STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of	f Natural Resources hereby issues a permit to:
Construction Permit ID: Title of Project: Owner: Address:	MOGC00791 The Crossing on 5th City of Washington 405 Jefferson Street Washington, MO 63090
	e general site work appropriate to the scope and purpose of the project and will include all the necessary mplete and usable collection system. The construction of this project will be in the vicinity of the county eiving Permit ID below:
County: Franklin	Receiving Permit ID: MO0025810
for the construction of (desc	cribed construction project):
HDPE emergency storage	action of approximately 3,759 lf of 8-inch PVC SDR-35 gravity sewer and 135 lf of 60-inch to lines with approximately 28 manholes to serve a 640 PE and a design average flow of 1,014 lf of 4-inch SDR 26 PVC force main with 1 lift station.
	of 2459 East 5th Street in Washington, Franklin County and discharges to an existing ashington WWTF, MO-0025810. Charles Stankovic from the City of Washington signed attion.
RSMo, and regulation prom As the Department does not permit does not include app	sed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, sulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department) examine structural features of design or the efficiency of mechanical equipment, the issuance of this roval of these features. the construction of water pollution control components; it does not apply to other environmentally
September 23, 2024 Issue Date	John Hoke, Director Water Protection Program

September 22, 2026 Expiration Date

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 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 <a href="https://dnr.mo.gov/data-e-services/water/electronic-permitting-ep

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 <u>statement of work complete</u> 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 ACCOMPAN										
1.0 APPLICATION INFORMATION (Note – considered incomplete and returned.)	If any of the quest	ions in this secti	ion are answ	ered NO, this applic	ation may be					
1.1 Is this a Federal/State funded project?	☐ YES ☑ N/A	A Funding Age	ency:	Pro	oject #:					
1.2 Has the Department of Natural Resources approved the proposed project's engineering report*? ☐ YES Date of Approval: ☐ NO ☑ N/A										
1.3 Is a copy of the appropriate plans* and s	1.3 Is a copy of the appropriate plans* and specifications* included with this application?									
1.4 Is a summary of design* included with the	is application?	YES NO)							
1.5 Is the appropriate fee or JetPay confirmation See Section 7.0	ation included with	this application?	YES	□NO						
* Must be affixed with a Missouri registered p	rofessional engine	er's seal, signat	ture and date							
2.0 PROJECT INFORMATION 2.1 NAME OF PROJECT		, XII, HI IV OV	longer, la 1							
The Crossing on 5th										
ADDRESS 2549 East 5th Street	CITY Washington		STATE MO	63090	COUNTY Franklin					
2.2 Legal Description: 1/4, SW	1/4, NE 1/4,	Sec. 25 , T.	44N , R 11	W						
2.3 Project Components (check all that apply Gravity sewers Pumping station		ns □ Alternat	tive sewer sy	stem □ Other (D	escribe below.)					
☐ Gravity sewers ☐ Pumping stations ☐ Force mains ☐ Alternative sewer system ☐ Other (Describe below,) 2.4 PROJECT DESCRIPTION Installation of approximately 3,632 feet of 8 inch SDR 35 PVC gravity sewer pipe, 28 manholes, a lift station and 1,014 feet of 4 inch SDR 21 PVC pressure sewer main to serve a residential development.										
2.5 DESIGN INFORMATION A. Population or number of lots to be served				D : D	-					
B. Estimated flow to be contributed by this eC. Industrial Wastes: Type:	xtension: Design Flow:		64,000 gpd	Design Peak Hourly	/ Flow: 10,444 gph					
D. Receiving Sewer: Size: 8 inches	0 "	gpd 313 gpm								
3.0 PROJECT OWNER		710 01								
NAME	TELEPHO	ONE NUMBER WITH AR	REA CODE	EMAIL ADDRESS						
City of Washington	636-39									
ADDRESS 405 Jefferson Street	CITY Washington		MO	ZIP CODE 63090						
4.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity or person(s) that will be operating the facility or ensuring compliance with the permit requirements. 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 https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS.										
City of Washington	636-390	ONE NUMBER WITH AR 0-1010	REA CODE	EMAIL ADDRESS						
ADDRESS 405 Jefferson Street	CITY Washington		STATE MO	ZIP CODE 63090						
4.1 A letter from the continuing authority or ti if different than the owner, is included with the		nority and Receivers	ving Wastewa	ater Treatment Faci	lity Acceptance form,					

ENGINEER NAME / COMPANY NAME		TELEPH	ONE NUMBER WITH AR	EA CODE	EMAIL ADDRESS		
Nunderlich Surveying & Eng	ineering, Inc.	636-58	636-583-8400		ron@wseteam.com		
ADDRESS		YTK	STATE		ZIP CODE		
512 East Main Street	l	Inion		MO	63084		
6.0 RECEIVING WASTEWA	TER TREATMEN	T FACILITY		334			
NAME			ONE NUMBER WITH AR	EA CODE	EMAIL ADDRESS		
Washington Sewage Treatme		636-39	0-1010				
MISSOURI STATE OPERATING PERMIT	#	REMAIN	NG CAPACITY (GPD)				
MO- 0025810		1.26	MGD				
6.1 Has the receiving treatm	ent facility agreed	to accept the ac	Iditional wastewa	ter flow?	☑ YES □ NO		
6.2 A letter from the receivin ☐ YES ☐ NO ☑	g wastewater treat N/A	ment facility, if o	different than the	continuing	authority, is included with this application		
7.0 Application Fee	The Branch						
Check Number			F1				
8.0 PROJECT OWNER: I ce supervision in accordance w	ith a system desigi	ned to assure th	document and all	attachme	ation Number nts were prepared under my direction or erly gather and evaluate the information		
8.0 PROJECT OWNER: I co supervision in accordance w submitted. Based on my inqu gathering the information, the aware that there are significa	ith a system desigi uiry of the person c e information subm	ned to assure the r persons who r litted is, to the b	document and all at qualified perso nanage the syste est of my knowle	attachme nnel prope m, or thos	nts were prepared under my direction or		
8.0 PROJECT OWNER: I consume supervision in accordance we submitted. Based on my inquigathering the information, the aware that there are significated when wing violations.	ith a system desigi uiry of the person c e information subm	ned to assure the r persons who r litted is, to the b	document and all at qualified perso nanage the syste est of my knowle	attachme nnel prope m, or thos	nts were prepared under my direction or erly gather and evaluate the information e persons directly responsible for elief, true, accurate, and complete. I am sibility of fine and imprisonment for		
8.0 PROJECT OWNER: I consupervision in accordance we submitted. Based on my inquigathering the information, the aware that there are significated when wind violations. PROJECT OWNER SIGNATURE PRINTED NAME	ith a system design uiry of the person of e information subm ant penalties for su	ned to assure the persons who reitted is, to the bomitting false in	document and all at qualified perso nanage the syste est of my knowle	attachmennel properm, or thosodge and being the pos	nts were prepared under my direction or erly gather and evaluate the information e persons directly responsible for elief, true, accurate, and complete. I am sibility of fine and imprisonment for		
8.0 PROJECT OWNER: I ce supervision in accordance we submitted. Based on my inquigathering the information, the aware that there are significated knowing violations. PROJECT OWNER SIGNATURE PRINTED NAME Charles Stankovic	ith a system designation of the person of the person of the person of the information submant penalties for su	ned to assure the persons who reitted is, to the bomitting false in	document and all at qualified perso manage the syste est of my knowled formation, including the Number with are	attachmennel properm, or thosodge and being the pos	nts were prepared under my direction or orly gather and evaluate the information e persons directly responsible for elief, true, accurate, and complete. I am sibility of fine and imprisonment for		

INSTRUCTIONS FOR COMPLETING APPLICATION FOR CONSTRUCTION PERMIT – SEWER EXTENSION

All blanks must be filled in when the application is submitted to the Missouri Department of Natural Resources. This includes the **required signature**.

In accordance with Missouri State law RSMo 644.051.3.(2), sewer extension projects installing up to a total of 1,000 linear feet of gravity sewer or force main with less than two pump stations are exempt from obtaining a construction permit. Since these projects are exempt, a construction permit will not be issued for this activity and completion of this form is not required.

Note: Use the form *Application for Construction Permit – Wastewater Treatment Facility*, MO 780-2189, if any wastewater treatment component(s) are to be constructed.

A land disturbance permit is required if construction will result in the disturbance of one or more acres of land. A land disturbance permit is available through the department's ePermitting system at department's ePermitting system at department/belp.htm. A permit fee in accordance with 10 CSR 20-6.011(2)(E) is required.

After receiving a complete application, the department enters the application information into the Missouri Clean Water Information System. You may search for the status of a construction permit online at https://apps5.mo.gov/mocwis-public/applicationInprocessSearch.do.

- 1.1 Check appropriate box. If the project is funded with federal or state monies, supply the funding agency name and project number.
- 1.2 Check appropriate box and provide the date of department approval.

 The department has developed a fact sheet to aid in the development of an approvable engineering report. This document is available online at dnr.mo.gov/pubs/pub2415.htm. Engineering report exemptions are listed in 10 CSR 20-6.010(4)(B). Per 10 CSR 20-8.110(2), engineering reports must be approved by the department prior to the submittal of plans and specifications and a construction permit application. The department has developed a fact sheet to aid in the development of an approvable engineering report, Engineering Report Guidance for Collection Systems, Fact Sheet--PUB2415.
- 1.3 Check appropriate box. Provide a copy of the appropriate plans and specifications for department review when applying for a construction permit per 10 CSR 20-8.110 and 10 CSR 20-6.010. A Missouri registered professional engineering seal, signature and date is required on each sheet of the plans and the cover of the technical specifications. An electronic copy of the construction permit application and the information listed below in Portable Document Format (PDF) searchable format or department approved equivalent per 10 CSR 20-6.010(5) (G), along with one paper copy for projects not seeking department funding or two paper copies for projects seeking department funding under 10 CSR 20-4.
- 1.4 Check appropriate box. A summary of design shall accompany the plans and specifications when applying for a construction permit per 10 CSR 20-8.110. The department has developed a fact sheet to aid in the development of an acceptable summary of design, <u>Summary of Design Guidance</u>, Fact Sheet--PUB2417.
- 1.5 Check the appropriate box. Include fee with application per 10 CSR 20-6.011(2) and Wastewater Treatment Facility Permit Fees -- PUB2564.
- Note: The department returns incomplete construction permit applications and related engineering documents and the application forfeits the fees. See 10 CSR 20-6.011(5)(A). The applicant forfeits the fees when the applicant withdraws construction applications. See 10 CSR 20-6.011(5)(B).2.1. Provide the project name and location by street name or address.
- 2.2 Provide the project legal description. The department's mapping system is available online at dnr.mo.gov/gis/.
- 2.3 Check all of the applicable boxes.
 - The department considers anything other than a gravity sewer system to be an alternative sewer system. Examples of these systems are grinder pump pressure sewers, septic tank effluent pump, or STEP, sewers, septic tank effluent gravity, or STEG, sewers or small diameter gravity sewers.
- 2.4 Briefly describe the project by providing the following information:
 - A. Total number of manholes.
 - B. Size of sewers and the total linear feet of each size.
 - C. Number of lift stations and design average flow and peak hourly flow capacities of each lift station.
 - D. Size and length of force mains.
 - E. Alternative sewer size and length, plus the number of components (e.g. septic tanks, grinder pumps, etc.)
- 2.5 Provide the project design information and when required in the units specified.
 - A. Provide the population or number of lots to be served by the proposed sewer extension.

- B. Provide the estimated design flow information in accordance with 10 CSR 20-8.110(4)(C)4.A.

 Design average flow The design average flow is the average of the daily volumes to be received for a continuous 12 month period expressed as a volume per unit time. However, the design average flow for facilities having critical seasonal high hydraulic loading periods (e.g., recreational areas, campuses and industrial facilities) shall be based on the daily average flow during the seasonal period.

 Design peak hourly flow The design peak hourly flow is the largest volume of flow to be received during a one hour period expressed as a volume per unit time.
- C. Provide the type and flow in gallons per day of industrial wastes received by the propose sewer extension.
- D. Provide the receiving sewer size in inches and capacity in gallons per minute.
- 3.0 Complete Project Owner information. Include the legal name and address.
- 4.0 Continuing Authority A continuing authority is a company, business, entity or person(s) that will be operating the facility or ensuring compliance with the permit requirements. 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 http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS. If same as the Project Owner, write "Same as above"
- 4.1 Check appropriate box. Include a letter signed by the continuing authority (if not same as the project owner) stating they will "accept, operate and maintain" the sewer extension. The continuing authority may also complete the Continuing Authority and Receiving Wastewater Treatment Facility Acceptance form in lieu of a letter. If the continuing authority will not accept and agree to operate and maintain the sewer extension, this application will be considered incomplete.
- 5.0 Complete Engineer contact information.
- 6.0 Complete Receiving Wastewater Treatment Facility information. Include the Missouri State Operating Permit number and the available remaining capacity in gallons per day, or gpd.
- 6.1 Check appropriate box. The receiving wastewater treatment facility must be notified and agree to the proposed sewer extension and additional flow, prior to submitting a construction permit to the department.

 If the receiving wastewater treatment facility will not accept the wastewater, this application will be considered incomplete.
- 6.2 Check appropriate box. Include a letter from the receiving wastewater treatment facility (if not same as the continuing authority) acknowledging and accepting the additional flow from the proposed sewer extension.
- 7.0 Check the appropriate box and include check or confirmation number. Applicants can pay fees online by credit card or eCheck through a system called JetPay.
 - Per Section 37.001, RSMo, a transaction fee will be included. The transaction fee is paid to the third party vendor JetPay, not the Department of Natural Resources.
 - Be sure to select the correct fee type and corresponding URL to ensure your payment is applied appropriately. If you are unsure what type of fee to pay, please contact the Water Protection Program's Budget, Fees, and Grants Management Unit by phone at 573-522-1485 for assistance.
 - Upon successful completion of your payment, JetPay provides a payment confirmation. Submit this form
 with a copy of the payment confirmation if requesting a new permit or a permit modification. For permit
 renewals of active permits, the Department will invoice fees annually in a separate request.
 - If you are unable to make your payment online, but want to pay with credit card, you may email your name, phone number, and invoice number, if applicable, to wppfees.gov.. The Budget, Fees, and Grants Management Unit will contact you to assist with the credit card payment. Please do not include your credit card information in the email.
 - Applicants can find fee rates in 10 CSR 20-6.011 and Wastewater Treatment Facility Permit Fees-PUB2564 (https://dnr.mo.gov/pubs/pub2564.htm).

WP 04 Construction Permits: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/592/
8.0 The owner of the construction project must sign the application.

Mail the completed form and applicable fee to the department.

If there are any questions concerning this form, please contact the Department of Natural Resources, Water Protection Program at 800-361-4827 or 573-751-1300 or visit dnr.mo.gov/env/wpp/permits/ww-construction-permitting.htm.

SEWER EXTENSION DESIGN CERTIFICATION

Answer all questions yes, no, or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension OR if a deviation was previously allowed by the Department in the approval of Standard specifications or Standard Detail Sheets.

9.0	9.0 SEWER EXTENSION CHECKLIST							
	REGULATION		YES	NO	N/A			
1	8.110(9)(B)	Are detailed plans showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities provided?						
2	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	×]					
3	8.110(3)(B)	Are average design flows, peak hourly flows, and I&I contributions for new systems calculated.						
4	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains, and combined wastewater?						
5	8.120(3)(C)	Is ASTM C969-17 leakage test specified to ensure water tight joint seals and appropriate exfiltration and infiltration rates?						
6	8.120(4)(A)	Are manholes located at all changes in grade, size or alignment, and all intersections?						
7	8.120(3)(A)1	Are all sewer pipes constructed with a slope to obtain mean velocities of not less than 2 feet per second?						
8	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?						
9	8.120(3)(A)	Is the pipe installation, embedment, and backfill designed to prevent damage to the pipe and its joints?						
10	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?						
11	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"?						
12	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, are they a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8"?						
13	8.120(4)(E)	Are the manholes specified to be watertight, constructed, installed in accordance with the manufacturer's recommendations and procedures?						
14	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?						
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?						
16	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system with no water pipes coming in contact with a sewer manhole?						

	REGULATION	WERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST	YES	NO	N/A
17	8.125(5)(A)1.	Does the cleaning velocity of ≥ 2 ft/s happen at least once per day?			
18	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	H	t H	╁≓
19	8.125(5)B	Are appurtenances compatible with the piping system?	H	+	╁
20	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25 in.?	H	H	ㅐΗ
21	8.125(5)(D)1.	Do simplex grinder pump stations service only a single equivalent	+=	H	ㅏ믐
	Α	dwelling unit (EDU)? i.e. 1 residence – 1 grinder pump station.	Щ		$ \sqcup$
22	8.125(5)(D)1, B	Are multiple unit pump stations owned, operated, maintained by an approved continuing authority?			
23	8.125(5)(D)3	Is there at least 70 gallons of storage in the grinder pump unit?	П		$\vdash \sqcap$
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?			
25	8.125(5)(D)7	Are units serviceable and replaceable under wet conditions without			
	8.130(3)(B)2	electrical hazard and electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1			
		location)?			
26	8.125(5)(D)8	Are provisions in place to avoid interruption of service due to			
	8.125(6)(F)6	mechanical or power failure by providing standby power, storage			ΙП
27	8.125(6)(D)	capacity or interconnection with another disposal system? Does each EDU have at least one septic tank with a minimum of 1,000			-
21	8.180(2)	gallon capacity with 20% of tank volume dedicated to freeboard and			
		ventilation?		_	1
28	8.125(6)(F)	Are pump vaults designed with duplex pumps for STEP sewer systems with design flow of 1,500 gallons per day or greater?			
29	8.125(7)(A)	Is the minimum STEG sewerservice line at least 4" in diameter?			
11 0	8.125(7)(C)	LOUFOVLICT	LU_		LU
11.0	PUMP STATION REGULATION	I CHECKLIST	LVEO	Luo	
30	8.130(2)(A)	Is the numb station decigned to withstand the 100 year flood?	YES	NO	N/A
30	8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?			
31	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable	П		П
32	8.130(3)(B)	and safe means of access provided to each? If the design flow is 1,500 gpd or more, are at least 2 pumps or			
-	0.100(0)(0)	pneumatic ejectors provided?			
33	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?			
34	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?			
35	8.130(3)(G)	Does all potable water brought to the pump station comply with 8.140			
20	0.400(0)	(7) D?			닏
36	8.130(6)	Is an alarm system provided with uninterrupted power?	$oxed{oxed}$		
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?			
38	8.130(7)(B)	Is there an independent utility substation provided for emergency power that is capable of starting and operating the pump station at its rated capacity?			
39	8.130(8)(A)	Is the force main velocity of ≥ 2 ft/s maintained?			
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?			

12.0	SUCTION LIFT	PUMP AND SUBMERSIE	BLE PUMP STATIO	N CHECKLIST			
	REGULATION				YES	NO	N/A
41	8.130(4)	Are the suction lift pump	s of the self priming	or vacuum priming type?			П
42	8.130(4)(A)	Is the combined total of and required net positive less than or equal to twe	suction head at des	at the "pump off" elevation sign operating conditions			
43	8.130(4)(B)	Are there dual vacuum p lift pump?	oumps capable of re	moving air from the suction			
44	8.130(5)(A)	Are submersible pumps personel entering, or disc	readily removable a connecting any pipe	nd replaceable without in the wet well?			
13.0	CERTIFICATIO	N STATEMENT					
	I hereby certify t that I am a duly	Licensed Professional Eng	, and/or report was p gineer under the law	orepared by me or under my is of the state of Missouri. Useful comments on design for			
Miss	ouri Professional	Engineer's Seal:					
Nam Stree City:	et Address:	St	ate:	ZIP Code:			
Phor	ne Number:		Email:				