notice of proper compliance.

SECTION 4 - LATERAL CONSTRUCTION

4.01 Materials

- A. Pipe and fittings used in Lateral construction shall be smooth wall inside and out and must be a minimum of PVC Schedule 40 or SDR 26.
- B. Joints must be either:
 - Flexible gasket push-on compression type for PVC pipe. Joint must comply with ASTM F-477, the physical requirements of ASTM D-3212, and UNI-B-1 "Recommended Specifications for Thermoplastic Pipe Joints. Pressure and Non-Pressure," the more stringent shall apply. The flexible gasket must be the only element depended upon to make joint flexible and watertight.
 - 2. Solvent cement type with colored primer assembled in a manner as recommended by manufacturer. Do not use primer or cement that has gelled.
 - 3. Solvent welding procedures to comply with ASTM D-2855 and D-1785.
- C. Fittings must be 45 degrees or less. Engineer will not permit fittings greater than 45 degrees.
- D. Type 2 clean-outs to have concrete apron with fiber mesh reinforcement. Application rate of 1.5 pounds of fibers per cubic yard. Fibers as manufactured by Fibermesh, 4019 Industry Drive, Chattanooga, TN 37416 or Engineer approved equal.

4.02 Lateral Installation

- A. A Permit must be issued by HSEU prior to installation of a Lateral.
- B. Approved Contractors.

©Copyright 2022 by Sanitary Management & Engineering Company, Inc.

- 1. Contractors pre-approved by HSEU must construct laterals. A list of pre-approved contractors may be obtained at HSEU's office or website.
- 2. Approved Contractors shall not sub-contract Lateral installation work to anyone other than an HSEU Approved Contractor.
- **3.** Each supervisor, foreman, or superintendent and pipe layer assigned by Contractor to supervise on-site installation of Laterals shall also be pre-approved by HSEU and be recertified annually.
- 4. To maintain approval by HSEU, a Contractor must install a minimum of ten (10) Laterals per calendar year.
- 5. Approved Contractors must submit a Standardized Pre-Qualifications Form (PQF) annually to maintain approval.
- **C.** Point of commencement for Laterals must be at the connection to the mainline sewer and must be laid with the bell end pointing upgrade.
- D. Contractor to extend insulated #10 copper tracer wire along top of pipe from the wye to the final cleanout at the structure.
- E. Foundation wall which the Lateral penetrates must be constructed prior to Lateral installation.
- F. Laterals must have a backwater valve with clean-out located within three (3) feet of the building's exterior wall. Subsequent clean-outs must be installed at a maximum interval of one hundred-fifty (150) feet.
 - 1. Clean-out must use pipe size as recommended by the backwater valve manufacturer or Lateral into which it is connected.
 - 2. Clean-outs must be constructed and capped per HSEU's Gravity Sanitary Sewer Details.
 - 3. A clean-out must be installed when deemed necessary by Engineer.
- **G.** It is recommended that a clean-out be installed after every three (3) fittings of 22.5 degrees or more, but in no case exceeding five (5) fittings between clean-outs.
- H. Under no circumstances shall clean-outs be buried.
- I. Slope
 - 1. Slope requirements must conform to the latest edition of the State of Indiana (uniform Plumbing Code), local codes, or these Standards whichever is more stringent.
 - 2. Laterals must be installed at a minimum of 1.00% and where possible not exceed 6.00%. Engineer, depending on site conditions, may waive slope requirements.
- J. Connection to Mainline Sewer
 - 1. Laterals not installed during original construction must be connected at an existing joint with manufactured fittings, no saddle connections will be allowed.
 - 2. Additional wye and coupling must be concrete encased.
 - **3.** Laterals cannot connect directly into manhole without prior written approval of Engineer. If approved, Lateral must connect to manhole at an elevation of not more than two (2) feet above the base of the manhole. Benchwall must be formed to receive flow from lateral, inside drop

connection will not be permitted.

- K. Bedding and Backfill
 - 1. Contractor shall place a minimum of six (6) inches of compacted #8 stone bedding along entire trench prior to installing Lateral.
 - 2. Objects that may cause point loading must be removed.
 - 3. Care should be taken to not compact directly over the top of the pipe or displace alignment.
 - 4. All stone bedding above, and below Lateral must be free of dirt, organic matter, and frozen material.
- L. Cover and Concrete Capping/Encasement/Cradle
 - 1. Lateral should maintain a minimum cover (from top of pipe to grade) of five (5) feet. If minimum cover cannot be maintained the following will apply:
 - a. A concrete cap must be installed when cover is four (4) to five (5) feet.
 - b. Concrete encasement must be installed when cover is three (3) to four (4) feet.
 - c. Laterals with less than 3 feet of cover will not be accepted by Engineer.
 - d. If Lateral has less than eighteen (18) inches of separation with other utilities, then a concrete cradle must be installed.
 - e. Refer to HSEU's Gravity Sanitary Sewer Details for more information.
- **M.** Laterals must be installed as previously stated or per UNI-B-5 "Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Sewer Pipe", the more stringent shall apply.

4.03 I&A Tanks, Grinder Pumps, and Sewage Ejectors to Lateral

- A. HSEU will allow the use of a sewage ejector only when it serves the level below grade and the balance of the house is served by gravity. If entire residence flows to a pumped system, an I&A tank or grinder pump must be installed.
- **B.** HSEU will only allow the use of a grinder pump for a single residence that is connected directly into a gravity sewer and no further connections are contemplated.
- **C.** It is highly recommended that pumps be external to the building. Sewage backups into the wet well/building may occur due to failure of the pump, check valve, or appurtenances. Any backup into the wet well/building will be responsibility of Owner. HSEU is not liable or responsible for damages due to sewage backups in wet wells/buildings served by grinder/ejector pumps.
- D. All pumps must have high level alarms, check valves, and shutoff valves suitable for sewage applications.
- E. All I&A tanks, grinder pumps, and effluent pumps must have an electrical disconnect switch, approved by Engineer, mounted adjacent to the wet well.
- F. All piping and facilities installed exterior to the building must be installed by a HSEU approved Contractor.
- G. All exposed piping must be Schedule 40.

- H. All buried piping must be a minimum of either PVC SDR 21 conforming to ASTM D-2241, PE DR 11, or Schedule 40 conforming to ASTM D-1785.
- I. Galvanized pipe must be threaded connection and PVC pipe must be either solvent weld or gasketed push-on joint connections conforming to ASTM D-3139 or AWWA C-900.
- J. Pump discharge must connect to the Lateral or common force main at locations approved by Engineer in writing.
- K. Force Main connections to HSEU's sanitary sewer facilities shall be allowed only as approved by Engineer.
- L. Wet well/sump must be FRP or concrete and must be specifically designed for the application. Wet well shall be constructed as specified in HSEU's specifications and details to prevent infiltration/inflow. Engineer may require vacuum testing of the wet well/sump.
- **M.** Operation, maintenance, repair, and replacement of pump and appurtenances shall be the responsibility of Owner. This includes the force main and/or gravity Lateral from the building to its connection into the sanitary sewer main.
- N. Installation must conform to all national, state, and local building codes.
- **O.** Top of Wet Well/Sump must be:
 - 1. Eighteen (18) inches above the current published DNR 100-year flood elevation of nearby waterways.
 - 2. It is highly recommended to be one (1) foot below the lowest elevation to have sanitary service in the home or building.

APPENDIX A

Hamilton Southeastern Utilities, Inc.

| Application For Sewer Connection 317- | | | | |
|--|---|---|--|--|
| Office Use Only: | Sewer Permit # | ۱ <u>ــــــ</u> | | |
| | Sewer Acct # _ | | | |
| Builder | Name | | Phone | |
| Duilderie Address | | | | |
| Builder's Address | Street | | City/Zip | |
| Lot Location | | | | |
| | Lot No. | Development | Section | |
| Lot Address | Street | | City/Zip | |
| Building Sewer/La | ateral Contractor | | | |
| A. Usage 🗆 SFF | R 🗆 MFR 🗆 No | n-Residential 🛛 Special User | 🗆 Municipal 🛛 Other | |
| B. Description of Fa | acility | | | |
| C. EDU Allocation/ | Estimated daily gallonag | е | Floating EDU | |
| D. Type of Improve | ment 🛛 New 🗆 F | Remodel 🛛 Existing Finish | ed Floor Elevation | |
| E. Sump Pump | □ _{Yes} □ _{No} | Grinder Pump/Effluent Pu | mp □ _{Yes} □ _{No} | |
| F. Roof run-off, floo | or drains & sub-surface o | drainage to: | | |
| Ground Surfa | ce 🔲 Storm Sewer | Other (Explain) | | |
| G. Cooling water or | geothermal system disc | charge to: | | |
| □ Ground Surfa | ce 🛛 Storm Sewer | □ Not Applicable Other | (Explain) | |
| accompanying plot plan ar and specifications currently pump, surface water drain | e true and correct, and that all adopted by Hamilton Southe | ad am fully empowered to make the foregoin construction of sanitary sewer will comply astern Utilities, Inc. I further certify that stor anitary sewers and that no connections to s is, Inc. | with all rules, regulations, standards, m water (i.e. downspouts, sump | |
| | tions herein provided shall ext rvice is provided as described | end to and be binding upon the respective h herein. | neirs, successors and assigns of the | |
| Signature of Builders | Authorized Agent | | | |
| OFFICE USE ONLY | <i>/</i> : | | | |
| Application Approved | by | Permit Fees Total (Non-Refundable) | Date | |
| Subsequent Connecto | or: 🗌 Yes 🗌 No | PERMIT VALID FOR ONE YEAR | FROM DATE OF ISSUANCE | |
| WHITE – HAMILTO | N SOUTHEASTERN COPY | YELLOW – APPLICANTS COPY | PINK – BUILDING PERMIT | |

APPENDIX B

HAMILTON-SOUTHEASTERN UTILITIES, INC.

PLOT PLAN STANDARDS

- 1. Plot plans must indicate the following:
 - a. Name of company that prepared the plot plan.
 - b. Builder/person(s) the plot plan was prepared for.
 - c. Date of drawing/revisions dates.
 - d. Subdivision name/section/lot number.
 - e. Street address of home/building.
 - f. North arrow and scale.
 - g. Entire boundary of lot or parcel should be labeled with dimensions per recorded plat or deed. <u>Note</u>: If the lot or parcel is not platted, provide the recording information of the deed.
 - h. Graphically indicate all easements, building lines, and rights-of way per recorded plat.
 <u>Note</u>: If parcel is not platted, provide pertinent information from the zoning requirements. (i.e., building set back requirements, etc.)
 - i. Graphically indicate all revisions due to certificates of correction and provide the recording information.
 - j. Provide location of all proposed and existing sanitary sewer facilities contained within the boundary of the lot or parcel including, gravity sewers and manholes, lift stations (wet well and valve vault), individual grinder stations, I&A tanks, force mains, force main fittings, isolation/service valves, air/vacuum relief manholes, force main or lateral (Type 1, 2 or 3) clean- outs, backwater valves, grease traps, grit traps, oil/water separators, neutralization tanks, end of stubs (no matter the length of the stub), etc. If more than one wye/lateral exists on the site, identify which lateral is to be abandoned.
 - k. As-built top of casting elevations of the nearest upstream and downstream sanitary sewer manholes (include manhole number). <u>Note</u>: Do not provide top of casting elevation of sanitary sewer manholes installed with bolted and gasketed castings, label manhole as "bolted casting." Contact HSE to discuss the specific situation in more detail. <u>Manholes</u> with bolted and gasketed castings cannot be used as a relief manhole.
 - Provide as-built locations of the upstream and downstream manholes (with manhole numbers), sanitary sewer main to which the building sewer connects and the wye/lateral. Provide entire route of the building sewer with all Type 1/2/3 clean-outs identified. Note: Clean-outs installed in grass or landscape areas and located within three (3) feet of the building's exterior wall can be installed as Type 1 clean-outs. All other clean-outs must be installed as Type 3 clean-outs, except hardscape surfaces require a Type 2 clean-out. Top of Casting (TC) must be shown for both Type 2 and Type 3 clean outs.
 - m. Elevation of the first floor and lowest point of gravity service (if other than the finished floor elevation).
 - n. Home/building and out-buildings dimensioned and tied down.
 - o. Driveway, sidewalk, and curb line locations. <u>Note:</u> Pavement or concrete, including driveways and sidewalks, must not be constructed on or within one (1) foot horizontal

distance of any sanitary sewer casting. The only exception is a Type 2 clean-out casting in a sidewalk or driveway.

- p. Centerline of adjoining streets with street names.
- q. If applicable, proposed sump pump/roof drain connection into the sub-surface drain. <u>Note</u>: HSE does not permit clear water sources (foundation drains, sump pumps, roof drains, etc.) to discharge into sanitary sewers.
- r. Proposed elevation of the lid (TC) for I&A Tanks or grinder/effluent pumps must be shown.
- 2. All drawings must be drawn to scale and plotted with a horizontal scale of 1" = 10', 20', 30', 40', 50' or 60'. <u>Note</u>: The scale of the plot plan shall display the information clearly and allow HSE the ability to scale dimensions. If HSE has difficulty scaling dimensions or reading the data, HSE may request the plot plan be re-plotted at a different scale.
- 3. All dimensions, distances, elevations, etc. shall be displayed in English units.
- 4. HSE typically will not permit "plan" information, if this information is permitted then it must be labeled as "plan." **Note:** If plan information is permitted, the F.F.E must be at least two (2) feet above the TC elevation of the first downstream manhole on the mainline sewer to which the connection is to be made.
- 5. Elevations on the Plot Plan must be on the same vertical datum as the HSE approved construction plans. **Note:** Record drawings created for HSE are typically prepared on the NAVD 1988 vertical datum; therefore, the entity preparing the plot plan should consider as-built elevations may be on a different vertical datum. Conversions between different datum may be necessary.
- 6. Indicate lateral size as a minimum of six (6) inches in diameter, except I&A tanks shall be (4) four inch diameter.
- 7. All sanitary sewer manhole top of casting (TC) elevations and sanitary sewer/lateral locations indicated on the plot plan will be considered as-built information unless otherwise noted.
- 8. When extending service laterals to the house connection point, lateral must be a minimum of five (5) feet from the face of the structure (house and garage) for portions of the lateral that parallels the structure. Lateral must be a minimum of three (3) feet from the face of a porch if it is adjacent.
- 9. When laterals are extended into side yards, a ten (10) foot separation between the lateral and lot line must be maintained. If this separation cannot be maintained, an additional easement must be granted on the adjoining lot.
- 10. If a manhole is located on the lot or lot line, the following note must be included on the plot plan: "Elevations must be set to ensure drainage away from manholes and top of casting elevations set at four tenths (0.40) foot above finish grade."
- 11. There shall be NO label or breaks on water or sewer lines, all labels shall be placed beside the line.
- 12. For all homes or buildings:
 - a. Indicate well and septic field locations if applicable.
 - b. Identify location(s) at which the plumbing exits the structure(s).
- 13. If the building sewer involves construction of a force main, include HSE's Small Diameter Specifications sheet and either HSE's Common Force Main Details sheet or Grinder Pump Details sheet. These documents can be found on HSE's website: www.hseutilities.com.
- 14. For further information regarding building sewers refer to HSE's "Standards for Design and Construction of Laterals."
- 15. Plot plan shall be prepared and electronically submitted to HSE in PDF format and AutoCAD 14 Revision Date – 12/2022

(or higher) or be capable of being converted to a DXF file.

<u>NOTE</u>: Any changes made to a plot plan will require a resubmittal to HSE for review and approval.