

RECEIVED  
JAN 22 2024  
Dept. of Environmental Quality



MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

**MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY (MDEQ)  
Large Construction Storm Water General Permit  
NPDES Permit MSR10**

# **LARGE CONSTRUCTION FORMS PACKAGE**

- LARGE CONSTRUCTION NOTICE OF INTENT (LCNOI) FORM..... 2
- PRIME CONTRACTOR CERTIFICATION FORM..... 7
- REGISTRATION FORM FOR RESIDENTIAL LOT COVERAGE..... 8
- SITE INSPECTION AND CERTIFICATION FORM..... 12
- MAJOR MODIFICATION FORM..... 13
- REQUEST FOR TRANSFER OF PERMIT, GENERAL PERMIT COVERAGE  
AND/OR NAME CHANGE ..... 14
- INSPECTION SUSPENSION FORM..... 16
- REQUEST FOR TERMINATION OF COVERAGE ..... 17

These standard forms are used to apply for permit coverage under the Large Construction Storm Water General Permit and for submittals and record keeping required by permit conditions after coverage has been granted. The forms are on our website at [www.deq.state.ms.us/MDEQ.nsf/page/epd\\_epdgeneral](http://www.deq.state.ms.us/MDEQ.nsf/page/epd_epdgeneral). Required information can be completed on screen, printed and signed.

Revised: 12/06/16



MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

## LARGE CONSTRUCTION NOTICE OF INTENT (LCNOI) FOR COVERAGE UNDER THE LARGE CONSTRUCTION STORM WATER GENERAL NPDES PERMIT

### INSTRUCTIONS

The Large Construction Notice of Intent (LCNOI) is for coverage under the Large Construction General Permit for land disturbing activities of five (5) acres or greater; or for land disturbing activities, which are part of a larger common plan of development or sale that are initially less than five (5) acres but will ultimately disturb five (5) or more acres. Applicant must be the owner or operator. For construction activities, the operator is typically the prime contractor. The owner(s) of the property and the prime contractor associated with regulated construction activity on the property have joint and severable responsibility for compliance with the Large Construction Storm Water General Permit MSR10.

If the company seeking coverage is a corporation, a limited liability company, a partnership, or a business trust, attach proof of its registration with the Mississippi Secretary of State and/or its Certificate of Good Standing. This registration or Certificate of Good Standing must be dated within twelve (12) months of the date of the submittal of this coverage form. Coverage will be issued in the company name as it is registered with the Mississippi Secretary of State.

Completed LCNOIs should be filed at least thirty (30) days prior to the commencement of construction. Discharge of storm water from large construction activities without written notification of coverage is a violation of state law.

Submittals with this LCNOI must include:

- A site-specific Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with ACT5 of the General Permit
- A detailed site-specific scaled drawing showing the property layout and the features outlined in ACT5 of the General Permit
- A United States Geological Survey (USGS) quadrangle map or photocopy, extending at least one-half mile beyond the facility property boundaries with the site location and outfalls outlined or highlighted. The name of the quadrangle map must be shown on all copies. Quadrangle maps can be obtained from the MDEQ, Office of Geology at 601-961-5523.

Additional submittals may include the following, if applicable:

- Appropriate Section 404 documentation from U.S. Army Corps of Engineers
- Appropriate documentation concerning future disposal of sanitary sewage and sewage collection system construction
- Appropriate documentation from the MDEQ Office of Land & Water concerning dam construction and low flow requirements
- Approval from County Utility Authority in Hancock, Harrison, Jackson, Pearl River and Stone Counties

ALL QUESTIONS MUST BE ANSWERED (Answer "NA" if the question is not applicable)

## TABLE OF CONTENTS

PERMITS

NARRATIVE

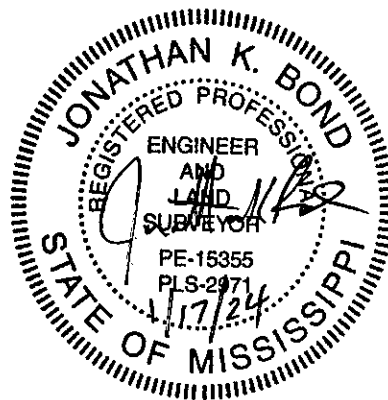
MAPS

DETAILS

CALCULATIONS

SUPPORT DOCUMENTS

- F & H UTILITIES
- USACE JOINT APPLICATION
- PHASE 2 PERMIT



**PERMIT**

MSR10

(NUMBER TO BE ASSIGNED BY STATE)

APPLICANT IS THE: ☒ OWNER ☐ PRIME CONTRACTOR

OWNER CONTACT INFORMATION

OWNER CONTACT PERSON: RICHARD HIATT  
OWNER COMPANY LEGAL NAME: KINGSMILL, LLC.  
OWNER STREET OR P.O. BOX: 15 KEYSTONE DR. SUITE C  
OWNER CITY: HATTIESBURG STATE: MS. ZIP: 39402  
OWNER PHONE #: (601) 296-9909 OWNER EMAIL: RICH HIATT@COMCAST.NET

PRIME CONTRACTOR CONTACT INFORMATION

PRIME CONTRACTOR CONTACT PERSON: LANE SMITH  
PRIME CONTRACTOR COMPANY LEGAL NAME: LANES DOZER SERVICE, LLC.  
PRIME CONTRACTOR STREET OR P.O. BOX: 243 HADEN RD.  
PRIME CONTRACTOR CITY: PURVIS STATE: MS. ZIP: 39475  
PRIME CONTRACTOR PHONE #: (601) 606-7859 PRIME CONTRACTOR EMAIL: KARLARSMITH@AOL.COM

FACILITY SITE INFORMATION

FACILITY SITE NAME: COPPERFIELD SUBDIVISION - PHASE 3 (FINAL)  
FACILITY SITE ADDRESS (If the physical address is not available, please indicate the nearest named road. For linear projects indicate the beginning of the project and identify all counties the project traverses.)  
STREET: BELLEWOOD RD.  
CITY: HATTIESBURG STATE: MS. COUNTY: LAMAR ZIP: 39402  
FACILITY SITE TRIBAL LAND ID (N/A If not applicable): N/A  
LATITUDE: 31 degrees 17 minutes 58 seconds LONGITUDE: 89 degrees 24 minutes 59 seconds  
LAT & LONG DATA SOURCE (GPS (Please GPS Project Entrance/Start Point) or Map Interpolation): GOOGLE MAP  
TOTAL ACREAGE THAT WILL BE DISTURBED <sup>1</sup>: 60 ACRES  
IS THIS PART OF A LARGER COMMON PLAN OF DEVELOPMENT? YES ☐ NO ☒  
IF YES, NAME OF LARGER COMMON PLAN OF DEVELOPMENT: PHASE 1 & 2 COMPLETED  
AND PERMIT COVERAGE NUMBER: MSR10 7754  
ESTIMATED CONSTRUCTION PROJECT START DATE: 2024-02-01  
YYYY-MM-DD  
ESTIMATED CONSTRUCTION PROJECT END DATE: 2026-01-01  
YYYY-MM-DD  
DESCRIPTION OF CONSTRUCTION ACTIVITY: MASS GRADE, STREETS, PONDS.  
PROPOSED DESCRIPTION OF PROPERTY USE AFTER CONSTRUCTION HAS BEEN COMPLETED: SUBDIVISION  
SIC Code \_\_\_\_\_ NAICS Code \_\_\_\_\_

NEAREST NAMED RECEIVING STREAM: PERKINS CREEK

IS RECEIVING STREAM ON MISSISSIPPI'S 303(d) LIST OF IMPAIRED WATER BODIES? (The 303(d) list of impaired waters and TMDL stream segments may be found on MDEQ's web site: [http://www.deq.state.ms.us/MDEQ.nsf/page/TWB\\_Total\\_Maximum\\_Daily\\_Load\\_Section](http://www.deq.state.ms.us/MDEQ.nsf/page/TWB_Total_Maximum_Daily_Load_Section)) YES ☐ NO ☒

HAS A TMDL BEEN ESTABLISHED FOR THE RECEIVING STREAM SEGMENT? YES ☐ NO ☒

ARE THERE RECREATIONAL STREAMS, PRIVATE/PUBLIC PONDS OR LAKES WITHIN ½ MILE DOWNSTREAM OF PROJECT BOUNDARY THAT MAY BE IMPACTED BY THE CONSTRUCTION ACTIVITY? YES ☒ NO ☐

EXISTING DATA DESCRIBING THE SOIL (for linear projects please describe in SWPPP): LOAMY CLAY

WILL FLOCCULANTS BE USED TO TREAT TURBIDITY IN STORM WATER? YES ☐ NO ☒

IF YES, INDICATE THE TYPE OF FLOCCULANT. ☐ ANIONIC POLYACRYLAMIDE (PAM) ☐ OTHER \_\_\_\_\_

IF YES, DOES THE SWPPP DESCRIBE THE METHOD OF INTRODUCTION, THE LOCATION OF INTRODUCTION AND THE LOCATION OF WHERE FLOCCULATED MATERIAL WILL SETTLE? YES ☐ NO ☐

<sup>1</sup> Acreage for subdivision development includes areas disturbed by construction of roads, utilities and drainage. Additionally, a housesite of at least 10,000 ft<sup>2</sup> per lot (entire lot, if smaller) shall be included in calculating acreage disturbed.

**DOCUMENTATION OF COMPLIANCE WITH OTHER REGULATIONS/REQUIREMENTS**  
COVERAGE UNDER THIS PERMIT WILL NOT BE GRANTED UNTIL ALL OTHER REQUIRED  
MDEQ PERMITS AND APPROVALS ARE SATISFACTORILY ADDRESSED

IS LCNOI FOR A FACILITY THAT WILL REQUIRE OTHER PERMITS?

YES ☐

NO ☒

IF YES, CHECK ALL THAT APPLY: ☐ AIR ☐ HAZARDOUS WASTE ☐ PRETREATMENT  
☐ WATER STATE OPERATING ☐ INDIVIDUAL NPDES ☐ OTHER: \_\_\_\_\_

IS THE PROJECT REROUTING, FILLING OR CROSSING A WATER CONVEYANCE OF ANY KIND? (If yes, contact the U.S. Army Corps of Engineers' Regulatory Branch for permitting requirements.) YES ☐ NO ☒

IF THE PROJECT REQUIRES A CORPS OF ENGINEER SECTION 404 PERMIT, PROVIDE APPROPRIATE DOCUMENTATION THAT:

- The project has been approved by individual permit, or
- The work will be covered by a nationwide permit and NO NOTIFICATION to the Corps is required, or
- The work will be covered by a nationwide or general permit and NOTIFICATION to the Corps is required

IS A LAKE REQUIRING THE CONSTRUCTION OF A DAM BEING PROPOSED? YES ☐ NO ☒  
(If yes, provide appropriate approval documentation from MDEQ Office of Land and Water, Dam Safety.)

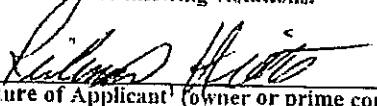
IF THE PROJECT IS A SUBDIVISION OR A COMMERCIAL DEVELOPMENT, HOW WILL SANITARY SEWAGE BE DISPOSED? Check one of the following and attach the pertinent documents.

- ☒ Existing Municipal or Commercial System. Please attach plans and specifications for the collection system and the associated "Information Regarding Proposed Wastewater Projects" form or approval from County Utility Authority in Hancock, Harrison, Jackson, Pearl River and Stone Counties. If the plans and specifications can not be provided at the time of LCNOI submittal, MDEQ will accept written acknowledgement from official(s) responsible for wastewater collection and treatment that the flows generated from the proposed project can and will be transported and treated properly. The letter must include the estimated flow.
- ☐ Collection and Treatment System will be Constructed. Please attach a copy of the cover of the NPDES discharge permit from MDEQ or indicate the date the application was submitted to MDEQ (Date: \_\_\_\_\_.)
- ☐ Individual Onsite Wastewater Disposal Systems for Subdivisions Less than 35 Lots. Please attach a copy of the Letter of General Acceptance from the Mississippi State Department of Health or certification from a registered professional engineer that the platted lots should support individual onsite wastewater disposal systems.
- ☐ Individual Onsite Wastewater Disposal Systems for Subdivisions Greater than 35 Lots. A determination of the feasibility of installing a central sewage collection and treatment system must be made by MDEQ. A copy of the response from MDEQ concerning the feasibility study must be attached. If a central collection and wastewater system is not feasible, then please attach a copy of the Letter of General Acceptance from the State Department of Health or certification from a registered professional engineer that the platted lots should support individual onsite wastewater disposal systems.

INDICATE ANY LOCAL STORM WATER ORDINANCE WITH WHICH THE PROJECT MUST COMPLY:

NONE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
Signature of Applicant (owner or prime contractor)

12-26-23  
Date Signed

RICHARD HIATT  
Printed Name

MEMBER  
Title

This application shall be signed as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.

For a municipal, state or other public facility, by principal executive officer, mayor, or ranking elected official

Please submit the LCN01 form to:

Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

# PRIME CONTRACTOR CERTIFICATION

## LARGE CONSTRUCTION GENERAL PERMIT

Coverage No. MSR10 \_\_\_\_\_ County \_\_\_\_\_  
(Fill in your Certificate of Coverage Number and County)



MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

By completing and submitting this form to MDEQ, the prime contractor is certifying that (1) they have operational control over the erosion and sediment control specifications (including the ability to make modifications to such specifications) or (2) they have day-to-day operational control of those activities at the site necessary to ensure compliance with the SWPPP and applicable permit conditions.

The owner(s) of the property and the prime contractor associated with regulated construction activity on the property have joint and severable responsibility for compliance with the permit. Notwithstanding any permit condition to the contrary, the coverage recipient and any person who causes pollution of waters of the state or places waste in a location where they are likely to cause pollution of any waters of the state shall remain responsible under applicable federal and state laws and regulations and applicable permits.

### PRIME CONTRACTOR INFORMATION

PRIME CONTRACTOR CONTACT PERSON: LANE SMITH PHONE NUMBER: (601) 606-7859  
PRIME CONTRACTOR COMPANY: LANE'S DOZER SERVICE, LLC.  
PRIME CONTRACTOR STREET (P.O. BOX): 243 MADEN RD.  
PRIME CONTRACTOR CITY: PURVIS STATE: MS. ZIP: 39475  
E-MAIL ADDRESS: KARLA R SMITH @ AOL.COM

### OWNER INFORMATION

OWNER CONTACT PERSON: RICHARD HIATT PHONE NUMBER: (601) 296-9909  
OWNER COMPANY NAME: KINGSMILL, LLC.

### PROJECT INFORMATION

PROJECT NAME: COPPERFIELD SUBDIVISION - PHASE 3  
DESCRIPTION OF CONSTRUCTION ACTIVITY: GRADE, DRAIN, BASE  
DETENTION BASINS, ROADS  
PHYSICAL SITE ADDRESS (If the physical address is not available indicate the nearest named road. For linear projects, indicate the beginning of the project and identify all counties the project traverses.)  
STREET: BELLEWOOD RD.  
CITY: HATTIESBURG COUNTY: LAMAR

I certify that I am the prime contractor for this project and will comply with all the requirements in the above referenced general NPDES permit. I further certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Prime Contractor Signature<sup>1</sup>

Date Signed

LANE SMITH  
Printed Name<sup>1</sup>

CONTRACTOR  
Title

<sup>1</sup>This application shall be signed as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.
- For a municipal, state or other public facility, by principal executive officer, mayor, or ranking elected official.

This Prime Contractors Certification form shall be submitted to:

Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

Revised: 10/25/16

Keep a Copy at the Construction Site and Also Submit this Page to:  
Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225-2261

## Registration Form for Residential Lot Coverage under Mississippi's Large Construction Storm Water General Permit INSTRUCTIONS



Coverage recipients for residential subdivision construction that do not retain responsibility for permit compliance for individual lots are to furnish this Registration to buyers of individual lots at the time of purchase. In addition, the attached Requirements for Individual Lots in Residential Subdivisions, the Site Inspection and Certification Form and the Large Construction Storm Water General Permit shall also be given to buyers of individual lots at the time of purchase. This form is providing notification to buyers of lots in residential developments, that being part of a "larger common plan of development or sale," coverage is required under Mississippi's Large Construction Storm Water General Permit. To comply with the permit, **the Registration Form must be submitted to MDEQ** at the address listed above and a Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented to reduce pollutants in storm water discharges during construction activity. **The SWPPP is not required to be submitted to MDEQ.** A copy of the SWPPP and Registration Form must be kept at the construction site or locally available (i.e., able to be produced within an hour of being requested by a state or local inspector). See the following attachments for information on SWPPP development. In addition, **a copy of the completed Registration Form(s) must be retained by the developer and submitted to the MDEQ when requesting termination of permit coverage.** If the buyer or homebuilder sells the lot before a house is built, they must provide this form to the new owner. All questions must be answered. Answer "NA" if the question is not applicable. For further information, contact MDEQ at 601/961-5171 or access our website address: [www.deq.state.ms.us/MDEQ.nsf/page/epd\\_epdgeneral](http://www.deq.state.ms.us/MDEQ.nsf/page/epd_epdgeneral).

ORIGINAL COVERAGE RECIPIENT NAME: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

STREET OR P.O. BOX: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE # (INCLUDE AREA CODE): \_\_\_\_\_

BUYER / HOMEBUILDER: \_\_\_\_\_

COMPANY NAME (IF APPROPRIATE): \_\_\_\_\_

STREET OR P.O. BOX: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

BUYER PHONE # (INCLUDE AREA CODE): \_\_\_\_\_

RESIDENTIAL SUBDIVISION NAME: \_\_\_\_\_

LARGE CONSTRUCTION STORM WATER PERMIT COVERAGE NUMBER: **MSR10:** \_\_\_\_\_

LOT NUMBER(s) (attach an additional sheet if necessary): \_\_\_\_\_ LOT SIZE(s): \_\_\_\_\_

PHYSICAL SITE ADDRESS (IF NOT AVAILABLE INDICATE THE NEAREST NAMED ROAD):

STREET: \_\_\_\_\_

CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ ZIP: \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As a buyer / homebuilder, I further certify that I have read and understand the terms and conditions of Mississippi's Large Construction Storm Water General Permit and that I am responsible for installing and maintaining the appropriate pollution control measures for the purchased lot(s) identified.

Original Coverage Recipient Signature<sup>1</sup> \_\_\_\_\_

Date Signed \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

Buyer / Homebuilder Signature<sup>1</sup> \_\_\_\_\_

Date Signed \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

<sup>1</sup>This application shall be signed according to ACT11, T-7 of the Large Construction General Permit.

## REQUIREMENTS FOR LOTS IN RESIDENTIAL SUBDIVISION WHICH ARE COVERED BY THE LARGE CONSTRUCTION STORM WATER GENERAL PERMIT

As a homebuilder on a lot that is part of a regulated subdivision, you are also regulated under the State's storm water regulations and are required to take steps to keep soil and sediment from leaving the lot. When rain falls on exposed soil it can wash away valuable topsoil. It also carries sediment, nutrients and other pollutants into streets, gutters and ditches, where it then travels to lakes, rivers, streams or wetlands. Polluted runoff can cause excessive growth of aquatic weeds and algae and reduce recreational opportunities such as swimming and fishing. Sediment laden runoff can also destroy fish habitat reducing productive fishing opportunities. In addition, sediment-laden runoff can also clog pipes, ditches, streams and basins resulting in increased flooding and maintenance cost. Therefore, the homebuilder is required to minimize off-site damage from soil erosion, sediment leaving the construction site, and poor "housekeeping" practices. This requirement must be accomplished by developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Some examples of individual lot SWPPPs are attached for your convenience. Sketch the controls on a copy of your site plan. Narrative notes on the site plan may also be used in addition to the erosion control symbols.

In developing and implementing the SWPPP, controls must be used from each control group (vegetative, structural, housekeeping) to prevent erosion and sediment and other pollutants from leaving the site. Commonly used controls include:

### Vegetative Controls

**Temporary vegetation** includes annual grasses that sprout quickly such as annual rye, browntop millet, oats, and winter wheat. These grow quickly with little care and can protect the soil from rainfall and act as a filter. They will not provide permanent cover. Permanent cover must be established as indicated below. When a disturbed area will be left undisturbed for fourteen (14) days or more, the appropriate temporary or permanent vegetative practices shall be implemented immediately.

**Mulching** is the placement of hay grass, woodchips, straw, or synthetic material on the soil to provide temporary cover to protect the soil from rain. Mulching may be the only option during the winter when seeding or sodding is not possible. Mulch must stay in place to be effective. Netting, stakes or chemical binders are used to anchor some types of mulch. Be sure to reinstall washed-out mulch and anchor if necessary until permanent cover is established.

**Permanent stabilization** is the establishment of a permanent vegetative cover on disturbed areas using either sod, perennial seed, trees or shrubs. When a disturbed area will be left undisturbed for fourteen (14) days or more, the appropriate temporary or permanent vegetative practices shall be implemented immediately. Silt fences, and other temporary measures must be removed following permanent stabilization.

**Vegetative buffer zones** are undisturbed or planted vegetated areas that are between construction activities and water bodies.

### Structural Controls

**Silt fences** are temporary sediment barriers made of filter fabric buried at the bottom, stretched, and supported by stakes. The silt fence slows runoff and allows it to puddle or pond, so soil and sediment can settle out before leaving the site. The bottom eight to twelve inches of fence must either be sliced in or buried in a trench about four to six inches deep by four to six inches wide. **Silt fences that are not buried are improperly installed. They have no useful function, are a waste of money, and may result in enforcement action.** Stakes must be on the downstream side of the fence and spaced about 3 feet apart. Silt fence must not be installed across streams, ditches, waterways, or other concentrated flow areas. Place fences on the contour or perpendicular to the slope of the hill so that water and sediment will pond behind the fence. **Turn ends uphill** to prevent water going around the end. Install on the downslope, downhill, downstream, or low side of your lot. Keep the fence/barrier in place until grass is established.

**Slope drains** are piping or lined channels that carry storm water downslope without erosion. A good example would be a downspout extender. Extenders may be used to protect temporarily stabilized areas from roof runoff. Extenders can direct water from roof gutters to paved or grassed areas. Remove extenders following permanent stabilization.

**Construction entrance/exits** are stone stabilized site entrances which reduce sediment tracked onto public roads. Apply gravel or crushed rock to the driveway area and restrict traffic to this one route. Use 3 to 6 inch gravel over a geotextile fabric. At the end of each day sweep or scrape up any soil tracked onto the street. Limit "standard" vehicle access (including workers' vehicles) to only streets and roads, keep vehicles off of future yard areas; limit tracking of mud onto streets by requiring any required vehicles to use designated access drives. Streets are conduits for storm water, it is important to keep mud and sediment off the streets.

**Stockpiles** of sand or soil should be covered with plastic or tarps at the end of each workday, or surrounded with silt fence or haybales. Do not locate a stockpile near a street, storm drain inlet, or ditch.

**Erosion control blankets or mats** are machine-produced mats of straw or other fibers held together with netting that provide temporary or permanent stabilization in critical areas, such as slopes or channels, so that vegetation may be established.

**Storm Drain Inlets** on the lot must be protected by surrounding or covering with a filter material until final stabilization has been achieved.

**Additional Controls:** The above controls are the more common practices used at small construction sites. There are a number of other controls, techniques and manufactured product available. A few examples include hydro seeding, diversion berms, silt dikes and fiber logs. Even something as simple as a tarp or plastic may provide temporary cover for small exposed areas. You may wish to contact an erosion and sediment control specialist, local building official, or MDEQ for further information. In addition, MDEQ has several guidance manuals that may be of assistance and the internet has abundant guidance on construction BMPs.

**Housekeeping Controls:** Pollutants that may enter storm water from construction sites because of poor housekeeping include oils, grease, paints, gasoline, solvents, litter, debris, and sanitary waste. Good housekeeping practices include:

- Frequent cleaning of trash and debris, providing waste receptacles at convenient locations and providing regular collection of waste;
- Directing concrete trucks to the subdivision's designated wash-off area(s) or back to the Ready-Mix facility;
- Providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials; and
- Providing adequately maintained sanitary facilities.

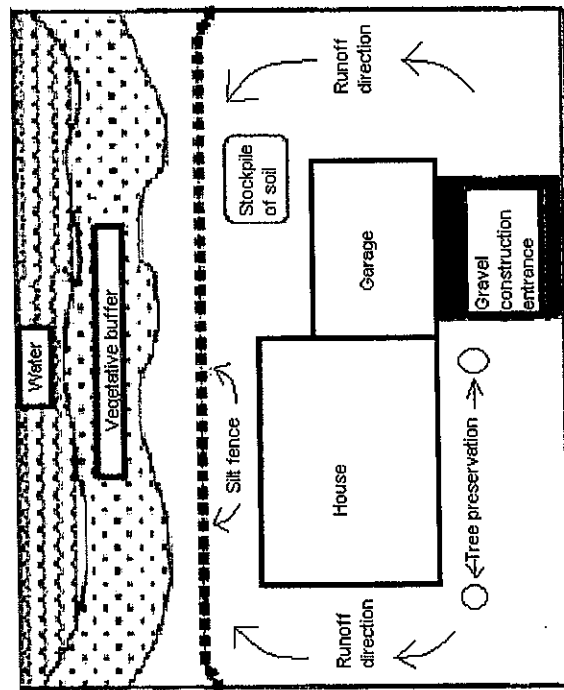
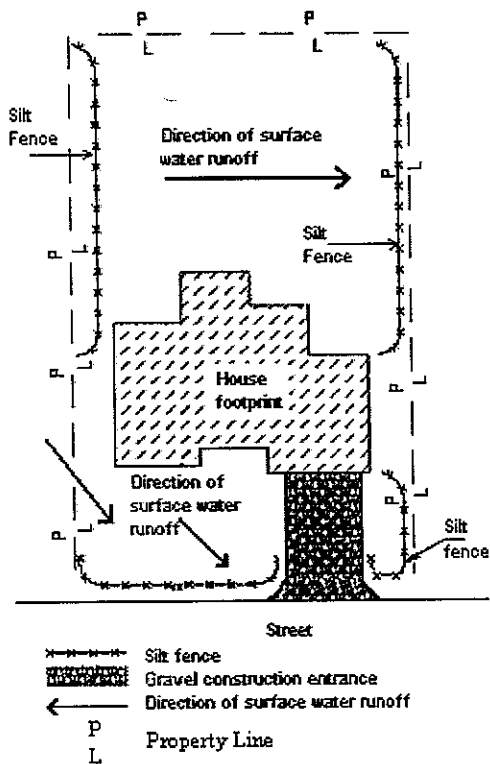
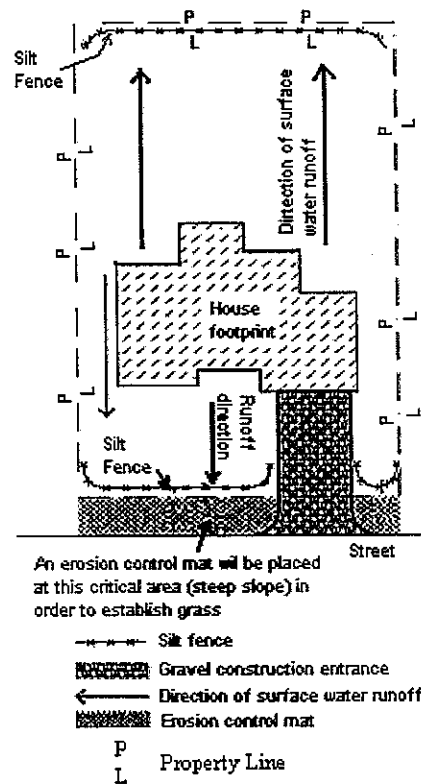
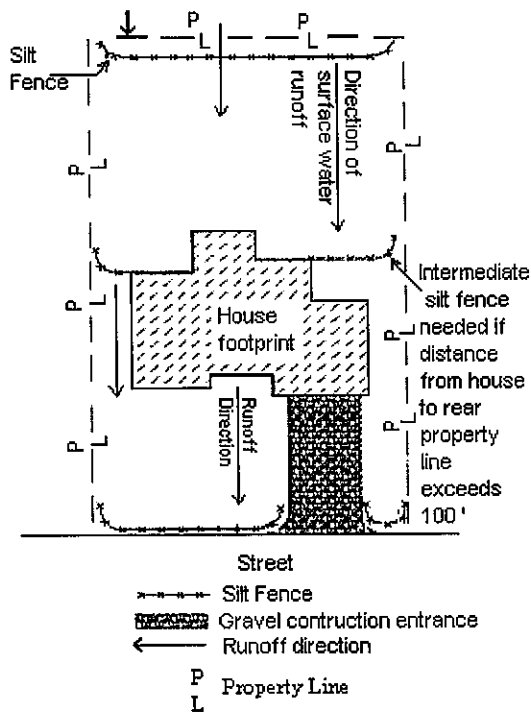
In addition, you should be aware that State air regulations prohibit the open burning of residential solid waste.

**Inspection Requirements.** Homebuilders shall inspect all erosion controls as often as is necessary, but no less than weekly, to ensure that appropriate erosion and sediment controls have been properly constructed and maintained to prevent erosion and sediment from leaving the site and determine if additional or alternative control measures are required. The inspection results shall be recorded on the Site Inspection and Certification Form contained in the Large Construction Forms Package. MDEQ strongly recommends that homebuilders perform "walk through" inspections daily. It is a responsibility of the homebuilder to install additional and/or alternative erosion and sediment controls when existing controls prove to be ineffective in preventing sediment from leaving the site.

**Retention of Records.** All records, reports, forms and information resulting from activities required by this permit shall be retained for a period of at least three years from the date of the document origin.

**Duty to Comply.** Lot owners must comply with the applicable permit conditions. See Activities 3, 5, 6, 7, 10 and 11 in the Large Construction Storm Water General Permit for applicable conditions. Any noncompliance with the applicable permit conditions and aforementioned conditions including sediment leaving the lot constitutes a violation of the Mississippi Water Pollution Control Law and is grounds for enforcement action. It shall not be an acceptable defense that controls were not installed because subsequent activities would require their replacement or cause their destruction.

# EXAMPLE INDIVIDUAL LOT EROSION AND SEDIMENT CONTROL PLANS



All disturbed areas will be temporarily seeded with ryegrass. After final grade has been reached, all disturbed areas will be sodded with bermuda grass.

Keep a Copy Available at the Permitted Facility or Locally Available  
Submit the Inspection Reports Only if Requested by the Mississippi Department of Environmental Quality (MDEQ)

**LARGE CONSTRUCTION GENERAL PERMIT  
SITE INSPECTION AND CERTIFICATION FORM  
COVERAGE NUMBER (MSR10 \_\_\_\_\_)**



**INSTRUCTIONS**

Results of construction storm water inspections required by ACT6 of this permit shall be recorded on this report form and kept with the Storm Water Pollution Prevention Plan (SWPPP) in accordance with the inspection documentation provisions of ACT9 of the this permit. Inspections shall be performed at least weekly for a minimum of four inspections per month. The coverage number must be listed at the top of all Inspection and Certification Forms.

**COVERAGE RECIPIENT INFORMATION**

OWNER/PRIME CONTRATOR NAME: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
PROJECT STREET ADDRESS: \_\_\_\_\_  
PROJECT CITY: \_\_\_\_\_ PROJECT COUNTY: \_\_\_\_\_  
OWNER/PRIME CONTRACTOR MAILING ADDRESS: \_\_\_\_\_  
MAILING CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_ CONTACT PHONE NUMBER: (\_\_\_\_\_) \_\_\_\_\_  
EMAIL ADDRESS: \_\_\_\_\_

**INSPECTION DOCUMENTATION**

DATE (mo/day/yr)	TIME (hr:min AM/PM)	ANY DEFICIENCIES? (CHECK IF YES)	INSPECTOR(S)
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

Deficiencies Noted During any Inspection (give date(s); attach additional sheets if necessary): \_\_\_\_\_

Corrective Action Taken or Planned (give date(s); attach additional sheets if necessary): \_\_\_\_\_

Based upon this inspection, which I or personnel under my direct supervision conducted, I certify that all erosion and sediment controls have been implemented and maintained, except for those deficiencies noted above, in accordance with the Storm Water Pollution Prevention Plan (SWPPP) and sound engineering practices as required by the above referenced permit. I further certify that the LCNOI and SWPPP information is up to date.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

**MAJOR MODIFICATION FORM  
FOR LARGE CONSTRUCTION GENERAL PERMIT**  
Coverage No. MSR10 \_\_\_\_\_ County \_\_\_\_\_



**INSTRUCTIONS**

Coverage recipients shall notify the Mississippi Department of Environmental Quality at least 30 days in advance of the following activities (check all that apply). This form should be submitted with a modified Storm Water Pollution Prevention Plan (SWPPP), updated USGS topographic map, Corps of Engineers Section 404 documentation and wastewater collection and treatment information, as appropriate.

- ☐ SWPPP details have been developed and are ready for MDEQ review for subsequent phases of an existing, covered project.
- ☐ "Footprint" identified in the original LCN01 is proposed to be enlarged.

This form must be signed by the current coverage recipient under Mississippi's Large Construction General Permit. A different developer of new phases of existing subdivisions must apply for separate permit coverage through the submittal of a new complete LCN01 package. Coverage recipients are authorized to discharge storm water associated with proposed expansions of existing subdivisions or subsequent phases, under the conditions of the General Permit, only upon receipt of written notification of approval by MDEQ. All other modifications, such as changes of erosion and sediment controls used, must be in accordance with ACT6, S-1 (6) and S-2 (7) of the General Permit.

ALL INFORMATION MUST BE COMPLETED (indicate "N/A" where not applicable)

**COVERAGE RECIPIENT INFORMATION**

COVERAGE RECIPIENT CONTACT NAME: \_\_\_\_\_ TEL # (\_\_\_\_) \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

STREET OR P.O. BOX: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

**PROJECT INFORMATION**

PROJECT NAME: \_\_\_\_\_

CITY: \_\_\_\_\_

ADDITIONAL ACREAGE TO BE DISTURBED: \_\_\_\_\_ TOTAL PROJECT ACREAGE: \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature (must be signed by coverage recipient)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

Please submit this form to:

Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

# Environmental Permits for Industrial Facilities

## Request for Transfer of Permit, General Permit Coverage and/or Name Change

Instructions: For Ownership Change-Complete all Items on Page 1 (except Item VIII) and Page 2 (reverse side).

For Name Change Only-Complete Items I, II, V, VI, VII, VIII, and Page 2 (reverse side).

Note-This form should be submitted to MDEQ when a transferal date is finalized but prior to the actual transfer.

<b>Item I.</b> Facility Name: _____ Location: (Do Not Use P.O. Box) Street: _____ City: _____ State: <u>MS</u> Zip: _____ County: _____ Telephone: (_____) _____	<b>Item II.</b> Responsible official after transfer or name change: Name: _____ Title: _____ Mailing Address: Street/P.O. Box: _____ City: _____ State: _____ Zip: _____ Telephone (_____) _____								
<b>Item III.</b> Previous Permittee <sup>1</sup> : _____ Mailing Address: Street/P.O. Box: _____ City: _____ State: _____ Zip: _____ Telephone: (_____) _____	<b>Item IV.</b> New Permittee <sup>1</sup> : _____ Mailing Address: Street/P.O. Box: _____ City: _____ State: _____ Zip: _____ Telephone: (_____) _____								
<b>Item V.</b> Industrial Activity      SIC Code: _____ Brief Description: _____	<b>Item VI.</b> Will Facility Operations Change?    Yes _____ No _____ If yes, the appropriate applications and permits may require modification prior to change.								
<b>Item VII.</b> Will Facility Name Change?    Yes _____ No _____ If Yes, Provide New Name for Permit Coverage. New Name: _____	<b>Item VIII.</b> Signature for Name Change Print Name: _____ Authorized Signature <sup>2</sup> : _____ Title: _____ Date: _____								
<b>Item IX.</b> We the undersigned request transfer of permit(s) and/or permit coverage(s) listed on the backside of this form. From: _____ To: _____ Acquisition Date: _____ <p>By signature below, the recipient certifies that: 1) they are aware of the requirements of the permit(s), 2) the applicant can demonstrate to the Permit Board it has the financial resources and operational expertise and 3) agrees to accept responsibility and liability for the permit(s) listed on the back of this document. By signature below, the previous permittee is requesting that the permit(s) and/or permit coverage(s) be transferred to the recipient. The transfer of the permit(s) or permit coverage(s) will be by written notification from the Office of Pollution Control (OPC). The OPC may require submittal of information regarding financial capability and past compliance history of the recipient.</p> <table style="width: 100%;"> <tr> <td style="width: 50%;">           _____            Print New Permittee<sup>1</sup> Name         </td> <td style="width: 50%;">           _____            Print Previous Permittee<sup>1</sup> Name         </td> </tr> <tr> <td>           _____            New Authorized Signature<sup>2</sup> </td> <td>           _____            Previous Authorized Signature<sup>2</sup> </td> </tr> <tr> <td>           _____            Title         </td> <td>           _____            Title         </td> </tr> <tr> <td>           _____            Date         </td> <td>           _____            Date         </td> </tr> </table>		_____ Print New Permittee <sup>1</sup> Name	_____ Print Previous Permittee <sup>1</sup> Name	_____ New Authorized Signature <sup>2</sup>	_____ Previous Authorized Signature <sup>2</sup>	_____ Title	_____ Title	_____ Date	_____ Date
_____ Print New Permittee <sup>1</sup> Name	_____ Print Previous Permittee <sup>1</sup> Name								
_____ New Authorized Signature <sup>2</sup>	_____ Previous Authorized Signature <sup>2</sup>								
_____ Title	_____ Title								
_____ Date	_____ Date								

<sup>1</sup>A Permittee is a company or individual that has been issued an individual permit or coverage under a general permit.

<sup>2</sup>Authorized Signature must be owner or in the case of a corporation, a corporate officer as defined in Regulations 11 Miss. Admin. Code Pt. 2, Ch. 2. and 11 Miss. Admin. Code Pt. 6, Ch. 1.

**Mississippi Department of Environmental Quality/Office of Pollution Control**  
**P.O. Box 2261**  
**Jackson, Mississippi 39225**  
**(601) 961-5171**

<p><b>Item X. Storm Water</b></p> <p>(Check One)</p> <p><input type="checkbox"/> A Storm Water Pollution Prevention Plan (SWPPP) is not required for the site.</p> <p><input type="checkbox"/> The recipient certifies that they have received a copy of the Office of Pollution Control approved SWPPP from the original owner.</p> <p><input type="checkbox"/> The recipient is submitting a new SWPPP, which is attached to this form.</p> <p><input type="checkbox"/> A copy of the SWPPP cannot be obtained from the original owner.</p>	<p><b>Item XI. Hazardous Waste ID Number</b></p> <p>EPA ID No. _____</p> <p>(Check One)</p> <p><input type="checkbox"/> An EPA Hazardous Waste ID Number is not required for the site.</p> <p><input type="checkbox"/> The site's EPA ID Number is listed above and a Notification of Regulated Waste Activity Form is attached.</p>
<p><b>Item XII. Permit(s) and/or Coverage(s) to be Transferred</b></p>	
<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>	<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>
<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>	<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>
<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>	<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>
<p>Permit Type: _____</p> <p>Permit/Coverage No.: _____</p> <p>Permit Issuance Date: _____</p> <p>Date of General Permit Coverage: _____</p> <p>Permit Expiration Date: _____</p>	<p><b>OTHER INFORMATION:</b></p>    

# INSPECTION SUSPENSION FORM

## UNDER LARGE CONSTRUCTION STORM WATER GENERAL NPDES PERMIT MSR10



MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

### INSTRUCTIONS

Coverage recipients under Mississippi's Large Construction Storm Water General Permit may temporarily suspend required weekly inspections of erosion and sediment controls and monthly record keeping by submission of this form. Inspections may be suspended only when land disturbing activities have ceased, no further land disturbing activities are planned for a period of at least six (6) months, the site is stable with no active erosion, and vegetative cover has been established (see ACT9, S-1). The coverage recipient is responsible for all permit conditions during the suspension period and nothing in this condition shall limit the rights of MDEQ to take enforcement or other actions against the coverage recipient. Once land disturbing activities resume MDEQ must be notified and all inspections and record keeping required by the permit must also resume. Color photographs, representative of the construction site, must be submitted with this inspection form.

### COVERAGE RECIPIENT INFORMATION

COVERAGE RECIPIENT CONTACT PERSON: \_\_\_\_\_  
COMPANY NAME: \_\_\_\_\_  
STREET OR P.O. BOX: \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
PHONE # (INCLUDE AREA CODE): \_\_\_\_\_ E-MAIL: \_\_\_\_\_

### PROJECT INFORMATION

CONSTRUCTION STORM WATER GENERAL PERMIT COVERAGE NUMBER: **MSR10** \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that: land disturbing activities have ceased, no further land disturbing activities are planned for a period of at least six (6) months, the site is stable with no active erosion, and vegetative cover has been established.

Signature (must be signed by coverage recipient) \_\_\_\_\_

Date Signed \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

Please submit this form to:

Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

Revised: 12/10/2016

# Request for Termination (RFT) of Coverage



**LARGE CONSTRUCTION GENERAL PERMIT**  
Coverage No. MSR10 \_\_\_\_\_ County \_\_\_\_\_  
(Fill in your Certificate of Coverage Number and County)

This form must be submitted within thirty (30) days of achieving final stabilization (see ACT10, S-1 of general permit). Failure to submit this form is a violation of permit conditions.

The signatory of this form must be the owner or operator (prime contractor) who is the current coverage recipient (rather than the project manager or environmental consultant).

(Please Print or Type)

Project Name: \_\_\_\_\_  
Physical Site Street Address (if not available, indicate nearest named road): \_\_\_\_\_  
City: \_\_\_\_\_ County: \_\_\_\_\_ Zip: \_\_\_\_\_  
Coverage Recipient Company Name: \_\_\_\_\_  
Street Address / P.O. Box: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Coverage Recipient Contact Name and Position: \_\_\_\_\_ Tel. #: (\_\_\_\_) \_\_\_\_\_

Has another owner(s) or operator(s) assumed control over all areas of the site that have not reached final stabilization?

## RESIDENTIAL SUBDIVISIONS:

- ☐ YES. A copy of the Registration Form for Residential Lot Coverage for each lot or out parcel that has been sold and a site map, indicating which lots have been sold, are attached.
- ☐ NO. Coverage may not be terminated until all areas have reached final stabilization.

## COMMERCIAL DEVELOPMENT:

- ☐ YES. A copy of the site map, indicating which out-parcels have been sold, is attached.
- ☐ NO. Coverage may not be terminated until all areas have reached final stabilization.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. I understand that by submitting this Request for Termination and receiving written confirmation, I will no longer be authorized to discharge storm water associated with construction activity under this general permit. Discharging pollutants associated with construction activity to waters of the State without proper permit coverage is a violation of state law. I also understand that the submittal of this Request for Termination does not release an owner or operator from liability for any violations of this permit or the Clean Water Act.

Authorized Name (Print) \_\_\_\_\_

Telephone \_\_\_\_\_

Signature \_\_\_\_\_

Date Signed \_\_\_\_\_

This application shall be signed according to the General Permit, ACT11, T-7 as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.
- For a municipal, state or other public facility, by principal executive officer, mayor, or ranking elected official.

After signing please mail to:

Chief, Environmental Permits Division  
MS Department of Environmental Quality, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

## **NARRATIVE**

# **Narrative of Storm Water Prevention Plan for Copperfield Subdivision Phase 3 Final Phase**

## **Project Description**

This phase is the final phase of a multi-phase residential subdivision. This phase will disturb approximately 60 acres, consisting of land grading, roads, lots, and utilities. There are 2 detention ponds for this phase.

## **Adjacent Property**

The adjacent properties consist of phase one of copperfield to the east, vacant field to the west, and other residential areas to the north and south.

## **Planned Erosion, Sediment, and Storm water Control Practices**

1. Silt Fence - Place silt fence at the bottom of any slope steeper than 5:1 and around the perimeter of the site. Replace at 50% capacity before overtopping occurs.
2. Permanent Seeding - Establish a permanent grass in all disturbed areas. These areas may be seeded or sodded. Cover cannot be certified until after a minimum of 6 weeks of establishment and at least 1/2" of rainfall has occurred.
3. Straw wattles - Placed with the silt fence around pipe culverts for added protection.
4. **Special Provision** – Temporary seeding must be initiated immediately whenever any clearing, grading, excavating or other land disturbing activities have been left undisturbed 14 or more days.

## **Good Housekeeping Practices**

1. Vehicles entering the roadway shall be washed down ( if muddy) prior to entering the roadway. The vehicle will pass over a limestone ( 10 lbs riprap) bed and be washed down of the major portion of mud.
2. Equipment maintenance and repairs shall only be performed on upland areas with a 12" dirt berm installed around the perimeter of the work area. Proper chemicals shall be on hand to be placed on fluid spills in accordance with manufacturers recommendations. All contaminated soil shall be loaded and properly disposed of

in a certified landfill accepting hazardous material. The two closes are McNeal and Pine Belt.

3. Waste receptacles shall be placed where the work is being performed and shall move with the work. The contractor shall not let a full container stand for more than 48 hours before changing out or 7 days, whichever comes first.
4. Pota-lets shall be made available and used.

### Implementation Sequence

Make sure plan is incorporated into the site work contractor's contract or the general contractor, if applicable, and have said contractor sign prime contractors certification form placing responsibility on the contractor during construction.

Construct the construction entrance/exit.

Install all perimeter silt fence.

Install detention basins and protect.

Install all ditches and pipes and protect.

Complete site clearing and grass disturbed areas.

Construct roads.

Make sure all temporary controls are in-place immediately following site clearing.

Topsoil all disturbed areas and establish permanent grass or pave.

After site is stabilized, remove all temporary controls and implement all permanent sedimentation controls.

Weekly inspection reports should be made and submitted at the end of the project by the responsible party.

### Short Term Maintenance Plan

1. Check all controls after all rainfall events and at least once a week.
2. Repair controls as soon as possible after discovered.
3. Clean out sedimentation from the silt fence or check dams when 50% capacity has been reached.

4. Re-fertilize and reseed all exposed areas as needed.

#### Long Term Maintenance Plan

1. Maintain or restore all vegetated areas to provide good ground cover.
2. The Owner will inspect the site periodically to check for maintenance issues.
3. During the construction phase, the prime contractor shall be the responsible party to make sure this plan is executed correctly.
4. After the contractor is finished, the Owner shall be the responsible party.
5. Should the owner lease, sub-lease or sell all or a portion of the property, the owner shall assign responsibility to the new party in written form. A copy of said form shall be sent to the Office of Pollution Control for concurrence.
6. Post construction measures will be the detention ponds, owned by the home owner's association.
7. Each lot owner will be subject to this SWPPP and are to follow the rules and apply for an individual lot coverage permit.

## MAPS

[illegible]

March 5, 2018

0	290	580	870	1,160
---	-----	-----	-----	-------

Feet

# Overall view

Write a description for your map.

## Legend

- Feature 1
- Oak Grove

Google Earth

©2018 Google

Buccanero Dr

S Point  
Baiboa Dr

Dawn Dr

Santa Rosa Dr

Plantation Blvd

Delta Dr  
Delta Dr

Hunters Ln

Bellewood Rd

Pecan Hill Dr

Oak Grove Rd

Shadow Ridge Dr

Dove Run Dr

Knoxville

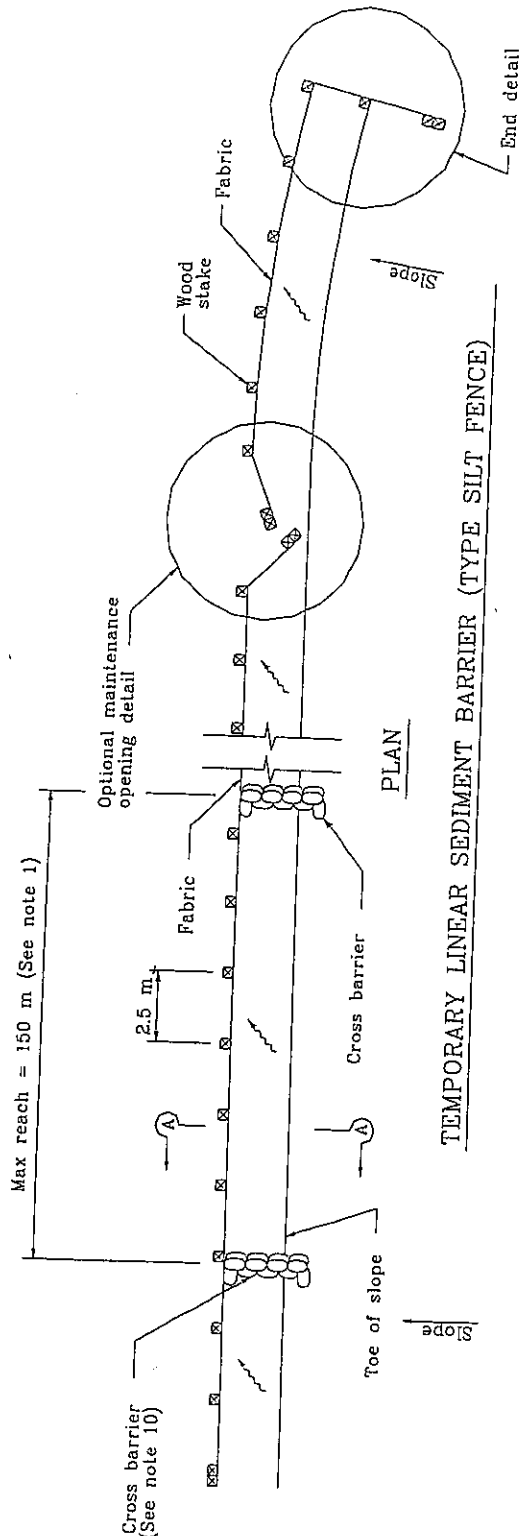
3000 ft

N

## DETAILS

# Silt Fence

SC-1



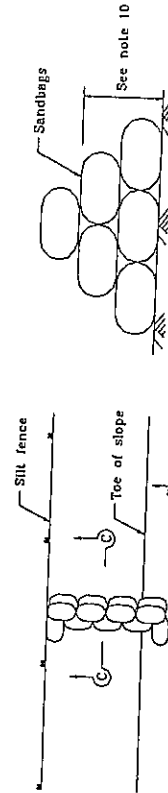
TEMPORARY LINEAR SEDIMENT BARRIER (TYPE SILT FENCE)

## NOTES

1. Construct the length of each reach so that the change in base elevation at the toe of the reach does not exceed  $1/3$  the height of the linear barrier, in no case shall the reach length exceed 150m.
2. The last 2.5 m of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 2.5 m maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of  $1/3$  and a maximum of  $1/2$  the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.

## LEGEND

- Tempered backfill
- Slope direction
- Direction of flow



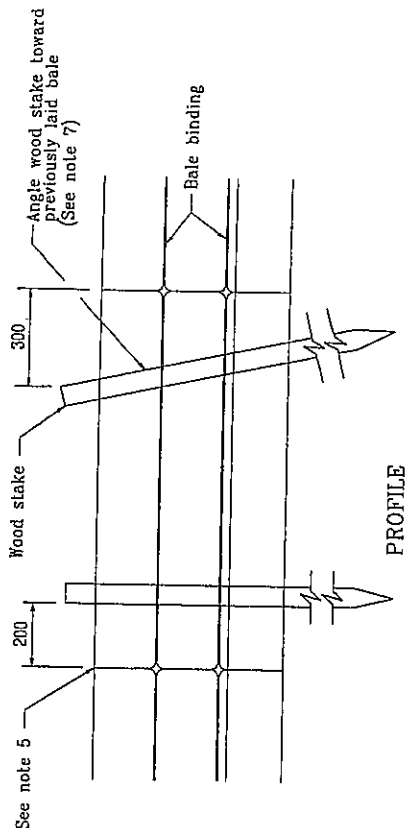
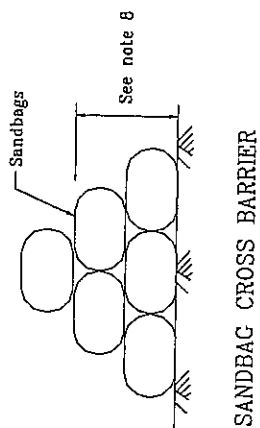
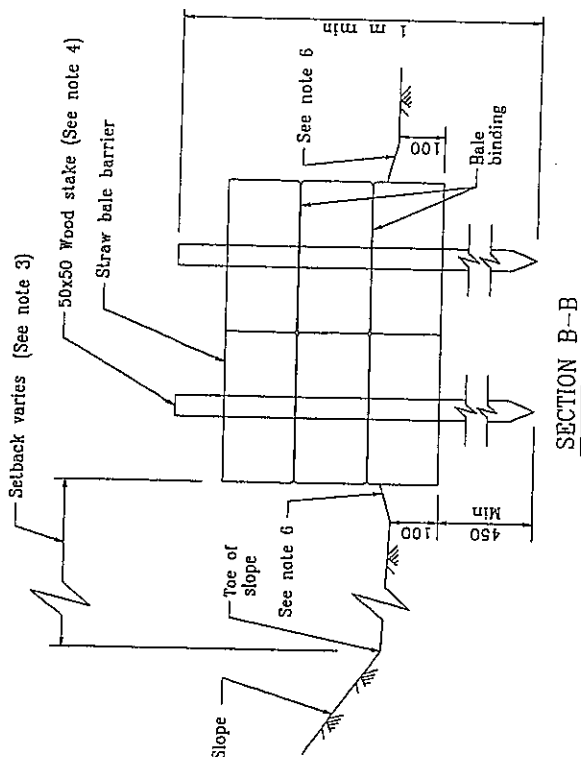
SECTION C-C

## TEMPORARY LINEAR SEDIMENT BARRIER (TYPE SILT FENCE)

NO SCALE  
ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

# Straw Bale Barrier

SC-9

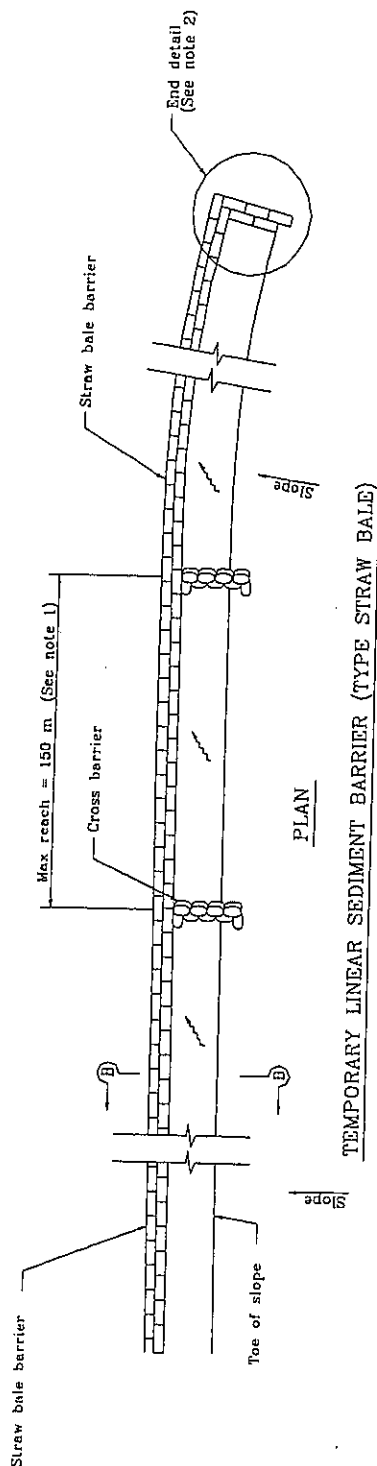


STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
TEMPORARY LINEAR SEDIMENT BARRIER  
(TYPE STRAW BALE)

NO SCALE  
ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

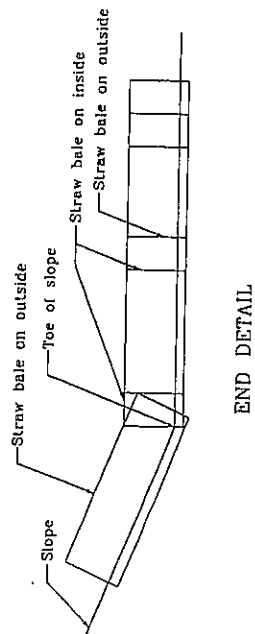
# Straw Bale Barrier

SC-9



## NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed  $1/2$  the height of the linear barrier. In no case shall the reach length exceed 150 m.
2. The end of barrier shall be turned up slope.
3. Dimension may vary to fit field condition.
4. Stake dimensions are nominal.
5. Place straw bales tightly together.
6. Tamp embedment spoils against sides of installed bales.
7. Drive angled wood stake before vertical stake to ensure light abutment to adjacent bale.
8. Cross barriers shall be a min of  $1/2$  and a max of  $2/3$  the height of the linear barrier.
9. Sandbag rows and layers shall be offset to eliminate gaps.



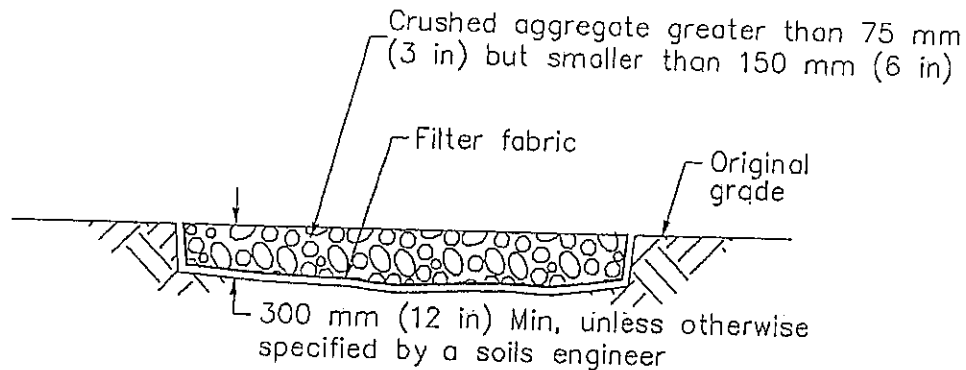
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
TEMPORARY LINEAR SEDIMENT BARRIER  
(TYPE STRAW BALE)

NO SCALE  
ALL DIMENSIONS ARE IN  
MILLIMETERS UNLESS OTHERWISE SHOWN

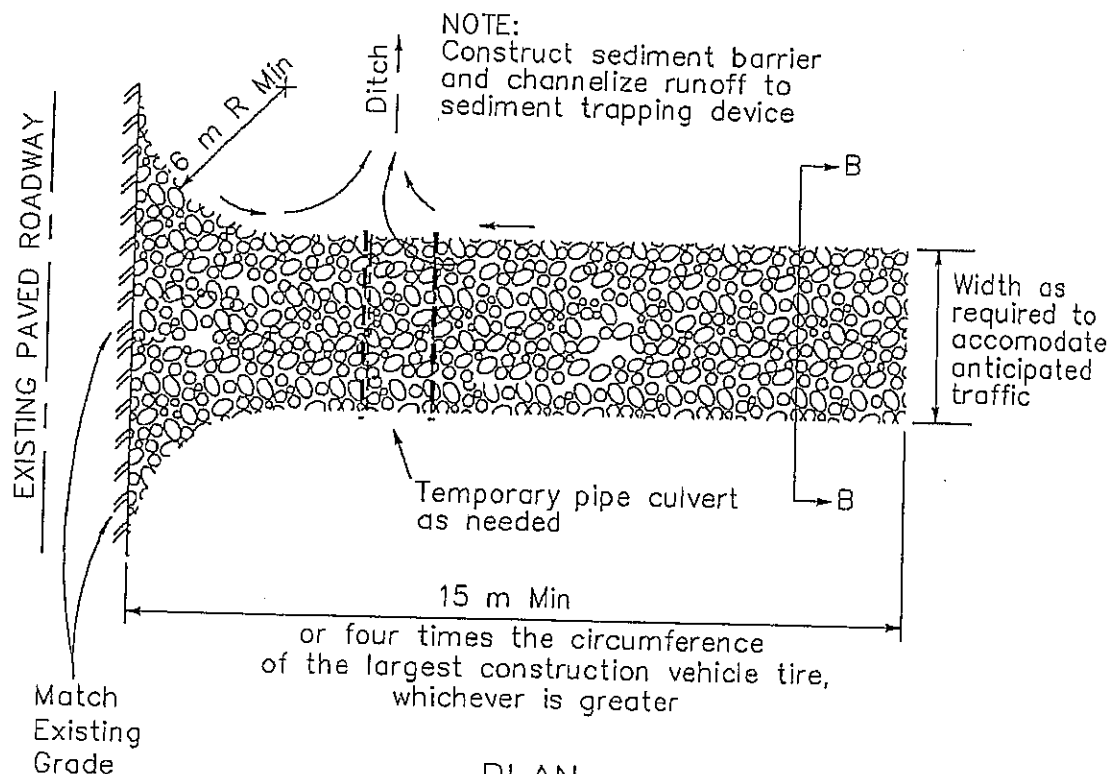


# Stabilized Construction Entrance/Exit

TC-1



SECTION B-B  
NTS

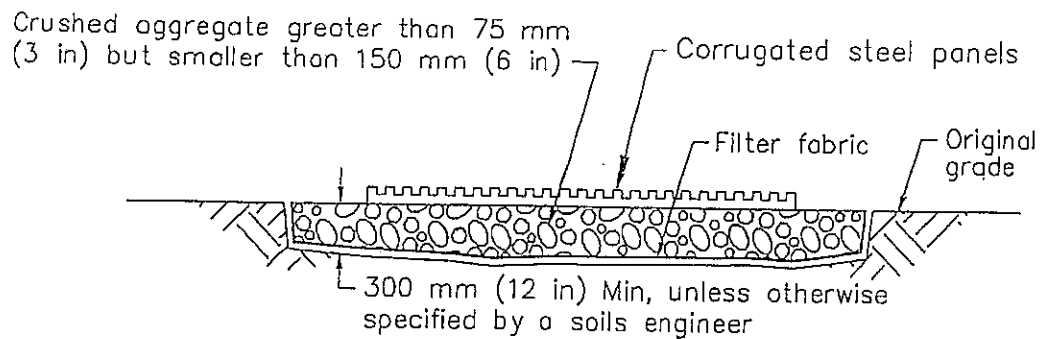


PLAN  
NTS

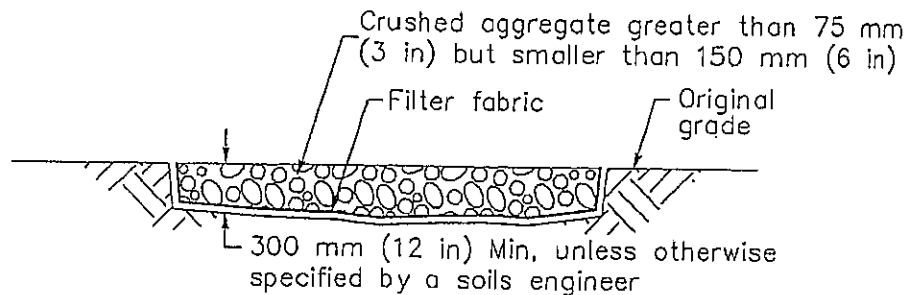
Stabilized Construction Entrance/Exit (Type 1)

# Entrance/Outlet Tire Wash

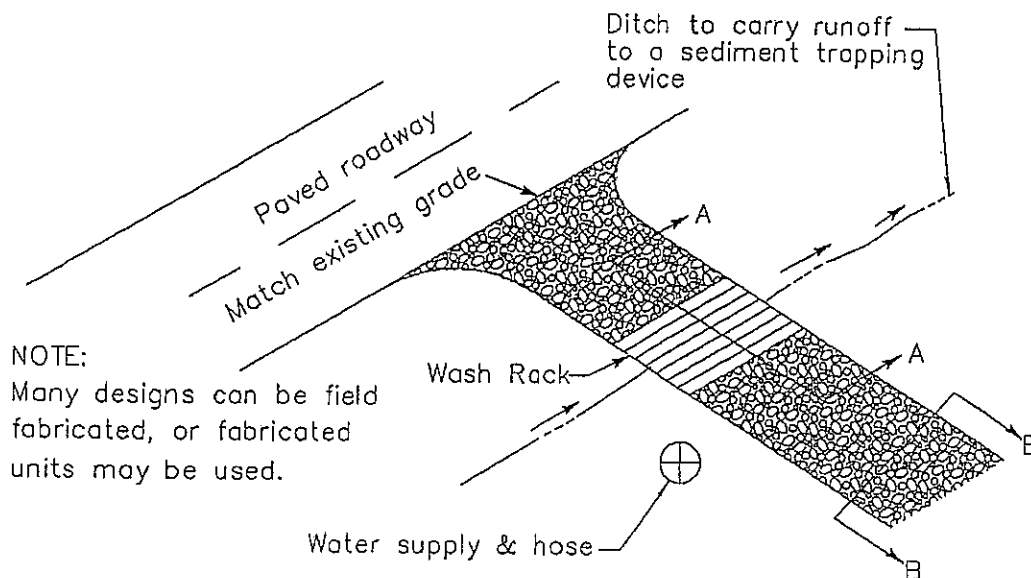
TC-3



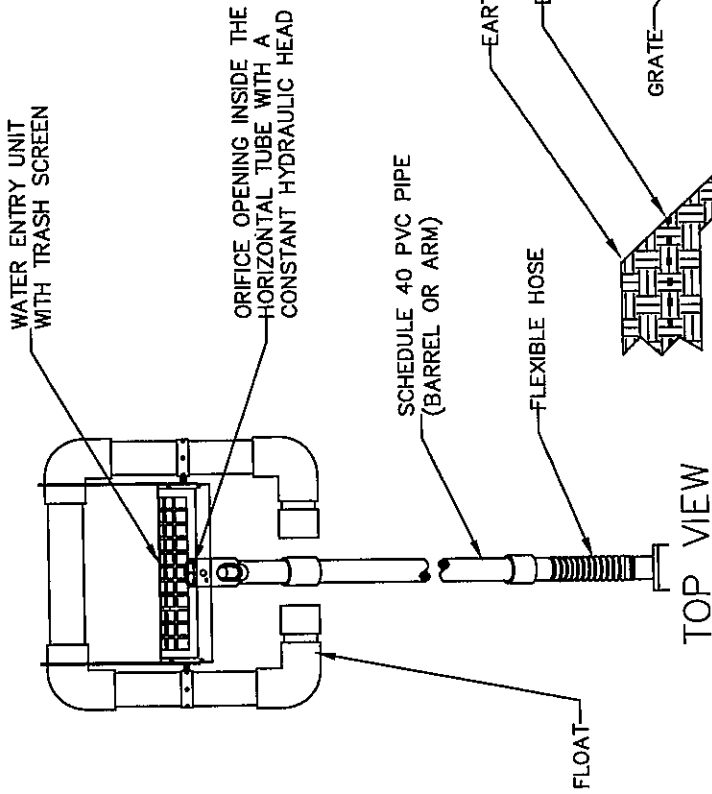
SECTION A-A  
NOT TO SCALE



SECTION B-B  
NTS



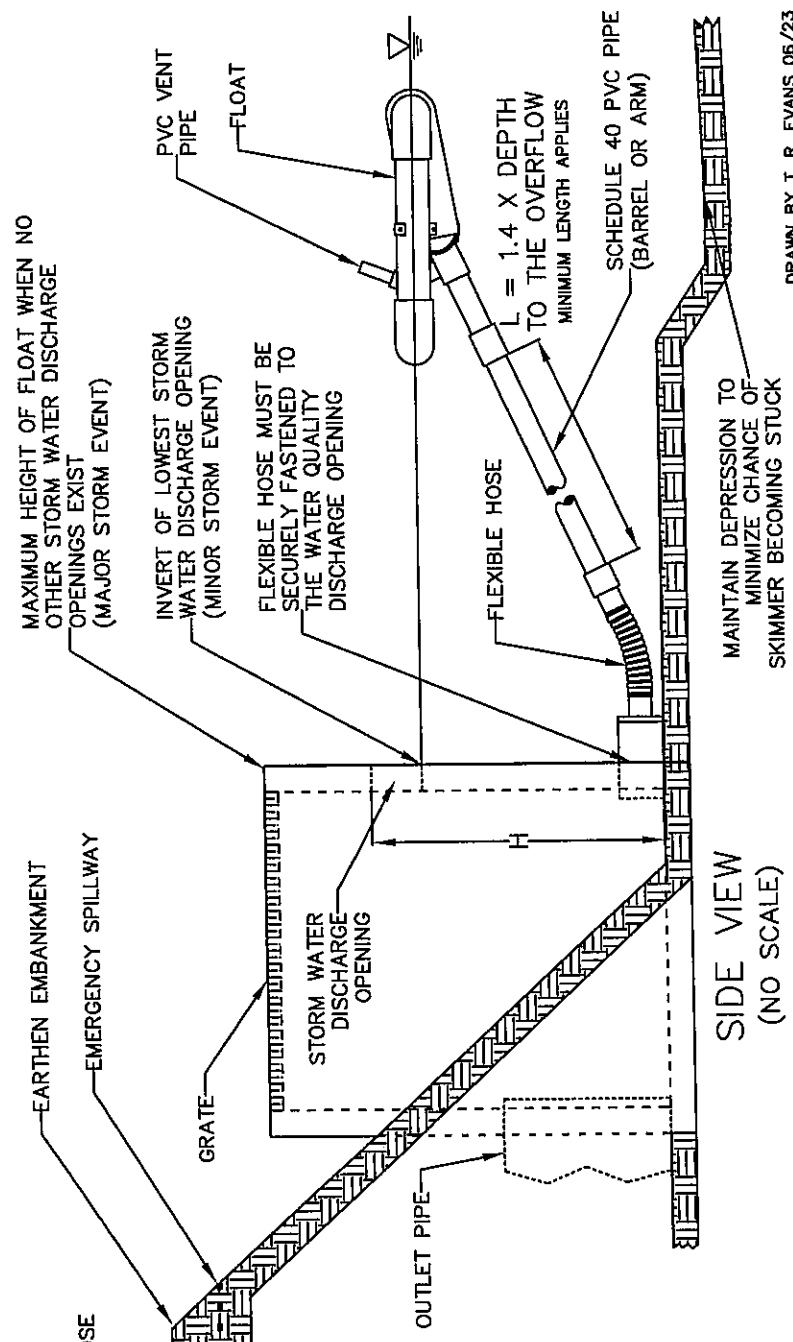
TYPICAL TIRE WASH  
NOT TO SCALE



COPPERFIELD PHASE 3 - BASIN #5			
Basin	Skimmer Size	Orifice RAD	Orifice Dia.
BASIN #5	6"	2 5/8"	5 3/16"

# GENERAL NOTES:

1. FAIRCLOTH SKIMMER® FLOW RATES WERE USED AS THE BASIS OF DESIGN WHEN DETERMINING DRAINAGE CALCULATIONS. UTILIZING A PRODUCT FROM AN ALTERNATIVE MANUFACTURER WILL CREATE A SIGNIFICANT DEVIATION TO THE DESIGN AND MUST BE APPROVED AND RECALCULATED BY THE DESIGN ENGINEER.
2. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
3. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
4. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
5. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
6. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
7. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
8. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.
9. BARREL PIPE SHOULD BE 1.4 X DEPTH OF THE BASIN TO ENSURE PROPER FUNCTION.

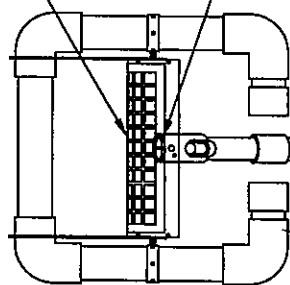


DRAWN BY T. R. EVANS 06/23

FAIRCLOTH SKIMMER  
WWW.FAIRCLOTHSKIMMER.COM  
TELEPHONE: (919) 732-1244  
FAX: (919) 732-1266  
EMAIL: SALES@FAIRCLOTHSKIMMER.COM

## FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

WATER ENTRY UNIT  
WITH TRASH SCREEN



ORIFICE OPENING INSIDE THE HORIZONTAL TUBE WITH A CONSTANT HYDRAULIC HEAD

SCHEDULE 40 PVC PIPE  
(BARREL OR ARM)

**FLEXIBLE HOSE**

—FLOAT—

TOP VIEW

COPPERFIELD PHASE 3 - BASIN #6			
Basin	Skimmer Size	Orifice RAD	Orifice Dia.
BASIN #6	8"	3 5/16"	6 11/16"

—EMERGENCY SPILLWAY

GR

## CHARGE-OPENING

OUTLET PIPE

SIDE VIEW  
(NO SCALE)

MAXIMUM HEIGHT OF FLOAT WHEN NO  
OTHER STORM WATER DISCHARGE  
OPENINGS EXIST  
(MAJOR STORM EVENT)

INVERT OF LOWEST STORM  
WATER DISCHARGE OPENING  
(MINOR STORM EVENT)

**FLEXIBLE HOSE MUST BE  
SECURELY FASTENED TO  
THE WATER QUALITY  
DISCHARGE OPENING**

**FLEXIBLE HOSE**

**L = 1.4 X DEPTH  
TO THE OVERFLOW  
MINIMUM LENGTH APPLIES**

SCHEDULE 40 PVC PIPE  
(BARREL OR ARM)

MAINTAIN DEPRESSION TO  
MINIMIZE CHANGE OF-  
SKIMMER BECOMING STUCK

DRAWN BY T. R. EVANS 06/23

# FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

**FAIRCLOTH SKIMMER**  
**WWW.FAIRCLOTHSKIMMER.COM**

**TELEPHONE: (919) 732-1244**

FAX: (919) 732-1266

FAX: (919) 732-1268  
EMAIL: SALES@AJRCLOTHSKIMMER.COM

## CALCULATIONS

## DETENTION POND DESIGN CALCULATION

Site Location 2 ( 18") pipes on road A

Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 1.15 (G)  
 Storm Recurrence Interval (Yrs) 25

Cont. Drainage Area (Acres) 7.64 (J)

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	27.85	8,356	1.15	8,012
(10)	0.17	0.86	5.16	(24.44)	14,665	1.15	13,978
15	0.25	1.10	4.40	20.84	18,758	1.15	17,726
20	0.33	1.24	3.72	17.62	21,145	1.15	19,770
30	0.50	1.51	3.02	14.31	25,749	1.15	23,686
40	0.67	1.65	2.48	11.72	28,137	1.15	25,386
50	0.83	1.79	2.15	10.17	30,524	1.15	27,086
60	1.00	1.92	1.92	9.09	32,741	1.15	28,615
90	1.50	2.15	1.43	6.79	36,663	1.15	30,474
120	2.00	2.37	1.19	5.61	40,414	1.15	32,163
180	3.00	2.62	0.87	4.14	44,677	1.15	32,301
360	6.00	3.07	0.51	2.42	52,351	1.15	27,598
720	12.00	3.56	0.30	1.41	60,707	1.15	11,200
1080	18.00	3.84	0.21	1.01	65,482	1.15	-8,779
1440	24.00	4.09	0.17	0.81	69,745	1.15	-29,270

Maximum: **32,301**

$$Q_{in} = 24.44 \text{ CFS}$$

$$L = 47 \text{ L.F.}$$

$$S = 1\%$$

$$18" \text{ Full} = 15.66 \text{ CFS}$$

$$2x = 31.2 \text{ CFS} \checkmark \text{ o.k.}$$

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**94,570 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J. Bond

Date: 12/14/23

## DETENTION POND DESIGN CALCULATION

Site Location 2 (24") pipes east side

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 2.37 (G)

Cont. Drainage Area (Acres) 15.79 (J)

Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	57.56	17,269	2.37	16,559
10	0.17	0.86	5.16	50.52	30,309	2.37	28,888
<u>15</u>	0.25	1.10	4.40	<u>43.08</u>	38,768	2.37	36,636
20	0.33	1.24	3.72	36.42	43,702	2.37	40,859
30	0.50	1.51	3.02	29.57	53,217	2.37	48,954
40	0.67	1.65	2.48	24.23	58,151	2.37	52,467
50	0.83	1.79	2.15	21.03	63,085	2.37	55,980
60	1.00	1.92	1.92	18.80	67,667	2.37	59,140
90	1.50	2.15	1.43	14.03	75,773	2.37	62,983
120	2.00	2.37	1.19	11.60	83,527	2.37	66,473
180	3.00	2.62	0.87	8.55	92,337	2.37	66,758
360	6.00	3.07	0.51	5.01	108,197	2.37	57,037
720	12.00	3.56	0.30	2.90	125,466	2.37	23,147
1080	18.00	3.84	0.21	2.09	135,334	2.37	-18,145
1440	24.00	4.09	0.17	1.67	144,145	2.37	-60,493

$$Q_w = 43.08 \text{ CFS}$$

$$L = 52 \text{ L.F.}$$

$$S = 1\%$$

$$24" \text{ Full} = 33.4 \text{ CFS}$$

$$2x = 66.8 \text{ CFS} \checkmark \text{ O.K.}$$

Maximum: 66,758

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**195,453 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J. Bond

Date: 12/14/23

## DETENTION POND DESIGN CALCULATION

Site Location N. Cul-de-sac pipe 18" Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.43 (G)  
 Cont. Drainage Area (Acres) 2.87 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	10.46	3,139	0.43	3,010
<u>10</u>	0.17	0.86	5.16	<u>9.18</u>	5,509	0.43	5,251
15	0.25	1.10	4.40	7.83	7,046	0.43	6,659
20	0.33	1.24	3.72	6.62	7,943	0.43	7,427
30	0.50	1.51	3.02	5.37	9,673	0.43	8,898
40	0.67	1.65	2.48	4.40	10,570	0.43	9,536
50	0.83	1.79	2.15	3.82	11,466	0.43	10,175
60	1.00	1.92	1.92	3.42	12,299	0.43	10,749
90	1.50	2.15	1.43	2.55	13,773	0.43	11,448
120	2.00	2.37	1.19	2.11	15,182	0.43	12,082
180	3.00	2.62	0.87	1.55	16,783	0.43	12,134
360	6.00	3.07	0.51	0.91	19,666	0.43	10,367
720	12.00	3.56	0.30	0.53	22,805	0.43	4,207
1080	18.00	3.84	0.21	0.38	24,598	0.43	-3,298
1440	24.00	4.09	0.17	0.30	26,200	0.43	-10,995

Maximum: 12,134

$$Q_{in} = 9.18 \text{ CFS}$$

$$L = 64 \text{ L.F.}$$

$$S = 1\%$$

$$18" \phi_{Full} = 15.66 \text{ CFS} \checkmark$$

o.k.

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**35,526 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J. Bond

Date: 12/14/23

## DETENTION POND DESIGN CALCULATION

Site Location S. Cul-de-sac pipe (2) 18" Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 1.18 (G)  
 Cont. Drainage Area (Acres) 7.87 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	28.69	8,607	1.18	8,253
<u>10</u>	0.17	0.86	5.16	<u>25.18</u>	15,107	1.18	14,398
15	0.25	1.10	4.40	21.47	19,322	1.18	18,260
20	0.33	1.24	3.72	18.15	21,782	1.18	20,365
30	0.50	1.51	3.02	14.74	26,524	1.18	24,400
40	0.67	1.65	2.48	12.08	28,984	1.18	26,150
50	0.83	1.79	2.15	10.48	31,443	1.18	27,901
60	1.00	1.92	1.92	9.37	33,726	1.18	29,477
90	1.50	2.15	1.43	6.99	37,767	1.18	31,392
120	2.00	2.37	1.19	5.78	41,631	1.18	33,131
180	3.00	2.62	0.87	4.26	46,023	1.18	33,273
360	6.00	3.07	0.51	2.50	53,927	1.18	28,428
720	12.00	3.56	0.30	1.45	62,534	1.18	11,537
1080	18.00	3.84	0.21	1.04	67,453	1.18	-9,044
1440	24.00	4.09	0.17	0.83	71,844	1.18	-30,151

Maximum: 33,273

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**97,417 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J. Bono

Date: 12/14/23

$Q_{in} = 25.18 \text{ CFS}$   
 $L = 84 \text{ L.F.}$   
 $S = 1\%$   
 $18" \phi \text{ Full} = 15.66 \text{ CFS}$   
 $2X = 31.2 \text{ CFS} \checkmark \text{ O.K.}$

## DETENTION POND DESIGN CALCULATION

Site Location 18" pipe road E Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.41 (G)  
 Cont. Drainage Area (Acres) 2.76 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	10.06	3,019	0.41	2,894
<u>10</u>	0.17	0.86	5.16	<u>8.83</u>	5,298	0.41	5,049
15	0.25	1.10	4.40	7.53	6,776	0.41	6,404
20	0.33	1.24	3.72	6.37	7,639	0.41	7,142
30	0.50	1.51	3.02	5.17	9,302	0.41	8,557
40	0.67	1.65	2.48	4.24	10,165	0.41	9,171
50	0.83	1.79	2.15	3.68	11,027	0.41	9,785
60	1.00	1.92	1.92	3.29	11,828	0.41	10,337
90	1.50	2.15	1.43	2.45	13,245	0.41	11,009
120	2.00	2.37	1.19	2.03	14,600	0.41	11,619
180	3.00	2.62	0.87	1.49	16,140	0.41	11,669
360	6.00	3.07	0.51	0.88	18,912	0.41	9,970
720	12.00	3.56	0.30	0.51	21,931	0.41	4,046
1080	18.00	3.84	0.21	0.37	23,656	0.41	-3,172
1440	24.00	4.09	0.17	0.29	25,196	0.41	-10,574

Maximum: 11,669

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**34,164 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J. Bando

Date: 12/14/23

$Q_{in} = 8.83 \text{ CFS}$   
 $L = 44 \text{ L.F.}$   
 $S = 1\%$   
 $18" \phi \text{ Full} = 15.66 \text{ CFS} \checkmark \text{ o.k.}$

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "A"

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 1.15 (G)

Cont. Drainage Area (Acres) 7.64 (J)

Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	27.85	8,356	1.15	8,012
<u>10</u>	0.17	0.86	5.16	<u>24.44</u>	14,665	1.15	13,978
15	0.25	1.10	4.40	20.84	18,758	1.15	17,726
20	0.33	1.24	3.72	17.62	21,145	1.15	19,770
30	0.50	1.51	3.02	14.31	25,749	1.15	23,686
40	0.67	1.65	2.48	11.72	28,137	1.15	25,386
50	0.83	1.79	2.15	10.17	30,524	1.15	27,086
60	1.00	1.92	1.92	9.09	32,741	1.15	28,615
90	1.50	2.15	1.43	6.79	36,663	1.15	30,474
120	2.00	2.37	1.19	5.61	40,414	1.15	32,163
180	3.00	2.62	0.87	4.14	44,677	1.15	32,301
360	6.00	3.07	0.51	2.42	52,351	1.15	27,598
720	12.00	3.56	0.30	1.41	60,707	1.15	11,200
1080	18.00	3.84	0.21	1.01	65,482	1.15	-8,779
1440	24.00	4.09	0.17	0.81	69,745	1.15	-29,270

Maximum: **32,301**

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**94,570 CFT**

- A) Duration of the storm event in minutes.
- B) Duration of the storm event in hours.
- C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- E) The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- H) The required retention storage is determined by multiplying the difference flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- I) Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- J) Contributing Drainage to the proposed detention or retention system.

Calculation By: JB

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "B" Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 2.73 (G)  
 Cont. Drainage Area (Acres) 18.17 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr.)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	66.24	19,872	2.73	19,055
10	0.17	0.86	5.16	58.13	34,878	2.73	33,242
15	0.25	1.10	4.40	49.57	44,611	2.73	42,158
<u>20</u>	0.33	1.24	3.72	<u>41.91</u>	50,289	2.73	47,018
30	0.50	1.51	3.02	34.02	61,239	2.73	56,333
40	0.67	1.65	2.48	27.88	66,916	2.73	60,375
50	0.83	1.79	2.15	24.20	72,594	2.73	64,418
60	1.00	1.92	1.92	21.63	77,866	2.73	68,055
90	1.50	2.15	1.43	16.15	87,194	2.73	72,476
120	2.00	2.37	1.19	13.35	96,116	2.73	76,493
180	3.00	2.62	0.87	9.84	106,255	2.73	76,820
360	6.00	3.07	0.51	5.76	124,505	2.73	65,634
720	12.00	3.56	0.30	3.34	144,377	2.73	26,636
1080	18.00	3.84	0.21	2.40	155,733	2.73	-20,880
1440	24.00	4.09	0.17	1.92	165,872	2.73	-69,611

Maximum: 76,820

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**224,914 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: JB

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "C"  
 Cont. Drainage Area (Acres) 10.65 (J)  
 Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 1.60 (G)  
 Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	38.83	11,648	1.60	11,168
<u>10</u>	0.17	0.86	5.16	<u>34.07</u>	20,443	1.60	19,484
15	0.25	1.10	4.40	29.05	26,148	1.60	24,710
20	0.33	1.24	3.72	24.56	29,476	1.60	27,559
30	0.50	1.51	3.02	19.94	35,894	1.60	33,018
40	0.67	1.65	2.48	16.34	39,222	1.60	35,388
50	0.83	1.79	2.15	14.18	42,550	1.60	37,757
60	1.00	1.92	1.92	12.68	45,640	1.60	39,889
90	1.50	2.15	1.43	9.46	51,107	1.60	42,481
120	2.00	2.37	1.19	7.82	56,337	1.60	44,835
180	3.00	2.62	0.87	5.77	62,279	1.60	45,026
360	6.00	3.07	0.51	3.38	72,976	1.60	38,470
720	12.00	3.56	0.30	1.96	84,624	1.60	15,612
1080	18.00	3.84	0.21	1.41	91,280	1.60	-12,238
1440	24.00	4.09	0.17	1.13	97,223	1.60	-40,801

Maximum: 45,026

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
 131,829 CFT

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the difference flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: JB

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "D"  
 Cont. Drainage Area (Acres) 0.80 (J)  
 Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.12 (G)  
 Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
<u>5</u>	0.08	0.49	5.88	<u>2.92</u>	875	0.12	839
10	0.17	0.86	5.16	2.56	1,536	0.12	1,464
15	0.25	1.10	4.40	2.18	1,964	0.12	1,856
20	0.33	1.24	3.72	1.85	2,214	0.12	2,070
30	0.50	1.51	3.02	1.50	2,696	0.12	2,480
40	0.67	1.65	2.48	1.23	2,946	0.12	2,658
50	0.83	1.79	2.15	1.07	3,196	0.12	2,836
60	1.00	1.92	1.92	0.95	3,428	0.12	2,996
90	1.50	2.15	1.43	0.71	3,839	0.12	3,191
120	2.00	2.37	1.19	0.59	4,232	0.12	3,368
180	3.00	2.62	0.87	0.43	4,678	0.12	3,382
360	6.00	3.07	0.51	0.25	5,482	0.12	2,890
720	12.00	3.56	0.30	0.15	6,357	0.12	1,173
1080	18.00	3.84	0.21	0.11	6,857	0.12	-919
1440	24.00	4.09	0.17	0.08	7,303	0.12	-3,065

Maximum: 3,382

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**9,903 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the difference flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: SB

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "D2"  
 Cont. Drainage Area (Acres) 2.28 (J)  
 Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.34 (G)  
 Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
<u>5</u>	0.08	0.49	5.88	<u>8.31</u>	2,494	0.34	2,391
10	0.17	0.86	5.16	7.29	4,377	0.34	4,171
15	0.25	1.10	4.40	6.22	5,598	0.34	5,290
20	0.33	1.24	3.72	5.26	6,310	0.34	5,900
30	0.50	1.51	3.02	4.27	7,684	0.34	7,069
40	0.67	1.65	2.48	3.50	8,397	0.34	7,576
50	0.83	1.79	2.15	3.04	9,109	0.34	8,083
60	1.00	1.92	1.92	2.71	9,771	0.34	8,540
90	1.50	2.15	1.43	2.03	10,941	0.34	9,094
120	2.00	2.37	1.19	1.68	12,061	0.34	9,598
180	3.00	2.62	0.87	1.23	13,333	0.34	9,639
360	6.00	3.07	0.51	0.72	15,623	0.34	8,236
720	12.00	3.56	0.30	0.42	18,117	0.34	3,342
1080	18.00	3.84	0.21	0.30	19,542	0.34	-2,620
1440	24.00	4.09	0.17	0.24	20,814	0.34	-8,735

Maximum: 9,639

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
 28,223 CFT

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/15/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "E"

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 1.99 (G)

Cont. Drainage Area (Acres) 13.27 (J)

Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	48.38	14,513	1.99	13,916
10	0.17	0.86	5.16	42.45	25,472	1.99	24,278
<u>15</u>	0.25	1.10	4.40	<u>36.20</u>	32,581	1.99	30,789
20	0.33	1.24	3.72	30.61	36,727	1.99	34,339
30	0.50	1.51	3.02	24.85	44,724	1.99	41,141
40	0.67	1.65	2.48	20.36	48,871	1.99	44,094
50	0.83	1.79	2.15	17.67	53,017	1.99	47,046
60	1.00	1.92	1.92	15.80	56,868	1.99	49,702
90	1.50	2.15	1.43	11.79	63,680	1.99	52,931
120	2.00	2.37	1.19	9.75	70,196	1.99	55,865
180	3.00	2.62	0.87	7.19	77,601	1.99	56,103
360	6.00	3.07	0.51	4.21	90,929	1.99	47,934
720	12.00	3.56	0.30	2.44	105,442	1.99	19,453
1080	18.00	3.84	0.21	1.76	113,736	1.99	-15,249
1440	24.00	4.09	0.17	1.40	121,140	1.99	-50,839

Maximum: **56,103**

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**164,260 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (I).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "F"  
 Cont. Drainage Area (Acres) 1.83 (J)  
 Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.27 (G)  
 Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
<u>5</u>	0.08	0.49	5.88	<u>6.67</u>	2,001	0.27	1,919
10	0.17	0.86	5.16	5.85	3,513	0.27	3,348
15	0.25	1.10	4.40	4.99	4,493	0.27	4,246
20	0.33	1.24	3.72	4.22	5,065	0.27	4,735
30	0.50	1.51	3.02	3.43	6,168	0.27	5,674
40	0.67	1.65	2.48	2.81	6,740	0.27	6,081
50	0.83	1.79	2.15	2.44	7,311	0.27	6,488
60	1.00	1.92	1.92	2.18	7,842	0.27	6,854
90	1.50	2.15	1.43	1.63	8,782	0.27	7,300
120	2.00	2.37	1.19	1.34	9,680	0.27	7,704
180	3.00	2.62	0.87	0.99	10,702	0.27	7,737
360	6.00	3.07	0.51	0.58	12,540	0.27	6,610
720	12.00	3.56	0.30	0.34	14,541	0.27	2,683
1080	18.00	3.84	0.21	0.24	15,685	0.27	-2,103
1440	24.00	4.09	0.17	0.19	16,706	0.27	-7,011

Maximum: 7,737

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
 22,652 CFT

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: S.B.

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "G" Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.96 (G)  
 Cont. Drainage Area (Acres) 6.43 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	23.44	7,032	0.96	6,743
10	0.17	0.86	5.16	20.57	12,343	0.96	11,764
15	0.25	1.10	4.40	17.54	15,787	0.96	14,919
20	0.33	1.24	3.72	14.83	17,796	0.96	16,639
30	0.50	1.51	3.02	12.04	21,671	0.96	19,935
40	0.67	1.65	2.48	9.87	23,680	0.96	21,366
50	0.83	1.79	2.15	8.56	25,690	0.96	22,796
60	1.00	1.92	1.92	7.65	27,555	0.96	24,083
90	1.50	2.15	1.43	5.71	30,856	0.96	25,648
120	2.00	2.37	1.19	4.72	34,014	0.96	27,069
180	3.00	2.62	0.87	3.48	37,602	0.96	27,185
360	6.00	3.07	0.51	2.04	44,060	0.96	23,227
720	12.00	3.56	0.30	1.18	51,092	0.96	9,426
1080	18.00	3.84	0.21	0.85	55,111	0.96	-7,389
1440	24.00	4.09	0.17	0.68	58,699	0.96	-24,634

Maximum: 27,185

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**79,592 CFT**

- A) Duration of the storm event in minutes.
- B) Duration of the storm event in hours.
- C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- E) The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (I).
- F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- H) The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- I) Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- J) Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Drainage Ditch "H" Percent Imperviousness: 60% (I)  
 Proposed Runoff "C" Value 0.62  
 Maximum Allowable Outflow (CFS) 0.65 (G)  
 Cont. Drainage Area (Acres) 4.31 (J) Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	15.71	4,714	0.65	4,520
10	0.17	0.86	5.16	13.79	8,273	0.65	7,885
15	0.25	1.10	4.40	11.76	10,582	0.65	10,000
20	0.33	1.24	3.72	9.94	11,929	0.65	11,153
30	0.50	1.51	3.02	8.07	14,526	0.65	13,362
40	0.67	1.65	2.48	6.61	15,873	0.65	14,321
50	0.83	1.79	2.15	5.74	17,220	0.65	15,280
60	1.00	1.92	1.92	5.13	18,470	0.65	16,143
90	1.50	2.15	1.43	3.83	20,683	0.65	17,192
120	2.00	2.37	1.19	3.17	22,799	0.65	18,144
180	3.00	2.62	0.87	2.33	25,204	0.65	18,222
360	6.00	3.07	0.51	1.37	29,533	0.65	15,569
720	12.00	3.56	0.30	0.79	34,247	0.65	6,318
1080	18.00	3.84	0.21	0.57	36,940	0.65	-4,953
1440	24.00	4.09	0.17	0.46	39,345	0.65	-16,512

Maximum: 18,222

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**53,350 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12-13-23

## DETENTION POND DESIGN CALCULATION

Site Location Ditch i

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 0.79 (G)

Cont. Drainage Area (Acres) 5.25 (J)

Storm Recurrence Interval (Yrs) 25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	19.14	5,742	0.79	5,506
<u>10</u>	0.17	0.86	5.16	<u>16.80</u>	10,077	0.79	9,605
15	0.25	1.10	4.40	14.32	12,890	0.79	12,181
20	0.33	1.24	3.72	12.11	14,530	0.79	13,585
30	0.50	1.51	3.02	9.83	17,694	0.79	16,277
40	0.67	1.65	2.48	8.06	19,335	0.79	17,445
50	0.83	1.79	2.15	6.99	20,975	0.79	18,613
60	1.00	1.92	1.92	6.25	22,499	0.79	19,664
90	1.50	2.15	1.43	4.67	25,194	0.79	20,941
120	2.00	2.37	1.19	3.86	27,772	0.79	22,102
180	3.00	2.62	0.87	2.84	30,701	0.79	22,196
360	6.00	3.07	0.51	1.67	35,974	0.79	18,964
720	12.00	3.56	0.30	0.97	41,716	0.79	7,696
1080	18.00	3.84	0.21	0.69	44,997	0.79	-6,033
1440	24.00	4.09	0.17	0.55	47,927	0.79	-20,113

Maximum: 22,196

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**64,986 CFT**

- A) Duration of the storm event in minutes.
- B) Duration of the storm event in hours.
- C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- E) The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- H) The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- I) Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- J) Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Detention Pond #5

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 2.73 (G)

Storm Recurrence Interval (Yrs) 25

Cont. Drainage Area (Acres) 18.17 (J)

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	66.24	19,872	2.73	19,055
10	0.17	0.86	5.16	58.13	34,878	2.73	33,242
15	0.25	1.10	4.40	49.57	44,611	2.73	42,158
20	0.33	1.24	3.72	41.91	50,289	2.73	47,018
30	0.50	1.51	3.02	34.02	61,239	2.73	56,333
40	0.67	1.65	2.48	27.88	66,916	2.73	60,375
50	0.83	1.79	2.15	24.20	72,594	2.73	64,418
60	1.00	1.92	1.92	21.63	77,866	2.73	68,055
90	1.50	2.15	1.43	16.15	87,194	2.73	72,476
120	2.00	2.37	1.19	13.35	96,116	2.73	76,493
180	3.00	2.62	0.87	9.84	106,255	2.73	76,820
360	6.00	3.07	0.51	5.76	124,505	2.73	65,634
720	12.00	3.56	0.30	3.34	144,377	2.73	26,636
1080	18.00	3.84	0.21	2.40	155,733	2.73	-20,880
1440	24.00	4.09	0.17	1.92	165,872	2.73	-69,611

Maximum: 76,820 ✓

$$\begin{aligned} \text{MDEQ} &= 18.17 \text{ AC} \times 3680 \text{ CFT} \\ &> = 65,412 \text{ CFT} \end{aligned}$$

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)  
**224,914 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differentiation flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
 The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/13/23

## DETENTION POND DESIGN CALCULATION

Site Location Detention Pond #6

Percent Imperviousness: 60% (I)

Proposed Runoff "C" Value 0.62

Maximum Allowable Outflow (CFS) 4.95 (G)

Storm Recurrence Interval (Yrs) 25

Cont. Drainage Area (Acres) 33.00 (J)

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.49	5.88	120.30	36,091	4.95	34,606
10	0.17	0.86	5.16	105.57	63,344	4.95	60,374
15	0.25	1.10	4.40	90.02	81,022	4.95	76,567
20	0.33	1.24	3.72	76.11	91,333	4.95	85,393
30	0.50	1.51	3.02	61.79	111,221	4.95	102,311
40	0.67	1.65	2.48	50.64	121,532	4.95	109,652
50	0.83	1.79	2.15	43.95	131,844	4.95	116,994
60	1.00	1.92	1.92	39.28	141,420	4.95	123,600
90	1.50	2.15	1.43	29.33	158,360	4.95	131,630
120	2.00	2.37	1.19	24.25	174,565	4.95	138,925
180	3.00	2.62	0.87	17.87	192,979	4.95	139,519
360	6.00	3.07	0.51	10.47	226,124	4.95	119,204
720	12.00	3.56	0.30	6.07	262,215	4.95	48,375
1080	18.00	3.84	0.21	4.36	282,839	4.95	-37,921
1440	24.00	4.09	0.17	3.49	301,253	4.95	-126,427

Maximum: 139,519 ✓

$$\begin{aligned} \text{MDECR} &= 33 \text{ ac.} \times 3600 \\ &> = 118,800 \text{ CFT} \end{aligned}$$

## RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24 Hour Design Storm from the Entire Contributing Area (5.5 Inches of Rainfall)

**408,484 CFT**

- Duration of the storm event in minutes.
- Duration of the storm event in hours.
- Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute.  
The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2
- Contributing Drainage to the proposed detention or retention system.

Calculation By: J.B.

Date: 12/13/23

## **SUPPORT DOCUMENTS**

- **F & H UTILITIES**
- **USACE JOINT APPLICATION**
- **PHASE 2 PERMIT**

# F&H Utilities, LLC

P.O. Box 17257  
Hattiesburg, Ms. 39404  
601-264-3682  
601-408-9393

June 14, 2018

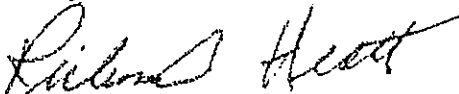
Jonathan K. Bond, Project Engineer  
O'Neal-Bond Engineering, Inc.  
P.O. Box 369  
Wiggins, MS 39577

Re: Waste Water Notice of Intent to Serve

Dear Mr. Bond:

Per your request and in accordance with the Large Construction NPDES Permit MSR10, we are giving you this letter as our official letter of intent to serve Copperfield subdivision wastewater collection services.

Thank you,



Richard Hiatt  
F&H Utilities, LLC

# JOINT APPLICATION AND NOTIFICATION

U.S. ARMY CORPS OF ENGINEERS

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY/OFFICE OF POLLUTION CONTROL

This form is to be used for proposed activities in waters of the United States in Mississippi and for the erection of structures on suitable sites for water dependent industry. Note that some items, as indicated, apply only to projects located in the coastal area of Hancock, Harrison and Jackson Counties.

1. Date  
4 29 23  
month day year

2. Applicant name, mailing address, phone number and email address:

KingsMill LLC Attn: Richard Hiatt (Manager)

15 Keystone Dr. Suite C

Hattiesburg, MS 39404

richhiatt@comcast.net, 601-408-9393

Agent name, mailing address, phone number and email address:

Pittman Environmental Services, LLC

Bart Pittman

P.O. Box 1926, Purvis MS 39474

601-297-2487, bartpittman@gmail.com

3. Official use only

COE

DMR

DEQ

A95

DATE RECEIVED

## 4. Project location

Street Address Bellewood Drive City/Community Oak Grove

Name of Waterway \_\_\_\_\_ Latitude 31.297637 Longitude (if known) -89.419678

Geographic location: Section 20 Township 4N Range 14W County Lamar

## 5. Project description

New work \_\_\_\_\_ Maintenance work \_\_\_\_\_

### Dredging

<input type="checkbox"/> Channel	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Canal	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Boat Slip	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Marina	length _____	width _____	existing depth _____	proposed depth _____
<input type="checkbox"/> Other-Mooring Basin	length _____	width _____	existing depth _____	proposed depth _____

Cubic yards of material to be removed \_\_\_\_\_ Type of material \_\_\_\_\_

Location of spoil disposal area \_\_\_\_\_

Dimensions of spoil area \_\_\_\_\_ Method of excavation \_\_\_\_\_

How will excavated material be contained? \_\_\_\_\_

### Construction of structures

<input type="checkbox"/> Bulkhead	Total length _____	Height above water _____
<input type="checkbox"/> Pier	length _____	width _____ height _____
<input type="checkbox"/> Boat Ramp	length _____	width _____ slope _____
<input type="checkbox"/> Boat House	length _____	width _____ height _____

\_\_\_\_ Structures on designed sites for water dependent industry (Coastal area only). Explain in item 11 or include as attachment.

☒ Other (explain) Fill of 404 wetland for development of residential subdivision

### Filling

Dimensions of fill area 1.08

Cubic yards of fill +/-20,000 Type of fill earthen

Other regulated activities (i.e. Seismic exploration, burning or clearing of marsh) Explain.

**6. Additional information relating to the proposed activity**

Does project area contain any marsh vegetation? Yes \_\_\_\_\_ No X

(If yes, explain) \_\_\_\_\_

Is any portion of the activity for which authorization is sought now complete? Yes \_\_\_\_\_ No X

(If yes, explain) \_\_\_\_\_

Month and year activity took place \_\_\_\_\_

If project is for maintenance work on existing structures or existing channels, describe legal authorization for the existing work. Provide permit number, dates or other form(s) of authorization. \_\_\_\_\_

Has any agency denied approval for the activity described herein or for any activity that is directly related to the activity described herein?

Yes \_\_\_\_\_ No X (If yes, explain) \_\_\_\_\_

**7. Project schedule**

Proposed start date ASAP Proposed completion date \_\_\_\_\_

Expected completion date (or development timetable) for any projects dependent on the activity described herein. \_\_\_\_\_

**8. Estimated cost of the project** Unknown

**9. Describe the purpose of this project. Describe the relationship between this project and any secondary or future development the project is designed to support.** This project is an expansion of the existing Copperfield Subdivision, this project will create 108 +/-0.34 acre lots to support medium income housing for the Oak Grove/West Hattiesburg market.

Intended use: Private \_\_\_\_\_ Commercial X Public \_\_\_\_\_ Other (Explain) \_\_\_\_\_

**10. Describe the public benefits of the proposed activity and of the projects dependent on the proposed activity.**

**Also describe the extent of public use of the proposed project.**  
provided medium income housing for the Oak Grove/West Hattiesburg area

**11. Narrative Project Description:**

In effort to meet the demand medium income housing within the Oak Grove/West Hattiesburg area, Kingsmill LLC (applicant) is proposing the development of Phase 3 of the existing Copperfield Subdivision. Phase 3 will be comprised of 108 residential lots that average 0.34 acres in size. SEE ATTACHED SUPPLEMENTAL INFORMATION FOR MORE DETIAL

12. Provide the names and addresses of the adjacent property owners. Also identify the property owners on the plan view of the drawing described in Attachment "A". (Attach additional sheets if necessary.)

1. See attached list of adjacent land owners

2.

13. List all approvals or certifications received or applied for from Federal, State and Local agencies for any structures, construction, discharges, deposits or other activities described in this application. Note that the signature in Item 14 certifies that application has been made to or that permits are not required from the following agencies. If permits are not required, place N/A in the space for Type Approval.

<u>Agency</u>	<u>Type Approval</u>	<u>Application Date</u>	<u>Approval Date</u>
Dept. of Environmental Quality			
Dept. of Marine Resources			
Army Corps of Engineers			
City/County _____			
Other _____			

**14. Certification and signatures**

Application is hereby made for authorization to conduct the activities described herein. I agree to provide any additional information/data that may be necessary to provide reasonable assurance or evidence to show that the proposed project will comply with the applicable state water quality standards or other environmental protection standards both during construction and after the project is completed. I also agree to provide entry to the project site for inspectors from the environmental protection agencies for the purpose of making preliminary analyses of the site and monitoring permitted works. I certify that I am familiar with and responsible for the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I am the owner of the property where the proposed project is located or that I have a legal interest in the property and that I have full legal authority to seek this permit.

U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willingly falsifies, conceals, or covers up by any trick, scheme or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

**Mississippi Coastal Program (Coastal area only)**

I certify that the proposed project for which authorization is sought complies with the approved Mississippi Coastal Program and will be conducted in a manner consistent with the program.



Signature of Applicant or Agent

5-12-23

Date

---

**15. Fees**

Payable to MS Dept. of Marine Resources  
\$50.00 Single-family residential application fee  
\$500.00 Commercial application fee  
Public notice fee may be required

Please include appropriate fees for all projects  
proposed in coastal areas of Hancock, Harrison and  
Jackson Counties.

---

**16. If project is in Hancock, Harrison or Jackson Counties, send one completed copy of this application form and appropriate fees listed in Item 15 to:**

Department of Marine Resources  
Bureau of Wetlands Permitting  
1141 Bayview Avenue  
Biloxi, MS 39530  
(228) 374-5000

If project **IS NOT** in Hancock, Harrison or Jackson Counties, send one completed copy of this application form to each agency listed below:

District Engineer  
Mobile District  
Attn: CESAM-RD  
P.O. Box 2288  
Mobile, AL 36628-0001

District Engineer  
Vicksburg District  
Regulatory Branch  
Attn: CEMVK-OD-F  
4155 Clay Street  
Vicksburg, MS 39183-3435

Director  
Mississippi Dept. of Environmental Quality  
Office of Pollution Control  
P.O. Box 10385  
Jackson, MS 39289

---

**17. In addition to the completed application form, the following attachments are required:*****Attachment "A" Drawings***

Provide a vicinity map showing the location of the proposed site along with a written description of how to reach the site from major highways or landmarks. Provide accurate drawings of the project site with proposed activities shown in detail. All drawings must be to scale or with dimensions noted on drawings and must show a plan view and cross section or elevation. Use 8 1/2 x 11" white paper or drawing sheet attached.

***Attachment "B" Authorized Agent***

If applicant desires to have an agent or consultant act in his behalf for permit coordination, a signed authorization designating said agent must be provided with the application forms. The authorized agent named may sign the application forms and the consistency statement.

***Attachment "C" Environmental Assessment (Coastal Area Only)***

Provide an appropriate report or statement assessing environmental impacts of the proposed activity and the final project dependent on it. The project's effects on the wetlands and the effects on the life dependent on them should be addressed. Also provide a complete description of any measures to be taken to reduce detrimental offsite effects to the coastal wetlands during and after the proposed activity. Alternative analysis, minimization and mitigation information may be required to complete project evaluation.

***Attachment "D" Variance or Revisions to Mississippi Coastal Program (Coastal area only)***

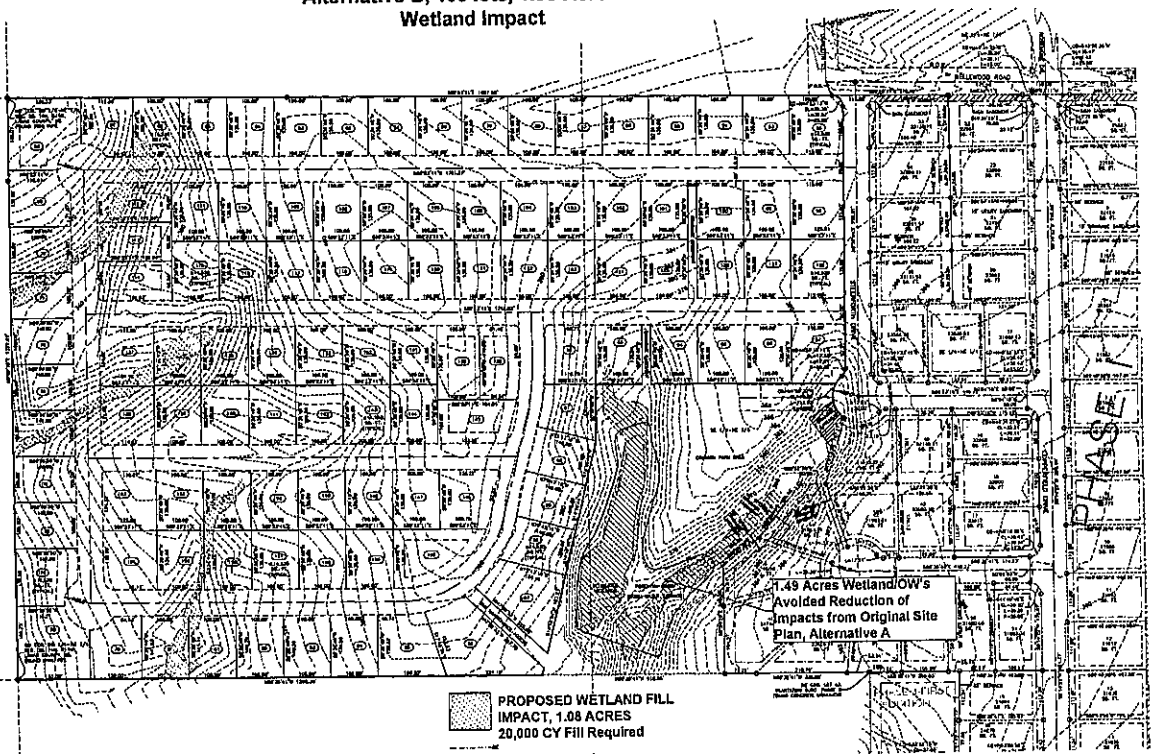
If the applicant is requesting a variance to the guidelines in Section 2, Part III or a revision to the Coastal Wetlands Use Plan in Section 2, Part IV of the Rules, Regulations, Guidelines and Procedures of the Mississippi Coastal Program, a request and justification must be provided.

Attachment "A" Drawings

PRELIMINARY PLAT FOR  
COPPERFIELD SUBDIVISION  
PHASE 3

DEVELOPER: KINGSWILL, LLC  
JANESVILLE, MISSOURI

Alternative B, 108 lots, 1.08 Acres of  
Wetland Impact



- NOTES:
- 1) ALL EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 2) PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA.
  - 3) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 4) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 5) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 6) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 7) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 8) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 9) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 10) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 11) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.
  - 12) EASEMENTS WERE DETERMINED BASED ON A TOPOGRAHY MAP OF THE AREA, AND THE EASEMENTS WERE DETERMINED BASED ON THE EASEMENTS SHOWN ON THE MAP.

<p>SCALE: 1" = 100'</p> <p>DATE: 3/2023</p> <p>DRAWN BY: [Name]</p> <p>CHECKED BY: [Name]</p> <p>APPROVED BY: [Name]</p>	<p>PROJECT: COPPERFIELD SUBDIVISION PHASE 3</p> <p>LOCATION: JANESVILLE, MISSOURI</p> <p>OWNER: KINGSWILL, LLC</p> <p>DESIGNER: [Name]</p> <p>DATE: 3/2023</p>
--	--

Preliminary Wetland Delineation  
19.5 Acre Site  
Bellewood Road, Oak Grove







31.297637, -89.419678  
Section 20, T-4N, R-14W  
Lamar County, MS



Stittman Env. Serv., LLC  
April 6, 2018

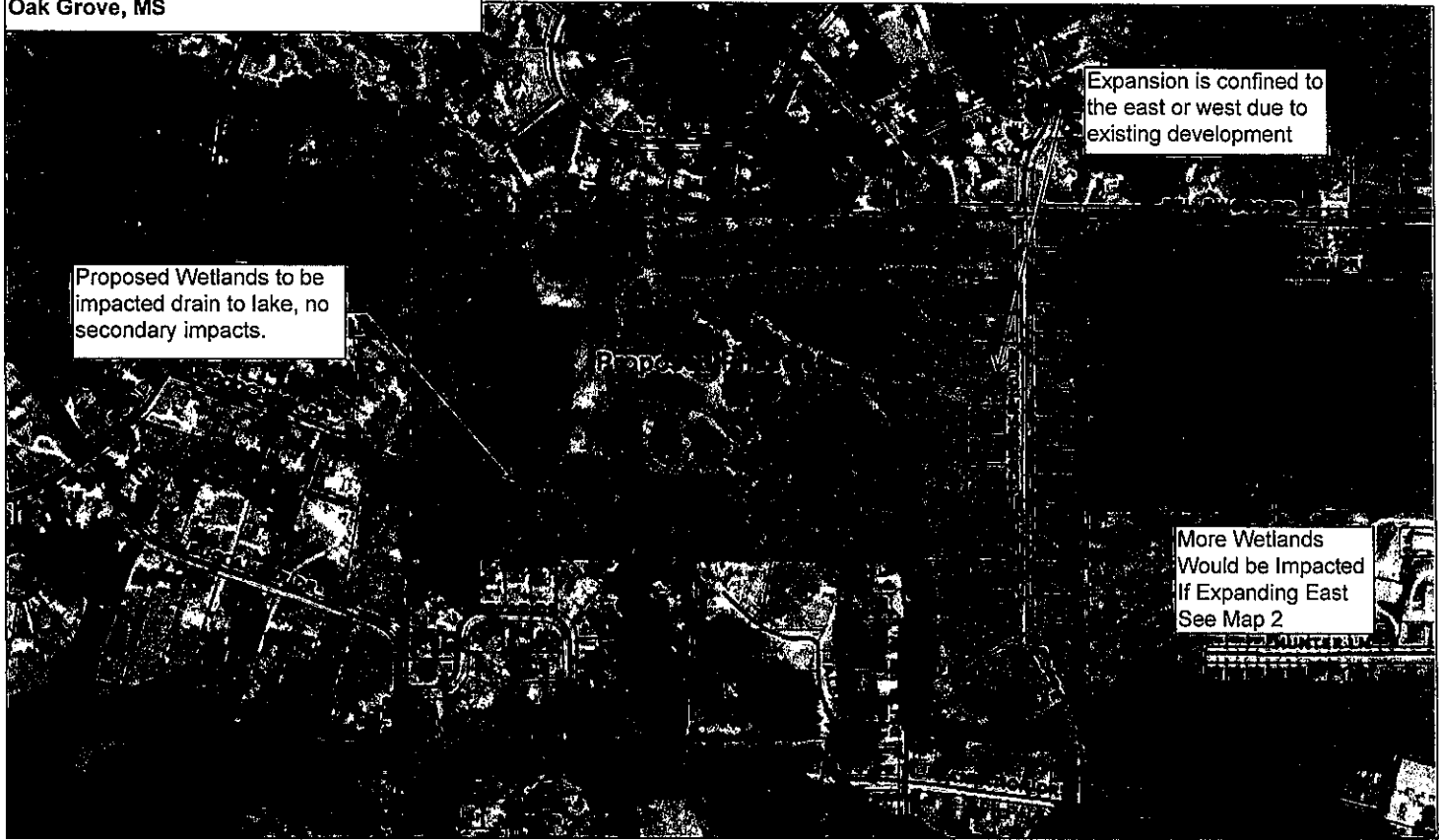
Bellewood Road

Legend

-  Delineation Limits 89.5 Acres
-  Wetland Boundary
-  Jurisdictional Wetland (PFO) 2.22 Acres
-  Jurisdictional Pond 0.37 Acres
-  Isolated Pond 0.22 Acres
-  Data Points

SAI, HERE, Delorme, Mapbox, etc., and the GIS user community. Sources: SAI, Delorme, Google, Federal, USGS, USGS, AF, Esri, etc., and the GIS user community.

Alternative Analysis, Map 1  
Proposed Copperfield Subdivision Phase 3  
Oak Grove, MS



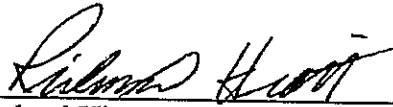
DISCLAIMER: Any user of this map product accepts its faults and assumes all responsibility for the use thereof, and further agrees to hold Lamar County harmless from and against any damage, loss or liability arising from any use of the map product. Users are cautioned to consider carefully the provisional nature of the maps and data before using it for decisions that concern personal or public safety or the conduct of business that involves monetary or operational consequences. Conclusions drawn from, or actions undertaken, on the basis of such maps and data, are the sole responsibility of the user.

0 300 600ft

**ATTACHMENT "B"**

**Authorization of Agent for  
Copperfield Subdivision Phase 3  
SAM-2018-00430**

KingsMill LLC authorizes Pittman Environmental Services LLC to serve as agent/consultant for the coordination of the USACE 404 permit authorization for the proposed Copperfield Subdivision Phase 3, SAM-2018-00430.

  
\_\_\_\_\_  
Richard Hiatt  
Manager  
KingsMill LLC

Date: 5-12-23

**ADJACENT LANDOWNERS, PROPOSED COOPERFIELD SUB. PHASE 3**

- **Parcel Number:** 054J-20-019.000  
**Owner Name:** KEASLER DEENA C  
**Owner Address:** 13 CARRIAGE LN HATTIESBURG MS39402
- **Parcel Number:** 054J-20-020.000  
**Owner Name:** TURNER DERRICK SHANE & DEANNA HILL  
**Owner Address:** 11 CARRIAGE LN HATTIESBURG MS39402
- **Parcel Number:** 054J-20-021.000  
**Owner Name:** UTTERBACK RYAN N & KAREN B TRUSTEES THE RYAN AND KAREN UTTERBACK REVOCABLE\*  
**Owner Address:** 32 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-030.000  
**Owner Name:** MEITZLER HERBERT LEE ETUX  
**Owner Address:** 34 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-031.000  
**Owner Name:** SANDERSON CARL C ETUX SONYA K  
**Owner Address:** 36 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-032.000  
**Owner Name:** BECKETT DAVID CHARLES ET UX  
**Owner Address:** 38 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-033.000  
**Owner Name:** HOWELL DONALD RAY  
**Owner Address:** 13 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-035.000  
**Owner Name:** PHIPPS RANDY L ETUX PAMELA JOYCE  
**Owner Address:** 11 DUNLEITH CT HATTIESBURG MS39402
- **Parcel Number:** 054J-20-036.000  
**Owner Name:** FREEMAN KATE  
**Owner Address:** 138 BELLEWOOD RD HATTIESBURG MS39402
- **Parcel Number:** 054J-20-044.000  
**Owner Name:** JORDAN GLEN A ETUX LISA L  
**Owner Address:** 130 BELLWOOD DR HATTIESBURG MS39402
- **Parcel Number:** 054J-20-046.000  
**Owner Name:** WOODS DONALD  
**Owner Address:** 10 ROSEMONT DR HATTIESBURG MS39402

- **Parcel Number:** 055M-21-016.000  
**Owner Name:** DALE MICHAEL LEE  
**Owner Address:** 27 DUNLEITH COURT HATTIESBURG MS39402
- **Parcel Number:** 055N-21-012.000  
**Owner Name:** RYAN INVESTMENTS LLC  
**Owner Address:** 17 POWER LANE HATTIESBURG MS39402
- **Parcel Number:** 055N-21-020.000  
**Owner Name:** RYAN PAT  
**Owner Address:** 17 POWER LANE HATTIESBURG MS39402
- **Parcel Number:** 054R-20-143.000  
**Owner Name:** WILLIAMSON RHONDA K  
**Owner Address:** P O BOX 17402 HATTIESBURG MS394057402
- **Parcel Number:** 054R-20-144.000  
**Owner Name:** CHASTAIN REX D  
**Owner Address:** 367 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-145.000  
**Owner Name:** STEPHENSON BARBARA ANN ETVIR STEWART  
**Owner Address:** 369 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-146.000  
**Owner Name:** MAY ROBERT M  
**Owner Address:** 371 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-147.000  
**Owner Name:** TROSCLAIR JOSEPH & MISTY  
**Owner Address:** 393 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-148.000  
**Owner Name:** VARGAS RAYMOND J JR  
**Owner Address:** 377 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-149.000  
**Owner Name:** RONEY LANDON BLAINE & JESSICA LEANN  
**Owner Address:** 381 DELTA DR W HATTIESBURG MS39402
- **Parcel Number:** 054R-20-001.000  
**Owner Name:** ALBRIGHT CODY R  
**Owner Address:** 26 ALBRIGHT PL HATTIESBURG MS394026130

- **Parcel Number:** 054R-20-001.001  
**Owner Name:** SPIERS LOREN DANE & LACEY  
**Owner Address:** 42 ALBRIGHT PL APT B HATTIESBURG MS39402
- **Parcel Number:** 054R-20-004.000  
**Owner Name:** CONNELL STEPHEN  
**Owner Address:** 58 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054R-20-009.000  
**Owner Name:** FAIRCHILD JOSEPH L ETUX JO NELL  
**Owner Address:** 76 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054R-20-008.000  
**Owner Name:** SALIBA N M ET UX  
**Owner Address:** P O BOX 16985 HATTIESBURG MS394046985
- **Parcel Number:** 054R-20-010.000  
**Owner Name:** BARNETT PHILIP J ETUX HALEY LYNN  
**Owner Address:** 80 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054R-20-011.000  
**Owner Name:** DILLENKOFFER MOLLIE R & JONAH MARK  
**Owner Address:** 82 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054R-20-012.000  
**Owner Name:** SCHARWATH-BUSBY SHANNON  
**Owner Address:** 86 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054R-20-014.000  
**Owner Name:** POWELL MARY L  
**Owner Address:** 90 POPLAR DR HATTIESBURG MS39402
- **Parcel Number:** 054K-20-054.000  
**Owner Name:** WEST STEPHEN A ETUX NANCY T  
**Owner Address:** 96 POMPAÑO DR HATTIESBURG MS39402
- **Parcel Number:** 054K-20-063.000  
**Owner Name:** SPIERS JASON R & MELISSA A  
**Owner Address:** 30 WOODCHUCK DR HATTIESBURG MS39402
- **Parcel Number:** 054K-20-007.000  
**Owner Name:** CHAMBLISS JOHN G ETUX LEESA  
**Owner Address:** 223 BALBOA DR HATTIESBURG MS39402

- **Parcel Number:** 054K-20-006.000  
**Owner Name:** RAYBORN GRAYSON HANKS ETUX  
**Owner Address:** 231 BALBOA DR HATTIESBURG MS39402
- **Parcel Number:** 054J-20-018.000  
**Owner Name:** LIN ANDREW C ETUX BEVERLY LIZA C (LE) LIN  
TIMOTHY D AND NATHAN A (REM)  
**Owner Address:** 14 CARRIAGE LN HATTIESBURG MS39402



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
MOBILE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 2288  
MOBILE, AL 36628-0001

May 31, 2018

South Mississippi Branch  
Regulatory Division

SUBJECT: Department of the Army Preliminary Wetland Determination Jurisdictional  
Number SAM-2018-00430-DEM, O'Neal Bond Engineering

Pittman Environmental Services, LLC  
Attention: Mr. Bart Pittman  
Post Office Box 1926  
Purvis, Mississippi 39475

Dear Mr. Pittman:

This letter is in response to your request for verification of the wetland delineation performed by Pittman Environmental Service, LLC, on a 89.5-acre property located at south of Bellewood Road, Latitude 31.297779° North, Longitude -89.419819° West, Oak Grove, Lamar County, Mississippi.

Based on our review of information you submitted, and other information available to our office, we have determined the boundary of the wetlands to be accurate as shown on the enclosed delineation boundary map. For regulatory purposes, the Department of the Army (DA), U.S. Army Corps of Engineers (USACE), defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Enclosed to this letter is a copy of the Preliminary Jurisdiction Determination (JD) for the approximately 2.59 acres of waters identified on the property. Any decisions based on this Preliminary JD will treat all onsite and potentially affected waters and wetlands as jurisdictional waters of the United States. This Preliminary JD shall remain in effect unless new information or a request for an Approved JD is provided to this office.

**Issuance of a DA permit may be required prior to conducting work in wetlands on your property.** Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the United States, including streams and wetlands, prior to conducting the work (33 U.S.C. 1344). If future work proposed at this site includes a discharge or placement of dredged and/or fill material into the stream or wetlands, a DA permit is required prior to initiating work.

The wetland boundary as shown on the submitted survey map of the property has been determined to be accurate. A copy of the map is being returned to you and a copy is being placed in our jurisdiction file for future reference. Please be advised that this determination is primarily based upon the delineation report, map, and data supplied by you. The enclosed Preliminary JD reflects current policy and is based upon criteria contained in the USACE's Wetlands Delineation Manual dated January 1987, and the Regional Supplement to the USACE Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). The Preliminary JD is a non-binding action and shall remain in effect unless new information or a request for an Approved JD supporting a revision is provided to this office. Please note that since this JD is preliminary in nature, it is subject to change and therefore is not an appealable action under the USACE Administrative Appeal Procedures defined at 33 CFR 331.

The statements contained herein do not convey any property rights, or any exclusive privileges and do not authorize any injury to property or obviate the requirements to obtain other local, State or Federal approvals required by law. Nothing in this letter shall be construed as excusing you from compliance with other Federal, State, or local statutes, ordinances, or regulations which may affect this work.

We appreciate your cooperation with the U.S. Army Corps of Engineers Regulatory Program. Please refer to Number SAM-2018-00430-DEM, in all future correspondence regarding this site or if you have any questions concerning this determination.

Thank you for your cooperation with our permit program. If you have any questions concerning this matter, please contact me at (251) 690-3185.

Sincerely,



Don Mroczko  
Mississippi Branch  
Regulatory Division

Enclosures

**SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply**

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Pittman Environmental Services, LLC.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☒ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

☐ USGS NHD data.

☐ USGS 8 and 12 digit HUC maps.

☐ U.S. Geological Survey map(s). Cite scale & quad name:

☐ USDA Natural Resources Conservation Service Soil Survey. Citation:.

☐ National wetlands inventory map(s). Cite name:

☐ State/Local wetland inventory map(s):

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

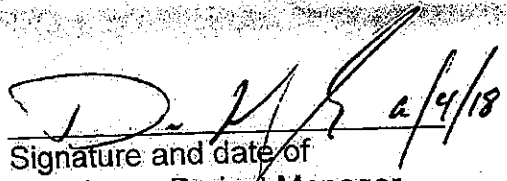
☒ Photographs: ☒ Aerial (Name & Date): Google Earth 2018.

or ☒ Other (Name & Date): Pittman Environmental Services, LLC.

☐ Previous determination(s). File no. and date of response letter:

☐ Other information (please specify):

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

  
Signature and date of  
Regulatory Project Manager  
(REQUIRED)

\_\_\_\_\_  
Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining  
the signature is impracticable)



*State of Mississippi  
Department of Environmental Quality  
Office of Pollution Control*

*Certificate of Permit Coverage*

under Mississippi's Large Construction Storm Water General NPDES Permit

Be it known

**Lanes Dozer Service, LLC**  
Purvis, Mississippi

having submitted an acceptable Construction Notice of Intent, is hereby granted this Certificate of Permit Coverage in order to discharge storm water associated with the construction of

**Copperfield Subdivision, Phase 2**  
Receiving Stream: Perkins Creek  
Lamar County

*Krystal Rudolph*  
Chief, Environmental Permits Division

Coverage No: MSR107754  
Date of Coverage: October 15, 2018  
Date Permit Expires: December 31, 2021  
Date Coverage Modified: August 31, 2021

73935 GNP20210001