WPC - Camden
Big Island
ID NO 2174

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MISSOURI — Mel Carnahan, Governor • Stephen M. Mahfood, Director

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY
Jefferson City Regional Office
210 Hoover Road P.O. Box 176 Jefferson City, MO 65102-0176
(573)751-2729
FAX (573)751-8014

January 5, 1999

Big Island Homeowners Association, Inc.
ATTN: Reggie Golden
P.O. Box 328
Longmont, CO 80501

Dear Applicant:

Your application for wastewater works to serve the Big Island has been approved by the Department of Natural Resources as evidenced by Construction Permit Number 26-3081 which is enclosed with this letter.

This permit will expire one year from the date of issuance unless justification for extension is presented thirty (30) days prior to expiration. The applicant must show that there have been no substantial changes in the project.

In addition to the requirements for a construction permit, land disturbance activities of five acres or more require a Missouri State Operating Permit to discharge stormwater (10 CSR 20-6.200). The permit requires best management stormwater practices. To obtain this permit, submit Forms E and G and a permit fee of $150 to the Permits Unit Chief, Department of Natural Resources, Water Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102.

Following completion of construction, the enclosed application shall be completed and returned to the Department of Natural Resources, Jefferson City Regional Office, P.O. Box 176, Jefferson City, Missouri 65102. The state operating permit must be obtained prior to discharging wastewater effluent from this facility.

If you have any questions, please contact Keith Forck at the Jefferson City Regional Office at (573) 751-2729.

Sincerely,

JEFFERSON CITY REGIONAL OFFICE

Robert H. Hentges
Regional Director

RHH:kfl

Enclosures

c: Water Pollution Control Program
Lake Professional Engineering Services, Inc.

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

WPC - Camden
Big Island
ID NO 2174

Construction Permit No. 26-3081
River Reach No: 10290110-03-00

CONSTRUCTION PERMIT

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

Big Island Homeowners
ATTN: Reggie Golden
P.O. Box 328
Longmont, CO 80501

for the construction of (describe facilities):

1000 and 1500 gallon septic tanks with .5 to 1 horsepower effluent pumps designed for 10 gallons per minute at 140 to 170 feet of total dynamic head, 2000 linear feet of two-inch PVC pressure pipe, 7200 linear feet of three-inch PVC pressure pipe, 3400 linear feet of four-inch PVC pressure pipe, air release valves, ten feet by forty feet by six feet deep recirculation tank with four -one horsepower pumps - each designed for fifty gallons per minute

Permit Conditions:

(NONE)

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

As the Department of Natural Resources 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 periodically during construction. Issuance of an operating permit 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 wastewater treatment facilities; it does not apply to other environmentally regulated areas.

January 5, 1999

Effective Date

John A. Young

Director, Division of Environmental Quality

January 5, 2000

Expiration Date

Director of Staff, Clean Water Commission or Designee

$500.00 Rec'd. Check No. 1011

MO 780-1151 (10-94)

WQP 3.34
Rev. 10-94

FACILITY DESCRIPTION (CONTINUED):
at fifty-one feet of total dynamic head, 120 feet by 46 feet recirculating sand filter bed, 1000 gallon chlorine contact chamber, and all the necessary appurtenances to make the facilities complete and usable. This facility is to serve eighty homes in Big Island with a design flow of 22,525 gallons per day. Legal Description: NW1/4, NW1/4, SW1/4, Sec. 6, T38N, R17W, Camden County, Missouri.

ARTICLE B

TRENCH EXCAVATION

B.1-1. Pipe Trench Excavation

A. Clearing and Care of Surface Materials – The contractor shall furnish all labor, materials and equipment necessary to complete all clearing of brush, trees, or other obstructions required to complete all work under this article.

The contractor shall protect fences, power poles, property pins and other property unless their removal is authorized. All existing fixtures that are cut or disturbed by the installation of the lines, or otherwise damaged by the contractor's equipment shall be replaced and/or repaired in a manner satisfactory to the engineer and/or owner at the contractor's expense.

B. Protection of Trees and Shrubs – The contractor shall protect all trees and shrubs. No excavation material shall be placed so as to injure trees or shrubs. Trees or shrubs damaged or destroyed by the contractor shall be replaced with new stocks of a similar size and age, in the proper season, at the sole expense of the contractor.

C. Alignment Grade and Trench Preparation – Pipelines shall be installed to the grade, alignment and location shown on the plans or as directed by the engineer.

The contractor shall be responsible to notify all utility companies and determine the exact location of underground utilities and structures before the start of any excavation work. Any underground utilities and structures damaged by the contractor shall be repaired at the contractor's expense.

D. Trenching and Excavating – Excavation for pipe lines may be by hand or machinery. The excavation shall not extend below the finished grade. The last few inches of the finished grade shall be removed by pick or shovel or crumbled out by hand and shall be trimmed to the shape and grade required before the placement of the pipe.

Excavations carried below the grade specified on the plans shall be filled to grade at the contractor's expense, with earth, sand or gravel as directed by the engineer and thoroughly compacted. The contractor shall work with the owner to determine the depth of lines due to fill being placed in construction areas.

The side of the trenches shall be as nearly vertical as possible. Excessive width of trenches shall not be allowed.

All excavated material shall be deposited along the side of the trench far enough away to prevent material returning to the trench and cave in of the trench. Excavated material is to be placed so that inconvenience to public travel or tenants occupying adjoining property will be reduced or eliminated.

In the event it is necessary to place the excavated materials on any sidewalk, the contractor shall keep the excavated material a minimum of four feet (4') from the front of all buildings and from the inner portion of the sidewalk.

All sidewalks are to be cleaned and opened to pedestrian traffic when work is not in progress. Barricades and flares shall be provided at each end and at other locations as required to provide safety for the workers and public. All barricades shall comply with local and state laws and Occupational Health and Safety Administration (OSHA) rules. Where the excavated material has been deposited on grass plots, the contractor shall remove the excavated material carefully so as not to destroy the grass.

E. Shoring and Bracing – All trenches shall be shored and braced to comply with local and state laws and OSHA rules. When the depth is four feet (4') or more or where necessary to prevent caving, trenches shall be adequately shored and braced. Extreme caution should be used when excavating in sand, gravel, sandy soils, and other unsuitable materials to adequately shore and brace trenches. Where shoring and bracing are used, the clear trench width shall not be less than that specified for unshored trenches. As backfill is placed, the shoring shall be withdrawn in sections for proper fill material compaction.

F. Pipe Clearance in Rock – A minimum clearance to rock of six inches (6") shall be provided below and on each side of all pipe, valves and fittings. All rock, boulders, ledge rock and other large stones shall be removed to provide the minimum clearance.

This minimum specified clearance is the minimum clear distance to be permitted between any part of the pipe or appurtenances to a point of projection of such rock, boulder or stone. Before the pipe is installed, all irregularities of the rock shall be filled with earth or sand that has been well compacted into place and the bottom of the trench brought to the proper grade and shape.

G. Trench Excavation – All trench excavation is unclassified, and no extra compensation will be allowed for rock excavation.

H. Blasting – The use of dynamite or other blasting materials will be permitted upon the approval of the engineer, and then only after adequate safety precautions have been taken. The engineer shall fix the hours of blasting. Any damage resulting from the necessary blasting shall be the contractor's expense. The methods and procedures for blasting shall conform to all local and state laws and OSHA rules. The contractor shall carry the necessary insurance to cover any and all damage caused by the blasting.

I. Dewatering Trenches – Adequate provisions shall be made by the contractor for the removal and proper and legal disposal of all water entering the excavation and for the maintenance of the excavation in a dry condition until the pipe lines and other parts of the work have been satisfactorily installed. Every effort must be made to prevent water from entering the pipe.

B.1-2. Backfilling

A. Backfilling of Trench - Backfilling shall follow closely behind installation of the lines. When laying plastic pipe, the trench shall not be backfilled before the pipe has had sufficient time to adjust to the trench temperature and relieve the possibility of thermal stresses.

The bottom of the trench shall be covered with a minimum of six inch (6") of specified bedding material and shaped and graded before pipe is installed. A minimum of six inches (6") of bedding material shall be placed around and over the pipe. The bedding material will be tamped by hand or mechanical methods. Then select backfill shall be placed in twelve inch (12") layers and thoroughly compacted. The select backfill shall contain no rock, stone or boulder larger than eight inches (8") in diameter and shall be free from brush and other objectionable material that will prevent consolidation.

The ditches shall be maintained so that no standing water will occur over the trenches. A small amount of excess excavation material or extra trench fill shall be mounded over the trench and all other excess excavation material, if any, shall be removed and disposed of at the direction of the engineer and/or owner. If extra trench fill is required, approved material shall be provided and installed at the contractor's expense.

B. Seeding and Mulching – The construction area shall be seeded and mulched as necessary to complete the restoration of the construction area. There will be no separate payment for seeding and mulching. The grass seed shall be selected to match the existing grass.

B.1-3 Horizontal Separation of Water and Sewer Mains – Whenever possible, the water mains shall be laid ten feet (10') horizontally from any existing or proposed drain or sewer line. Should conditions prevent a lateral separation of ten feet (10'), water mains may be laid closer then ten feet (10') to a storm or sanitary sewer, provided the water main is laid in a separate trench, or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least eighteen (18") inches above the top of the sewer. When it is impossible to obtain the proper horizontal or vertical clearance as stipulated above, both the water main and sewer line shall be constructed of a full twenty foot (20') length of pipe crossing in the middle and shall be pressure tested to assure watertightness before backfilling.