

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 2/7/2020**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENAB-OP-RMN (DAVIDSONVILLE SAND AND GRAVEL MINE/ANNE ARUNDEL COUNTY/JD) 2019-00549-E1.**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: **Maryland** County/parish/borough: **Anne Arundel County** City: **Davidsonville**

Center coordinates of site (lat/long in degree decimal format): Lat. **38.940556 N**, Long. **-76.686389W**.

Universal Transverse Mercator:

Name of nearest waterbody: **UNT to Patuxent River**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Patuxent River -**

Name of watershed or Hydrologic Unit Code (HUC): **Patuxent River: 02131105**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date:

Field Determination. Date(s): **December 18, 2019**

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply): <sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: **0** linear feet: width (ft) and/or acres.

Wetlands: **3.837** acres.

There were no non-jurisdictional waters within the area of review.

**c. Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual** This evaluation was performed in general accordance with the Routine and Atypical Wetland Determination Methods as outlined in the U.S. Army Corps of Engineers (Corps) Wetlands Delineation Manual (Y-87-1), dated January 1987, and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (ERDC/EL TR-12-9), dated April 2012.

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

The CORPS conducted a field review on December 18, 2019. During that review, eight wetlands exhibiting all three wetland indicators were identified within the area of review. The areas are adjacent but not abutting an RPW which flows to the Patuxent River approximately 1,400 lf from the associated wetlands. The Corps has determined that all 8 wetlands are jurisdictional on site. A significant nexus to the downstream TNW exists for these wetlands, which is an RPW. All 8 wetlands are located in close proximity to this RPW (100 lf). The wetlands discharge groundwater to this RPW as they are all within close proximity. In addition, the nearest TNW is relatively close, approximately 1,400 lf from the adjacent wetlands.

Elevation of established OHWM (if known): **Unknown**.

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW: .

Summarize rationale supporting determination: .

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent": .

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

<sup>3</sup> Supporting documentation is presented in Section III.F.

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

(ii) **Physical Characteristics:**

(a) Relationship with TNW:

- Tributary flows directly into TNW.  
 Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>:  
Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

- Tributary is:**  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

**Tributary** properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

- Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  
Presence of run/riffle/pool complexes. Explain:  
Tributary geometry:  
Tributary gradient (approximate average slope):

(c) Flow:

Tributary provides for: **Pick List**  
Estimate average number of flow events in review area/year: **Pick List**  
Describe flow regime:  
Other information on duration and volume:

Surface flow is: Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

apply): If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that

- |                                                                    |                                                                        |
|--------------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> High Tide Line indicated by:              | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |                                                                        |
| <input type="checkbox"/> other (list):                             |                                                                        |

**(iii) Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:  
Identify specific pollutants, if known:

**(iv) Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

**2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size: **3.873** acres

Wetland type: **PFO** Explain:

Wetland quality. Explain: **These wetlands are adjacent to an existing sand and gravel mine. Fairly high quality forested wetlands.**

Project wetlands cross or serve as state boundaries. Explain:

**(b) General Flow Relationship with Non-TNW:**

Flow is: **Pick List**. Explain: **Intermittent**.

Surface flow is: **Pick List** **Overland sheetflow**.

Characteristics:

Subsurface flow: **Pick List**. Explain findings: **Adjacent wetlands discharge hydrology into nearby RPW.**

Dye (or other) test performed:

**(c) Wetland Adjacency Determination with Non-TNW:**

- Directly abutting
- Not directly abutting
  - Discrete wetland hydrologic connection. Explain:
  - Ecological connection. Explain:
  - Separated by berm/barrier. Explain:

**(d) Proximity (Relationship) to TNW**

Project wetlands are **Pick List** river miles from TNW. **1/4 mile**

Project waters are **Pick List** aerial (straight) miles from TNW. **1/4 mile**

Flow is from: **Pick List**. **Wetland to Navigable Waters**

Estimate approximate location of wetland as within the **Pick List** floodplain.

**(ii) Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known: Agricultural pesticides and herbicides.

**(iii) Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width): **Forested**
- Vegetation type/percent cover. Explain: **100% Forested**
- Habitat for:
  - Federally Listed species. Explain findings:

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings:

**3. Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( 3.84 ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Aquatic Resource Name	Aquatic Resource Type	Size	Directly Abuts?
Wetland A	PFO	0.051	N
Wetland B	PFO	0.089	N
Wetland C	PFO	2.328	N
Wetland E	PFO	0.017	N
Wetland G	PFO	0.062	N
Wetland O	PFO	0.083	N
Wetland P	PFO	0.044	N
Wetland K	PFO	1.163	N

Summarize overall biological, chemical and physical functions being performed:

**These forested wetlands discharge hydrology into the adjacent RPW, which directly discharges into the Patuxent River (TNW) approximately ¼ mile away. These river floodplain wetlands provide food, shelter and habitat for various species found within the Patuxent River floodplain. In addition, these wetlands are effective in trapping sediment and other pollutants from runoff from the adjacent sand and gravel mine before these pollutants enter the Patuxent River. Also, the forested wetlands contribute detritus to the downstream TNW which contributes to a diverse benthic habitat.**

**C. SIGNIFICANT NEXUS DETERMINATION**

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

**These forested wetlands discharge hydrology into the adjacent RPW, which directly discharges into the Patuxent River (TNW) approximately ¼ mile away. These river floodplain wetlands provide food, shelter and habitat for various species found within the Patuxent River floodplain. In addition, these wetlands are effective in trapping sediment and other pollutants from runoff from the adjacent sand and gravel mine before these pollutants enter the Patuxent River. Also, the forested wetlands contribute detritus to the downstream TNW which contributes to a diverse benthic habitat. These 8 wetlands are also similarly situated among each other and therefore function as a system adjacent to the existing RPW. Based on this information, it has been determined that a significant nexus exists for these 8 wetlands and are therefore jurisdictional waters of the U.S.**

**D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):**

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
  - TNWs: linear feet width (ft), Or, acres.
  - Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
  - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: **UNT to Patuxent River has standing water, evidence of flow and leads directly to the Patuxent River.**

Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that the tributary flows seasonally.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters:

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**
  - Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
  - Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
    - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
    - Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

<sup>8</sup>See Footnote # 3.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **3.873** acres.

**These forested wetlands discharge hydrology into the adjacent RPW, which directly discharges into the Patuxent River (TNW) approximately ¼ mile away. These river floodplain wetlands provide food, shelter and habitat for various species found within the Patuxent River floodplain. In addition, these wetlands are effective in trapping sediment and other pollutants from runoff from the adjacent sand and gravel mine before these pollutants enter the Patuxent River. Also, the forested wetlands contribute detritus to the downstream TNW which contributes to a diverse benthic habitat. These 8 wetlands are also similarly situated among each other and therefore function as a system adjacent to the existing RPW. Based on this information, it has been determined that a significant nexus exists for these 8 wetlands and are therefore jurisdictional waters of the U.S.**

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area:            acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:** Wetlands W-KLE-01 (0.01 acres), W-KLE-03 (0.01 acres), W-KLE-04 (0.06 acres), W-KLE-05 (0.03 acres), W-KLE-06 (0.04 acres) and W-KLE-07 (0.01 acres) were determined to be isolated wetlands with no significant nexus to downstream TNWs. They are depressional PEM wetlands and the main source of hydrology is groundwater and/or overland flow.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:            linear feet            width (ft).  
 Other non-wetland waters:            acres.  
Identify type(s) of waters: .  
 Wetlands: acres. Wetland W-KLE-02 1.02 acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Explain:  
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).  
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.





**NOTES-LAST UPDATED MARCH 2017**

1. CLOSURE OF WASH PLANT
2. RECLAMATION TO BEGIN UPON REMOVAL OF WASH PLANT PROCESSING EQUIPMENT.
3. PROPERTY FOUND ON ANNE ARUNDEL SOIL MAP #23.
4. PRELIMINARY SOILS GAB 8 ESC. THE MINING OR OPERATIONAL AREA OF THIS SITE INTO THE 100-FEET FLOODPLAIN.
5. BENCHMARK - CONCRETE MONUMENT 91 HILES (N) OF HT. ARY ROAD STA. 15+40.53 EAST OF THE SANDS ROAD CENTERLINE NEXT TO POLE 008 #17423 @ COORDINATES N 0400.44
6. EXISTING SETTLEMENT POND IS TO BE REMOVED AS PART OF THIS UPDATE. THE EXISTING POND WILL BE REPAVED WITH SEDIMENT TRAPS AND OTHER PROPOSED CONTROLS.
7. ANNE ARUNDEL COUNTY NON-CORRODING COB NO. 10 APRES WASTEWATER DISCHARGE PERMIT 06-09-040.
8. ANNE ARUNDEL COUNTY ALLOWS FOR THE CLOSURE OF ALL STATE REGULATED MINING SITES. THIS SITE IS TO BE FILLED ONTO THE SITE FOR INCORPORATION INTO THE FLOODPLAIN SHALL CONSIST OF CLEAN EARTHEN MATERIAL CONTAINING MORE THAN 10% CONCRETE BRICK OR ASPHALT. CONCRETE BRICK OR ASPHALT SHALL NOT EXCEED 1 CUBIC FOOT IN SIZE AND SHALL BE PLACED IN A SINGLE LAYER. ALL OTHER CONSTRUCTION DEBRIS, STUMPS, ETC ARE PROHIBITED.
9. PROPERTY AREA = 164.35 ACRES
10. LIMITS OF DISTURBANCE = 50.2 ACRES
11. CUT = 12,422 C.Y. ±
12. FILL = 1,914,466 C.Y. ±
13. EXISTING TOPOGRAPHY OBTAINED FROM AERIAL SURVEY, PERFORMED BY KAYS GEOGRAPHICAL, LLC, DATED OCTOBER 19, 2011.
14. DATE: 2/16/17
15. PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 13354, EXPIRATION DATE: 2/28/2021

**2017 CONSULTANT'S CERTIFICATION**

I, THE CONSULTANT, CERTIFY THAT THE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A KNOWLEDGE OF THIS SITE AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AS/CD PLAN SUPERINTENDENT GUIDELINES AND THE CURRENT MARYLAND EROSION CONTROL ACT. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 13354, EXPIRATION DATE: 2/28/2021



MD P.E. LICENSE # 13354  
 NAME: DANIEL JONES, INC.  
 SIGNATURE: \_\_\_\_\_ DATE: 2/16/17  
 FIRM NAME: DAVIDSON, INC.  
 STREET ADDRESS: 4105 OLD ST. DENNIS ROAD ANNAPOLIS, MD 21403

**STANDARD RESPONSIBILITY NOTES**

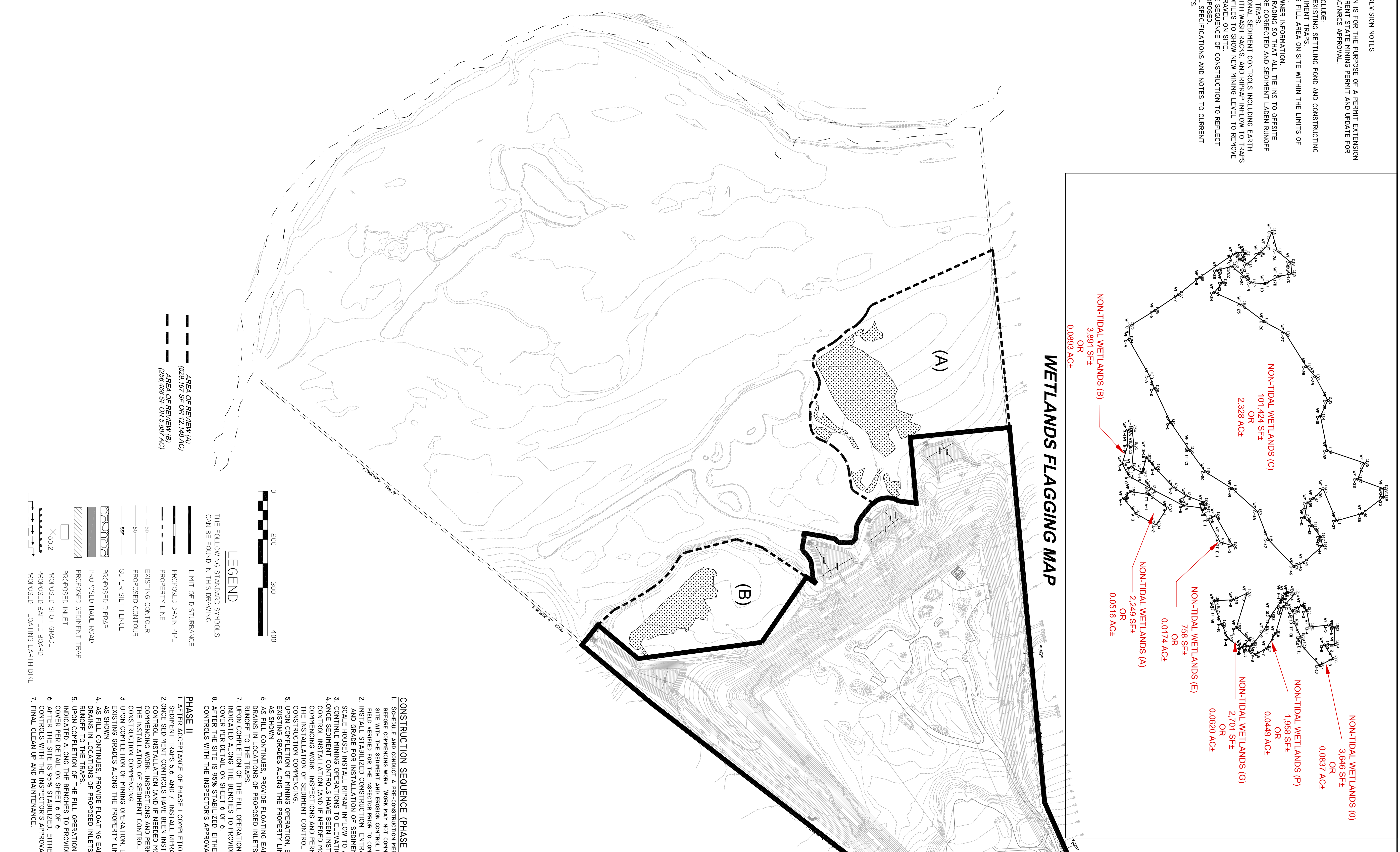
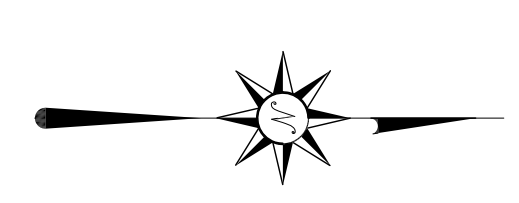
1. (M) CERTIFY THAT:
  - a. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT (AS/CD) BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS. ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
  - RESPECTABLE PERSONNEL ON SITE: DANIEL JONES, COR. HIS DESIGNED.
  - C. IF APPLICABLE, THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASINS INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH THE ANNE ARUNDEL COUNTY CODE.
2. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHT, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THE PLAN.
3. FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT AND/OR TEMPORARY STABILIZATION PER THE SEDIMENT AND EROSION CONTROL PLAN SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. DICES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND SEVEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. THE GRADING AND SEDIMENT CONTROL APPROVAL ON THIS PLAN EXTENDS ONLY TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE.
5. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH FEDERAL, STATE OR COUNTY REQUIREMENTS PERTAINING TO ENVIRONMENTAL ISSUES.
6. THE DEVELOPER MUST REQUEST THAT THE SEDIMENT AND EROSION CONTROL INSPECTOR APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THE ORDINANCE.
7. ALL MATERIAL SHALL BE TAKEN TO A SITE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.
8. FIRST PHASE INSPECTION AND APPROVAL OF THE SEDIMENT AND EROSION CONTROL INSPECTOR SHALL BE REQUIRED BEFORE ANY CONSTRUCTION BEGINS. THE INSPECTOR SHALL BE REQUIRED TO VERIFY THAT THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES, OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE SEDIMENT AND EROSION CONTROL INSPECTOR IS GIVEN. INSPECTION AND PERMITS MAY ALSO REQUIRE THAT AN INSPECTION AND CERTIFICATION OF THE INSTALLATION OF SEDIMENT CONTROL BE PERFORMED BY A DESIGN PROFESSIONAL FROM TO CONSTRUCTION COMMENCEMENT.
9. APPROVAL FROM THE INSPECTOR MUST BE REQUESTED ON FINAL STABILIZATION OF ALL SITES PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROLS.
10. EXISTING TOPOGRAPHY MUST BE FIELD VERIFIED BY RESPONSIBLE PERSONNEL TO THE SATISFACTION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING WORK.

**MARCH 2017 OPERATION NOTES**

1. FROM 7:00 AM TO 5:00 PM, MONDAY
2. OPERATION WILL BE SUPERVISED BY DAVIDSON AGGREGATES, INC. PERSONNEL AT ALL HOURS OF OPERATION. ON-SITE COMMUNICATIONS WILL BE MAINTAINED BY RADIO CONTACT THROUGHOUT THE PROJECT. TELEPHONE CONTACT WILL BE AVAILABLE BETWEEN THE OPERATION TRAILER AND THE BRANDYVINE AGGREGATES, INC. OFFICE.
3. SITE MATERIAL BROUGHT ONTO THE SITE FOR THE FIRST OF CLEAN EARTHEN MATERIALS CONTAINING NO MORE THAN 10% CONCRETE BRICK OR ASPHALT. CONCRETE BRICK OR ASPHALT SHALL NOT EXCEED 1 CUBIC FOOT IN SIZE. CONTAIN NO ALL OTHER CONSTRUCTION DEBRIS, STUMPS, ETC. ALL INCOMING TRUCKS WILL BE VISUALLY INSPECTED AT OPERATOR TRAILER PRIOR TO TRAILER IN PLACE. ALL AN RELEVATED WALKWAY AT THE TRAILER IS IN PLACE. ALL AN SOURCE OF THE LOAD AS EACH LOAD IS DUMPED AT THE WORK AREA. THE MATERIAL IS VISUALLY INSPECTED BY THE OPERATOR. IF UNSUITABLE OR UNACCEPTABLE MATERIAL IS FOUND, IT WILL BE REMOVED FROM THE SITE BY WHEEL AND TRACKED EQUIPMENT USED TO DISTRIBUTE THE MATERIAL. SITE IS SECURED BY A FENCE, BURN LOOKING GATE AT ENTRANCE TO PATUXENT RIVER ROAD DURING NON-OPERATION HOURS.

**MARCH 2017 REVISION NOTES**

- THIS REVISION IS FOR THE PURPOSE OF A PERMIT EXTENSION FOR THE CURRENT STATE MINING PERMIT AND UPDATE FOR THE 2012 AS/CD'S APPROVAL.
1. REVISIONS INCLUDE:
    - a. EXPANDING FILL AREA ON SITE WITHIN THE LIMITS OF FOUR (4) SEDIMENT TRAPS.
    - b. CORRECT GRADING SO THAT ALL TIE-INS TO OFF-SITE CONTOURS ARE CORRECTED AND SEDIMENT LAUNCH RAINOFF 5 ADD ADDITIONAL SEDIMENT CONTROLS INCLUDING EARTH DICES, SEE WITH WASH RACKS AND RIPRAP INFLOW TO TRAPS.
    - c. REVISE PROFILES TO SHOW NEW MINING LEVEL TO REMOVE CURRENT PROPOSED CONSTRUCTION TO REFLECT CURRENT PROPOSED CONSTRUCTION AND NOTES TO CURRENT REVISIONS.



- CONSTRUCTION SEQUENCE (PHASE I)**
1. SCHEDULE AND CONDUCT A PRE-CONSTRUCTION MEETING. HOE-MINING DIVISION INSPECTIONS AT LEAST 48 HOURS BEFORE COMMENCING WORK. WORK MAY NOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS. EXISTING TOPOGRAPHY MUST BE INSTALLED STABILIZED CONSTRUCTION. ENTRANCE WITH WASH RACK AND SEDIMENT TRAPPING TSO'S. CLEAR AND GRADE FOR INSTALLATION OF SEDIMENT TRAPS NO. 1-4. DEMOLISH EXISTING BUILDINGS EXCLUDING SCALE HOUSE) INSTALL RIPRAP INFLOW TO ALL TRAPERS BY FIELD CONDITIONS.
  2. CONSTRUCTION OF SEDIMENT TRAPS AND CONTOUR CONTROL. INSTALLATION (AND IF NEEDED MONITORING STAKE INSTALLATION BELOW OUTFALLS) PRIOR TO COMMENCING WORK. INSPECTIONS AND PERMITS MAY REQUIRE THAT AN INSPECTION AND CERTIFICATION OF CONSTRUCTION COMMENCING.
  3. UPON COMPLETION OF MINING OPERATION, BEGIN RECLAMATION OF SITE. NOTE: WHEN FILLING REACHES EXISTING GRADES ALONG THE PROPERTY LINES, INSTALL PERIMETER EARTH DICES AND SWALES. 60 MONTHS
  4. AS FILL CONTINUES, PROVIDE FLOATING EARTH DICES TO DIRECT RUNOFF TO TRAPS. INSTALL SILT SLOPE DRAINS IN LOCATIONS OF PROPOSED INLETS AS NECESSARY TO CONTINUE TO DIRECT RUNOFF TO THE TRAPS. THE FILL OPERATION INSTALL PERMANENT INLETS AND PIPES AT LOCATIONS INDICATED ALONG THE BENCHES TO PROVIDE STABILIZED CONVEYANCE OF STORMWATER. INSTALL FINAL COVER PER DETAIL ON SHEET 6 OF 6.
  5. UPON COMPLETION OF FILL OPERATION, BEGIN RECLAMATION OF SITE. NOTE: WHEN FILLING REACHES EXISTING GRADES ALONG THE PROPERTY LINES, INSTALL PERIMETER EARTH DICES AND SWALES. 60 MONTHS
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- PHASE II**
1. AFTER ACCEPTANCE OF PHASE I, BEGIN CLEANING AND GRADING FOR INSTALLATION OF 30 DAYS
  2. ONCE SEDIMENT CONTROLS HAVE BEEN INSTALLED, CONTACT THE INSPECTOR FOR APPROVAL OF SEDIMENT CONTROL INSTALLATION (AND IF NEEDED MONITORING STAKE INSTALLATION BELOW OUTFALLS) PRIOR TO COMMENCING WORK. INSPECTIONS AND PERMITS MAY REQUIRE THAT AN INSPECTION AND CERTIFICATION OF CONSTRUCTION COMMENCING.
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<p>PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 13354, EXPIRATION DATE: 2/28/21. (CORPORATE LICENSE #4866, EXPIRATION DATE: 2/28/2021)</p>										
<p><b>COVER SHEET: MODIFICATION TO STATE MINING PERMIT #78-SP-0018</b></p>										
<p><b>REVISION:</b></p> <table border="1"> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>3/18/19</td> <td>DAVIDSON</td> <td>PHASE TWO EXPANSION</td> </tr> <tr> <td>1/7/24</td> <td>DAVIDSON</td> <td>PHASE TWO EXPANSION</td> </tr> </table>		DATE	BY	DESCRIPTION	3/18/19	DAVIDSON	PHASE TWO EXPANSION	1/7/24	DAVIDSON	PHASE TWO EXPANSION
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<p><b>TERRAIN, INC.</b>                  LAND ENGINEERING &amp; DEVELOPMENT SERVICES                  106 OLD SOLOMON'S ISLAND ROAD                  ANNAPOLIS, MARYLAND 21401                  410-266-1160 FAX (410) 266-6129                  E-MAIL: TERRAIN@COMCAST.NET</p>										
<p>1 of 9</p>										