# STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



### GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of Natu	ural Resources hereby issues a permit to:
Construction Permit ID: Title of Project: Owner: Address:	MOGC00844 Brookside Addition Phase 4 Lombardo Homes of St. Louis LLC 4 Research Park Drive, Suite 130 St. Charles, MO 63304
	eral site work appropriate to the scope and purpose of the project and will include all the necessary e and usable collection system. The construction of this project will be in the vicinity of the county g Permit ID below:
County: St. Charles	Receiving Permit ID: MO0028720
for the construction of (described	construction project):
approximately 3 manholes. Co.	Construction of approximately 291 lf of 8-inch PVC SDR-35 gravity sewer lines with instruction of a low pressure sewer with grinder pumps and approximately 1459 lf of in to serve 23 residential lots with a design average flow of 8510 gpd. Installation of with a 70 gallon capacity.
discharges to an existing City of	dewert Road and Mossy Brook Drive in the City of OFallon, St. Charles County and of OFallon collection system to be treated at OFallon WWTP, MO-0028720.  Wastewater Plant Superintendent, City of OFallon provided an acceptance letter
RSMo, and regulation promulgate As the Department does not exam permit does not include approval	cilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, ed thereunder, or this permit may be revoked by the Department of Natural Resources (Department) nine structural features of design or the efficiency of mechanical equipment, the issuance of this of these features.  Instruction of water pollution control components; it does not apply to other environmentally
February 06, 2025 Issue Date	John Hoke, Director Water Protection Program

February 05, 2027
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 <a href="mailto:DNR.WPPEngineerSection@dnr.mo.gov">DNR.WPPEngineerSection@dnr.mo.gov</a> 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 <a href="https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem">https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem</a>.

See <a href="https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988">https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988</a> 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 <a href="https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance">https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance</a> 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 <a href="https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality">https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality</a> 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 DEPAR	TMENT USE ONLY
APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

				DATE RECEIVED	
NOTE ► Please Read the accompanying i	instructio	ons before completing t	his form		THE RESERVE
1.0 APPLICATION INFORMATION (Note – considered incomplete and returned.)	lf any of th	ne questions in this section	on are answe	red NO, this applica	ation may be
1.1 Is this a Federal/State funded project? ☐ YES ☑ N/A Funding Agency: Project #:					
1.2 Has the Department of Natural Resource  Type Date of Approximation    Type Date of Approxima		ed the proposed project's	engineering  NO	report*?	□ N/A
1.3 Is a copy of the appropriate plans* and s	pecification	ons* included with this ap	plication?	✓ YES □ NO	
If the project is using standard specificat					<del></del>
1.4 Is a summary of design* included with th					
1.5 Is the appropriate fee or JetPay confirms     See Section 7.0	ation inclu	ded with this application?	YES	□NO	
* Must be affixed with a Missouri registered p	rofession	al engineer's seal, signat	ure and date		
2.0 PROJECT INFORMATION 2.1 NAME OF PROJECT					
Brookside Addition Phase 4					
ADDRESS	CITY		STATE	ZIP CODE	COUNTY
Maple Brook Dr. @ Mossy Brook Dr.	City of C	Fallon	МО	63366	St Charles
2.2 Legal Description: 1/4, 1/2	4,	¼, Sec. Sur 1783,	T 47N ,	R <sub>2E</sub>	
2.3 Project Components (check all that apply  ☐ Gravity sewers ☐ Pumping station		orce mains	ive sewer sy	stem	Describe below.)
2.4 PROJECT DESCRIPTION					
Approximately 1,454 linear feet of 2.0" SDR2	1 LPSS sa	anitary sewer.			
		•			
A. Population or number of lots to be served	by this ex	dension: 23 Lots - 8510	gpd		
B. Estimated flow to be contributed by this ex	xtension:	Design Average Flow:	gpd	Design Peak Hourl	y Flow: 1480 gph
C. Industrial Wastes: Type: Flow: gpd					
D. Receiving Sewer: Size: 8 inches Capacity: 7066 gpm					
E. Does this project (check all that apply):					
☑ Connect to an existing treatment plant  ☐	Resolve	e enforcement issue	Eliminate or	consolidate an exis	ting treatment plant
F. Estimated number of onsite systems being	g remove	d:			
G: Estimated costs associated with piping: \$		Estimated costs a	ssociated wit	h lift station(s): \$	
3.0 PROJECT OWNER		L TELEBUONE NUMBER	F- 1000		
Lombardo Homes of St. Louis, LLC	TELEPHONE NUMBER WITH AR 314-336-0248	EA CODE	EMAIL ADDRESS Sgurganus@lomb	ardohomes.com	
ADDRESS	CITY	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	STATE	ZIP CODE	2. 25101100,0011
4 Research Park Drive, Suite 130	St. Charl	les	мо	63304	
CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED	AGENT				
NO 790 4622 (40 22)	_				

MO 780-1632 (10-22)

4.0 CONTINUING AUTHORITY: A continuing for ensuring compliance with the permit required continuing authority should be a relatively permit when needed, of the permitted facility or activation of the permitt	irements a ermanent e vity. A con and mainta ry requiren authority's	and provide entity respor tinuing auth ain the syste nent regardi name must he continuir	continuous s nsible for the ority is not, h m for a defir ng continuin be listed exa g authority i	stable oversic ongoing op nowever, an ned time per ig authority, actly as it ap s an individu	ight of the permitted facility or activity. The deration, maintenance and modernization, entity or individual that is contractually iod, such as a certified operator or 10 CSR 20-6.010(2), please visit Clean opears on the Missouri Secretary of State's ual(s), government entity, or otherwise not	
NAME City of O'Fallon MO		636-379-2	NUMBER WITH A 212	REA CODE	EMAIL ADDRESS  Msuddarth@ofallon.mo.us	
ADDRESS	CITY			STATE	ZIP CODE	
100 North Main Street CHARTER NUMBER (SECRETARY OF STATE)	O'Fallon			МО	63366	
4.1 Has appropriate continuing authority accepting A letter from the continuing authority accepting different than the original owner of the construction Treatment Facility Acceptance" Form 780-25	ng respons ruction), or	sibility for co a properly	ntinued mai exec <u>ute</u> d "C	ntenance of		
5.0 ENGINEER			SV. Santa - G. Santa			
ENGINEER NAME / COMPANY NAME The Sterling Company		(314) 487-	NUMBER WITH A 0440	REA CODE	EMAIL ADDRESS MBoerding@Sterling-eng-sur.com	
ADDRESS 5055 New Baumgartner Road	St. Louis	10 / .		STATE MO	ZIP CODE 63129	
6.0 RECEIVING WASTEWATER TREATME			1100	TI II.		
NAME City of O'Fallon MO		TELEPHONE I	NUMBER WITH A	REA CODE	EMAIL ADDRESS Msuddarth@ofallon.mo.us	
MISSOURI STATE OPERATING PERMIT # MO-0028720		COUNTY St. Charles			REMAINING CAPACITY (GPD) 2.99 MGD	
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 <b>or</b> 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 tre  ✓ YES ☐ NO ☐ N/A	eatment fac	cility, if differ	rent than the	continuing	authority, is included with this application.	
6.3 If the receiving treatment plant or continu Certificate of Convenience and Necessity ha			ted by the P Yes – Date		e Commission (PSC) for sewer activities, a	
OPTIONAL QUESTIONS REGARDING MIL	ITARY SE	RVICE				
Have you or an immediate family member ev U.S. Armed Forces?	in the	□ Y	'es	□No		
If yes, would you like information about military-related se in Missouri?			□ Y	'es	□ No	
7.0 Application Fee						
			☐ JetPay	Confirmatio	n Number	
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	$\geq$					
PRINTED NAME Scott Gurganus					12-18-24	
TITLE OR CORPORATE POSITION			TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS	
DIRECTOR DE LAND DEVELO		636-265-2	/10		sgurganus@lombardohomes.com	
Mail completed copy to:				Submit o	completed electronic copy to:	
MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM PO BOX 176 JEFFERSON CITY MO 65102-0176			Missouri Department of Natural Resources at DNR.WPPEngineerSection@dnr.mo.gov			

MO 780-1632 (10-22)

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  8.110(3)(A)  1. 8.110(3)(A)  1. 8.110(3)(B)  Are everage design flow based on actual flow data for an existing system?  2. 8.110(3)(B)  3. 8.110(9)(B)  1. 8. the design flow based on actual flow data for an existing system?  3. 8.110(9)(B)  1. 8. the reverage design flows, peak hourly flows and (81 contributions for new systems calculated?)  4. 8.120(2)  1. 8. 120(2)  1. 8. 120(3)(A)  2. 9. 8. 120(3)(A)  2. 18. 120(3)(A)  3. 18. 120(3)(A)  4. Are manholes bacted at the end of each line, at all changes in grade, size or elignment and sail intersections?  1. 8. 120(4)(C)  4. Are manholes 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°?  1. 8. 120(4)(C)  4. Are manholes 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°?  1. 8. 120(4)(C)  4. Are manholes 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 come in contact with a sever precion and testing for manholes?  1. 8. 120(4)(C)  4. Are manholes 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 come in contact with a sever manhole?  1. 8. 120(4)(E)  4. 8. 120(4)(E)  4. 8. 120(5)(A)  4. 8. 120(5	9.0 S	EWER EXTENSION	ON CHECKLIST		3,47
REGULATION   YES NA   1. 8.110(3)(A)   Is the design flow based on actual flow data for an existing system?	SEW	ER EXTENSION D	<b>PESIGN CERTIFICATION:</b> Answer all questions yes or N/A. Answer N/A only if the question is of the proposed sewer extension.	clearly	not
2. 8.110(3)(B) Are average design flows, peak hourly flows and I&I contributions for new systems				YES	N/A
2. 8.110(3)(8) Are average design flows, peak hourly flows and i&l contributions for new systems calculated?  3. 8.110(9)(8) Is there a detailed plan showing tributary area, boundaries, pertinent elevations, loography, existing and proposed facilities?  4. 8.120(2) Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?  5. 8.120(3)(A) Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?  6. 8.120(3)(A) Is sell sewer pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?  7. 8.120(3)(A) Is the pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?  8. 8.120(3)(A) Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  9. 8.120(3)(A) A manifolds included the nature on pipe exceeds a deflection of 5% of the inside diameter?  10. 8.120(4)(C) Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer in line larger than 8°?  11. 8.120(4)(C) Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer in line larger than 8°?  12. 8.120(4)(E) Are deanouts 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°?  12. 8.120(4)(E) Are the manholes wetterflight, constructed and installed in accordance with the manufacturer's recommendations and procedures?  13. 8.120(4)(E) Are the manholes wetterflight, constructed and installed in accordance with the manufacturer's recommendations and procedures?  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?  15. 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?  16. 8.125(5)(A)1. Does the cleaning velocity of ≥ 2 fi/s happen more tha	1.	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	7	
topography, existing and proposed facilities?  Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?  1. 8.120(3)(A)  Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?  1. 8.120(3)(A)  Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?  1. 8.120(3)(A)  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  2. 8.120(3)(A)  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  Is the manifoles located at the end of each line, at all changes in grade, size or alignment and at all intersections?  In the larger than 6°?  In the larger than 6°?  In the support than 6°?  In the suppo	2.		calculated?		
combined wastewater?  5. 8.120(3)(A)   Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?  6. 8.120(3)(A)1   Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?  7. 8.120(3)(A)2   Is the pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?  7. 8.120(3)(A)2   Is the pipe covered with at least 36° of soil or sufficiently insulated to prevent freezing?  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(4)(A)   Are manholes located at the end of each line, at all changes in grade, size or alignment and at all intersections?  10. 8.120(4)(C)   Are manholes located at the end of each line, at all changes in grade, size or alignment and at all intersections?  11. 8.120(4)(C)   Are manholes located 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 or pipes < 8°?  11. 8.120(4)(F)   Are the manholes waterlight, constructed and installed in accordance with the manufacturer's recommendations and procedures?  12. 8.120(4)(F)   De the specifications include a requirement for inspection and testing for manholes?  13. 8.120(4)(F)   De the specifications include a requirement for inspection and testing for manholes?  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?  15. 8.120(5)(B)   Are sewers and manholes located at lieast 50 feet horizontally from any existing or proposed water supply well, sources, structures?  10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST  REGULATION   Yes N/A  17. 8.125(5)(A)2. Is the diameter of the pressure sewer main pipe at least 1.5°?  20. 8.125(5)(B)2. Are supportenances compatible with the piping system?  21. 8.125(5)(B)2. Are included and maintained by an approved ordinary and provide and maint				V	
and its joints?		<u> </u>		V	
per second?  1. 8.120(3)(A)2 Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?  2. 8. 8.120(3)(B) Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?  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?  10. 8.120(4)(C) Are manholes that tests 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8"?  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 egual to the diameter for pipes < 8"?  12. 8.120(4)(E) Are the manholes watertight, constructed and installed in accordance with the manholes watertight, constructed and installed in accordance with the manholes watertight, constructed and installed in accordance with the manholes recommendations and procedures?  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?  15. 8.120(5)(B) Are sewers and manholes for a potable water supply system and no water pipes come in contact with a sewer manhole?  16. 8.125(5)(A)1. Does the cleaning velocity of 2.2 ft/s happen more than once per day?  17. 8.125(5)(A)2. Is the diameter of the pressure sewer main pipe at least 1.5"?  18. 8.125(5)(B) Are appurtenances compatible with the piping system?  19. 8.125(5)(B) Are appurtenances compatible with the piping system?  20. 8.125(5)(D)1. A po simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence —1 grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence —1 grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence —1 grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence —1 grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e.			and its joints?	V	
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diameter?   diameter?	7.	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	<b>V</b>	
and at all intersections?    1.	8.	8.120(3)(B)		V	
Iline larger than 8"?				V	
diameter of 8 inches or larger and egual to the diameter for pipes < 8"?  12. 8.120(4)(E) Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?  13. 8.120(4)(F) Do the specifications include a requirement for inspection and testing for manholes?  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?  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. 9.7 REGULATION  16. 8.125(5)(A)1. Does the cleaning velocity of ≥ 2 ft/s happen more than once per day?  17. 8.125(5)(A)2. Is the diameter of the pressure sewer main pipe at least 1.5"?  18. 8.125(5)(B) Are appurtenances compatible with the piping system?  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?  20. 8.125(5)(D)1. Do service line pipes have a minimum diameter of 1.25"?  21. 8.125(5)(D)1. Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence − 1 grinder pump.  22. 8.125(5)(D)1. Are multiple unit pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence − 1 grinder pump.  23. 8.125(5)(D)3. Is there at least 70 gallons of storage in the grinder pump unit?  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)3. Is there at least 70 gallons of storage in the grinder pump unit?  26. 8.125(5)(D)4. Provided for each electrical equipment suitable for hazardous locations (National Electrical Lode, Class I, Group D, Division 1 location?  26. 8.125(5)(D)8. Are multiple unit location?  27. 8.126(6)(D) In a STEP system is at least one septic tank (1,000 gallons or more) provided for e			line larger than 8"?	V	
manufacturer's recommendations and procedures?			diameter of 8 inches or larger and equal to the diameter for pipes < 8"?		V
13. 8.120(4)(F) Do the specifications include a requirement for inspection and testing for manholes?  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?  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?  10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST  REGULATION  16. 8.125(5)(A)1. Does the cleaning velocity of ≥ 2 ft/s happen more than once per day?  17. 8.125(5)(A)2. Is the diameter of the pressure sewer main pipe at least 1.5"?  18. 8.125(5)(B) Are appurtenances compatible with the piping system?  19. 8.125(5)(B) Are isolation valves located: upstream of major pipe intersections; both sides of stream, bridge and RR crossings, at terminal end of system?  20. 8.125(5)(C) Do service line pipes have a minimum diameter of 1.25"?  21. 8.125(5)(D)1.A Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? I.e. Iresidence − 1 grinder pump tump.  22. 8.125(5)(D)3. Is the eat least 70 gallons of storage in the grinder pump unit?  23. 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. Ale surface 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)?  26. 8.125(5)(D)8. 8.125(5)(D)8. 8.125(5)(D)8. 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?  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 dedicatied to freeboard and ventiliation?  28. 8.125(6)(F)  29. Are duplex pumps provided for the		8.120(4)(E)		V	
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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?    10.0   PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST	14.	8.120(5)(A)	pipes come in contact with a sewer manhole?		
REGULATION  Regul			Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	V	
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/O 780-1632 (10-22)					<b>V</b>

11.0 F	PUMP STATION C	HECKLIST		15 12 - 12		ELITE	
	REGULATION					YES	N/A
29.	8.125(7)(C)	Is the minimum d	liameter sewer main pi	pe and service line of S	STEG sewer at least 4"?		V
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station	on designed to withstar	nd the 100-year flood?			V
31.	8.130(3)(A)	Is the dry well con access provided	mpletely separate from to each?	the wet well and is a s	suitable and safe means of		V
32.	8.130(3)(B)	If the design flow provided?	If the design flow is 1,500 gpd or more, are there at least 2 pumps or pneumatic ejectors				<b>V</b>
33	8.130(3)(D)	Are valves locate	d outside wet well unle	ss integral to a pump of	or its housing?		<b>V</b>
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry w	vells have separate ven	tilation systems?			
35.	8.130(3)(G)	Does all potable	water brought to pump	stations comply with 8	.140(7)(D)?		V
36.	8.130(6)	Is an alarm syste	m provided with uninte	rrupted power?		一	
37.	8.130(7)(A)		etention of the peak ho eak hourly flow for a de		low > 100,000 gpd or 4 hrs		V
38.	8.130(7)(B)	Are there indeper	ndent utility substations pump station at its rat	provided for emergen	cy power capable of starting		V
39.	8.130(8)(A)		velocity of ≥ 2 ft/s main				V
40.	8.130				ions provided that include and spare parts that may be		<b>V</b>
12.0 S	UCTION LIFT PU	MP AND SUBMER	SIBLE PUMP STATIC	N CHECKLIST		1831	
	REGULATION					YES	N/A
41.	8.130(4)	Are the suction lif	t pumps of the self prin	ning or vacuum priming	g type?		V
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?					V
43.	8.130(4)(B)	Are there dual va	cuum pumps capable o	of removing air from the	suction lift nump?		
44.	8.130(5)(A)	Are there dual vacuum pumps capable of removing air from the suction lift pump?  Are submersible pumps readily removable and replaceable without personnel entering, or					
13 0 S	FWFR FXTFNSI		y pipe in the wet well? CERTIFICATION STA	TEMENT			LV.
engine					MININ		
Missouri Professional Engineer's seal, signature and date:  MISSOURI Professional Engineer's seal, signature and date:  MISSOURI Professional Engineer's seal, signature and date:						CHARTER STATES	1
Name:	Name: Mike Boerding - Vice President-PE						
Address: 5055 New Baumgartner Road							
City:	St. Louis		State: MO		ZIP Code: 63129		
Teleph	Telephone Number with Area Code: (314) 487-0440 Email: MBoerding@Sterling-eng-sur.com						
MO 780-163	32 (10-22)						