

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**CONSTRUCTION PERMIT**

The Missouri Department of Natural Resources hereby issues a permit to:

Jeff Layton  
The City of Perryville  
215 Northwest St  
Perryville, MO 63775

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

January 12, 2024  
Effective Date

January 11, 2026  
Expiration Date

  
\_\_\_\_\_  
John Hoke, Director, Water Protection Program

## CONSTRUCTION PERMIT

### COLLECTION SYSTEM:

The proposed wastewater collection system project will consist of a new (upgraded/replacement) lift station dry well with three 50-hp centrifugal pumps (capable of pumping a minimum of 1,000 gpm against 35 ft TDH and a maximum of 2,300 gpm against 55 ft TDH) and associated controls, related piping to connect the new dry well to the existing wet well, influent gravity main and force main (approximately 71 lf of 15-inch SDR-35 PVC gravity, approximately 58 lf of 12-inch SDR-35 PVC gravity, 4 manholes, and approximately 3,020 lf of 14-inch DR-25 PVC force main), stand-by natural gas generator, and all necessary appurtenances to make a complete and usable wastewater collection system. There will be no change in flow to the station, but the flow to the station was recalculated to be a design average of 91 gpm (131,040 gpd) and a peak instantaneous flow of 1,820 gpm (108,333 gph) due to the presence of significant I&I within the existing collection system. The project will also include general site work appropriate to the scope and purpose of the project.

On April 12, 2023, the Missouri Clean Water Commission approved a variance from the two-hour minimum emergency storage capacity, as required by 10 CSR 20-8.130(7)(A), allowing only 32 minutes of detention time at the peak hourly flow, but with a dedicated natural gas-powered stand-by generator.

These activities will be in the vicinity of the vicinity of School Street and Star Street in Perryville, Perry County and will discharge to an existing system to be treated at Perryville SE WWTF, MO-0051144.

### PERMIT CONDITIONS:

1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.
2. All construction shall be consistent with plans and specifications signed and sealed by Timothy Baer with Baer Engineering, LLC and as described in this permit.
3. The department must be contacted in writing prior to making any changes to the plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(11).
4. If construction will incorporate minor changes from previously submitted plans and specifications (i.e., changes that do not affect the capacity, flow, or system layout), submit an electronic copy of the as-built plans and specifications in accordance with 10 CSR 20-8.110(11).
5. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the

- department's Southeast Regional Office per 10 CSR 20-7.015(9)(G) or through the Online Bypass/SSO Reporting service on the Missouri Gateway for Environmental Management (MoGEM) portal found at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>.
6. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5) and 10 CSR 23-3.010.
    - A. There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply.
    - B. Sewers shall be laid at least 50 feet in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
  7. Manholes shall be located with the top access at or above grade level.
  8. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the department's ePermitting system available online at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
  9. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.

Katrice Williams  
Engineering Section  
[katrice.williams@dnr.mo.gov](mailto:katrice.williams@dnr.mo.gov)

Cailie Carlile, P.E.  
Engineering Section  
[cailie.carlile@dnr.mo.gov](mailto:cailie.carlile@dnr.mo.gov)

## **APPLICABILITY**

1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earthen flow equalization storage basins at lift stations and inline storage, which flows back into the lift station or collection system, are also included.
2. The Missouri Department of Natural Resources may require a site-specific sewer extension construction permit due to compliance and enforcement actions in accordance with 10 CSR 20-6.010(13)(C).
3. This permit does not apply to:
  - A. Earthen storage basins;
  - B. Exempt projects in accordance with 10 CSR 20-6.010(1)(B), 10 CSR 20-6.010(5)(B), and RSMo 644.051 unless requested by the applicant or required by enforcement.

## **PREREQUISITES:**

1. The Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).
2. Submit the Sewer Extension Construction Permit application at least sixty (60) days in advance of the start of construction in accordance with 10 CSR 20-6.010(5)(F).
3. Submit an electronic copy of the construction permit application and documents to [DNR.WPPEngineerSection@dnr.mo.gov](mailto:DNR.WPPEngineerSection@dnr.mo.gov) in accordance with 10 CSR 20-6.010(5)(G)3.
4. The plans and specifications, each signed, sealed, and dated by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.
5. The Design Certification form, Engineering Report, or Summary of Design, signed, sealed, and dated by a professional engineer registered in the State of Missouri, certifying the design of the system is in accordance with 10 CSR 20-6 and 10 CSR 20-8.
6. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the wastewater for treatment and indicating the permitted treatment facility has the available capacity.
7. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting responsibility for the operation and maintenance of these facilities.

## **PERMIT CONDITIONS:**

1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.
2. The construction must be in accordance with the final plans and specifications received by the Department. Revisions that affect capacity, flow, or system layout must be approved by the Department prior to construction.

**PERMIT CONDITIONS: (continued)**

3. If construction will incorporate minor changes from previously submitted plans and specifications (i.e., changes that do not affect the capacity, flow, or system layout), submit an electronic copy of the as-built plans and specifications in accordance with 10 CSR 20-8.110(11).
4. State and Federal Law does not permit bypassing of raw wastewater; therefore, the applicant must take steps to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's regional office per 10 CSR 20-7.015(9)(E) or through the Online Bypass/SSO Reporting service on the Missouri Gateway for Environmental Management (MoGEM) portal found at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>.

See <https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988> for more information.

5. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5).
  - A. There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply.
  - B. Lay sewers at least 50 feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
6. Position manholes so that the top access is at or above grade level.
7. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Applicants shall obtain land disturbance permits through the Department's ePermitting system, available online at <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting>.

See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance> for more information.

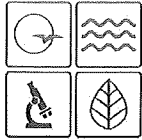
8. Entities applying for funding under 10 CSR 20-4, "Grants and Loans" will need to comply with those requirements in addition to the requirements of 10 CSR 20-8.

**PERMIT CONDITIONS: (continued)**

9. The Department may require a United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) or a permit waiver for the activities described in this permit. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S., then a 404/401 is required. Fulfillment of these requirements is necessary before the permit is considered valid. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Operating Permits Section at 573-522-4502 for more information.

See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.

10. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then the applicant shall submit a full closure plan with a Facility Closure Request Form, [Form – MO 780-2512](#), to the Department's appropriate [regional office](#) for review and approval. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit. Closure shall not commence until the Department approves the submitted closure plan.
11. If this project is part of a project to resolve an enforcement action or is receiving funding from the Department, submit a [statement of work complete](#) following the completion of construction.
12. Applicants may submit, prior to the expiration date of this permit, a written request that additional time is needed in accordance with 10 CSR 20-6.010(5)(H)3.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM  
**APPLICATION FOR CONSTRUCTION PERMIT –  
 SEWER EXTENSION**

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

**NOTE ► Please Read the accompanying instructions before completing this form**

**1.0 APPLICATION INFORMATION** (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project?  YES  N/A Funding Agency: \_\_\_\_\_ Project #: \_\_\_\_\_
- 1.2 Has the Department of Natural Resources approved the proposed project's engineering report\*?  
 YES Date of Approval: 11/28/22  NO  N/A
- 1.3 Is a copy of the appropriate plans\* and specifications\* included with this application?  YES  NO  
 If the project is using standard specifications, name of community: \_\_\_\_\_
- 1.4 Is a summary of design\* included with this application?  YES  NO
- 1.5 Is the appropriate fee or JetPay confirmation included with this application?  YES  NO  
 See Section 7.0

\* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

**2.0 PROJECT INFORMATION**

2.1 NAME OF PROJECT

School St. Lift Station Improvements & Force Main

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
School St.	Perryville	MO	63775	Perry

2.2 Legal Description: ¼, ¼, USS ¼, Sec. 846 , T 35 N , R 10 & 11 E

2.3 Project Components (check all that apply):

- Gravity sewers  Pumping stations  Force mains  Alternative sewer system  Other (Describe below.)

2.4 PROJECT DESCRIPTION

Replace existing lift station and 6" force main with new lift station and approximately 3,000 L.F. of 14" force main.

2.5 DESIGN INFORMATION

- A. Population or number of lots to be served by this extension: SEE ENGINEERING REPORT
- B. Estimated flow to be contributed by this extension: Design Average Flow: \_\_\_\_\_ gpd Design Peak Hourly Flow: \_\_\_\_\_ gph
- C. Industrial Wastes: Type: \_\_\_\_\_ Flow: \_\_\_\_\_ gpd
- D. Receiving Sewer: Size: \_\_\_\_\_ inches Capacity: \_\_\_\_\_ gpm
- E. Does this project (check all that apply):  
 Connect to an existing treatment plant  Resolve enforcement issue  Eliminate or consolidate an existing treatment plant
- F. Estimated number of onsite systems being removed: \_\_\_\_\_
- G: Estimated costs associated with piping: \$ \_\_\_\_\_ Estimated costs associated with lift station(s): \$ \_\_\_\_\_

**3.0 PROJECT OWNER**

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
The City of Perryville	573-547-2594	N/A	
ADDRESS	CITY	STATE	ZIP CODE
215 N. West St.	Perryville	MO	63775

CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED AGENT



**4.0 CONTINUING AUTHORITY:** A continuing authority is a company, business, entity, or person(s) that will be legally responsible for ensuring compliance with the permit requirements and provide continuous stable oversight of the permitted facility or activity. The Continuing authority should be a relatively permanent entity responsible for the ongoing operation, maintenance and modernization, when needed, of the permitted facility or activity. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit [Clean Water Commission Chapter 6](#). A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: [Missouri Secretary of State](#), unless the continuing authority is an individual(s), government entity, or otherwise not required to register with the SoS.

NAME The City of Perryville		TELEPHONE NUMBER WITH AREA CODE 573-547-2594	EMAIL ADDRESS N/A
ADDRESS 215 N. West St.	CITY Perryville	STATE MO	ZIP CODE 63775

CHARTER NUMBER (SECRETARY OF STATE)

4.1 Has appropriate continuing authority acceptance been provided as follows:  
A letter from the continuing authority accepting responsibility for continued maintenance of the sewer (if the continuing authority is different than the original owner of the construction), or a properly executed "Continuing Authority and Receiving Wastewater Treatment Facility Acceptance" Form 780-2584.  YES  NO  N/A

**5.0 ENGINEER**

ENGINEER NAME / COMPANY NAME Timothy J. Baer / Baer Engineering, LLC		TELEPHONE NUMBER WITH AREA CODE 573-547-2310	EMAIL ADDRESS tbaer@baerengineering.com
ADDRESS 313 N. Jackson St.	CITY Perryville	STATE MO	ZIP CODE 63775

**6.0 RECEIVING WASTEWATER TREATMENT FACILITY**

NAME Perryville Southeast Wastewater Treatment Plant		TELEPHONE NUMBER WITH AREA CODE 573-547-2690	EMAIL ADDRESS N/A
MISSOURI STATE OPERATING PERMIT # MO-0051144	COUNTY Perry	REMAINING CAPACITY (GPD) 800,000	

6.1 If different from the owner, has a letter been provided from the receiving treatment facility demonstrating that they agree to accept the expanded flow or has a properly executed Continuing Authority and Receiving Wastewater Treatment Facility Acceptance MO 780-2584 form been provided?  YES  NO  N/A

6.2 A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application.  YES  NO  N/A

6.3 If the receiving treatment plant or continuing authority is regulated by the Public Service Commission (PSC) for sewer activities, a Certificate of Convenience and Necessity has been received?  Yes - Date:  No  N/A

**OPTIONAL QUESTIONS REGARDING MILITARY SERVICE**

Have you or an immediate family member ever served in the U.S. Armed Forces?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, would you like information about military-related services in Missouri?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**7.0 Application Fee**

<input checked="" type="checkbox"/> Check Number 12666	<input type="checkbox"/> JetPay Confirmation Number
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**8.0 PROJECT OWNER:** I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROJECT OWNER SIGNATURE  


PRINTED NAME Jeff Layton	DATE 11/7/23
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TITLE OR CORPORATE POSITION Public Works Director	TELEPHONE NUMBER WITH AREA CODE 573-547-2594	EMAIL ADDRESS jefflayton@perryvillemo.gov
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Mail completed copy to:  MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM PO BOX 176 JEFFERSON CITY, MO 65102-0176	Submit completed electronic copy to:  Missouri Department of Natural Resources at <a href="mailto:DNR.WPPEngineerSection@dnr.mo.gov">DNR.WPPEngineerSection@dnr.mo.gov</a>
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9.0 SEWER EXTENSION CHECKLIST				
SEWER EXTENSION DESIGN CERTIFICATION: Answer all questions yes or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension.				
	REGULATION		YES	N/A
1.	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems calculated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.	8.120(3)(A)	Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	8.120(3) (A)1	Is all sewer pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9.	8.120(4)(A)	Are manholes located at the end of each line, at all changes in grade, size or alignment and at all intersections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	8.120(4)(C)	Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11.	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, they are a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12.	8.120(4)(E)	Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13.	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14.	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system and no water pipes come in contact with a sewer manhole?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15.	8.120(5)(B)	Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST				
	REGULATION		YES	N/A
16.	8.125(5)(A)1.	Does the cleaning velocity of $\geq 2$ ft/s happen more than once per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19.	8.125(5)(B)2.	Are isolation valves located: upstream of major pipe intersections; both sides of stream, bridge and RR crossings; at terminal end of system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21.	8.125(5)(D)1.A	Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence – 1 grinder pump.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22.	8.125(5)(D)1.B	Are multiple unit pump stations owned, operated and maintained by an approved continuing authority?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23.	8.125(5)(D)3.	Is there at least 70 gallons of storage in the grinder pump unit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24.	8.125(5)(D)4.	Do grinder pump stations have shutoff valves, check valves and anti-siphon valves (where siphoning could occur) that are accessible from the ground surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25.	8.125(5)(D)7., 8.130(3)(B)2.	Are units serviceable and replaceable under wet conditions without electrical hazard and is electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26.	8.125(5)(D)8., 8.125(2)(F)6.	Are provisions in place to avoid interruption of service due to mechanical or power failure by providing standby power, storage capacity, or interconnection with another disposal system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27.	8.125(6)(D)	In a STEP system is at least one septic tank (1,000 gallons or more) provided for each EDU with 20% of tank volume dedicated to freeboard and ventilation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

11.0 PUMP STATION CHECKLIST				
	REGULATION		YES	N/A
29.	8.125(7)(C)	Is the minimum diameter sewer main pipe and service line of STEG sewer at least 4"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31.	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
32.	8.130(3)(B)	If the design flow is 1,500 gpd or more, are there at least 2 pumps or pneumatic ejectors provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
33.	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35.	8.130(3)(G)	Does all potable water brought to pump stations comply with 8.140(7)(D)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
36.	8.130(6)	Is an alarm system provided with uninterrupted power?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
37.	8.130(7)(A)	Is there 2 hours retention of the peak hourly flow for a design flow > 100,000 gpd or 4 hrs retention of the peak hourly flow for a design flow < 100,000 gpd?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38.	8.130(7)(B)	Are there independent utility substations provided for emergency power capable of starting and operating the pump station at its rated capacity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39.	8.130(8)(A)	Is the force main velocity of $\geq 2$ ft/s maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40.	8.130	Are there complete operation instructions for the pumping stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

12.0 SUCTION LIFT PUMP AND SUBMERSIBLE PUMP STATION CHECKLIST				
	REGULATION		YES	N/A
41.	8.130(4)	Are the suction lift pumps of the self priming or vacuum priming type?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42.	8.130(4)(A)	Is the combined total of dynamic suction lift at the "pump off" elevation and required net positive suction head at design operating conditions less than or equal to 22 feet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43.	8.130(4)(B)	Are there dual vacuum pumps capable of removing air from the suction lift pump?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44.	8.130(5)(A)	Are submersible pumps readily removable and replaceable without personnel entering, or disconnecting any pipe in the wet well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**13.0 SEWER EXTENSION CHECKLIST -- CERTIFICATION STATEMENT**

For any questions answered "N/A" provide an explanation. Also provide any useful general comments regarding design for review engineer.

37. See Missouri Clean Water Commission Order Granting Variance No. CWC-V-1-23 dated 4/12/23.

38. See Missouri Clean Water Commission Order Granting Variance No. CWC-V-1-23 dated 4/12/23.

Missouri Professional Engineer's seal, signature and date:

*Timothy J. Baer*



Name: Timothy J. Baer

Address: 313 N. Jackson St.

City: Perryville

State: MO

ZIP Code: 63775

Telephone Number with Area Code: 573-547-2310

Email: tbaer@baerengineering.com