



Michael L. Parson
Governor

Dru Buntin
Director

December 7, 2022

Arturo Elivo
Senior LEAD Project Manager
Schuber Mitchell Homes, LLC
3331 North Rangeline Road
Joplin, MO 64801

Dear Arturo Elivo:

Pursuant to the Missouri Clean Water Law, we have issued and are enclosing a Site-Specific Permit for Sewer Extension Construction to the Duenweg collection system, which is satellite to the Joplin Turkey Creek Wastewater Treatment Facility, MO-0103349. Please review the requirements of your permit.

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to 10 CSR 20-1.020 and Sections 644.051.6 and 621.250, RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the Administrative Hearing Commission. Contact information for the AHC is as follows: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, P.O. Box 1557, Jefferson City, MO 65102, Phone: 573-751-2422, Fax: 573-751-5018, Website: www.oa.mo.gov/ahc.

Nothing in this permit removes any obligations to comply with county or other local ordinances or restrictions.

If you have any questions concerning this permit, please do not hesitate to contact the Water Protection Program by phone at 573-751-1300 or by mail at Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

WATER PROTECTION PROGRAM

A handwritten signature in cursive script that reads "Cindy LePage".

Cindy LePage, P.E., Chief
Engineering Section

CL:saa

Enclosure

c: Logan Ellis, P.E., Anderson Engineering
Joshua Oathout, P.E., Anderson Engineering
Justin Pryor, Administrative Director, City of Duenweg
Lyndell Edwards, Plant Superintendent, Joplin Turkey Creek WWTF
Erin Heidolph, Water Protection Program, Compliance and Enforcement
Southwest Regional Office

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Arturo Elivo, Senior LEAD Project Manager
Schuber Mitchell Homes, LLC
3331 N Rangeline Rd, Joplin, MO 64801

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.

December 7, 2022
Effective Date

December 6, 2024
Expiration Date


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

COLLECTION SYSTEM:

The proposed wastewater collection system will consist of a conventional gravity sewer system with lift stations and force mains, which will carry raw wastewater to the receiving wastewater treatment facility.

Construction and installation of approximately 3,794 linear feet of 8-inch polyvinyl chloride (PVC) Standard Dimension Ratio (SDR)-35, approximately 2,116 linear feet of 8-inch PVC SDR-26, and approximately 271 linear feet of 12-inch PVC SDR-35 gravity sewer with 27 manholes, approximately 1,821 linear feet of 6-inch PVC SDR-21 force mains with air release valves, upgrading 2 duplex lift stations, and all necessary appurtenances to make a complete and usable wastewater collection system to serve an estimated additional population equivalent of 648 and an estimated design average flow of 64,750 gallons per day. Lift station 1 will have improved duplex pumps, each capable of operating up to 500 gallons per minute (gpm) at 76.3 ft of TDH, with a variance approved November 4, 2022, to install a natural gas generator in lieu of the full emergency storage (but with at least 45 min of storage available at peak flows). Lift station 2 will have improved duplex pumps, each capable of operating at 160 gpm at 33.5 ft of TDH, with a 13-ft tall, 4-ft diameter manhole to provide additional emergency storage. Each station will have telemetered alarms, with an uninterrupted power source, and a station generator. The project will also include general site work appropriate to the scope and purpose of the project.

These activities will be in the vicinity of East 7th Street and North Prosperity Avenue in Duenweg, Jasper County, and will discharge to an existing sewer system to be treated at the Joplin Turkey Creek Wastewater Treatment Facility (WWTF), Missouri State Operating Permit No. MO-0103349. Russell Olds, Mayor of Duenweg, provided a continuing authority acceptance letter dated October 22, 2021. Justin Pryor, Administrative Director with Duenweg, agreed to the proposed variance via email on July 28, 2022. Christopher Parker, Sanitary Sewer Engineer with City of Joplin provided an acceptance letter dated October 21, 2021. Lyndell Edwards, Plant Superintendent with the Joplin Turkey Creek WWTF, provided an acceptance letter dated October 26, 2021.

PERMIT CONDITIONS:

1. All construction shall be in accordance with the plans and specifications submitted by Anderson Engineering, Inc., as follows:
 - Specifications (City of Joplin) received on November 29, 2022, and signed and sealed by Daniel Lowell Johnson, P.E., on January 25, 2021.
 - Plans signed and sealed by Joshua Oathout, P.E. on November 29, 2022.
2. The department must be contacted in writing prior to making any changes to the approved 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).
3. 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 Southwest Regional Office per 10 CSR 20-7.015(9) (D)5. and (G), or through the Online Bypass/SSO Reporting system found at <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater/sewer-overflows>.
4. This construction permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans".
5. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5), 10 CSR 23-3.010, and 10 CSR 60-10.010(2)(B)5.C.
 - A. There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto, which would permit the passage of any wastewater or polluted water into the potable supply.
 - B. Sewers shall be laid at least fifty feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
6. Manholes shall be located with the top access at or above grade level.

In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more 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 may only be obtained by means of 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.

7. 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.
8. Submit to the department a Statement of Work Completed form in accordance with 10 CSR 20-6.010(5)(N). See <https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>. Submit an electronic copy of the as-built drawings with this form if the project was not constructed in accordance with previously submitted plans and specifications.
9. Upon completion of construction, the City of Duenweg will become the continuing authority for operation, maintenance, and modernization of these facilities.

Scott Adams, P.E.
Engineering Section
scott.adams@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. A site specific sewer extension construction permit may be required by the Department due to compliance and enforcement actions.
3. Projects located within an Approved Sewer Program as noted in the operating permit of the receiving wastewater treatment facility are not required to obtain a construction permit from the Department of Natural Resources (Department).
4. This permit does not apply to:
 - A. Earthen storage basins;
 - B. Exempt projects unless requested by the applicant or required by enforcement.

PREREQUISITES:

1. The General Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).
2. The plans and specifications each signed and sealed by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.
3. The Design Certification form or Engineering Report or Summary of Design signed and sealed by a professional engineer registered in the State of Missouri certifying the design of the system was prepared in accordance with 10 CSR 20-6 and 10 CSR 20-8.
4. 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.
5. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the responsibility for 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 approved by the Department.
3. 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 regional office per 10 CSR 20-7.015(9)(E)2., or through the Online Bypass/SSO Reporting system found at <https://dnr.mo.gov/eservices.htm> under Water Protection.

PERMIT CONDITIONS: (continued)

4. Protection of drinking water supplies must meet the requirements of 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 thereto, which would permit the passage of any wastewater or polluted water into the potable supply.
 - B. Sewers shall be laid at least fifty feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
5. Manholes shall be located with the top access at or above grade level.
6. 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 www.dnr.mo.gov/env/wpp/epermit/help.htm.

See www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.

7. 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 www.dnr.mo.gov/env/wpp/401/ for more information.

8. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then a full closure plan shall be submitted 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 submitted closure plan is approved by the Department.
9. 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



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

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$300.00 DATE RECEIVED 10-13-21	CHECK NO. 18284 BB

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* or a Sewer Extension Design Checklist* included?
 Sewer Extension Design Checklist. (N/A to department funded projects.) Engineering Report Date of Approval: _____
- 1.3 Is a copy of the appropriate plans* and specifications* included with this application?
 YES Denote which form is submitted: Hard copy (1 minimum) and Electronic copy (See instructions.) NO
- 1.4 Is a summary of design* included with this application? YES NO
- 1.5 Is the appropriate fee (\$300) included with this application? YES NO
- * Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

SOUTHWIND TRAIL SUBDIVISION PHASE 2-5

PHYSICAL ADDRESS	CITY	STATE	ZIP CODE	COUNTY
E 7TH STREET & N PROSPERITY AVE	DUENWEG	MO	64801	JASPER

2.2 Legal Description: ¼, ¼, SW ¼, Sec. 3, T 27N, R 32W

2.3 UTM Coordinates Easting (X): 37.0543079 Northing (Y): -94.4237727
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.4 Project Components (check all that apply):

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

2.5 PROJECT DESCRIPTION

CONSTRUCTION OF 6,010 LF OF 8" SEWER MAIN, 275 LF OF 12" SEWER MAIN, 1,821 LF OF 6" FORCE MAIN, AND FITTINGS NECESSARY TO SERVE 185 RESIDENTIAL LOTS. EXISTING LIFT STATION UPGRADES WILL ALSO BE PERFORMED.

2.6 DESIGN INFORMATION

- A. Population or number of lots to be served by this extension: 185 Lots
- B. Estimated flow to be contributed by this extension: Design Average Flow: 79180 gpd Design Peak Hourly Flow: 13442 gph
- C. Industrial Wastes: Type: _____ Flow: _____ gpd
- D. Receiving Sewer: Size: 8 inches Capacity: 1167 gpm

3.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
SCHUBER MITCHELL HOMES	(417) 626-7000	AELIVO@SCHUBERMITCHELL.COM	
ADDRESS	CITY	STATE	ZIP CODE
1810 FOUNTAIN RD	WEBB CITY	MO	64870

4.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
CITY OF JOPLIN	(417) 624-0820	CPARKER@JOPLINMO.ORG	
ADDRESS	CITY	STATE	ZIP CODE
602 S MAIN ST	JOPLIN	MO	64801


4.1 A letter from the continuing authority or the Continuing Authority and Receiving Wastewater Treatment Facility Acceptance form, if different than the owner, is included with this application. YES NO N/A

5.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
JOSHUA OATHOUT	(417) 782-7399	JOATHOUT@AE-INC.COM	
ADDRESS	CITY	STATE	ZIP CODE
811 E. THIRD ST.	JOPLIN	MO	64801

RECEIVED

OCT 13 2021

6.0 RECEIVING WASTEWATER TREATMENT FACILITY		
NAME Turkey Creek	TELEPHONE NUMBER WITH AREA CODE (417) 624-3615	EMAIL ADDRESS LEdwards@joplinmo.org
MISSOURI STATE OPERATING PERMIT # MO-0103349	DESIGN AVERAGE FLOW (GPD) 15,000,000	REMAINING CAPACITY (GPD) 6,000,000
6.1 Has the receiving treatment facility agreed to accept the additional wastewater flow? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
6.2 A letter from the receiving wastewater treatment facility or the Continuing Authority and Receiving Wastewater Treatment Facility Acceptance form, if different than the continuing authority, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A		
7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law.		
PROJECT OWNER SIGNATURE 		
PRINTED NAME Arturo Elivo		DATE 08/27/2021
TITLE OR COPORATE POSITION Senior LEAD Project Manager	TELEPHONE NUMBER WITH AREA CODE (417) 626-7000	EMAIL ADDRESS aelivo@schubermitchell.com
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176		

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.

7.0 SEWER EXTENSION CHECKLIST – Part 1					
	REGULATION		YES	NO	N/A
1.	8.110(6)(C) 8.020(4)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	8.120(3)	Does the sewer receive only sewage and not combined sewage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	8.120(4)(B) 8.020(9)(B)	Is the design flow based on 100 gpcd with a peaking factor of 4? Is the design flow based on the design peak hourly flow in accordance with 8.110(4)(C)4?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	8.120(5)(G) 8.020(9)(A)	Does the sewer pipe comply with ASTM standards for sewer pipe?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	8.120(5)(I)4 8.020(9)(A)	Are the joints sealed to prevent infiltration > 100 gal/inch of pipe dia/mile/day for receiving WWTF with a design flow > 22,500 gpd, and >200 gal/inch of pipe dia/mile/day for receiving WWTF with a design flow ≤ 22,500 gpd?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	8.120(5)(D)4 8.120(6)(A) 8.020(9)(C)	Are manholes located at all changes in grade, size or alignment, at all intersections, and at distances of not greater than 400 feet for sewers 15 inches and less, or 500 feet for sewers 18 – 30 inches?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	8.120(5)(A) 8.020(9)(B)	Is the gravity sewer no less than 8" in diameter?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	8.020(9)(B)	Are sewers for schools, resorts and similar establishments, and subdivisions located in rural areas , is the sewer pipe at least 6 inches in diameter, laid at a slope of 0.60 feet/100 feet with appropriate bedding specifications and at least 30" of cover?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	8.120(5) 8.020(9)(B)2	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"/>	<input type="checkbox"/>
10.	8.120(5)(B) 8.020(9)(B)1	Is the pipe covered with at least 36" of soil if receiving WWTF has a design flow of >22,500 gpd or 30" for a design flow of ≤ 22,500 gpd?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	8.120(5)(D)6	If the sewer is on a 20% or greater slope, is it anchored securely and in accordance with requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12.	8.120(5)(G)3 8.020(9)(A)2	Is the pipe material adapted to local conditions, and designed to prevent damage from superimposed loads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	8.120(5)(H)	Is the pipe installation, embedment, and backfill designed to prevent damage to the pipe and its joints?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	8.120(5)(H)5	Is flexible pipe designed to pass a deflection test run 30 days after backfill using a minimum mandrel or ball size of 95% of pipe ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	8.120(5)(H)	Are methods employed to provide adequate control of siltation and erosion during construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	8.120(6)(C) 8.020(9)(C)	Are manholes at least 48 inches in diameter with a clear opening of 22 inches?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	8.120(6)(A)4 8.020(9)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, they are a minimum diameter of 8 inches, and the lateral length is not greater than 150 feet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	8.120(6)(D) 8.020(9)(C)	Are the manholes designed and/or specified to have flow channels in the bottom that conforms in shape and slope of the sewer?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	8.120(6)(F) 8.020(9)(C)	Are the manholes precast or poured in place concrete with watertight connections and conform to the "Frame and Cover" requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	8.120(6)(G)	Do the specifications include a requirement for inspection and testing for manholes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	8.120(6)(E)1	Are sewers 24 inches or less laid straight between manholes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	8.120(6)(F)1	When a smaller sewer joins a larger one, is the 0.8 depth point of both sewers at the same elevation in the manhole?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23.	8.120(7)	Do the inverted siphons have two barrels with at least a pipe size of 6 inches?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24.	8.120(8) 8.020(9)(A)5	Is the top of all sewers entering or crossing streams at least 3 feet below the natural stream bottom, perpendicular to the stream, and constructed of cast- or ductile-iron pipe?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25.	8.120(9) 8.020(9)(A)5	Are all aerial crossings ductile iron pipe with mechanical joints, supported at all pipe joints and designed to withstand freezing and a 50-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26.	8.120(10)(C) 8.020(9)(A)	Are sewers and manholes located at least 10 feet horizontally and 18 inches vertically from any existing or proposed water line?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27.	8.120(10) 8.020(9)(A)4	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"/>	<input type="checkbox"/>
28.	8.020(9)(B)	If your system is for a subdivision in a metropolitan area, or in a rural area adjacent to a regional system where incorporation into a region is feasible, is the sewer pipe at least 8 inches in diameter, laid at a slope of 0.40 feet/100 feet with appropriate bedding specifications and at least 30" of cover?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Part 1		I answered YES to questions 1 – 28. <input type="checkbox"/> YES			
8.0 PUMP STATION CHECKLIST – Part 2					
	REGULATION		YES	NO	N/A
29.	8.130(3)(A) 8.020(10)(A)	Is the pump station designed to withstand the 100-year flood, and to remain fully operational and accessible during the 25-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30.	8.130(3)(B) 8.020(10)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31.	8.130(4)(C) 8.020(10)(A)	If the design flow is 1 mgd or less, are there at least 2 pumps or pneumatic ejectors of the same capacity, each capable of handling flows in excess of the expected maximum flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32.	8.130(4)(C)	If the design flow is greater than 1 mgd, are there at least 3 pumps capable of handling maximum sewage flow when 1 unit is out-of-service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33.	8.130(4)(C) 8.020(10)(B)	Are the pumps capable of passing spheres of at least 3 inches in diameter, and connected with at least 4 inch piping?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34.	8.130(4)(C)	Are the pumps able to operate at varying delivery rates to permit discharging sewage at its rate of delivery?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35.	8.130(4)(E) 8.020(10)(B)	Are there suitable shutoff and check valves on the discharge line of each pump and shutoff valves on suction line of each wet/dry well pump?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36.	8.130(4)(E) 8.020(10)(B)	Are check valves between the pump and the shutoff valve, on horizontal portion of the discharge pipe, and outside wet well?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37.	8.130(4)(F) 8.020(10)(B)	Is the wet well floor sloped a minimum of 1:1 to the bottom?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38.	8.130(4)(G) 8.020(10)(B)	Is there separate mechanical ventilation for wet and dry well pump pits below the ground surface?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39.	8.130(4)(H)	Flow Measurement? If yes , how and where is it measured.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40.	8.130(4)(I)	Does all potable water at station comply with 8.140 (8) B?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41.	8.130(7) 8.020(10)(B)	Is there an alarm for power failure, pump failure, lag pump, high level, and unauthorized entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42.	8.130(8) 8.020(10)	Overflow prevented or minimized? If yes , indicate method used.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43.	8.020(10)(B)	Is there 24 hour retention of peak flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44.	8.130(11)(A) 8.020(9)(D)	Is the force main velocity of ≥ 2 ft/s maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
45.	8.130(11)(B) 8.020(9)(D)	Are air relief valves located at high points in the force main to prevent air locking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
46.	8.130(11)(C) 8.020(9)(D)	Is the force main connection to the manhole less than 2 feet above invert?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
47.	8.130(11)(D) 8.020(9)(D)	Are the force main and fittings designed to withstand normal pressure and surges?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
48.	8.130(11)(E)	Are all aerial crossings supported at all pipe joints and designed to withstand freezing and a 50-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
49.	8.130(11)(E)	Are all force mains entering or crossing streams constructed of cast- or ductile-iron pipe, cross perpendicular and ≥ 3 feet below the natural stream bottom?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
50.	8.130(11)(F)	Is friction loss calculated in the force main design based on the Hazen and Williams formula?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
51.	8.130(11)(G)	Is the force main located at least 10 feet horizontally and 18 inches vertically from any existing or proposed water line?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
52.	8.130(11)(H)	Is the force main properly identified to avoid confusion with water mains?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
53.	8.130	Instructions and Equipment. Sewage pumping stations and their operators should have a complete set of operational instructions, including emergency procedures, maintenance schedules, special tools and spare parts as may be necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Part 2		I answered yes to questions 29 – 53. (N/A if no Pump Stations) <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A			

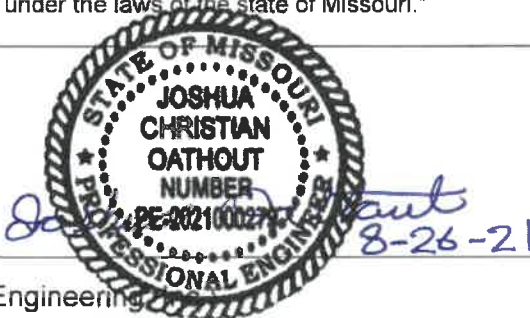
9.0 SUCTION LIFT PUMP CHECKLIST – Part 3					
	REGULATION		YES	NO	N/A
54.	8.130(5)	Are the suction lift pumps of the self priming or vacuum priming type?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
55.	8.130(5)(A)	Are the self-priming pumps capable of rapid priming and re-priming at the “lead pump on” elevation automatically under design operating conditions? The combined total of dynamic suction lift at the “pump off” elevation and required net positive suction head at design operating conditions shall not exceed twenty-two feet (22') (6.7m).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
56.	8.130(6)(C)	Is the control panel located outside the wet well, protected by a conduit seal, and have a junction box between the controls and the wet well that allows disconnection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
57.	8.130(6)(D)	Are the valves located in a separate pit that can be drained?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Part 3		I answered yes to questions 54 – 57. (N/A if no Suction Lift Pumps) <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A			
9.0 GRINDER PUMP CHECKLIST – Part 4					
	REGULATION		YES	NO	N/A
58.	8.130(9)(A) 8.020(9)(B)	Are the grinder units capable of reducing any material to a size that the materials will pass through the pump unit and force main without plugging or clogging?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
59.	8.130(9)(B) 8.020(9)(B)	Is there at least 50 gallons of storage in the grinder pump unit or enough storage to accommodate normal peak flows for periods of eight to twelve (8–12) hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60.	8.130(9)(C) 8.020(10)(B)	Are there audiovisual alarms capable of alerting the resident and operating personnel in the area for units serving a single home? This may be used in lieu of the alarm system specified in 8.130 (7).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
61.	8.130(9)(D) 8.020(10)(B)	Are gate valves provided on the service line near the common forcemain?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
62.	8.130(9)(E) 8.020(10)(C)	Is the force main cleansing velocity of at least 2 feet per second maintained at the design average flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
63.	8.130(9)(F)	Is there a suitable method of cleaning the force main whenever the velocity in the force main may be less than two feet (2') per second (0.61m/s) before ultimate development is reached?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
64.	8.130(9)(G)	Are units serviceable and replaceable under wet conditions without electrical hazard to repair personnel and electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
65.	8.130(9)(H) 8.020(9)(D)	Is there 1 standby unit for each 50 units or fraction thereof for WWTF >22,500 gpd provided? For WWTF ≤ 22,500 gpd, is there a 24 hour repair time either by replacement or repair with spare pump units stocked as follows: Installations Spare Units 1 - 10 1 10 - 20 2 20 - 40 3 40 - 60 4 60 - 100 5 100 - 200 6 over 200 3% of installations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
66.	8.130(9)(I) 8.020(9)(D)	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 type="checkbox"/>	<input checked="" type="checkbox"/>
Part 4		I answered yes to questions 58 – 66. (N/A if no Grinder Pumps) <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A			

Fast Track Certification Statement

I have answered **YES** to Checklist items Part 1, and **N/A** to Part 2, Part 3 and Part 4 above, or
 I have answered **YES** to Checklist items Part 1, Part 2, and **YES** or **N/A** to Part 3 and Part 4 above, and hereby certify that the design plans and specifications for this project, to the best of my knowledge, conform to the requirements listed above. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

I hereby certify that this plan, specification, and/or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Missouri."

Missouri Professional Engineer's Seal:



Name: Joshua Oathout (Anderson Engineering)
 Street Address: 811 E. Third St.
 City: Joplin State: MO Zip Code: 64801

Phone Number: 417-782-7399

Email: joathout@andersonengineeringinc.com

Question Answered N/A	Explanation (i.e. no pump station, no manholes, etc.) or previous approval Title and Date
33	The pumps are plastic pumps
8	Subdivision is not in a rural area
11	No part of the sewer is over the 20% incline
22	All sewer lines are 8"
23	No inverted siphons
24	No stream crossings
25	No aerial crossings

Detailed Review Track Certification Statement

I have answered **NO** or **N/A** Checklist item Part 1 or **NO** to one of the Checklist items Part 2, Part 3, or Part 4 above because the design does not conform with **all** of the requirements in The Missouri Department of Natural Resources Division 20 – Clean Water Commission Chapter 8 Guidelines (10 CSR 20-8). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

I hereby certify that this plan, specification, and/or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Missouri."

Missouri Professional Engineer's Seal:

Name:

Street Address:

City:

State:

Zip Code:

Phone Number:

Email:

List of regulations not complied with (attach additional pages if needed):

Question Answered No or N/A	Explanation for N/A (i.e. no pump station, no manholes, etc.) or Justification for deviation
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The pump station is locked so no alarm for unauthorized entry.

**BEFORE THE
MISSOURI CLEAN WATER COMMISSION**

In The Matter Of:

Schuber Mitchell Homes

Southwind Trail Subdivision Phase 2-5

Emergency Storage Volume Variance

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No. CWC-V-2-22

ORDER GRANTING VARIANCE NO. CWC-V-2-22

The Missouri Clean Water Commission (Commission) hereby grants variance request CWC-V-2-22 by Schuber Mitchell Homes. Specifically, the Commission approves a variance from the pump station design requirement contained in 10 CSR 20-8.130(7)(A) mandating emergency storage of two hours of sewage at peak flows. This variance allows Schuber Mitchell Homes to install a reasonable amount of emergency storage, along with emergency generators and other site-specific design considerations, as an alternative to the pump station design requirement in rule.

On September 13, 2022, the Commission issued a public notice and provided an opportunity for public comment on the requested variance. The Commission has determined that based on the administrative record the variance request satisfies the requirements of Section 644.061, Revised Statutes of Missouri (RSMo) and, if properly maintained and operated, the alternative emergency storage solution should provide a comparable level of protection against sanitary sewer overflows as the protection intended by the complete storage design requirement. Further, the proposed variance is consistent with a proposed rulemaking to revise 10 CSR 20-8.130(7) to allow for such alternative emergency storage solutions.

The Missouri Clean Water Commission directs staff to implement Variance No. CWC-V-2-22 as presented by revising construction permit MOGSE0282. The term of this variance is for the life of the pump station or until the pending proposed rulemaking of 10 CSR 20-8.130(7) becomes effective.

This decision of the Commission is subject to appeal to the Administrative Hearing Commission pursuant to Sections 644.061.5, 640.013, and 621.250, RSMo.

SO ORDERED on November 4, 2022.

Order Granting Variance No. CWC-V-2-22

Schuber Mitchell Homes

Southwind Trail Subdivision Phase 2-5

Emergency Storage Volume Variance

November 4, 2022

Missouri Clean Water Commission


Chair


Vice-Chair


Commissioner


Commissioner


Commissioner


Commissioner

Commissioner