

Project S-496-14

Holts Summit WWTF, MO-0106810
Wastewater System Improvements

Permit No. CPSE01073

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

City of Holts Summit
P.O. Box 429
Holts Summit, MO 65043

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.

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

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

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

January 23, 2019
Effective Date

January 22, 2021
Expiration Date

Edward B. Galbraith, Director, Division of Environmental Quality

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

COLLECTION SYSTEM:

Gravity Sewers:

Gravity sewers will consist of the construction and installation of the following approximate lengths of polyvinyl chloride (PVC) Standard Dimension Ratio (SDR)-35 pipe:

- 15,605 linear feet (lf) of 8-inch pipe
- 745 lf of 6-inch pipe

Approximate lengths PVC SDR-21 pipe:

- 315 lf of 8-inch pipe

Force Mains:

Force mains will consist of the construction and installation of the following approximate lengths of PVC SDR-21 pipe with cleanouts and air release valves:

- 28,370 lf of 12-inch pipe
- 3,500 lf of 4-inch pipe
- 1,200 lf of 3-inch pipe
- 1,350 lf of 2½-inch pipe
- 6,300 lf of 2-inch pipe
- 1,100 lf of 1½-inch pipe

Pump Stations:

Pump stations will consist of grinder pumps and regular pumps as described below:

- 13 duplex grinder pump units
 - Station A will have a 5-Horsepower (HP) pump capable of operating at 25 gallons per minute) GPM at 123.5 feet of total dynamic head (TDH)
 - Station C will have a 2-HP pump capable of operating at 25 GPM at 67.2 feet of TDH
 - Station D will have a 2-HP pump capable of operating at 25 GPM at 46.6 feet of TDH
 - Station F will have a 5-HP pump capable of operating at 40 GPM at 98.4 feet of TDH

- Station H will have a 2-HP pump capable of operating at 15 GPM at 46.7 feet of TDH
- Station J will have a 2-HP pump capable of operating at 25 GPM at 59.4 feet of TDH
- Station L will have a 3-HP pump capable of operating at 25 GPM at 82.3 feet of TDH
- Station P will have a 2-HP pump capable of operating at 25 GPM at 60.6 feet of TDH
- Station AA will have a 5-HP pump capable of operating at 35 GPM at 94.7 feet of TDH
- Station JJ will have a 2-HP pump capable of operating at 15 GPM at 38.7 feet of TDH
- Station LL will have a 3-HP pump capable of operating at 25 GPM at 65.5 feet of TDH
- Station NN will have a 2-HP pump capable of operating at 15 GPM at 53.9 feet of TDH
- Station UU will have a 3-HP pump capable of operating at 45 GPM at 48.3 feet of TDH
- The regional pump station will use two 100-HP pumps capable of operating at 750 GPM at 212.5 feet TDH each

This project also consists of the installation and construction of approximately 315 lf of 20-inch bored steel encasement underneath Highway 54, with approximately 91 manholes and all the necessary appurtenances to make a complete and usable wastewater collection system to serve an estimated population equivalent of 3,000 and an estimated design average flow of 500,000 gallons per day. The project will also include general site work appropriate to the scope and purpose of the project. This project will also eliminate the existing wastewater treatment plant.

These wastewater collection system improvements will be predominantly within the city limit of Holts Summit, extend south by southwest in Callaway County, and discharge to an existing sewer system to be treated at the Jefferson City Regional Water Reclamation Facility, Missouri State Operating Permit No. MO-0094846.

PERMIT CONDITIONS:

The permittee is authorized to construct subject to the following conditions:

1. All construction shall be in accordance with the plans and specifications submitted by Allstate Consultants on December 21, 2018, and signed and sealed by Mr. Stephen Lin, P.E., on September 26, 2018, and approved by the Department on January 23, 2019.
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(8).

3. This construction permit does not authorize discharge.
4. 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 Northeast Regional Office per 10 CSR 20-7.015(9)(E)2.
5. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10).

"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. No water pipe shall pass through or come in contact with any part of a sewer manhole."

 - A. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.
 - B. Sewer mains shall be laid at least 10 feet horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a 10 foot separation, the Department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.
 - C. Manholes should be located at least 10 feet horizontally from any existing or proposed water main.
 - D. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:

- 1) The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
 - 2) Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the Department for use in water main construction.
6. 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 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. A full closure plan shall be submitted to the Department's Northeast Regional Office for review and approval of any permitted wastewater treatment system being replaced. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III, Section I, of the Missouri State Operating Permit No. MO-0106810, Holts Summit Wastewater Treatment Plant. Closure shall not commence until the submitted closure plan is approved by the Department. Form J – Request for Termination of a State Operating Permit, shall be submitted to the Department's Northeast Regional Office for termination of any existing Missouri State Operating Permit, once closure is completed in accordance with the approved closure plan.
9. Upon completion of construction:
 - A. The city will become the continuing authority for operation, maintenance, and modernization of these facilities;

- B. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D); and
- C. Submit an electronic copy of the as-built plans.