



**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor  
Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

July 24, 2018

Re: Notice of Permit Decision  
Nontidal Wetlands and Waterways Permit Application  
Tracking Number 17-NT-0107/201760524

Dear Property Owner, Public Official, or Interested Person:

After examination and consideration of the documents received and evidence in the application file and record for the Washington Gas Light Prince George's County and District of Columbia Reliability and Reinforcement Project, the Water and Science Administration has determined that the application meets the statutory and regulatory criteria necessary for issuance of a Nontidal Wetlands and Waterway Permit. Copies of the permit, the Impact Overview Map, and the Summary of the Basis for Decision are enclosed with this permit decision. The plan view sheets that correspond to the Impact Area Overview Map are available at the MDE website under the Public Information heading using the following link:

<http://mde.maryland.gov/programs/Water/WetlandsandWaterways/Pages/index.aspx>

Hard copies can also be requested from the MDE Wetlands and Waterways office at (410) 537-3571.

This is a final agency determination; there is no further opportunity for administrative review. Any person with standing, who is either the applicant or who participated in the public participation process through the submission or written or oral comments may petition for judicial review in the Circuit Court in the County where the permitted activity is to occur. The petition for judicial review must be filed within 30 days of the publication of the permit decision. Please see the attached Fact Sheet for additional information about the judicial review process.

If you have any questions or need any additional information, please do not hesitate to contact Amanda Sigillito, Chief, Nontidal Wetlands Division at 410-537-3766.

Sincerely,

A handwritten signature in blue ink, appearing to read "Denise M. Keehner", with a long, sweeping horizontal line extending to the right.

Denise M. Keehner, Program Manager  
Wetlands and Waterways Program

/AS

Enclosures

## **FACT SHEET JUDICIAL REVIEW PROCESS**

Permits can be challenged through a request for direct judicial review in the Circuit Court for the county where the activity authorized by the permit will occur. Applicants, and persons who meet standing requirements under federal law and who participated in a public comment process by submitting written or oral comments (where an opportunity for public comment was provided), may seek judicial review. Judicial review will be based on the administrative record for the permit compiled by the Department and limited to issues raised in the public comment process (unless no public comment process was provided, in which case the review will be limited to issues that are germane to the permit).

### **Who Has Standing?**

Anyone who meets the threshold standing requirements under federal law and is either the applicant or someone who participated in the public participation process through the submission of written or oral comments, as provided in Environment Article § 5-204, Annotated Code of Maryland. The three traditional criteria for establishing standing under federal law are injury, causation, and redressability, although how each criterion is applied is highly fact-specific and varies from case to case. Further, an association has standing under federal law to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.

### **What is the Procedure for Seeking Judicial Review?**

Petitions for judicial review of a final determination or permit decision subject to judicial review must be filed in accordance with § 1-605 of the Environment Article no later than 30 days following publication by the Department of a notice of final determination or final permit decision and must be filed in the circuit court of the county where the permit application states that the proposed activity will occur. Petitions for judicial review must conform to the applicable Maryland Rules of Civil Procedure.

*To review the legislation follow the link below:*

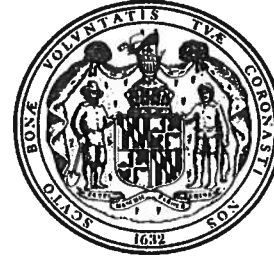
[http://mlis.state.md.us/2009rs/chapters\\_noln/Ch\\_650\\_sb1065T.pdf](http://mlis.state.md.us/2009rs/chapters_noln/Ch_650_sb1065T.pdf)

*For a complete list of permits that these procedures apply to follow the link below:*

[http://www.mde.state.md.us/programs/ResearchCenter/LawsandRegulations/Pages/ResearchCener/laws\\_regs/jrproc.aspx](http://www.mde.state.md.us/programs/ResearchCenter/LawsandRegulations/Pages/ResearchCener/laws_regs/jrproc.aspx)

**STATE OF MARYLAND**  
**DEPARTMENT OF THE ENVIRONMENT**  
**WATER AND SCIENCE ADMINISTRATION**  
**NOTICE OF DECISION**

In the Matter of: Washington Gas Light Company  
6801 Industrial Road  
Springfield, VA 22151-4205  
Attn: Theresa A. Curtis  
Nontidal Wetlands and Waterways Permit  
Application Number 17-NT-0107/201760524



**Hearing Date:** February 14, 2018

**Hearing Location:** Rennie Forum, Prince George's Community College  
Largo, Prince George's County, Maryland

**Decision:** Approval

**Date:** July 24, 2018

The review of the Nontidal Wetlands and Waterways Permit Application in the above-referenced matter has been governed by criteria set forth under Title 5, Subtitle 5, Environment Article, Annotated Code of Maryland, entitled Appropriation or Use of Waters, Reservoirs, and Dams; Subtitle 9, Environment Article, Annotated Code of Maryland, entitled Nontidal Wetlands; and Code of Maryland Regulations (COMAR) Title 26, Subtitle 17, Chapter 04, Construction on Nontidal Waters and Floodplains and Subtitle 23 Nontidal Wetlands. The Nontidal Wetlands and Waterways Permit Application has been reviewed for compliance with Maryland water quality standards under COMAR Title 26, Subtitle 08, Chapter 02 Water Quality.

After examination of all documents and evidence in the above-referenced matter, I have determined that:

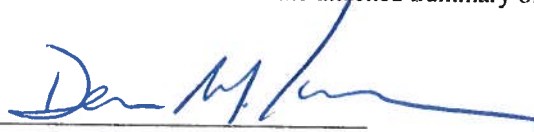
1. The applicant has demonstrated a need for impacts to nontidal wetlands, the 25-foot nontidal wetland buffer, waterways and the 100-year floodplain;
2. The applicant has minimized impacts to nontidal wetlands, the 25-foot nontidal wetland buffer, waterways and the 100-year floodplain;;
3. No rare, threatened or endangered species have been identified in the area of impact from the proposed project;
4. No historical or archeological sites will be impacted by the proposed project;
5. The project is consistent with State water quality requirements;
6. Public notice and public informational hearing requirements have been satisfied; and,
7. The applicant has demonstrated that the project has independent utility from any potential future projects.

Nontidal Wetlands and Waterways Permit Application 17-NT-0107/201760524 meets the criteria set forth in statute and regulation governing impacts to wetlands and waterways. Nontidal Wetlands and Waterways Permit Number 17-NT-0107/201760524 may be issued by the Water and Science Administration to authorize Washington Gas Light Company to conduct regulated activities associated with the construction of a 16-mile-long, 24-inch-diameter buried steel natural gas pipeline with a cathodic protection system in Prince George's County, MD. The work will include crossing environmental resources using open trench and trenchless crossings (i.e. horizontal directional drill or jack and bore). The project will permanently convert approximately 61,077 square feet (1.4 acres) of forested nontidal wetlands to emergent wetlands and will permanently impact approximately 41,230 square feet (0.95 acres) of the 25-foot nontidal wetland buffer. The project will temporarily impact approximately 21,330 square feet (0.50 acres) of forested nontidal wetlands, 17,220 square feet (0.40 acres) of emergent nontidal wetlands, 40,215 square feet (0.92 acres) of the 25-foot nontidal wetland buffer, 439,282 square feet (10.08 acres) of 100-year floodplain, and 1,372 linear feet (13,266 square feet) of Use I waterways. Waterways that will be impacted include Charles Branch, Back Branch, Cabin Branch, and Turkey Branch, as well as, unnamed tributaries to Charles Branch, Back Branch, Cabin Branch, Turkey Branch, Southwest Branch, Western Branch, and the Patuxent River, in Prince George's County, MD. The project will begin at Washington Gas Light's existing Strip 24 pipeline at the corner of Frank Tippet Road and U.S. Route 301 in Brandywine, MD and will transport natural gas service to their existing Strip 17 pipeline on Brightseat Road in Landover,

Notice of Decision  
July 24, 2018

MD. Mitigation is required for this project. The mitigation site construction will result in 3,930 square feet of temporary impact to the 100-year floodplain.

A brief explanation of the rationale for this decision is contained in the attached Summary of Basis for Decision.



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Denise M. Keehner  
Program Manager  
Wetlands and Waterways Program



## **SUMMARY BASIS FOR DECISION**

Washington Gas Light Company  
Name of Applicant

17-NT-0107/201760524  
Application Number

Elisa Riley/Imtiaz Choudhry  
Project Manager/Project Engineer

July 24, 2018  
Date of Decision

The Environment Article, Annotated Code of Maryland and the Code of Maryland Regulations establish criteria for the Maryland Department of the Environment (Department or MDE) to consider when evaluating projects that propose to change the course, current or cross section of a nontidal stream or other body of water or to impact a nontidal wetland. If the criteria are satisfied, the Department may issue a permit for the proposed activity. The Department may deny a permit for a waterway construction activity that it believes is inadequate, wasteful, dangerous, impracticable or detrimental to the best public interest. The Department may not issue a nontidal wetland permit for a regulated activity unless it finds that the applicant has demonstrated that a regulated activity, which is not water-dependent, has no practicable alternative, will minimize alteration or impairment of the nontidal wetlands, and will not cause or contribute to a degradation of ground or surface waters.

In the case of the proposed construction of a 16-mile-long, 24-inch-diameter buried steel natural gas pipeline with a cathodic protection system, the question for the Department to address is whether or not the proposed project impacts are acceptable under the regulations as they pertain to such construction activities.

### **PUBLIC NOTICE**

Adjoining property owners, local government officials and other interested persons must be notified of proposed impacts to nontidal wetlands and waterways. In addition, an opportunity to comment and request a public informational hearing must be provided via a local newspaper. For this project, Washington Gas Light Company (WGL) requested the Department schedule a public informational hearing and include that information in the public notice. The public notice on this application was published in *The Prince George's Post* on February 1, 2018. In addition, a copy of the public notice was mailed to adjoining property owners and local elected officials.

The public informational hearing was held on February 14, 2018 at the Rennie Forum located at Prince George's Community College, 301 Largo Road, Largo, Maryland. The hearing was called to order at 7 pm by the Hearing Officer, Amanda Sigillito, Chief of the Nontidal Wetlands Division at MDE. The applicant presented the proposed project and its associated impacts on regulated resources. The presentation was followed by comments and questions from those in attendance. Four people testified during the hearing; all in favor of the project. The Department received the following comments during the public comment period:

1. General: noise from construction and horizontal directional drilling; time frame for construction; scope of work; safety of the pipeline; and disruption to businesses. The applicant responded to the commenters (Letters dated February 23, 2018 and March 6, 2018 from WGL to the commenters).
2. Property Easements/Agreements: property owners affected by the pipeline alignment were concerned that easement/agreements have not yet been put in place. A special condition of the permit will require agreements to be in place prior to commencement of construction.
3. Constructability of the pipeline: concern about the constructability of the pipeline in a particular road right-of-way (ROW). The applicant responded to the commenter (Letter dated February 5, 2018 from GAI Consultants to the commenter).
4. Pipeline Alignment: location of the alignment. The applicant responded to the commenter (Email dated February 14, 2018 from WGL to the commenter).
5. Benefit to the local community: concern that gas was being transported to another area of the County without providing service to the local community. The applicant responded to the commenter (Letter dated March 6, 2018 from the WGL to the commenter).
6. Water Quality: concern over water quality of a stream in commenters front yard.
7. Rare, Threatened, or Endangered Species (RTE): concern over whether or not habitat for RTE species would be harmed.

It is important to note that the Department's decision is confined to the issues relevant to the Department's Wetland and Waterways authority and are addressed in the appropriate sections herein. Comments raised that are not directly within the scope of the Department's review were referred to the applicant.

## **PROJECT PURPOSE AND NEED**

In order for the Department to authorize impacts to nontidal wetlands and their regulated buffers, regulated activities must be determined to be necessary and unavoidable to meet the basic project purpose. It is also important to note that the orderly development and use of land is regulated through planning and zoning controls implemented by the local government. In this particular instance, Prince George's County makes the decision about appropriate land use of the property. The project's purpose is to maintain system reliability, reinforce the existing WGL distribution system, support the low pressure area in Landover, MD, and accommodate new growth in Prince George's County and the District of Columbia metro area. If the pipeline is not constructed, WGL will not be able to provide for the future energy needs for the eastern half of its service territory. This problem could become acute as soon as the beginning of the heating season of 2020-2021 (Alternatives Analysis Revised January 25, 2018 prepared by GAI Consultants).

## **ALTERNATIVES ANALYSIS**

For projects that are not water-dependent, the applicant must conduct an alternatives analysis to demonstrate that the project has no practicable alternative. The factors to be considered are whether the project purpose can be accomplished using one or more alternative sites in the general area; a reduction in the size, scope, configuration or density would result in less impact; the applicant made a good faith effort to accommodate the site constraints that caused the

alternative sites to be rejected; and that the regulated activity is necessary for the project to meet a demonstrated public need.

WGL included an Alternative Site Analysis (ASA) with the *Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal and Nontidal Wetland in Maryland* (Application) received by the Department on March 13, 2017. Upon review of the application, the Department determined that the ASA was inadequate and requested that the applicant provide documentation of efforts undertaken to pursue other alternative routes with fewer forested nontidal wetland conversion impacts. Specifically, the applicant was asked to consider alternate routes that would avoid the majority of the permanent forested nontidal wetland conversion impacts proposed to occur in Southwest Branch Stream Valley Park (SWBSVP or park). The letter also requested a meeting with all of the reviewing agencies to work through the ASA (Letter dated April 27, 2017 from the Department to WGL). The Alternatives Analysis Meeting was held at MDE on July 13, 2017. The meeting's outcome was that the applicant was to provide a more detailed ASA and documentation that the two additional alternative routes discussed at the meeting with fewer impacts to forested nontidal wetlands, continuing up the PEPCO ROW and the use of Harry S Truman Drive, could not be used to achieve the project's purpose (Meeting Minutes dated July 14, 2017 prepared by the Department). Additional meetings regarding the Alternative Analysis were held at the Joint Evaluation Meeting (JE) on September 27, 2017, at MDE on October 30, 2017, at the JE Meeting on November 29, 2017, and at a meeting on January 17, 2018. In addition to the Preferred Route that was eventually accepted by the Department, WGL evaluated the following alignments including one system alternative, four major route alternatives, a minor alternative to the northern section of the Applicant's preferred route, and several minor route alternatives.

The system alternative was to expand WGL's Chillium Station to include a liquefied natural gas storage facility. This option would have provided the increased supply of gas without impacting jurisdictional environmental resources. The expansion of this existing facility was considered not an option since WGL's attempts for re-zoning was denied.

The route alternatives included Major Route Alternative A, Major Route Alternative B, the Route 301 Alternative (requested to be considered by the U.S. Army Corps of Engineers [USACE]) and the MDE Suggested Route (requested to be considered by MDE). The minor northern route alternative to the Preferred Route was called the Harry S Truman Drive Alternative (HST Drive Alternative) which became the final alternative to be abandoned. All of these alternatives began at the tie in to the existing WGL strip 24 pipeline at the intersection of Frank Tippet Road and U.S. Route 301. Both Major Alternative A and Major Alternative B departed U.S. Route 301 at the PEPCO ROW located north of Sturdee Drive (the Preferred Route utilizes a PEPCO ROW south of this ROW). Major Alternative Route A paralleled Major Alternative B (which travelled up the PEPCO ROW) outside of the PEPCO ROW, crossed over Old Marlboro Pike then crossed over agricultural lands and continued up public road ROWs. This route was developed as an alternative to using a PEPCO ROW in the event that an agreement with PEPCO could not be reached or if existing (or future) structures within the ROW would preclude the use of their ROW. Later during the review process WGL provided documentation from PEPCO that this particular PEPCO ROW could not be utilized. Provided in this documentation was PEPCO's request that WGL not install a pipeline within at least a one-

mile radius of the substation on Brown Station Road since it was considered a critical substation. This requirement made the southern part of this alternative not an option. Also, the list of potential historic sites adjacent to the route would pose significant constraints to construction. Finally, the northern part of this alternative would be hindered by limited workspace in roadways due to utilities and the need to cross many commercial and industrial sites. For these reasons and the fact that the route would require 9.8 miles of new ROW (as compared to the six miles of new ROW required for the Preferred Route) the applicant decided to abandon this route.

Major Alternative B utilizes mostly PEPCO ROW. The same historic site constraints as were discussed with Major Alternative A apply to Major Alternative B. Though this route was 3 miles shorter than the Preferred Route, the single-pole structures within the PEPCO ROW would limit the workspace in this portion of the PEPCO ROW and the PEPCO requirement that prohibits locating the pipeline within a 1-mile radius of the existing substation were problems causing WGL to abandon this route as well. The Route 301 Alternative proposed routing the pipeline through public roads in order to avoid the permanent forested nontidal wetland impacts at SWBSVP. The route would continue up U.S. Route 301, turn west onto MD Route 214, and travel through various other public roads to tie in with the existing pipeline in Largo. Though this route was estimated to have about one-fourth of the forested nontidal wetland conversion impacts than the preferred route, it added seven miles to the length of the proposed pipeline over the preferred route. The route was determined to not meet the project's purpose because the total time to construct in the roadway would most likely prevent WGL from meeting the planned in-service date. The MDE suggested alternative route came about as a result of a request made in letter dated April 27, 2017 to the applicant from the Department asking the applicant to consider utilizing more of the existing PEPCO ROWs for the majority of the pipeline installation since the wetlands in the existing PEPCO ROW were already converted and the route would not require any permanent forested nontidal wetland impacts. The route went up PEPCO ROWs until it reached MD Route 214, followed Route 214, then continued up public roads. The applicant determined that the single-pole structures within the PEPCO ROW north of the substation would limit the workspace and could possibly provide unsafe construction conditions. The unsafe working conditions and the PEPCO requirement prohibiting locating the pipeline within a 1-mile radius of the existing substation ruled this alternative out of consideration. Additionally, since the route was 2.1 miles longer and construction in the road ROW takes significantly longer, the project would not meet the planned in-service date; therefore, it would not meet the project's purpose. Most of the minor route alternatives were ruled out due to increased length of the pipeline or unresponsive landowners with the exception of the HST Drive Alternative which was a northern minor alternative of the Preferred Route (Alternatives Analysis Revised January 25, 2018 prepared by GAI Consultants).

The HST Drive Alternative was considered at length since the route would result in significantly fewer permanent forested nontidal wetland conversion impacts than going through SWBSVP. The Department required documentation that HST Drive Alternative could not be utilized as an alternative to going through the park. Specifically, MDE requested documentation that WGL's premise that utilizing HST Drive Alternative would have a limited work day therefore, the route would extend the project's timeline for construction; and, that there were physical hinderances to construction in the road due to existing utilites in the roadway. WGL provided documentation that daytime and seasonal restrictions for construction in HST Drive Alternative pose the

following construction time complications: steel plates must be recessed in roadways and Prince George's County prohibits the use of steel plates between November 15 and March 15 therefore preventing construction in HST Drive Alternative during those months; the use of trench boxes required for construction in roadways requires additional construction time; and, the time of day restrictions in roadways reduces construction in roadways to four hours a day after set up and take down of temporary traffic controls. WGL also provided the documentation that the presence of underground utilities in HST Drive Alternative would complicate construction and require slower excavation. Construction in HST Drive Alternative would require crossing a total of 66 utility lines requiring slower excavation and the use of vacuum trucks to avoid damaging existing utilities. All of these time constraints were projected to result in approximately 240-300 days to complete construction in the HST Drive Alternative compared to a projected 112 days to complete construction through SWBSVP. (Letter dated January 25, 2018 from GAI Consultants to the Department). Since meeting a specific inservice date is an important component of the project's purpose, the Department accepted this justification. WGL also provided a cost analysis which estimated 27 million dollars for pipeline construction in HST Drive Alternative as compared to approximately 15 million dollars to go through SWBSVP. (Table 7, Cost Comparison of the Harry S Truman Alternatives and the Preferred Route, dated January 25, 2018, prepared by GAI Consultants).

## **AVOIDANCE AND MINIMIZATION**

If the alternative site analysis is accepted, the applicant must demonstrate that adverse impacts to nontidal wetlands, their regulated buffers, and the 100-year frequency floodplain are necessary and unavoidable.

At the time of the pre-application meeting (held at the August 31, 2016 JE meeting), all of the streams and temporary emergent nontidal wetland impacts within the PEPCO ROW were proposed to be crossed using open-cut trenching methods and the permanent pipeline ROW width through the SWBSVP (where the majority of forested nontidal wetland conversion impacts were proposed) was proposed to be 40 feet wide. The temporary emergent nontidal wetland impacts at that time were 40,933 square feet (0.94 acres), forested nontidal wetland conversion impacts were 80,150 square feet (1.84 acres), the temporary 25-foot nontidal wetland buffer impacts were 51,378 square feet (1.18 acres), temporary stream impacts were 1,603 linear feet, and the temporary 100-year floodplain impacts were 515,596 square feet (11.83 acres). From the the pre-application meeting to the March 3, 2017 Application submission, the applicant reduced their impacts: temporary emergent nontidal wetland impacts were reduced from 40,933 square feet (0.92 acres) to 20,775 square feet (0.48 acres) by utilizing horizontal directional drilling (HDD) and conventional boring methods in the PEPCO ROW; forested wetland conversion impacts were reduced from 80,150 square feet (1.84 acres) to 59,427 square feet (1.36 acres) by reducing the permanent ROW width within the park from a 40 foot width for the remainder of the wetland crossings in the alignment to a width of 30 feet through the forested wetlands in the park [this number was increased later due to additional forested nontidal wetlands noticed during the field review summer of 2017 which changed the total to the current 61,077 square feet (1.40 acres)]; the temporary 25-foot nontidal wetland buffer impacts decreased from 51,215 square feet (1.18 acres) to 39,130 square feet (0.90 acres) [this number increased to the current amount 40,215 square feet (0.92 acres) due to the additional forested nontidal wetlands found during the

field review summer of 2017]; temporary stream impacts were reduced from 1,603 linear feet to 1,329 linear feet in the application adjusted to the current 1,372 linear feet (due to the results of the field review summer of 2017); and temporary 100-year floodplain impacts were reduced from 515,596 square feet (11.83 acres) to the current 439,282 square feet (10.08 acres) (Impact Reduction Progression Table submitted December 12, 2017, prepared by GAI Consultants). Since most of the reduction of impacts occurred at the pre-app phase, the applicant was not able to further reduce their impacts; however, the applicant minimized impacts through design and construction practices devised to minimize impacts to resources. These methods included:

1. Co-location of the pipeline within existing PEPCO transmission line ROW where possible;
2. The use of HDD in certain locations;
3. The reduction of the width of the limit of disturbance and the temporary construction ROW from 75-feet in uplands to 40-feet in wetlands;
4. Utilizing three ROW maintenance categories to allow for regeneration of woody vegetation in portions of the permanent ROW after construction;
5. Clearing methods specifying that vegetation through wetlands will be cut to the ground as needed leaving root systems intact where feasible and tree stump removal will be limited to the trench area (stumps or root systems will only be removed from the ROW for safety-related construction constraints) (Summary of Wetland Reforestation Best Management Practices (BMPs) After Temporary Impacts Drawing dated November 30, 2017 prepared by GAI Consultants);
6. Segregation of top soil from wetland areas in order to reserve the viability of native seeds found therein;
7. Implementing additional practices to minimize impacts to regulated resources in SWBSVP to include preparing a Forested Wetland Impact Minimization Plan, holding a pre-construction field review with an arborist to facilitate selective cutting within the park and to identify trees for preservation during construction, specifying that grubbing will only occur where root zones would impede the construction or operation of the infrastructure, and where possible, retaining trees and overhanging branches within the ROW (Alternatives Analysis Revised January 25, 2018 prepared by GAI Consultants); and,
8. Employment of an Independent Environmental Monitor who will provide full-time oversight of construction, through final stabilization.

## **WATER QUALITY**

Erosion and sediment control measures and stormwater management practices are designed to prevent the degradation of ground and surface water quality. Sediment pollution is addressed under Maryland's Erosion and Sediment Control Act. The law mandates local Soil Conservation Districts to review and approve erosion and sediment control plans developed in accordance with State standards. The Department's programmatic responsibilities are limited to promulgating regulations, and developing standards, ordinances and other criteria necessary to administer an erosion and sediment control program, including program oversight and delegation of enforcement authority to local governments. As a result, the Washington Suburban Sanitary Commission is responsible for the review and approval of an erosion and sediment control plan for the proposed project.

Stormwater discharges are addressed under Maryland's Stormwater Management Act. The law requires counties and municipalities to "adopt ordinances necessary to implement a stormwater management program." The Department's programmatic responsibilities are limited to promulgating regulations defining the minimum features of a stormwater ordinance and program oversight. The Department also reviews the stormwater management program of the counties and municipalities and their field implementation and requires corrective action where a program is found deficient. For most projects, compliance with the County-issued stormwater management approval ensures that the project will not degrade water quality, but for projects affecting Tier II waters, the Department will require a separate anti-degradation analysis. In this particular case, however, the Prince George's County Department of Inspections and Enforcement is responsible for the review and approval of the project's stormwater management plan. This project involves work in Tier II streams and catchments. Accordingly, it was reviewed by the Department's Environmental Assessments and Standards Program. As a result of their review, certain Special Conditions have been stipulated in the Permit. These Special Conditions address biological and water quality monitoring requirements, enhanced BMPs, post construction surveys and compaction management. The Special Conditions serve to address direct, indirect, and cumulative impacts to these Tier II streams and catchments. Therefore, reporting and corrective actions, if warranted, are stipulated in the Permit conditions.

During the application review process, the Department verifies that appropriate BMPs are incorporated into the sediment and erosion control plans and the stormwater management plans to protect the State's water resources. In order to insure that these practices are contained in the project's final design plans, the applicant will submit approved sediment and erosion control plans and stormwater management plans to the Department prior to the commencement of construction activities authorized by the Permit. The 100-year floodplain and the stream channel impacts associated with the construction of the gas line are all temporary and will cause no adverse effects to the human life and property and complies with COMAR 26.17.04. The Department finds, based on the material provided and the conditions imposed in the Permit, that the project adequately addresses all applicable water quality considerations.

During the public comment period, the Department received a phone call from a commenter who was concerned about the water quality of a nearby stream. The particular stream in question was on the opposite side of the road from the alignment of the pipeline. Since the stream is conveyed in an existing culvert, the stream will be avoided completely. Additionally, to avoid secondary impacts to waterways, erosion and sediment control best management practices will be administered according to state standards.

## **ENDANGERED SPECIES**

Once the application is received, it goes through a screening process. This screening process uses Geographical Information System (GIS) to determine the proposed site location and whether or not there are designated resources in the area such as rare, threatened or endangered species. If there are resources identified, the Division sends copies of the proposed plan to the appropriate agencies to review and send comments. The GIS screening for the application indicated the potential for rare, threatened, or endangered (RTE) species within the project area. The Maryland Department of Natural Resources' (DNR) Wildlife Heritage Service had no



comments regarding the project since it was determined that there were no wetlands or streams containing RTE species being crossed by the pipeline alignment. DNR commented regarding the portion of the proposed pipeline that crosses three streams that are on the Rosaryville State Park property. Shane Johnston of the Maryland State Park Service requested and received agreement from WGL that the three streams on State parks property would be crossed using a trenchless method-a conventional bore. The usual extended time-of-year restriction periods of February 15- June 15 for these three streams due to the presence of anadromous fish spawning downstream of Charles Branch would not be required as it would not require in-stream work. The rest of the streams crossed with the pipeline could adhere to the typical Use-I stream restrictions since they are farther up the watershed (Email dated February 23, 2018 from DNR to the Department).

During the public comment period, the Department received a letter in opposition to the project. The commenter was concerned that the pipeline would do harm to the wooded natural environment that provides habitat to RTE species. No RTE species were identified along the proposed alignment; however, to minimize the impacts, the applicant intends to work with an arborist in an effort to preserve trees and overhanging branches within the LOD of the pipeline construction through the park and, to utilize three ROW maintenance categories to allow for regeneration of woody vegetation in portions of the permanent ROW after construction (Alternatives Analysis Revised January 25, 2018 prepared by GAI Consultants).

## **HISTORIC PRESERVATION**

The application was also screened using GIS for historical and archeological resources. The GIS screening indicated the potential for impacts to historical and archeological resources. Preliminary comments from the Maryland Historic Trust (MHT) indicated that much of the proposed project had a low potential for containing significant archeological deposits; however, they requested archeological investigations take place in two areas (Letter dated December 15, 2014 from MHT to the USACE). The Phase I survey was carried out and MHT concluded that the pipeline would have no effect on historic properties and that further archeological investigations were not warranted for this undertaking. MHT noted that any changes in the alignment must be submitted to MHT for review and comment (Letter dated November 23, 2016 from MHT to the USACE). On January 20, 2017 the applicant inquired about a realignment in a portion of the PEPCO ROW. After review of the new information, MHT determined that the proposed change would have no effect on the particular archeological deposit and required no further investigation (Email dated March 24, 2018 from MHT to the applicant).

## **MITIGATION**

Mitigation is only a consideration in a permit decision after steps have been taken to avoid and minimize impacts to nontidal wetlands and their regulated buffers, and nontidal waterways, including the 100-year floodplain. Mitigation is only a consideration in a permit decision after steps have been taken to avoid and minimize impacts to nontidal wetlands and their regulated buffers, and nontidal waterways, including the 100-year floodplain. The proposed project will result in the permanent conversion of 61,077 square feet of forested nontidal wetlands to emergent nontidal wetlands, resulting in a mitigation requirement of 61,077 square feet of



forested wetlands. Wetland creation, enhancement, and preservation at an offsite location in the same watershed as the proposed wetland impacts were proposed as the preferred wetland mitigation option. The Phase I Wetland Mitigation Plan was approved (Memorandum from David Walbeck to Elisa Riley dated March 13, 2018).



**STATE OF MARYLAND**  
**DEPARTMENT OF THE ENVIRONMENT**  
**WATER AND SCIENCE ADMINISTRATION**  
**NONTIDAL WETLANDS AND WATERWAYS PERMIT**

PERMIT NUMBER: 17-NT-0107/201760524

EFFECTIVE DATE: July 24, 2018

EXPIRATION DATE: July 24, 2028


PERMITTEE: Washington Gas Light Company  
6801 Industrial Road  
Springfield, VA 22151-4205  
Attn: Theresa A. Curtis



IN ACCORDANCE WITH ENVIRONMENT ARTICLE §5-503(a) AND §5-906(b), ANNOTATED CODE OF MARYLAND (2007 REPLACEMENT VOLUME), COMAR 26.17.04 AND 26.23.01, AND 26.08.02 AND THE ATTACHED CONDITIONS, Washington Gas Light Company ("PERMITTEE"), IS HEREBY AUTHORIZED BY THE WATER AND SCIENCE ADMINISTRATION ("ADMINISTRATION") TO CONDUCT A REGULATED ACTIVITY IN A NONTIDAL WETLAND, BUFFER, OR EXPANDED BUFFER, AND/OR TO CHANGE THE COURSE, CURRENT OR CROSS-SECTION OF WATERS OF THE STATE, IN ACCORDANCE WITH THE ATTACHED PLANS APPROVED BY THE ADMINISTRATION ON June 27, 2018 ("APPROVED PLAN") AND PREPARED BY GAI Consultants AND INCORPORATED HEREIN, AS DESCRIBED BELOW:

To conduct regulated activities associated with the construction of a 16-mile-long, 24-inch-diameter buried steel natural gas pipeline with a cathodic protection system in Prince George's County, MD. The work will include crossing environmental resources using open trench and trenchless crossings (i.e. horizontal directional drill or jack and bore). The project will permanently convert approximately 61,077 square feet (1.4 acres) of forested nontidal wetlands to emergent wetlands and will permanently impact approximately 41,230 square feet (0.95 acres) of the 25-foot nontidal wetland buffer. The project will temporarily impact approximately 21,330 square feet (0.50 acres) of forested nontidal wetlands, 17,220 square feet (0.40 acres) of emergent nontidal wetlands, 40,215 square feet (0.92 acres) of the 25-foot nontidal wetland buffer, 439,282 square feet (10.08 acres) of 100-year floodplain, and 1,372 linear feet (13,266 square feet) of Use I waterways. Waterways that will be impacted include Charles Branch, Back Branch, Cabin Branch, and Turkey Branch, as well as, unnamed tributaries to Charles Branch, Back Branch, Cabin Branch, Turkey Branch, Southwest Branch, Western Branch, and the Patuxent River, in Prince George's County, MD. The project will begin at Washington Gas Light's existing Strip 24 pipeline at the corner of Frank Tippet Road and U.S. Route 301 in Brandywine, MD and will transport natural gas service to their existing Strip 17 pipeline on Brightseat Road in Landover, MD. Mitigation is required for this project. The mitigation site construction will result in 3,930 square feet of temporary impact to the 100-year floodplain.

MD Grid Coordinates 129955 x 416433

  
Denise M. Keehner  
Program Manager  
Wetlands and Waterways Program

Attachments: Conditions of Permit  
Impact Overview Map and Plan Sheets

cc: MDE WSA Compliance Program w/ file  
U.S. Army Corps of Engineers, Maryland Section Southern

**Special Conditions**

1. **Enhanced Best Management Practices for Tier II Waters:** Enhanced Best Management Practices for Tier II Waters shall be implemented according to the plans.
2. **Biological Monitoring for Tier II Waters:**
  - a) A minimum of 30 days prior to conducting Maryland Biological Stream Survey (MBSS) Monitoring the Permittee shall obtain a Scientific Collections Permit/License from the Maryland Department of Natural Resources (DNR) Wildlife and Heritage Division. Contact the Wildlife Permit Coordinator, MD DNR-Wildlife and Heritage Service, 580 Taylor Ave., E-1, Annapolis, MD 21401 for more information or visit the following webpage to download an application: <http://dnr.maryland.gov/wildlife/Pages/Licenses/scicoll.aspx>.
  - b) MBSS monitoring consisting of one benthic and one fish sample, above and below the crossing site shall be conducted by certified persons before and after pipe installation across **Turkey Branch 1**, identified as in the approved Stream Monitoring Plan. Monitoring shall occur at the following coordinate locations (latitude/longitude):
    - i) Upstream: 38.854938/-76.825063
    - ii) Downstream: 38.855357/-76.824032
  - c) To submit the data, the Permittee shall contact Angel Valdez with the MDE Water and Science Administration, Environmental Assessment and Standards Program by phone at 410-537-3606 and by email at [angel.valdez@maryland.gov](mailto:angel.valdez@maryland.gov). A narrative report shall accompany the monitoring results. The Permittee shall also submit this data in hardcopy. All finalized data, both benthic and fish, must be provided to MDE by January 1<sup>st</sup> of each year of required sampling and shall be submitted as indicated above, and to the Administration's Compliance Program at: Maryland Department of the Environment Compliance Program, 1800 Washington Boulevard, Suite 420, Baltimore, Maryland 21230. The Permittee is not responsible for pre-construction monitoring if, with proper documentation of effort, it can be demonstrated that site access was unattainable during the sampling season outlined in the MBSS protocol.
3. **Water Quality Monitoring for Tier II Waters:**
  - a) Water quality monitoring, shall be conducted by experienced persons before and after pipe installation across Turkey Branch 1, as described in the approved Stream Monitoring Plan, both above and below the crossing site.
  - b) Monitoring shall consist of pH, sulfate, nitrite, nitrate, ammonia, total nitrogen, ortho-phosphate, chloride, conductivity, dissolved organic carbon, copper, zinc, calcium, and magnesium monitoring. Monitoring shall occur at the following locations (latitude/longitude):
    - i) Upstream: 38.854938/-76.825063
    - ii) Downstream: 38.855357/-76.824032
    - 1) Additional monitoring shall occur if determined by the Independent Environmental Monitor (IEM), and confirmed by the Administration, that unplanned discharges from the project persisting beyond 48 hours after identification, or are major in scope (e.g. total control failure or in-stream frac-out), or an incident occurring for more than 5 days have occurred.
  - c) The monitoring and results submission process shall be identical to the Biological Monitoring Report criteria in Special Condition 3.
4. **Compaction Monitoring and Mitigation for Tier II Waters:**
  - a) Compaction monitoring, shall be conducted by experienced persons before and after pipe installation across Turkey Branch 1, as described in the approved Compaction Monitoring and Minimization Plan (CMMP), both above and below the crossing site. Monitoring shall occur at the following locations:
    - i. 38.855481/-76.824446
    - ii. 38.855365/-76.824541
    - iii. 38.855138/-76.82459
    - iv. 38.854998/-76.824454
    - 1) If during post construction, soil surveys of sensitive soil areas indicate increased compaction above those recorded during the pre-construction surveys; those areas shall be delineated and restored as detailed in the approved CMMP.
    - 2) Post-construction monitoring shall be required for one year following restoration of all delineated and restored sensitive soils areas, construction areas with the streamside management zone, and any areas identified as potential sources of soil compaction or negative hydrologic impacts.
  - b) The monitoring and results submission process shall be identical to the Biological Monitoring Report criteria in the Tier II Special Condition Number 3.
5. **Easements and Property Agreements:** The Permittee is finalizing access agreements with some owners of properties on which regulated activities will be conducted. At least 30 days prior to the start of construction, the Permittee shall provide to the Department's Nontidal Wetlands Division documentation (e.g. signed contract, recorded easement, or other real property document) that demonstrates that the Permittee has the property owner permission to undertake the wetlands and waterways activities authorized by this Permit.

6. **Hydrostatic Testing:** Prior to hydrostatic testing of the gas line, Permittee must provide MDE with specific information relative to the source of the test water and the manner and location in which the water will be returned. If the source or waste location of the water involves other than municipal water and sewer lines, the Department must approve the plan prior to line testing. Additional Conditions may be imposed if the water is drawn directly from or returned to Waters of the State, or regulated nontidal wetlands or the regulated buffer.
7. **Removal of Silt Fence:** Once construction of the gas line and the facility have been completed and the area stabilized, all silt fence, including measures utilizing natural materials, must be removed so to avoid their presenting an impediment the movement of herpetofauna.
8. **Use of Existing Access Roads:** Permittee may undertake such maintenance as is necessary in order to use existing PEPCO access roads passing through regulated areas. These maintenance activities may not exceed that which the utility itself would have undertaken in order to stabilize their roads. Said maintenance work may not increase the width of, or relocate existing roads within regulated areas.
9. **Placement of Chips:** No Chips resulting from clearing operations may be placed in nontidal wetlands, or Sensitive management Zones.
10. **Flagging of Wetlands:** All nontidal wetlands must be flagged in the field with orange construction fence (or equivalent) prior to the initiation of construction.
11. **Independent Environmental Monitor:** Employment of an Independent Environmental Monitor who will provide full-time oversight of construction, through final stabilization. Duties of the Independent Environmental Monitor will be as submitted to and approved by MDE.
12. **Pre-Construction Meeting:** At least ten days prior to commencing work, the Permittee shall hold a pre-construction meeting and invite representatives from the Administration's Compliance Program (301-665-2850), the U.S. Army Corps of Engineers (410-962-6029) and the Washington Suburban Sanitary Commission.
13. **Inclusion Documents:** The practices, methods and requirements described in the following documents are included as Conditions of this authorization, by reference. The documents are: Agreement letter between Washington Gas Light Company and the Maryland Department of Natural Resources regarding the adjacent Rosaryville State Park and the crossing of the streams located on the PEPCO right-of-way that bisects the park; MDE's Recommendations for Best Management Practices for Restoration after Temporary Impacts (December 2013); Horizontal Directional Drilling Inadvertent Release Contingency Plan Revised July 2018; Scope of Services-Independent Environmental Monitoring and Reporting; Best Management Practices For Restoration of Wetlands After Temporary Impacts; Forested Wetland Impact Minimization Plan; and the PGDCRRP construction plans, stormwater management plans, and erosion and sediment control plans.

**General Conditions**

1. **Validity:** Permit is valid only for use by Permittee. Permit may be transferred only with prior written approval of the Administration. In the event of transfer, transferee agrees to comply with all terms and conditions of Permit.
2. **Initiation of Work, Modifications and Extension of Term:** Permittee shall initiate authorized activities in waterways, including streams and the 100-year floodplain, within two (2) years of the Effective Date of this Permit or the Permit shall expire. [Annotated Code of Maryland, Environment Article 5-510(a)-(b) and Code of Maryland Regulations 26.17.04.12]. Permittee may submit written requests to the Administration for (a) extension of the period for initiation of work, (b) modification of Permit, including the Approved Plan, or, (c) not later than 45 days prior to Expiration Date, an extension of term. Requests for modification shall be in accordance with applicable regulations and shall state reasons for changes, and shall indicate the impacts on nontidal wetlands, streams, and the floodplain, as applicable. The Administration may grant a request at its sole discretion. (Annotated Code of Maryland, Environment Article 5-510(c), and Code of Maryland Regulations 26.17.04.12, and Annotated Code of Maryland, Environment Article 5-907 and Code of Maryland Regulations 26.23.02.07).
3. **Responsibility and Compliance:** Permittee is fully responsible for all work performed and activities authorized by this Permit shall be performed in compliance with this Permit and Approved Plan. Permittee agrees that a copy of the Permit and Approved Plan shall be kept at the construction site and provided to its employees, agents and contractors. A person (including Permittee, its employees, agents or contractors) who violates or fails to comply with the terms and conditions of this Permit, Approved Plan or an administrative order may be subject to penalties in accordance with §5-514 and §5-911, Department of the Environment Article, Annotated Code of Maryland (2007 Replacement Volume).
4. **Failure to Comply:** If Permittee, its employees, agents or contractors fail to comply with this Permit or Approved Plan, the Administration may, in its discretion, issue an administrative order requiring Permittee, its employees, agents and contractors to cease and desist any activities which violate this Permit, or the Administration may take any other enforcement action available to it by law, including filing civil or criminal charges.
5. **Suspension or Revocation:** Permit may be suspended or revoked by the Administration, after notice of opportunity for a hearing, if Permittee: (a) submits false or inaccurate information in Permit application or subsequently required submittals; (b) deviates from the Approved Plan, specifications, terms and conditions; (c) violates, or is about to violate terms and conditions of this Permit; (d) violates, or is about to violate, any regulation promulgated pursuant to Title 5, Department of the Environment Article, Annotated Code of Maryland as amended; (e) fails to allow authorized representatives of the Administration to enter the site of authorized activities at any reasonable time to conduct inspections and evaluations; (f) fails to comply with the requirements of an

- administrative action or order issued by the Administration; or (g) does not have vested rights under this Permit and new information, changes in site conditions, or amended regulatory requirements necessitate revocation or suspension.
6. **Other Approvals:** Permit does not authorize any injury to private property, any invasion of rights, or any infringement of federal, State or local laws or regulations, nor does it obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.
  7. **Site Access:** Permittee shall allow authorized representatives of the Administration access to the site of authorized activities during normal business hours to conduct inspections and evaluations necessary to assure compliance with this Authorization. Permittee shall provide necessary assistance to effectively and safely conduct such inspections and evaluations.
  8. **Inspection Notification:** Permittee shall notify the Administration's Compliance Program at least five (5) days before starting authorized activities and five (5) days after completion. For Carroll, Frederick, Howard, Montgomery and Prince George's Counties, Permittee shall call 301-665-2850.
  9. **Sediment Control:** Permittee shall obtain approval from the Washington Suburban Sanitary Commission for a grading and sediment control plan specifying soil erosion control measures. The approved grading and sediment control plan shall be included in the Approved Plan, and shall be available at the construction site.
  10. **Best Management Practices During Construction:** Permittee, its employees, agents and contractors shall conduct authorized activities in a manner consistent with the Best Management Practices specified by the Administration.
  11. **Disposal of Excess:** Unless otherwise shown on the Approved Plan, all excess fill, spoil material, debris, and construction material shall be disposed of outside of nontidal wetlands, nontidal wetlands buffers, and the 100-year floodplain, and in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands.
  12. **Temporary Staging Areas:** Temporary construction trailers or structures, staging areas and stockpiles shall not be located within nontidal wetlands, nontidal wetlands buffers, or the 100-year floodplain unless specifically included on the Approved Plan.
  13. **Temporary Stream Access Crossings:** Temporary stream access crossings shall not be constructed or utilized unless shown on the Approved Plan. If temporary stream access crossings are determined necessary prior to initiation of work or at any time during construction, Permittee, its employees, agents or contractors shall submit a written request to the Administration and secure the necessary permits or approvals for such crossings before installation of the crossings. Temporary stream access crossings shall be removed and the disturbance stabilized prior to completion of authorized activity or within one (1) year of installation.
  14. **Discharge:** Runoff or accumulated water containing sediment or other suspended materials shall not be discharged into waters of the State unless treated by an approved sediment control device or structure.
  15. **Instream Construction Prohibition:** To protect important aquatic species, motor driven construction equipment shall not be allowed within stream channels unless on authorized ford crossings. Activities within stream channels are prohibited as determined by the classification of the stream (COMAR 26.08.02.08): Charles Branch, Back Branch, Cabin Branch, and Turkey Branch, as well as unnamed tributaries to Charles Branch, Back Branch, Cabin Branch, Turkey Branch, Southwest Branch, Western Branch, and the Patuxent River are Use I waterways; in-stream work may not be conducted from March 1 through June 15 inclusive, of any year.
  16. **Instream Blasting:** Permittee shall obtain prior written approval from the Administration before blasting or using explosives in the stream channel.
  17. **Minimum Disturbance:** Any disturbance of stream banks, channel bottom, wetlands, and wetlands buffer authorized by Permit or Approved Plan shall be the minimum necessary to conduct permitted activities. All disturbed areas shall be stabilized vegetatively no later than seven (7) days after construction is completed or in accordance with the approved grading or sediment and erosion control plan.
  18. **Restoration of Construction Site:** Permittee shall restore the construction site upon completion of authorized activities. Undercutting, meandering or degradation of the stream banks or channel bottom, any deposition of sediment or other materials, and any alteration of wetland vegetation, soils, or hydrology, resulting directly or indirectly from construction or authorized activities, shall be corrected by Permittee as directed by the Administration.
  19. **Mitigation:** Permittee shall mitigate for the permanent conversion of 61,077 square feet of forested nontidal wetlands to emergent nontidal wetlands by creating the equivalent of at least 61,077 square feet of forested nontidal wetlands, in accordance with an approved Phase I conceptual mitigation plan, as may be modified by a Phase II Mitigation Plan approved by the Mitigation and Technical Assistance Section ("Section") of the Department, pursuant to COMAR 26.23.04. A Phase II Mitigation Plan shall be submitted to the Section no later than 90 days after the issuance of this Permit, unless an extension has been granted in writing by the Section. The permittee shall successfully construct the mitigation site and meet project standards and other requirements, as specified in the Approval Letter and COMAR 26.23.04, in advance or concurrently with the activities authorized in this Permit. In the event of discrepancy with the mitigation requirements found in this Condition, the standards and requirements set forth in the Approval Letter shall govern. The permittee is required to notify the Section upon the start of grading and the completion of planting of the mitigation project. The permittee shall submit monitoring reports for the mitigation project to the Section as specified in the Approval Letter. If the permittee as stated in the Permit, changes, the permittee must notify the Section. If the mitigation obligation is to be transferred to another party, the permittee must notify the Section.

**FEDERALLY MANDATED STATE AUTHORIZATIONS**

A Water Quality Certification is granted for this project provided that all work is performed in accordance with the authorized project description and associated conditions. See individual WQC for 17-NT-0107/201760524. In addition, as applicable, this Permit constitutes the State's concurrence with the Applicant's certification that the activities authorized herein are consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act of 1972, as amended. Activities in the following counties are not subject to the Maryland Coastal Zone Management requirement: Allegany, Carroll, Frederick, Garrett, Howard, Montgomery, and Washington.

**U.S. ARMY CORPS OF ENGINEERS AUTHORIZATION**

The U.S. Army Corps of Engineers has reviewed this activity as a Category Alt. They will provide their approval under a separate cover letter. Permittee is advised that they may not begin work on the activities approved herein until they have also received an approval from the U.S. Army Corps of Engineers.

**BEST MANAGEMENT PRACTICES FOR WORKING IN  
NONTIDAL WETLANDS, WETLAND BUFFERS,  
WATERWAYS, AND 100-YEAR FLOODPLAINS**

- 1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- 4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- 6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
- 7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria italica*), Barley (*Hordeum* sp.), Oats (*Uniola* sp.), and/or Rye (*Secale cereale*). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. **Kentucky 31 fescue shall not be utilized in wetland or buffer areas.** The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- 8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- 9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:
  - Use I waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.
  - Use III waters: In-stream work shall not be conducted during the period October 1 through April 30, inclusive, during any year.
  - Use IV waters: In-stream work shall not be conducted during the period March 1 through May 31, inclusive, during any year.
- 10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- 11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

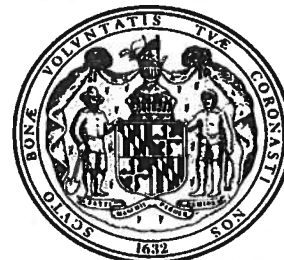


**STATE OF MARYLAND**  
**DEPARTMENT OF THE ENVIRONMENT**  
**WATER AND SCIENCE ADMINISTRATION**

**WATER QUALITY CERTIFICATION**  
**for**  
**NONTIDAL WETLANDS AND WATERWAYS**

**CERTIFICATION NUMBER:** 17-NT-0107/201760524

**ISSUED TO:** Washington Gas Light Company  
6801 Industrial Road  
Springfield, VA 22151-4205  
Attn: Theresa A. Curtis



**EFFECTIVE DATE:** July 24, 2018

**EXPIRATION DATE:** July 24, 2028

Description of Certified Project: The certification holder to construct a 16-mile-long, 24-inch-diameter buried steel natural gas pipeline with cathodic protection system in Prince George's County, MD. The work will include crossing environmental resources using open trench and trenchless crossings (ie. horizontal directional drill or jack and bore). The project will begin at Washington Gas Light Company's existing Strip 24 pipeline at the corner of Frank Tippet Road and U.S. Route 301 in Brandywine, MD and will transport natural gas service to their existing Strip 17 pipeline on Brightseat Road in Landover, MD. The project involves work in Use I waterways. Waterways that will be impacted include Charles Branch, Back Branch, Cabin Branch, and Turkey Branch, as well as, unnamed tributaries to Charles Branch, Back Branch, Cabin Branch, Turkey Branch, Southwest Branch, Western Branch, and the Patuxent River in Prince George's County, MD.

The project will permanently convert approximately 61,077 square feet (1.4 acres) of forested nontidal wetlands to emergent wetlands and will permanently impact 41,230 square feet ((0.95 acres) of the 25-foot nontidal wetland buffer. The project will temporarily impact 21,330 square feet (0.50 acres) of forested nontidal wetlands, 17,220 square feet (0.40 acres) of emergent nontidal wetlands, 40,215 square feet (0.92 acres) of the 25-foot nontidal wetland buffer, 439,282 square feet (10.08 acres) of 100-year floodplain, and 1,372 linear feet (13,266 square feet of Use I waterways. The mitigation site construction will result in 3,930 square feet of temporary impact to the 100-year floodplain.

This Water Quality Certification is issued under authority of Section 401 of the Federal Water Pollution Control Act and its Amendments and the Environment Article, Sections 9-313 - 9-323, inclusive, Annotated Code of Maryland. A copy of this required Certification has been sent to the Corps of Engineers. This Certification does not relieve the applicant of responsibility for obtaining any other approvals, licenses or permits in accordance with federal, State, or local requirements and does not authorize commencement of the proposed project. The Maryland Department of the Environment has determined from a review of the plans that the project described above will not violate Maryland's water quality standards, provided that the following conditions are satisfied.

The Certification Holder shall comply with the following conditions:

**GENERAL CONDITIONS**

1. The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant is to notify the Water and Science Administration's Compliance Program, at 301-665-2850, ten (10) days prior to commencing work. If project is part of a mining site, please contact the Land and Materials Administration's Mining Program at 410-537-3557 at least ten (10) days prior to commencing work. Verbal notification is to be followed by written notice within ten (10) days.
2. The proposed project shall be constructed in accordance with the approved final plan and its revisions.
3. All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of this State.
4. The certification holder shall notify the Water and Science Administration, Nontidal Wetlands Division, in writing, upon transferring property ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request, in writing, transfer of this water quality certification to his/her name.
5. The certification holder shall allow the Water and Science Administration or its representative to inspect the project area at reasonable times and to inspect records regarding this project.

**SPECIAL CONDITIONS**

1. The conditions of Nontidal Wetlands and Waterways Permit No. 17-NT-0107/201760524 are incorporated, by reference, into this Water Quality Certification.
2. The disturbance of the bottom of the water and sediment transport into adjacent State waters shall be minimized. The Permittee shall obtain and certify compliance with a grading and sediment control plan, which has been approved by the, Washington Suburban Sanitary Commission. The approved plans shall be available at the project site during all phases of construction.
3. Work in waters may not be conducted from March 1 through June 15 inclusive, of any year.
4. Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway. The natural vegetation shall be maintained and restored when disturbed or eroded. Stormwater drainage facilities shall be designed, implemented, operated, and maintained in accordance with the applicable approving authority.
5. Stormwater Management Plan: The certification holder shall provide to the Administration a stormwater management plan including cross sections, and other applicable drawings which incorporates effective pollutant removal strategies in uplands to treat the required volume of runoff from impervious surfaces prior to the release of stormwater into state waters, tidal wetlands, or nontidal wetlands. There shall be no discharge of untreated stormwater to State waters and tidal and nontidal wetlands. The plan shall be provided by GAI Consultants and shall be implemented by Washington Gas Light.
6. Nontidal Wetland Mitigation Requirement: The certification holder will mitigate for approximately 61,077 square feet (1.40 acres) of permanent forested nontidal wetland conversion by creating the equivalent of at least 61,077 square feet of forested nontidal wetlands in accordance with the approved Mitigation Plan.

**Water Quality Certification Number: 17-NT-0107/201760524**  
**Page 3 of 3**

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification and legal proceedings may be instituted against the certification holder in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime.

CERTIFICATION APPROVED

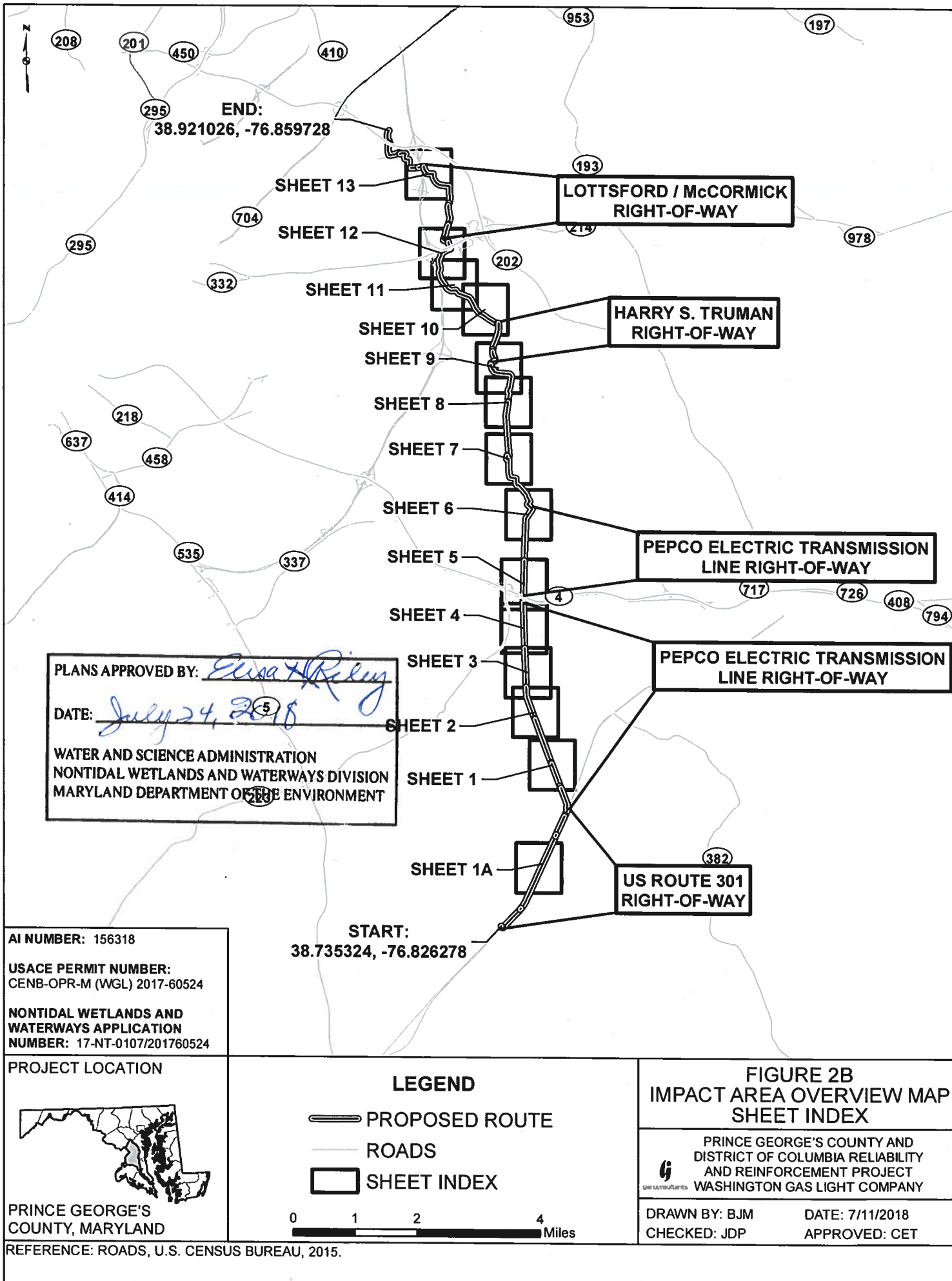


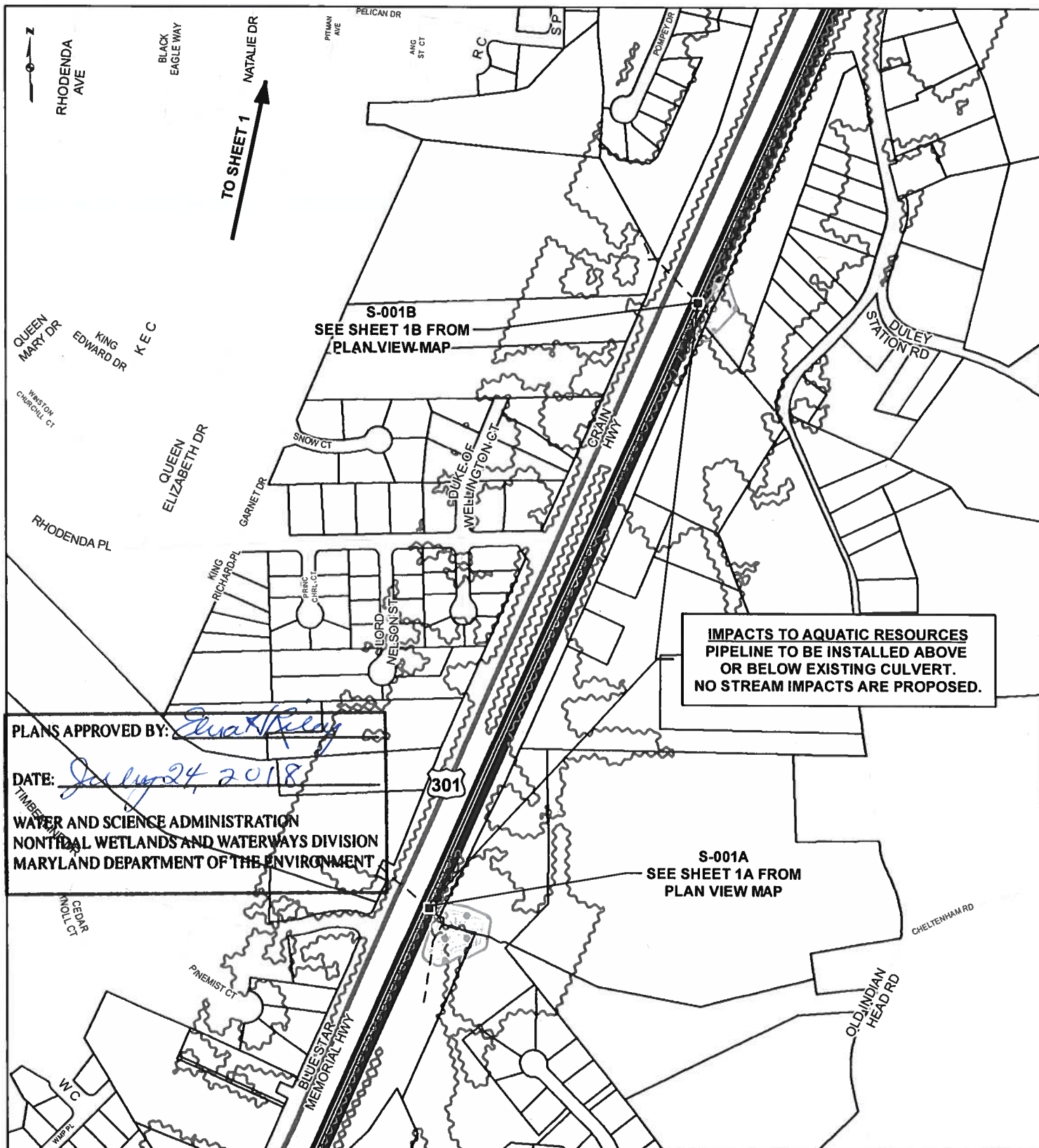
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Denise M. Keehner  
Program Manager  
Wetlands and Waterways Program

cc: U.S. Army Corps of Engineers, Maryland Section Southern







PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

IMPACTS TO AQUATIC RESOURCES  
 PIPELINE TO BE INSTALLED ABOVE  
 OR BELOW EXISTING CULVERT.  
 NO STREAM IMPACTS ARE PROPOSED.

S-001A  
 SEE SHEET 1A FROM  
 PLAN VIEW MAP

S-001B  
 SEE SHEET 1B FROM  
 PLAN VIEW MAP



LEGEND		
▼ BORE LOCATION	— US HIGHWAY	100-YEAR FLOODPLAIN
■ HYDROLOGY CROSSING	— TOWNSHIP ROAD	PERMANENT ROW
■ WETLAND CROSSING	— STATE ROAD	LIMIT OF DISTURBANCE
— PROPOSED ROUTE	WETLAND	FOREST CANOPY
- - - STREAM	WETLAND BUFFER	
— INTERSTATE ROAD	PARCEL BOUNDARY	

0 250 500 1,000 Feet

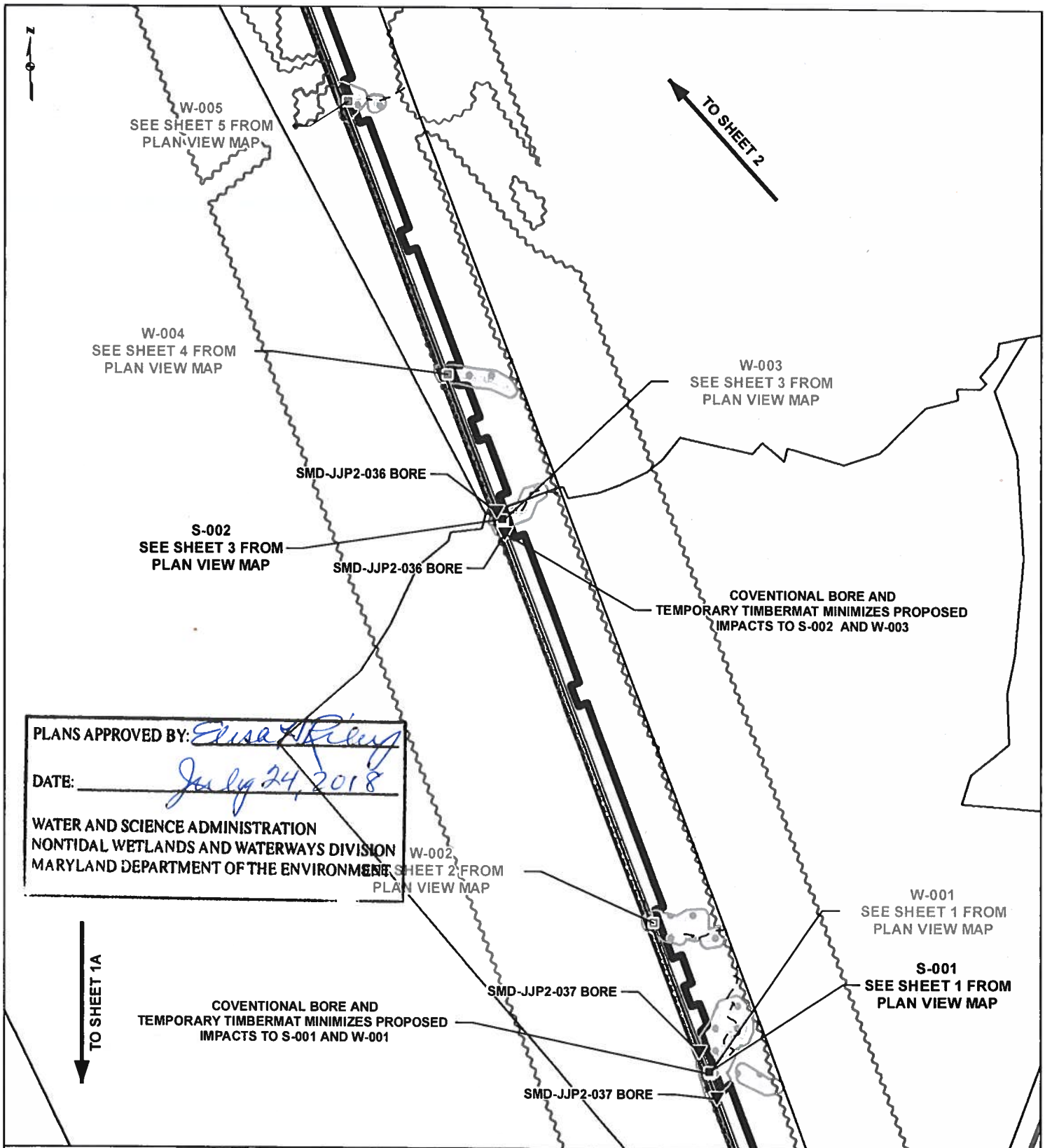
**FIGURE 2B  
 IMPACT AREA OVERVIEW MAP  
 SHEET 1A OF 14**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM      DATE: 7/10/2018  
 CHECKED: JDP      APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.

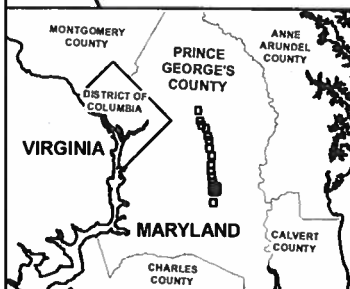




PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND		
▼ BORE LOCATION	— US HIGHWAY	100-YEAR FLOODPLAIN
■ HYDROLOGY CROSSING	— TOWNSHIP ROAD	PERMANENT ROW
■ WETLAND CROSSING	— STATE ROAD	LIMIT OF DISTURBANCE
— PROPOSED ROUTE	WETLAND	FOREST CANOPY
- - - STREAM	POND	
— INTERSTATE ROAD	WETLAND BUFFER	
	PARCEL BOUNDARY	

0 250 500 1,000  
Feet

## FIGURE 2B IMPACT AREA OVERVIEW MAP SHEET 1 OF 14

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

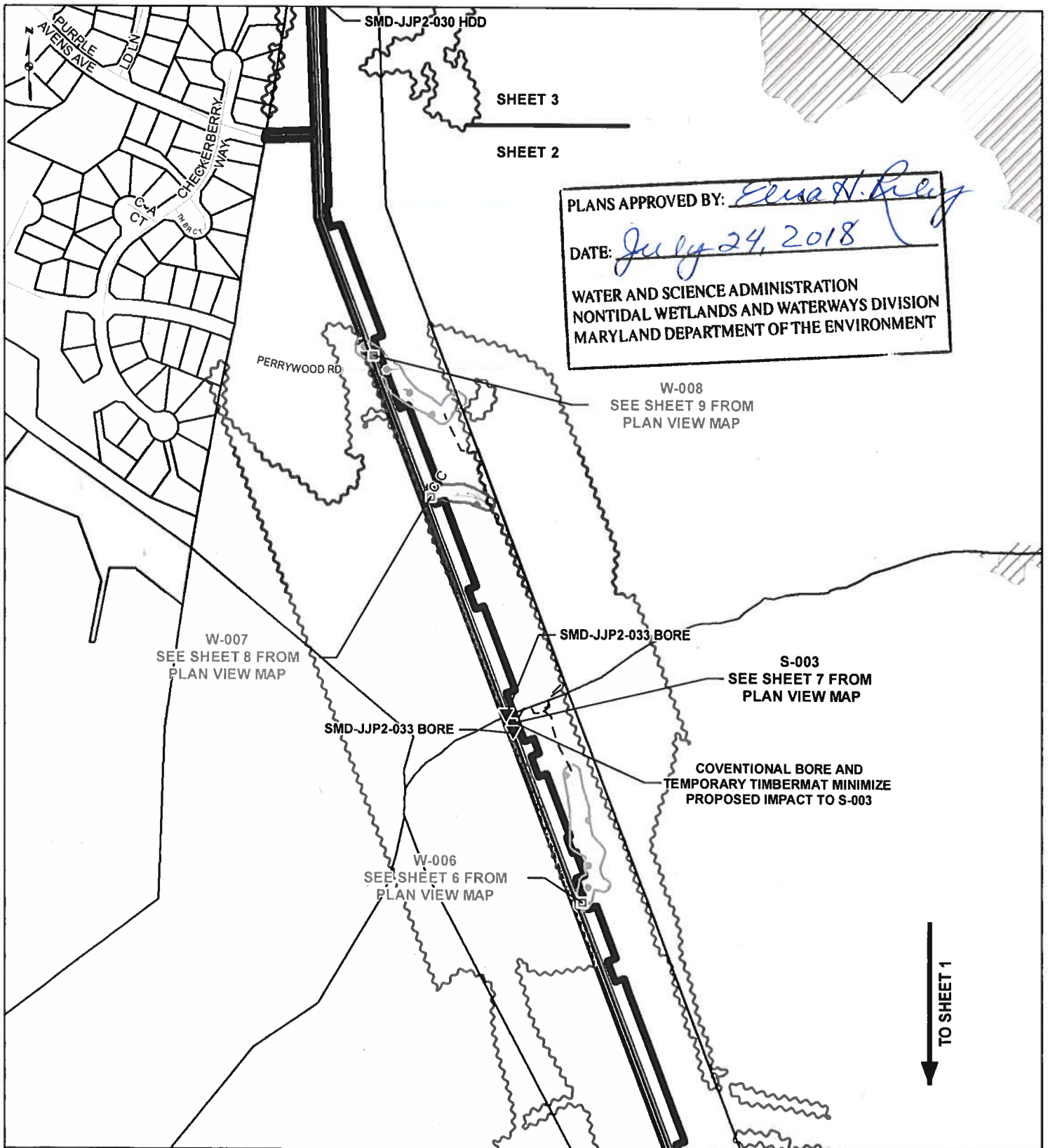
DRAWN BY: BJM

DATE: 7/10/2018

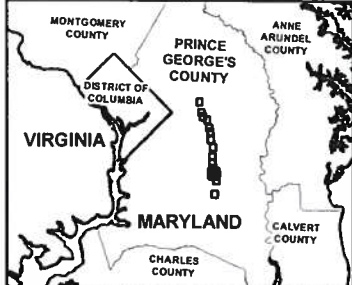
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APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.



PLANS APPROVED BY: *Elena H. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND		
▼ BORE LOCATION	— US HIGHWAY	100-YEAR FLOODPLAIN
■ HYDROLOGY CROSSING	— TOWNSHIP ROAD	PERMANENT ROW
■ WETLAND CROSSING	— STATE ROAD	LIMIT OF DISTURBANCE
— PROPOSED ROUTE	WETLAND	FOREST CANOPY
- - - STREAM	WETLAND BUFFER	
— INTERSTATE ROAD	PARCEL BOUNDARY	
	— POND	

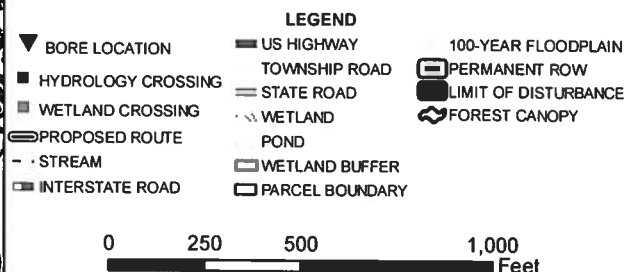
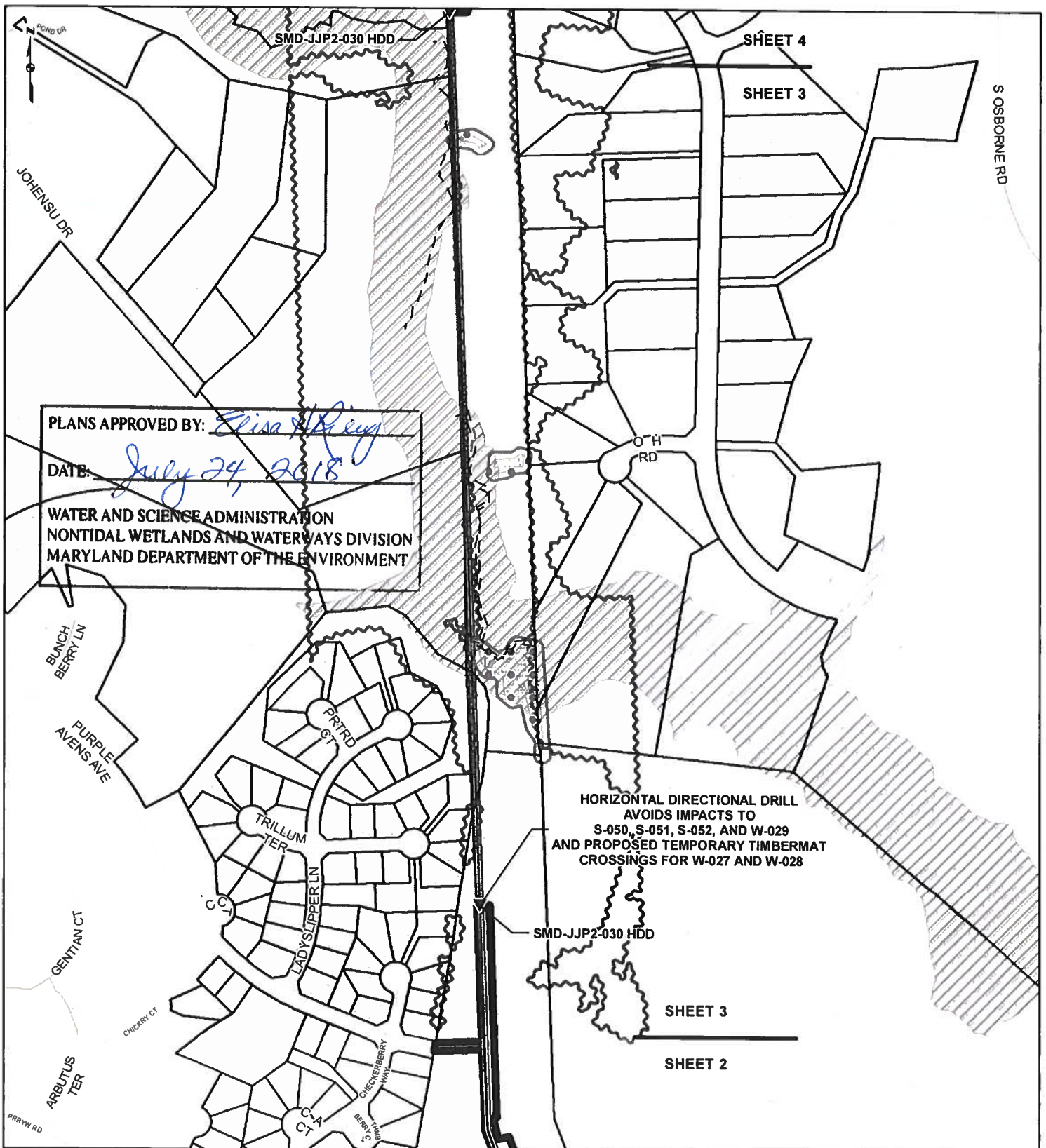
**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 2 OF 14**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM      DATE: 7/10/2018  
 CHECKED: JDP      APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.



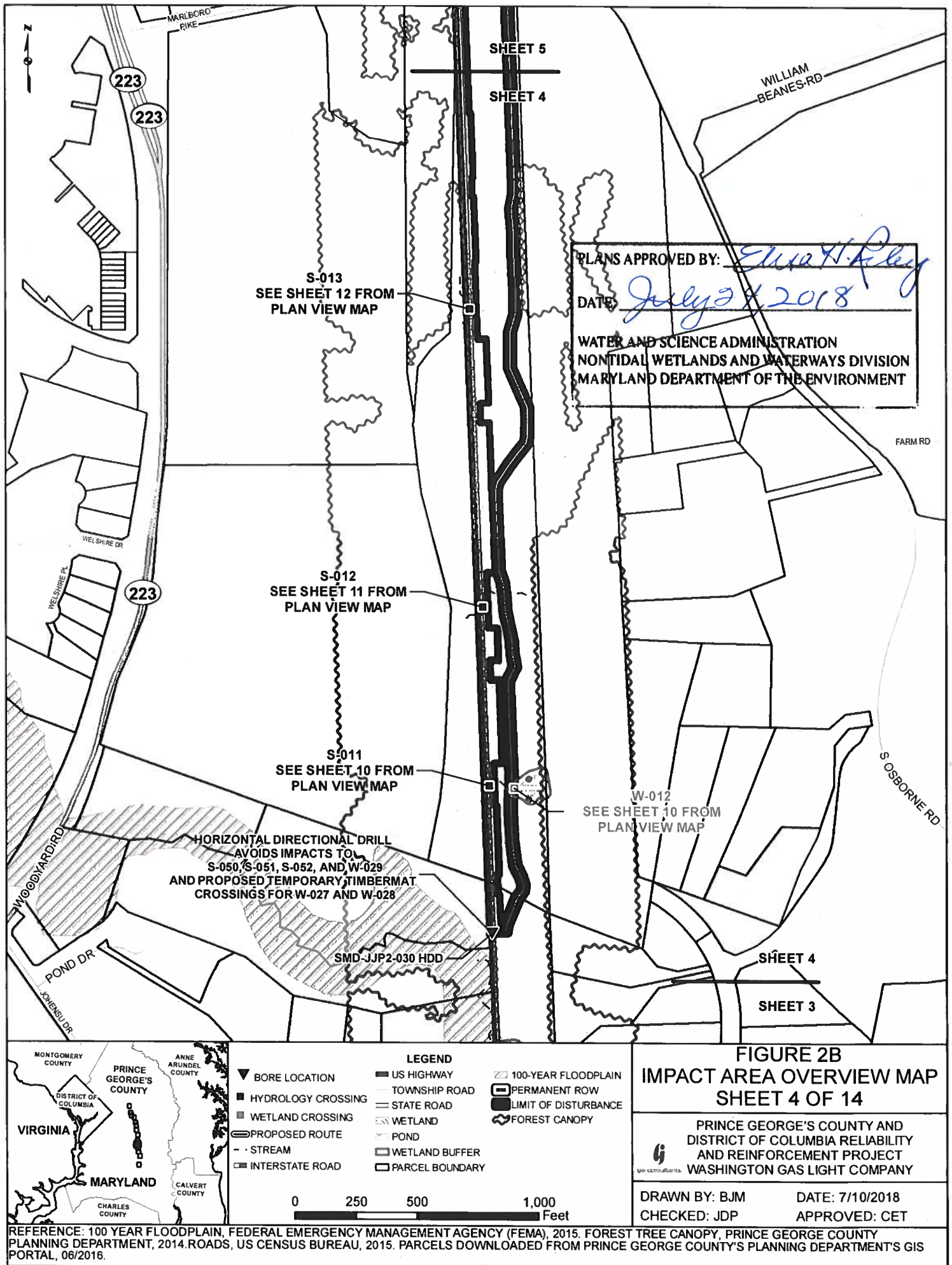


**FIGURE 2B  
 IMPACT AREA OVERVIEW MAP  
 SHEET 3 OF 14**

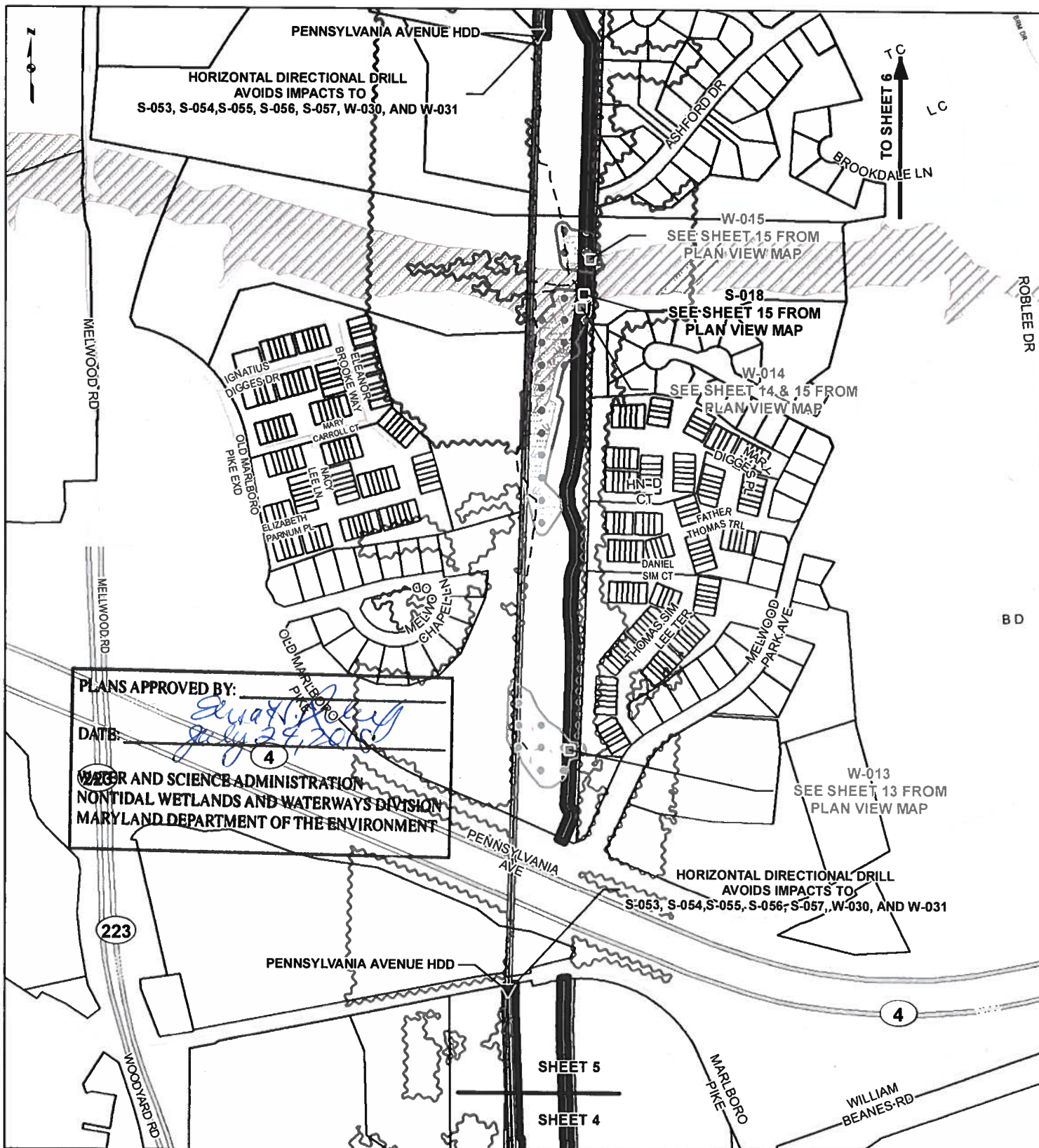
PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM DATE: 7/10/2018  
 CHECKED: JDP APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.







## FIGURE 2B IMPACT AREA OVERVIEW MAP SHEET 5 OF 14

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

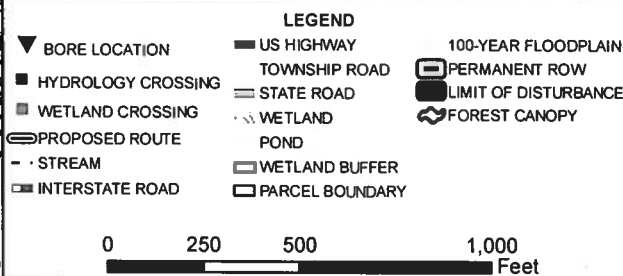
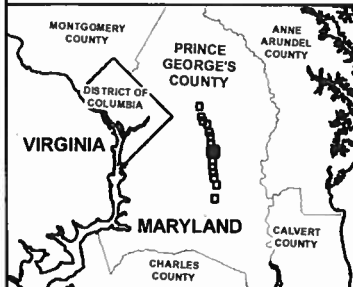
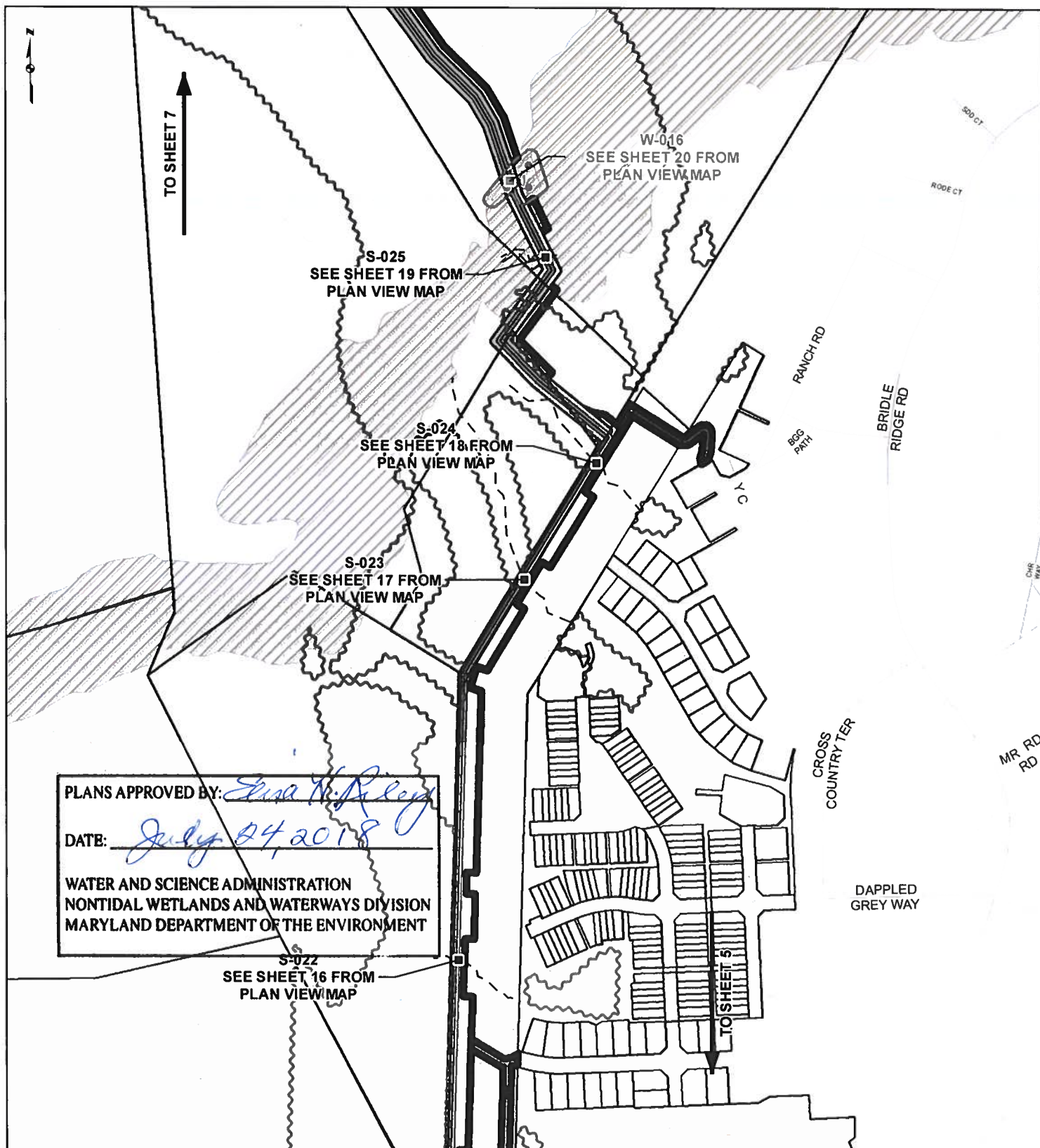
DRAWN BY: BJM

DATE: 7/10/2018

CHECKED: JDP

APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.



## FIGURE 2B IMPACT AREA OVERVIEW MAP SHEET 6 OF 14

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM

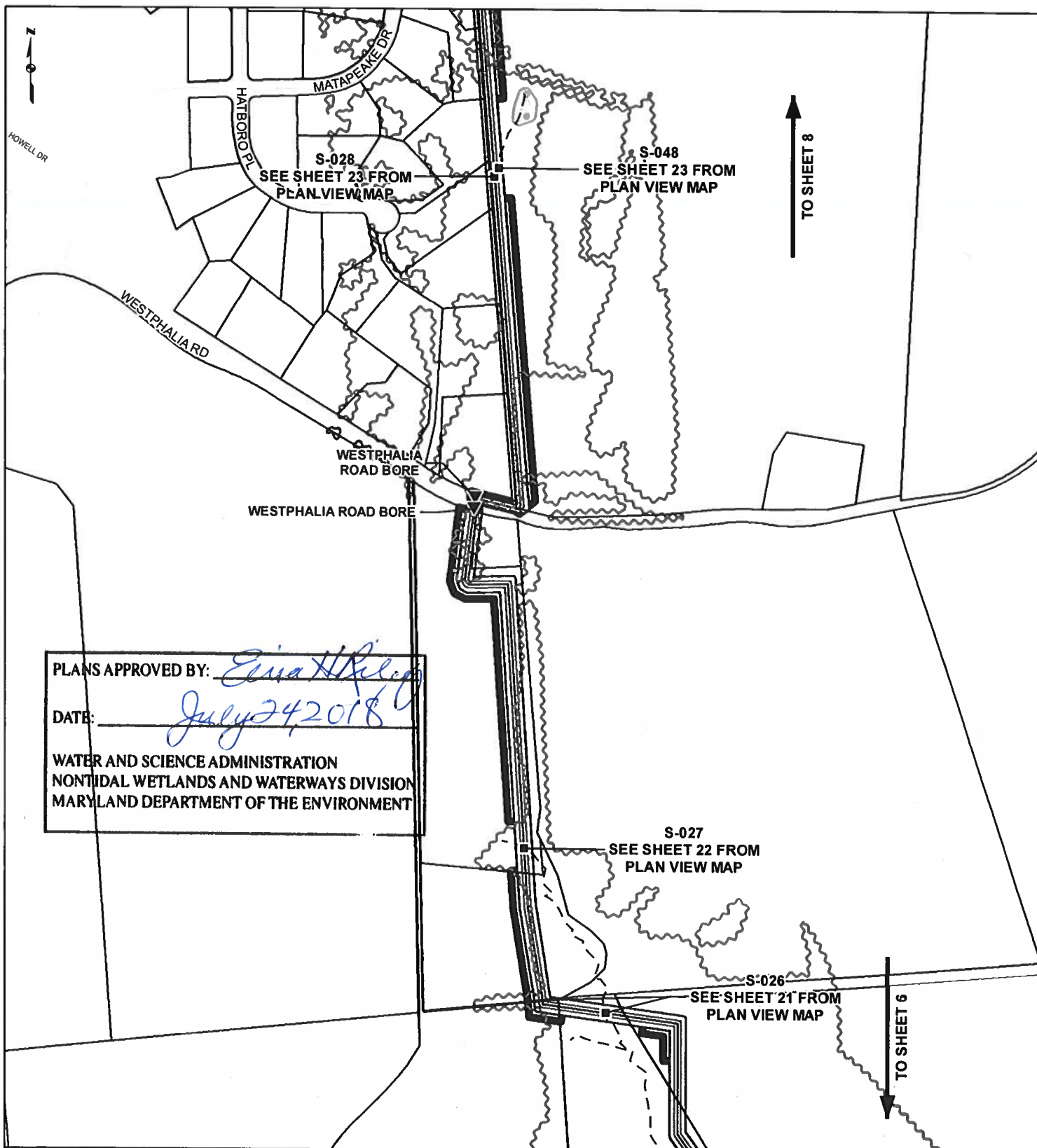
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CHECKED: JDP

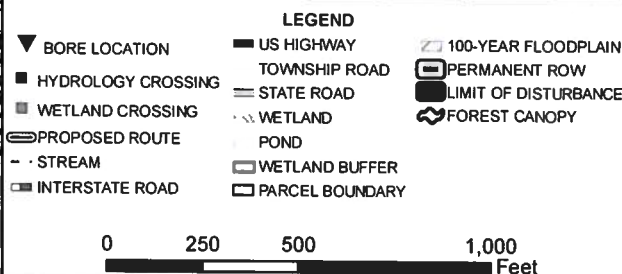
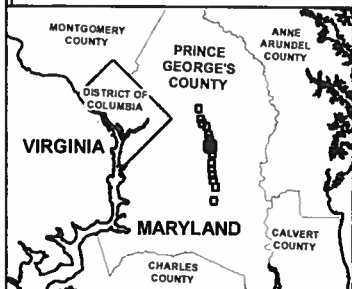
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PLANS APPROVED BY: *Eina H. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

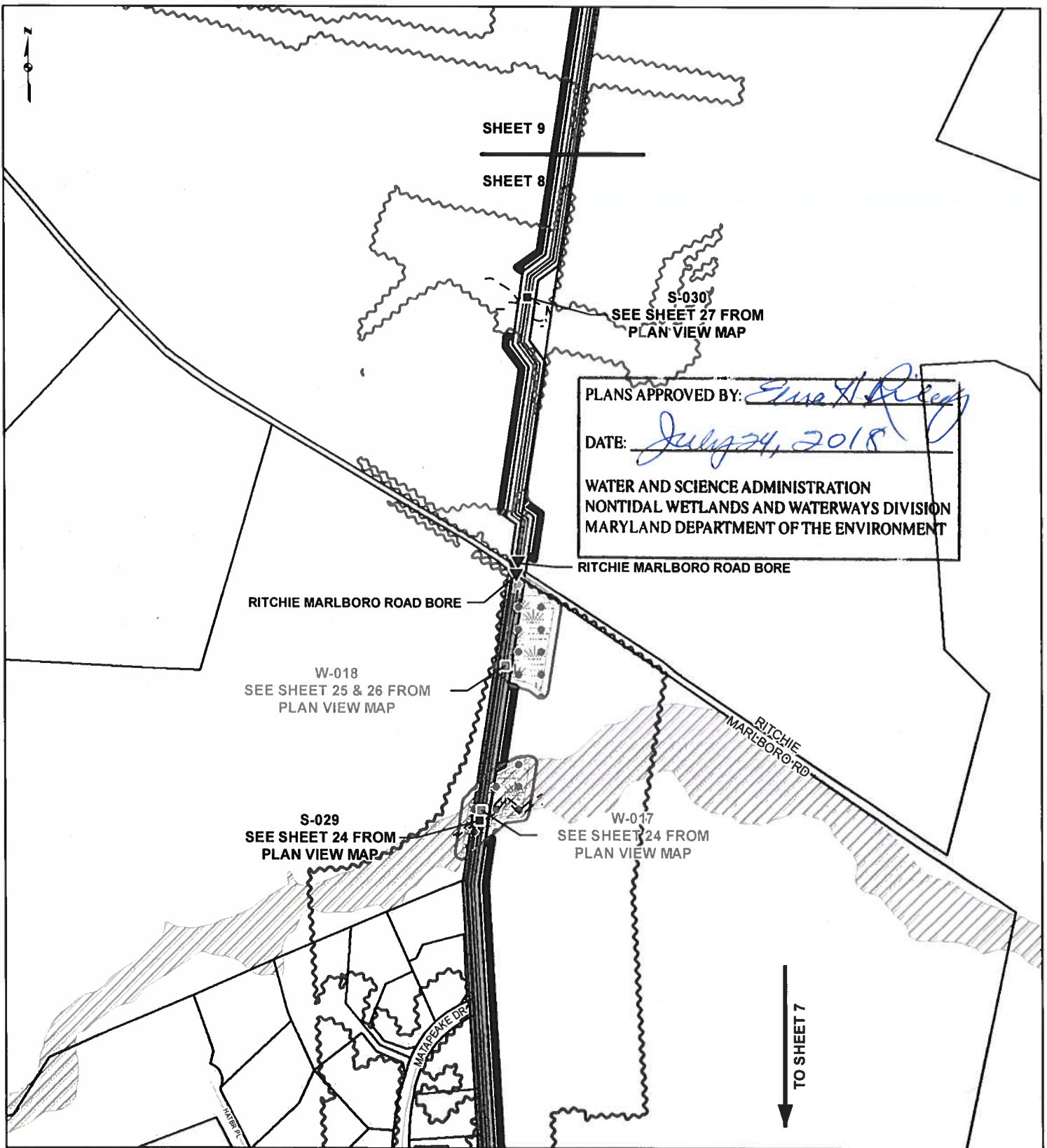


**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 7 OF 14**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM DATE: 7/10/2018  
 CHECKED: JDP APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.



PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

RITCHIE MARLBORO ROAD BORE

RITCHIE MARLBORO ROAD BORE

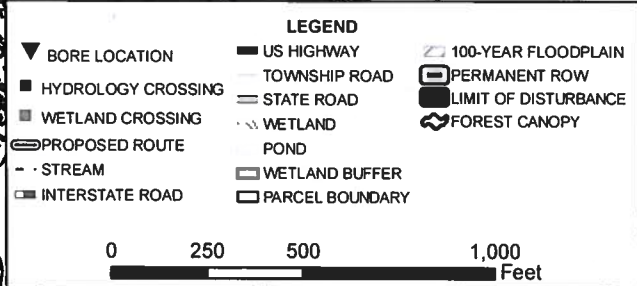
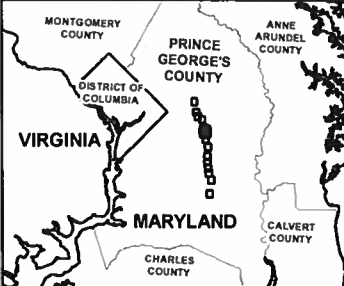
W-018  
SEE SHEET 25 & 26 FROM  
PLAN VIEW MAP

S-029  
SEE SHEET 24 FROM  
PLAN VIEW MAP

W-017  
SEE SHEET 24 FROM  
PLAN VIEW MAP

RITCHIE  
MARLBORO RD

TO SHEET 7



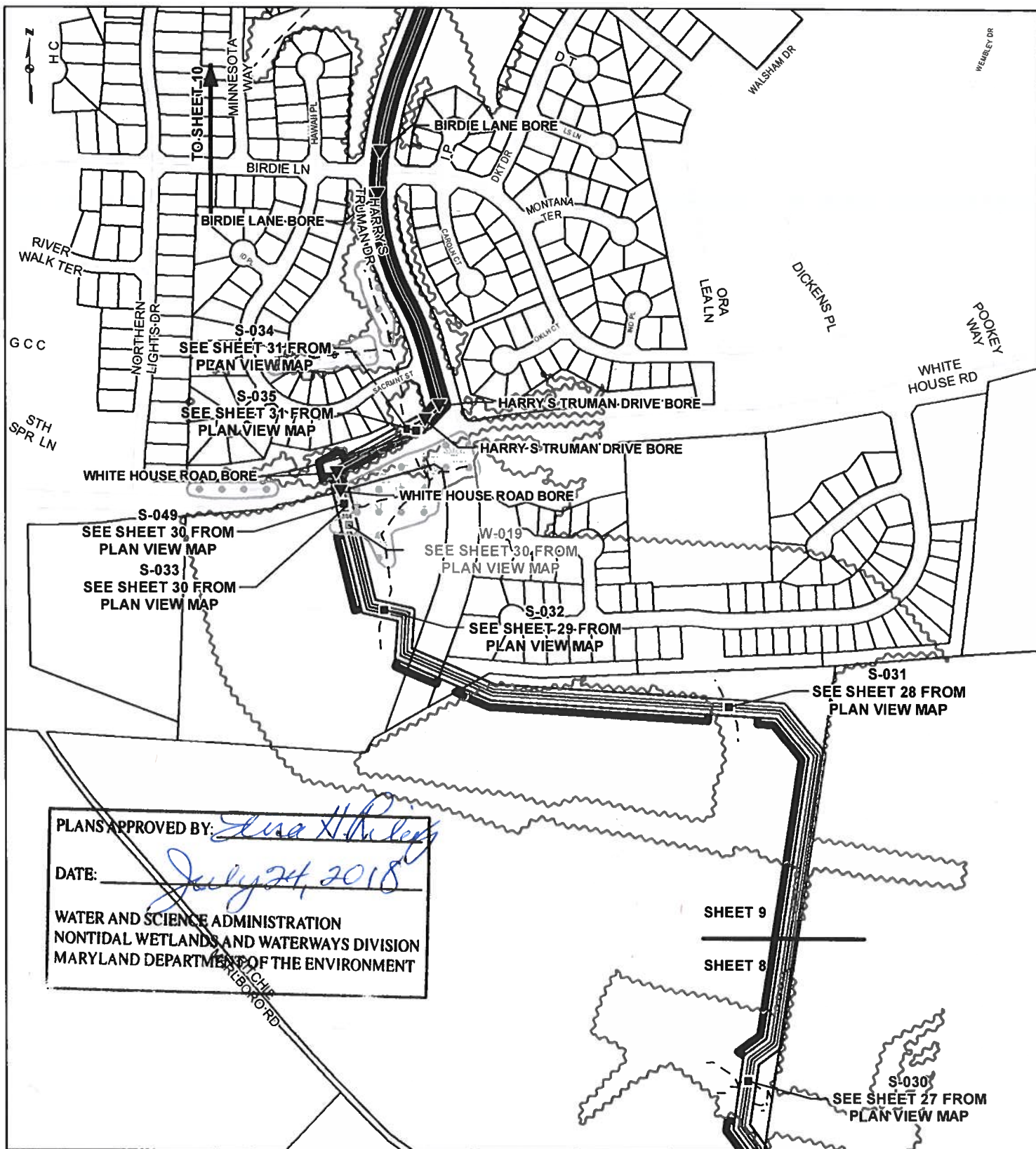
**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 8 OF 14**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM  
CHECKED: JDP

DATE: 7/10/2018  
APPROVED: CET

REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.



**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 9 OF 14**

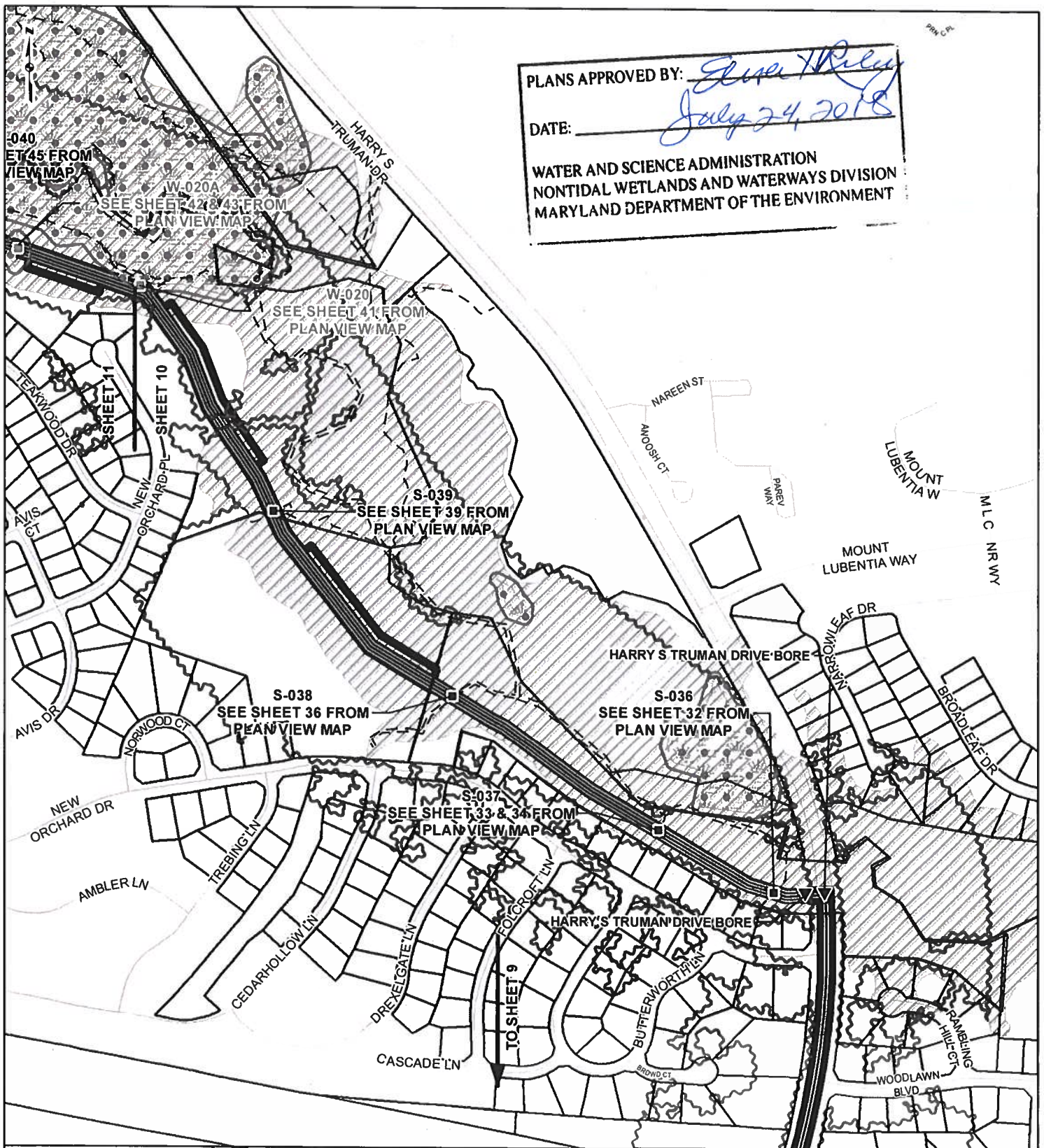
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM  
CHECKED: JDP

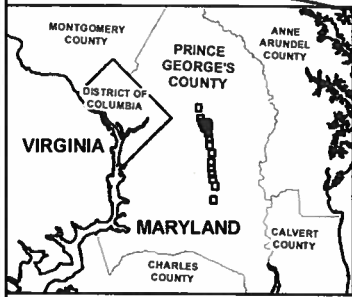
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PLANS APPROVED BY: *Glenn Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND		
▼ BORE LOCATION	— US HIGHWAY	100-YEAR FLOODPLAIN
■ HYDROLOGY CROSSING	— TOWNSHIP ROAD	PERMANENT ROW
■ WETLAND CROSSING	— STATE ROAD	LIMIT OF DISTURBANCE
— PROPOSED ROUTE	WETLAND	FOREST CANOPY
- - - STREAM	POND	
— INTERSTATE ROAD	WETLAND BUFFER	
	PARCEL BOUNDARY	

0 250 500 1,000 Feet

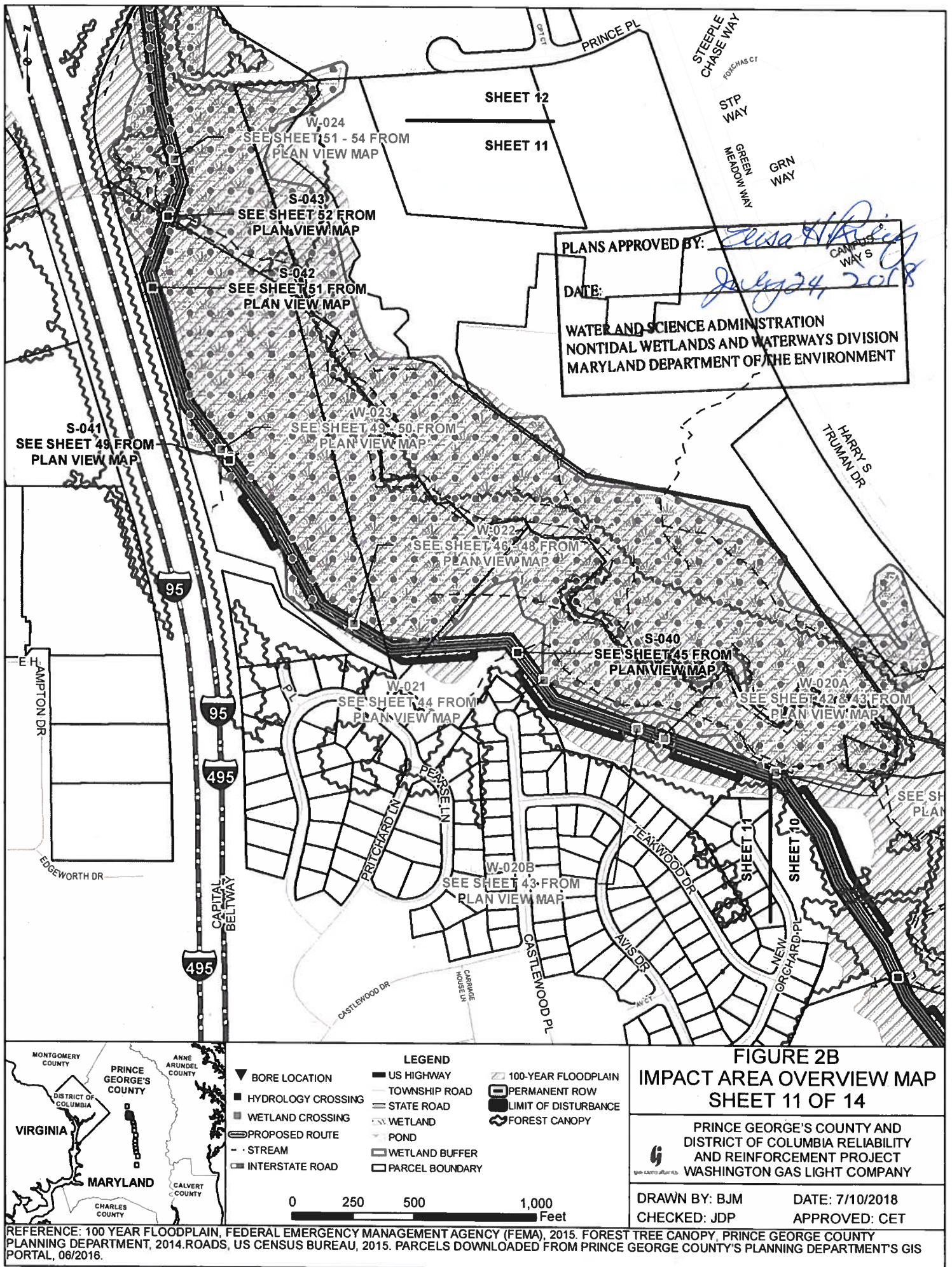
**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 10 OF 14**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

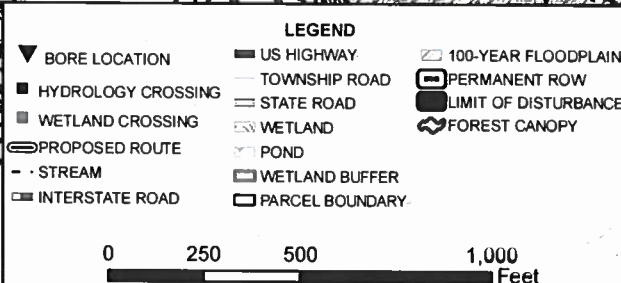
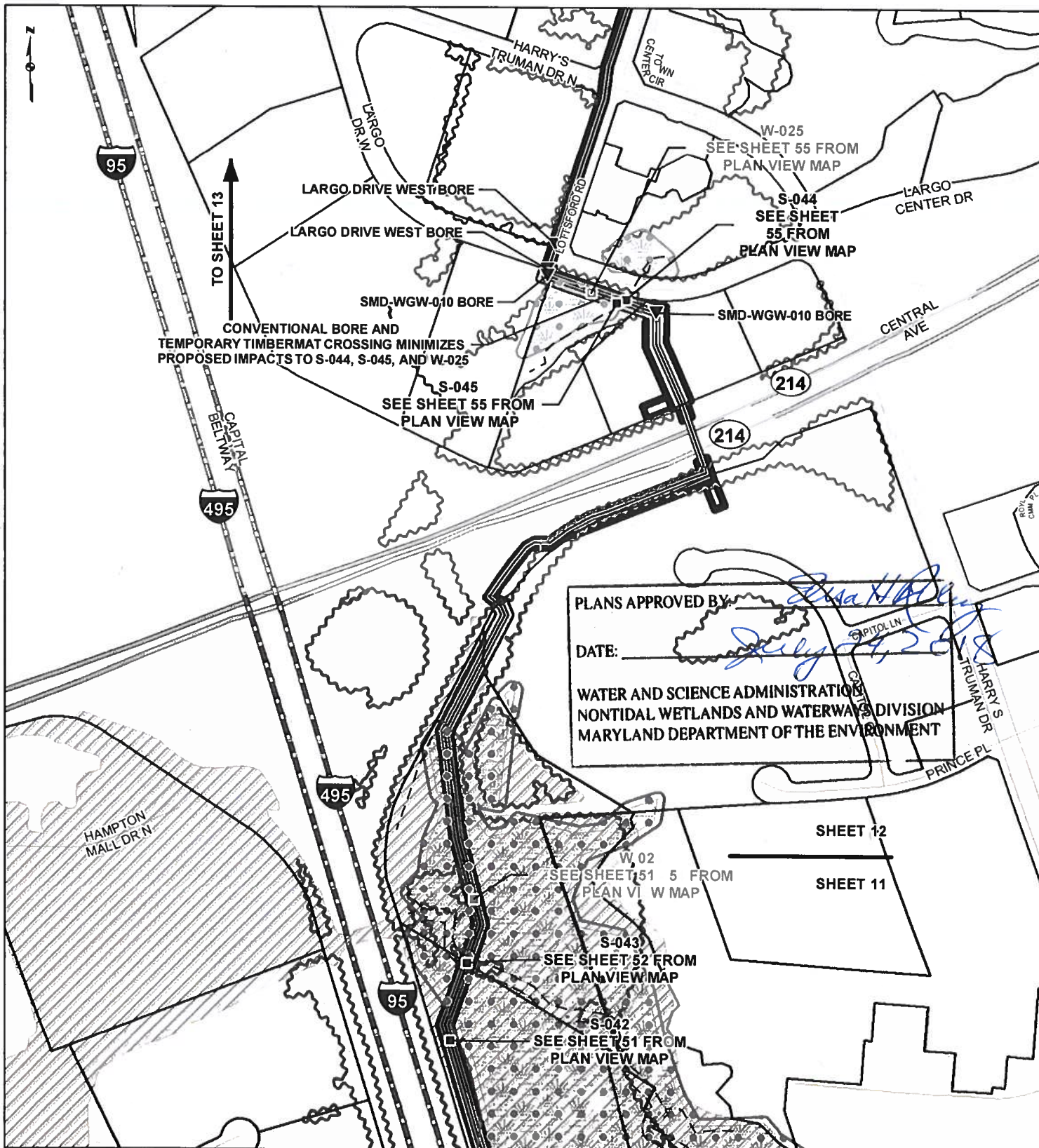
DRAWN BY: BJM DATE: 7/10/2018  
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REFERENCE: 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROADS, US CENSUS BUREAU, 2015. PARCELS DOWNLOADED FROM PRINCE GEORGE COUNTY'S PLANNING DEPARTMENT'S GIS PORTAL, 06/2016.







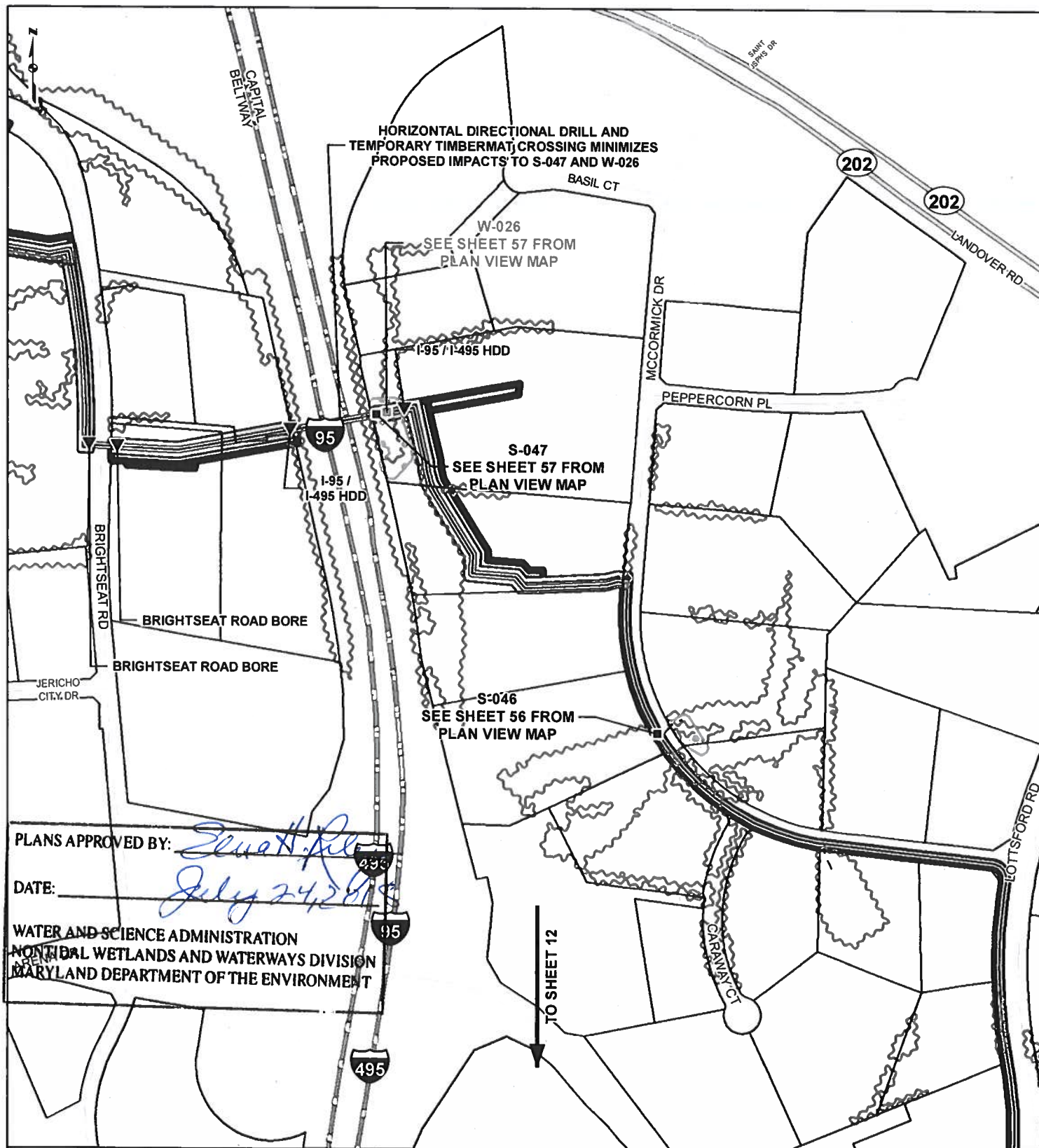


**FIGURE 2B  
IMPACT AREA OVERVIEW MAP  
SHEET 12 OF 14**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM      DATE: 7/10/2018  
CHECKED: JDP      APPROVED: CET

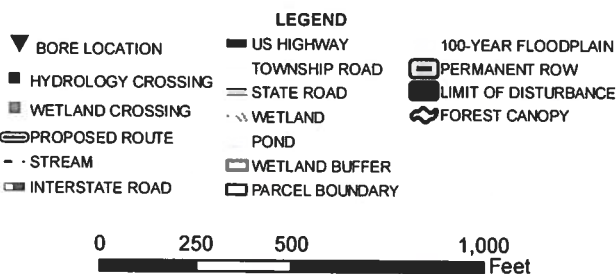
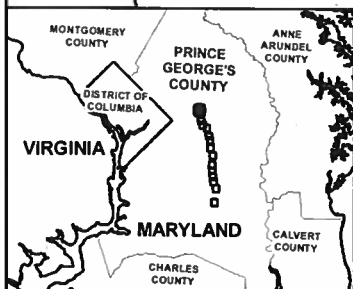
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PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT



**FIGURE 2B**  
**IMPACT AREA OVERVIEW MAP**  
**SHEET 13 OF 14**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: BJM

DATE: 7/10/2018

CHECKED: JDP

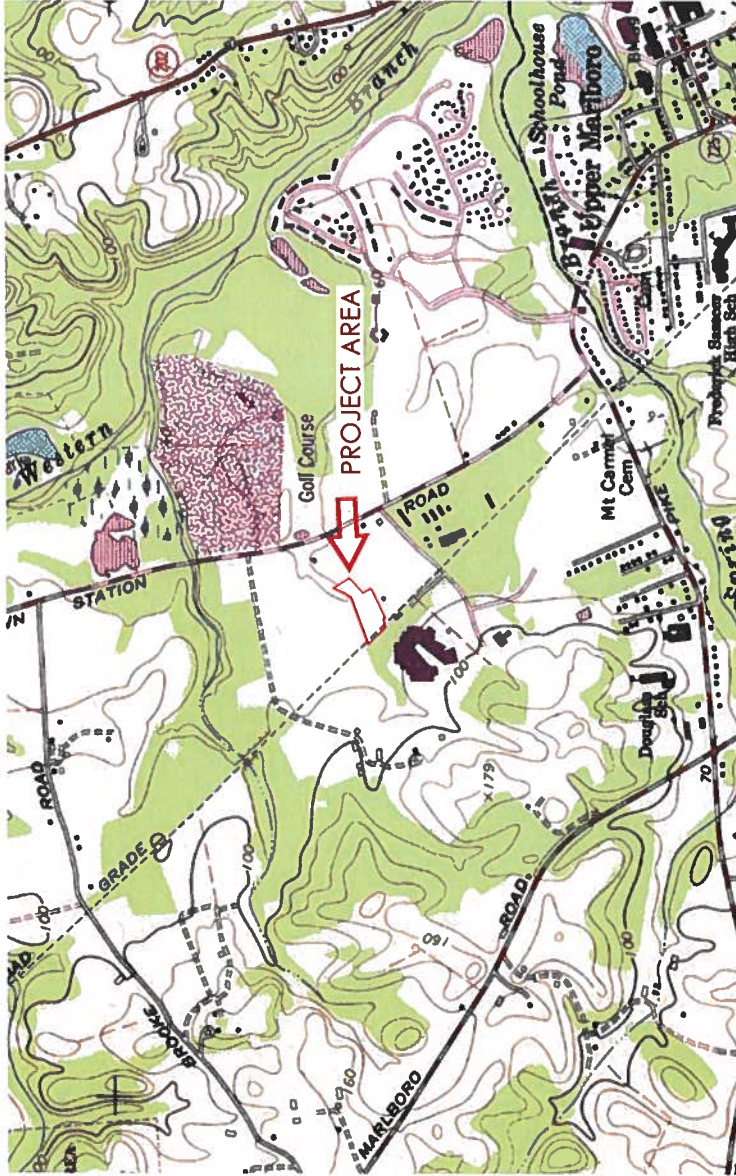
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# WESTERN BRANCH NON-TIDAL WETLAND MITIGATION PROJECT IMPACT SUMMARY PLATES

TAX MAP 92, GRID C4, LOT 3  
UPPER MARLBORO, PRINCE GEORGE'S COUNTY, MARYLAND



1 PROJECT VICINITY  
SCALE: 1" = 2,000'  
7.5 MINUTE SERIES USGS QUADRANGLE  
UPPER MARLBORO, MARYLAND

PROJECT SPONSOR:  
GREENVEST, LLC  
2200 SOMERVILLE ROAD  
SUITE 300  
ANNAPOLIS, MD 21401

PROPERTY OWNERS  
GEORGE A. PICOT  
4525 BROWN STATION ROAD  
UPPER MARLBORO, MD 20772

**CALL BEFORE YOU DIG!**  
MARYLAND LAW REQUIRES  
2 FULL WORKING DAYS NOTICE  
FOR CONSTRUCTION PHASE - STOP CALL  
REFERENCE MARYLAND STATE LAW ON  
UNDERGROUND UTILITY DRAINAGE PREVENTION LAW  
(MARYLAND STATE LAW TITLE 12)  
1-800-257-7777

## PROJECT NOTES

1. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAV88).
2. HORIZONTAL DATUM IS NORTH AMERICAN DATUM 1983 (NAD83).
3. GENERAL TOPOGRAPHIC INFORMATION COLLECTED BY AECOM CONSULTING, LLC, BASE TOPOGRAPHIC INFORMATION FROM THE PLAN OF THE PROJECT, DATED 11/17/2017, AND REVISED 12/20/2017.
4. TOPOGRAPHIC INFORMATION ILLUSTRATED ON THE PLAN THAT IS OUTSIDE THE PROJECT AREA IS FOR INFORMATION ONLY AND DOES NOT REPRESENT A FIELD DETERMINATION FOR THE WETLAND AND WATERS OF THE UNITED STATES DETERMINATION COMPLETED BY GREENVEST, LLC IN AUGUST 2017.

2/17/2018  
DATE  
REVISED PER UPDATED FLOODPLAIN MAPPING  
DESCRIPTION  
REVISIONS

**GEOFFREY M. GOLL**  
Professional Engineer  
MD Lic. No. 31645

2/16/2018  
DATE

**PRINCETON HYDRO**  
SCIENTISTS AND ENGINEERS  
2200 SOMERVILLE ROAD, SUITE 300  
ANNAPOLIS, MARYLAND 21401  
PHONE: 908.237.5660  
FAX: 908.237.5666  
WWW.PRINCETONHYDRO.COM

**GreenVest**  
One Stop Program

PROJECT NAME:  
WESTERN BRANCH NON-TIDAL WETLAND  
MITIGATION PROJECT  
IMPACT SUMMARY PLATES

DRAWING NAME:

TITLE SHEET

DATE: 1/17/2018  
PROJECT NO.: 0995.045  
SCALE: AS SHOWN  
DRAWN BY: EPD  
CHECKED BY: MPG  
SHEET NO.

1 5  
OF

**CALL BEFORE YOU DIG!**  
MARYLAND LAW REQUIRES  
2 FULL WORKING DAYS NOTICE  
FOR CONSTRUCTION PHASE - STOP CALL  
REFERENCE MARYLAND STATE LAW ON  
UNDERGROUND UTILITY DRAINAGE PREVENTION LAW  
(MARYLAND STATE LAW TITLE 12)  
 1-800-257-7777

**PROJECT NOTES**

1. VERICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD83) (GEOID 99, US FEET).

2. HORIZONTAL DATUM IS NORTH AMERICAN DATUM 1983 (NAD83).

3. ALL DATA AND INFORMATION COLLECTED FOR THIS PROJECT WAS OBTAINED FROM THE FOLLOWING SOURCES:

4. GENERAL TOPOGRAPHIC INFORMATION COLLECTED BY PNEUMATIC LEVELING AND TOTAL STATION SURVEYING BY STEPHEN C. THOMAS, DATED 11/13/2017 AND RECEIVED 12/07/2017.

5. TOPOGRAPHIC INFORMATION ELUSTRATED ON THE PLAN THAT IS OUTSIDE OF THE PROJECT AREA WAS OBTAINED FROM 2014 Aerial DATA.

6. THE PROJECT AREA WAS OBTAINED FROM 2014 Aerial DATA.

7. FIELD DEMONSTRATION FOR THE WETLAND AND WATERS OF THE UNITED STATES DELINEATION COMPLETED BY GREENEVEY, LLC IN AUGUST 2017.

2/13/2018	REVISYON PER UPDATED FLOODPLAIN MAPPING
DATE	DESCRIPTION
	REVISIONS

PROFESSIONAL CERTIFICATION  
 THESE REVIEWS CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED  
 BY THE ENGINEER OR ARCHITECT IDENTIFIED HEREON AS THE AUTHORIZED PERSON  
 BY THE LAW OF THE STATE OF MARYLAND LICENSE NO. 51445, EXPIRATION DATE  
 5/6/2019

**GEOFFREY M. GOLL**  
 Professional Engineer  
 MD EIT No. 31661  
 4/13/2018

**PRINCETON  
HYDRO**

SCIENTISTS AND ENGINEERS  
2200 SOMERVILLE ROAD, SUITE 300  
ANNA POLIS, MA 01460  
PHONE: 908.237.5660  
FAX: 908.237.5666  
[WWW.PRINCETONHYDRO.COM](http://WWW.PRINCETONHYDRO.COM)

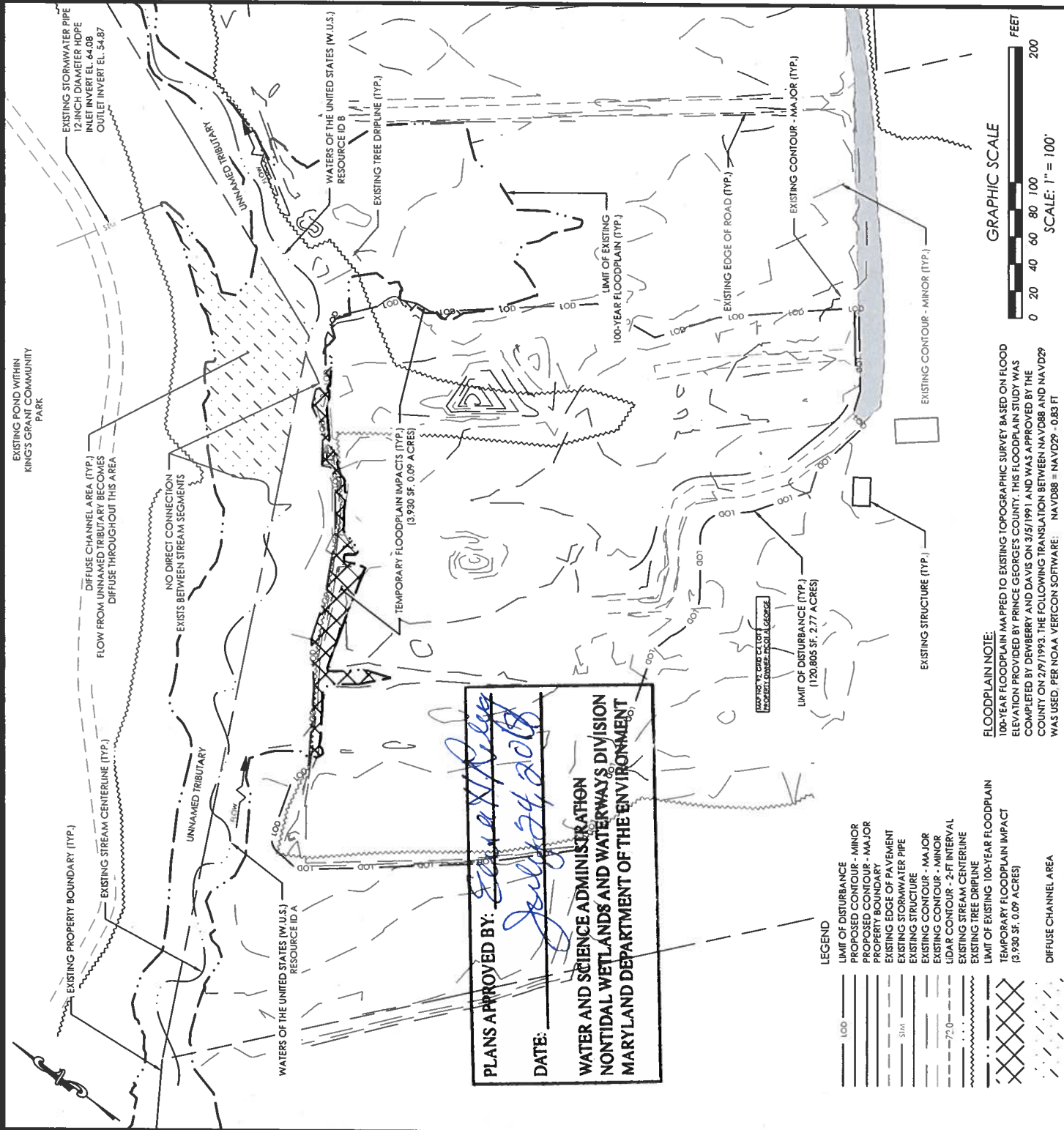
**GreenVest**  
CITY OF SEATTLE

**PROJECT NAME:**  
WESTERN BRANCH NON-TIDAL WETLAND MITIGATION PROJECT  
FOR  
PRINCE GEORGES COUNTY AND DISTRICT OF COLUMBIA  
RELIABILITY AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY


DRAWING NAME: PROPOSED TEMPORARY FLOODPLAIN IMPACTS

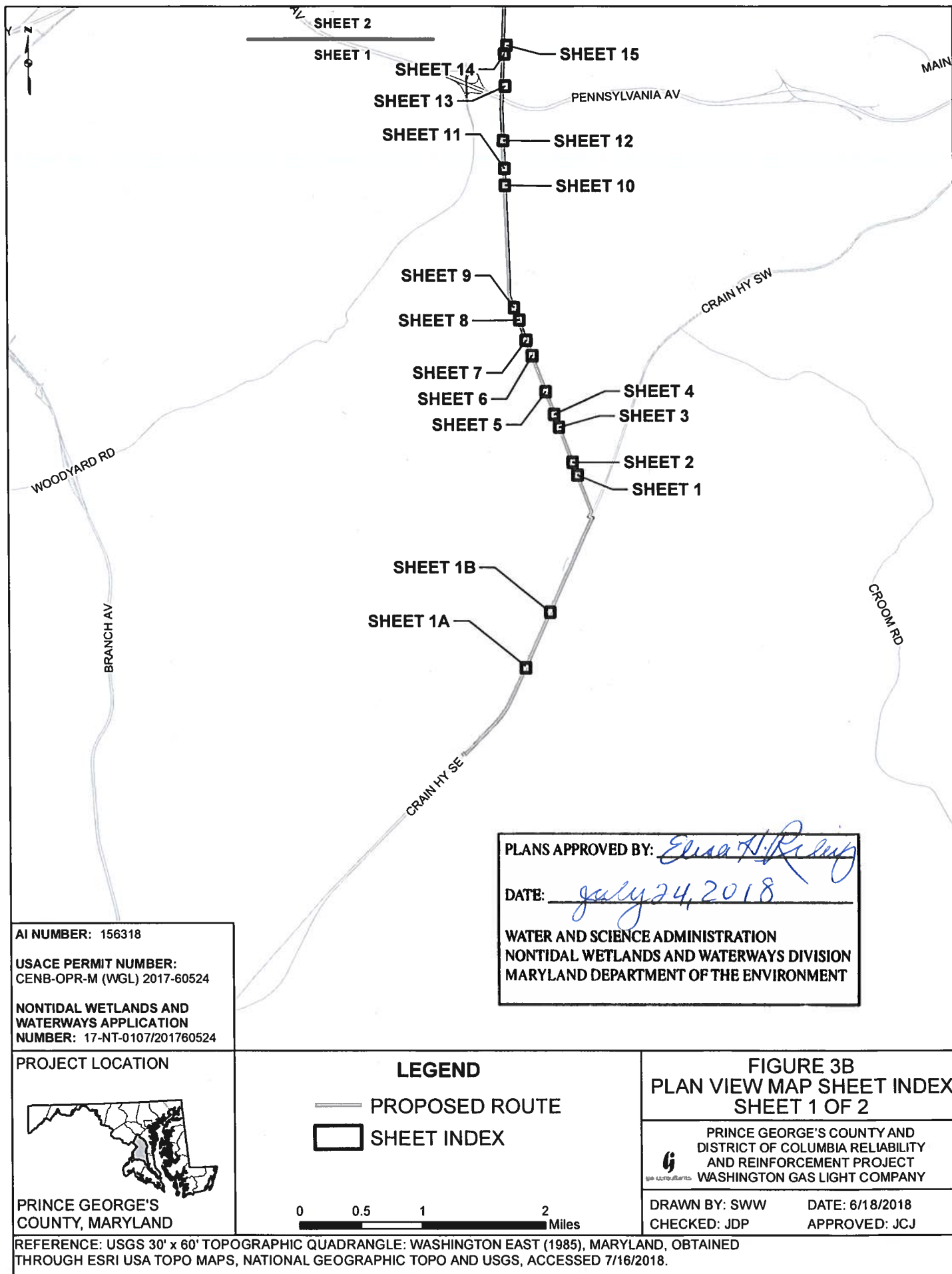
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PROJECT NO.:	0995.045
SCALE:	1"= 100'
DRAWN BY:	RJP
CHECKED BY:	MPG

11 OF 11

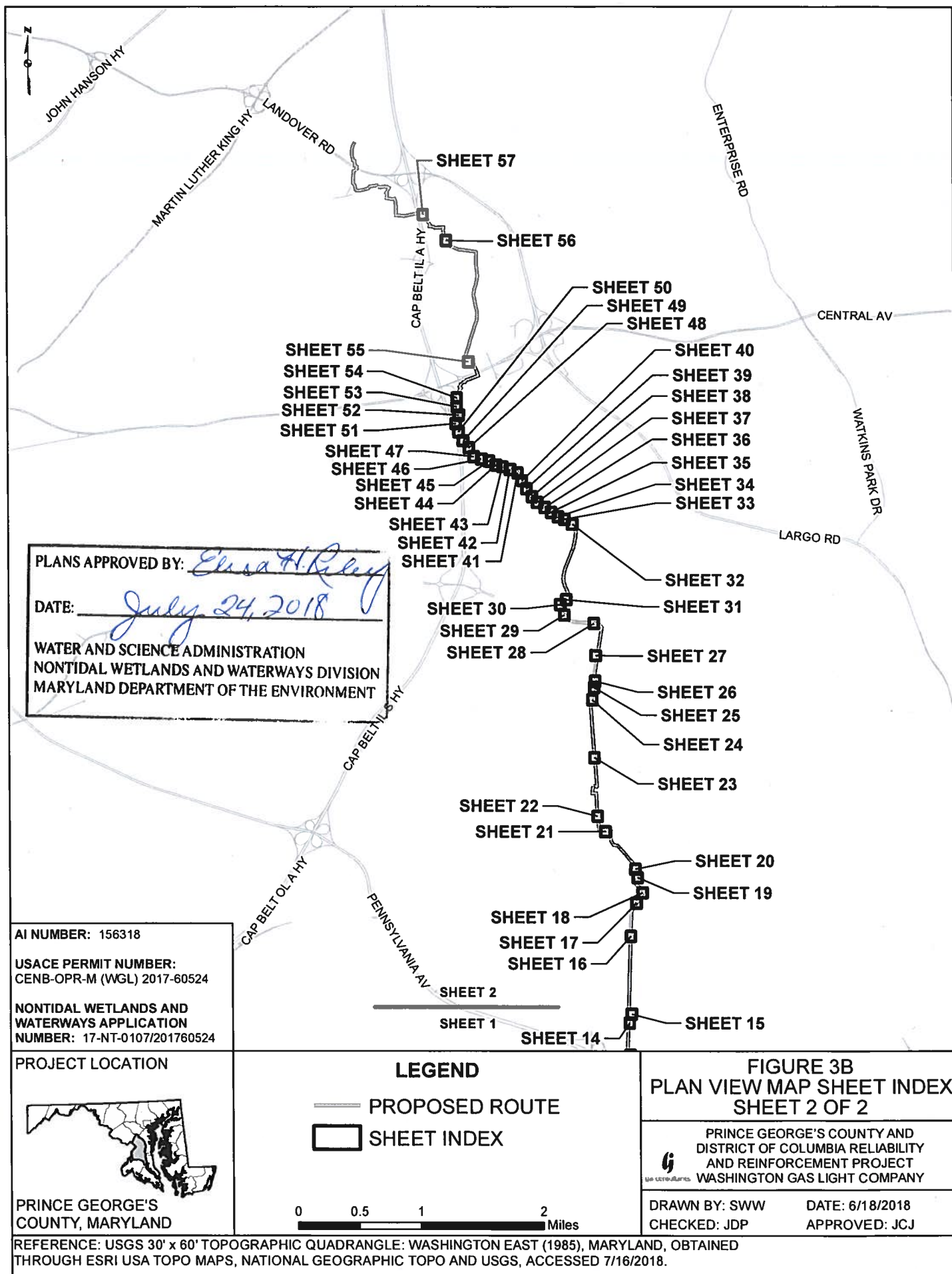


**FLOODPLAIN NOTE:** 100-YEAR FLOODPLAIN MAPPED TO EXISTING TOPOGRAPHIC SURVEY BASED ON FLOOD ELEVATION PROVIDED BY PRINCE GEORGE'S COUNTY. THIS FLOODPLAIN STUDY WAS COMPLETED BY DEWBERRY AND DAVIS ON 3/5/1991 AND WAS APPROVED BY THE COUNTY ON 2/9/1993. THE FOLLOWING TRANSLATION BETWEEN NAVD88 AND NAVD29 WAS USED. PER NOAA VERTCON SOFTWARE: NAVD88 = NAVD29 - 0.83 FT

	<p>LIMIT OF EXISTING 100-YEAR FLOODPLAIN</p> <p>TEMPORARY FLOODPLAIN IMPACT [3,930 SF, 0.09 ACRES]</p> <p>DIFFUSE CHANNEL AREA</p>
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## LEGEND

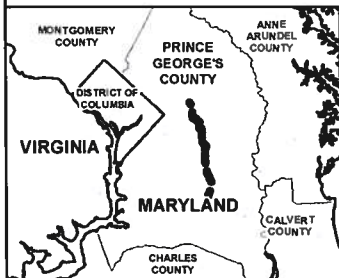
▼ BORE LOCATION	POND IMPACT
— CONVENTIONAL BORE	TIMBER MAT
- - HDD	WETLAND
PROPOSED ROUTE	POND
EROSION CONTROL DEVICE	WETLAND BUFFER
SUPER SILT FENCE IN TIER II WATERSHED	PERMANENT WETLAND BUFFER IMPACT
- - - STREAM	TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	FLOODPLAIN IMPACT
- - ROAD	100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	PERMANENT ROW
- - - EDGE OF ROAD	LIMIT OF DISTURBANCE
STREAM BOUNDARY IMPACT	FOREST CANOPY
PERMANENT WETLAND IMPACT	
TEMPORARY WETLAND IMPACT	

PLANS APPROVED BY: *Glenn H. Riey*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

FIGURE 3B: PLAN VIEW MAP LEGEND



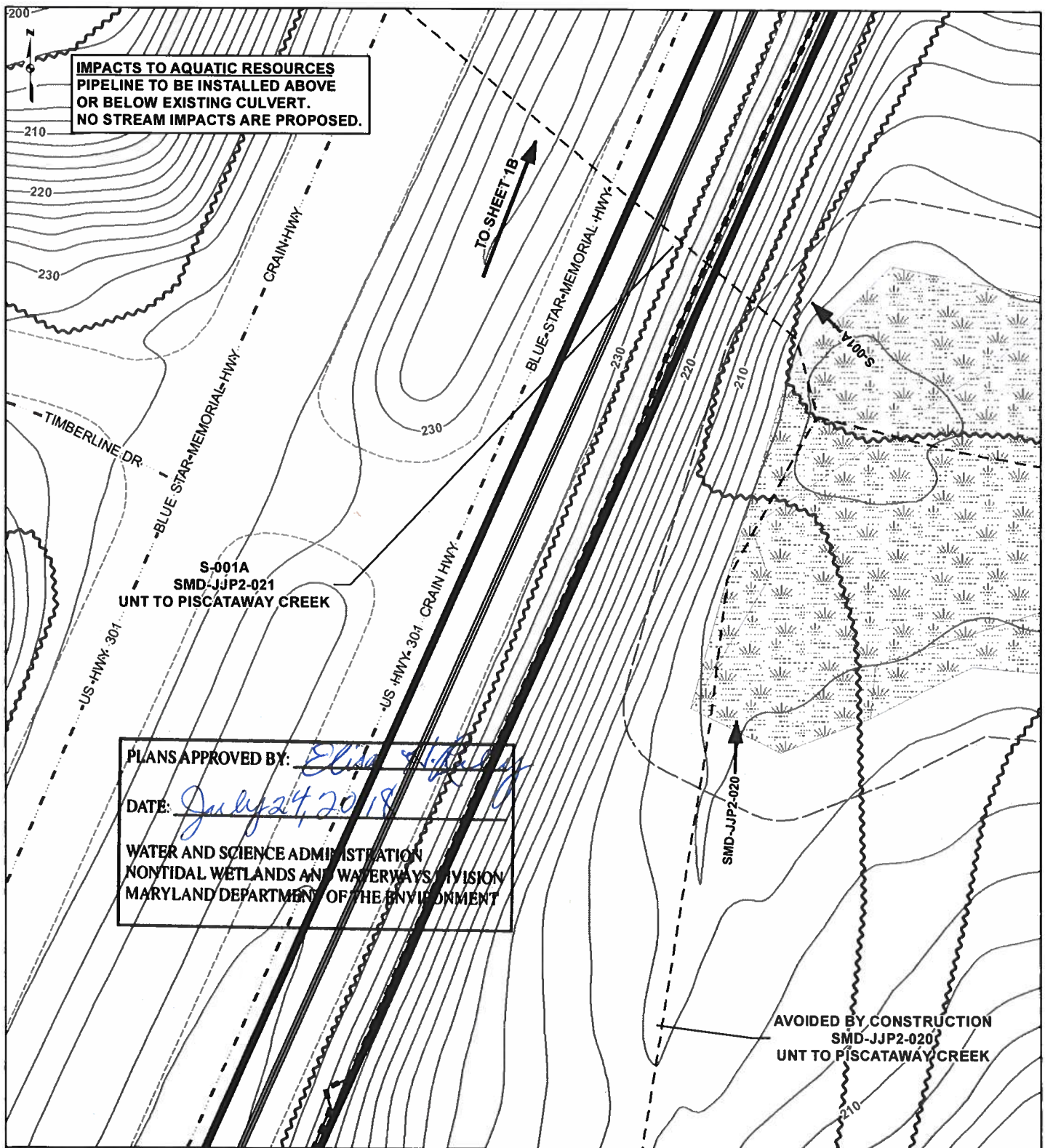
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

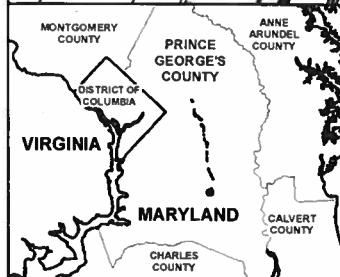


**FIGURE 3B  
PLAN VIEW MAP  
SHEET 1A OF 59**

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP  
CHECKED: SWW**

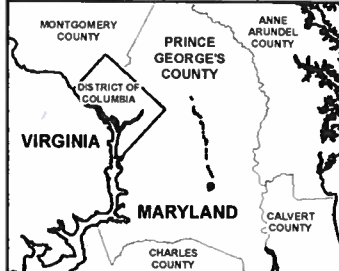
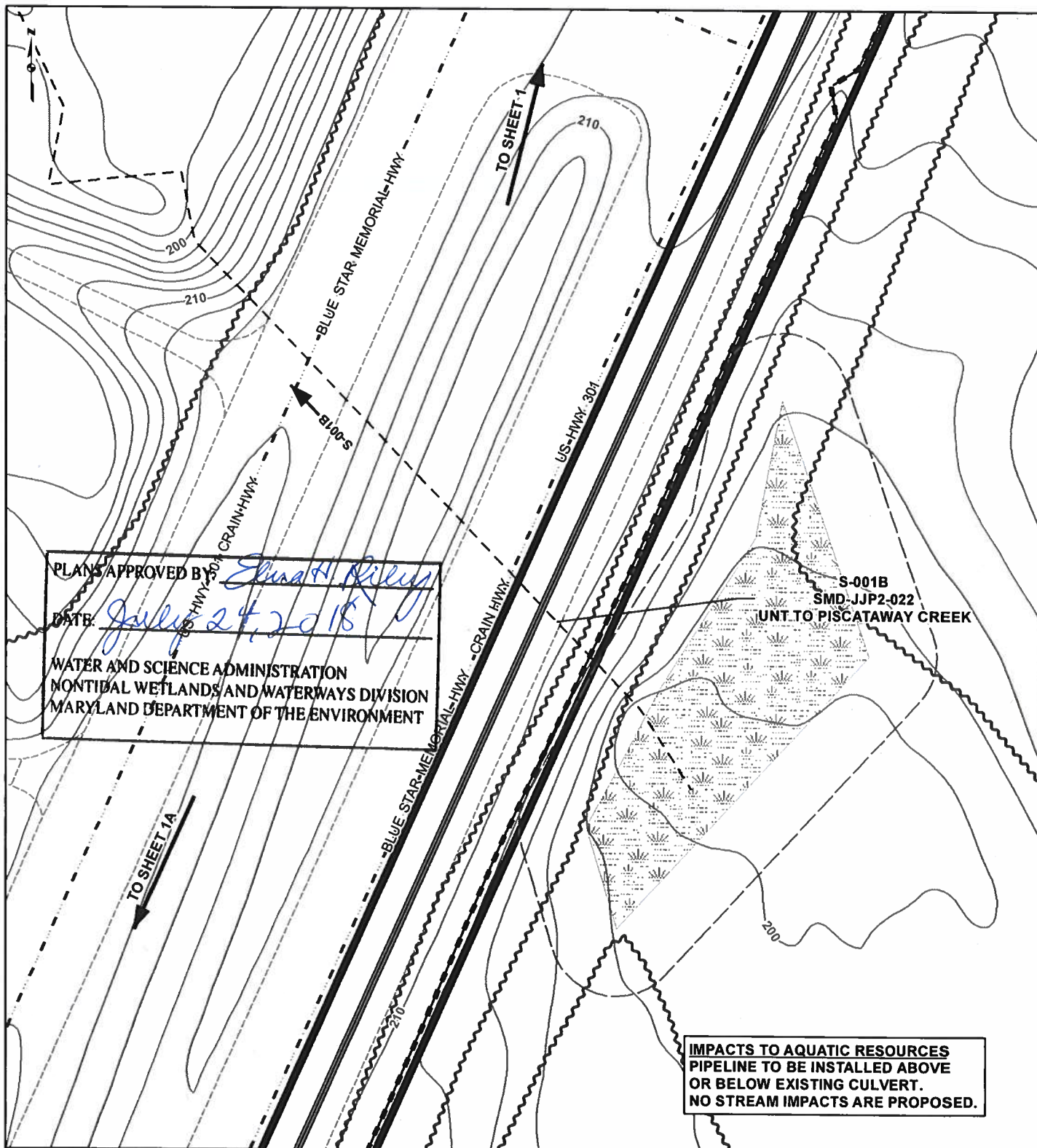
**DATE: 6/18/2018  
APPROVED: RDM**



<ul style="list-style-type: none"> <li>▼ BORE LOCATION</li> <li>— CONVENTIONAL BORE</li> <li>— HDD</li> <li>— PROPOSED ROUTE</li> <li>— EROSION CONTROL DEVICE</li> <li>— SUPER SILT FENCE IN TIER II WATERSHED</li> <li>— STREAM</li> <li>— 2-FT CONTOUR</li> <li>— ROAD</li> <li>— BUILDING FOOTPRINT</li> <li>— EDGE OF ROAD</li> <li>— STREAM BOUNDARY IMPACT</li> <li>— PERMANENT WETLAND IMPACT</li> <li>— TEMPORARY WETLAND IMPACT</li> </ul>	<ul style="list-style-type: none"> <li>□ POND IMPACT</li> <li>□ TIMBER MAT</li> <li>□ WETLAND</li> <li>□ POND</li> <li>□ WETLAND BUFFER</li> <li>□ PERMANENT WETLAND BUFFER IMPACT</li> <li>□ TEMPORARY WETLAND BUFFER IMPACT</li> <li>□ FLOODPLAIN IMPACT</li> <li>□ 100-YEAR FLOODPLAIN</li> <li>□ PERMANENT ROW</li> <li>□ LIMIT OF DISTURBANCE</li> <li>□ FOREST CANOPY</li> </ul>
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REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	• WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 3-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	

### FIGURE 3B

### PLAN VIEW MAP

### SHEET 1B OF 59

PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT

WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP

CHECKED: SWW

DATE: 6/18/2018

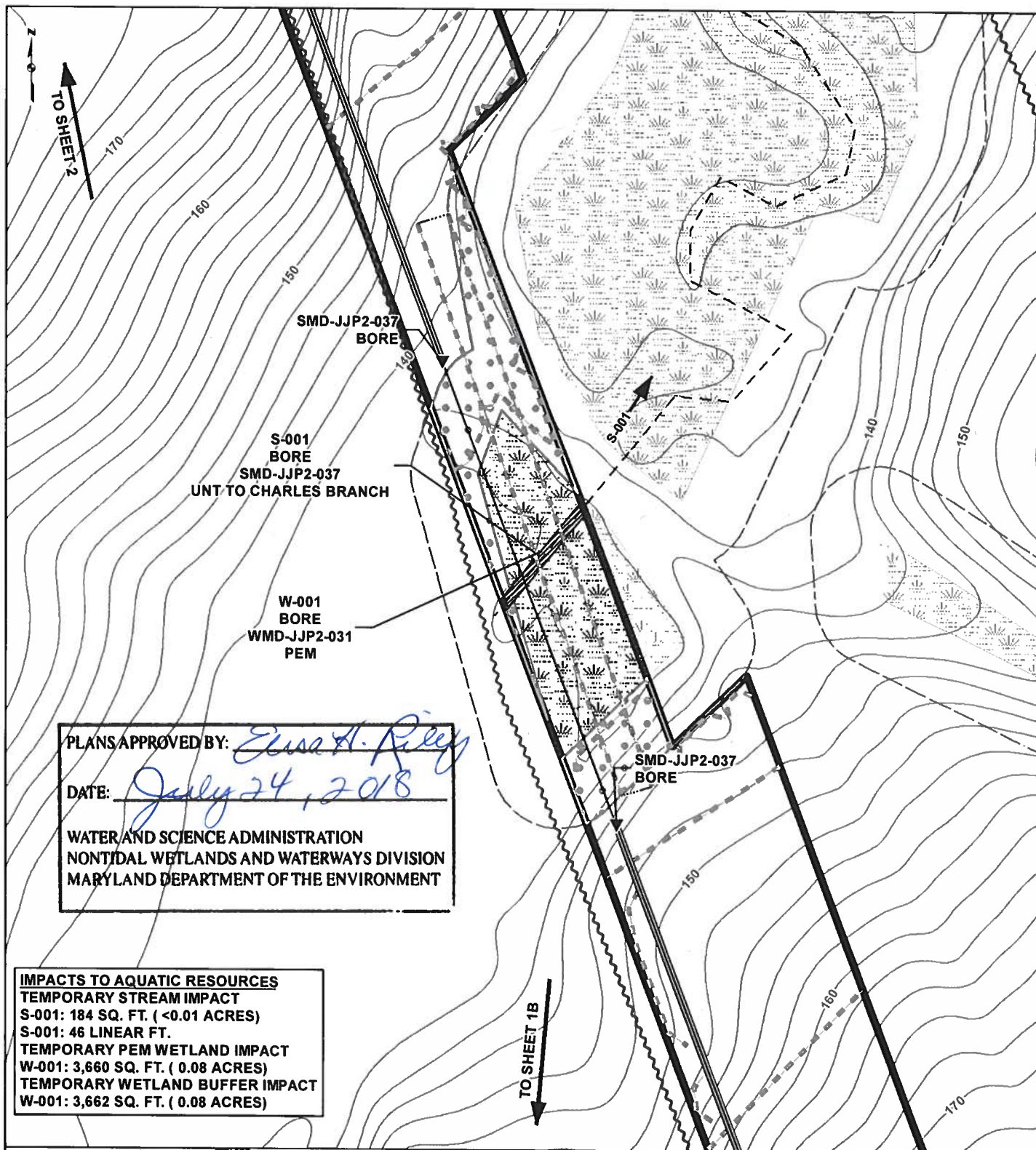
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016, CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014, 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015, FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014, ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

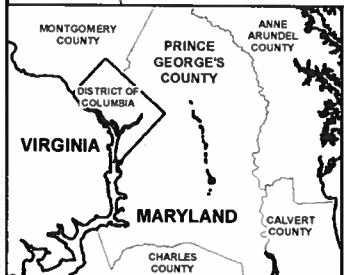
Z:\Energy\2013\IC131838.00 - WGL - Strip 12 Land AcquiGIS\WDX\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd





PLANS APPROVED BY: *Eustace H. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NON-TIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-001: 184 SQ. FT. ( <0.01 ACRES)  
 S-001: 46 LINEAR FT.  
**TEMPORARY PEM WETLAND IMPACT**  
 W-001: 3,660 SQ. FT. ( 0.08 ACRES)  
**TEMPORARY WETLAND BUFFER IMPACT**  
 W-001: 3,662 SQ. FT. ( 0.08 ACRES)



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▼ BORE LOCATION</li> <li>— CONVENTIONAL BORE</li> <li>— HDD</li> <li>— PROPOSED ROUTE</li> <li>— EROSION CONTROL DEVICE</li> <li>— SUPER SILT FENCE IN TIER II WATERSHED</li> <li>— STREAM</li> <li>— 2-FT CONTOUR</li> <li>— ROAD</li> <li>— BUILDING FOOTPRINT</li> <li>— EDGE OF ROAD</li> <li>— STREAM BOUNDARY IMPACT</li> <li>— PERMANENT WETLAND IMPACT</li> <li>— TEMPORARY WETLAND IMPACT</li> </ul> | <ul style="list-style-type: none"> <li>□ POND IMPACT</li> <li>□ TIMBER MAT</li> <li>□ WETLAND</li> <li>□ POND</li> <li>□ WETLAND BUFFER</li> <li>□ PERMANENT WETLAND BUFFER IMPACT</li> <li>□ TEMPORARY WETLAND BUFFER IMPACT</li> <li>□ FLOODPLAIN IMPACT</li> <li>□ 100-YEAR FLOODPLAIN</li> <li>□ PERMANENT ROW</li> <li>□ LIMIT OF DISTURBANCE</li> <li>□ FOREST CANOPY</li> </ul> |
|--|--|

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 1 OF 59**

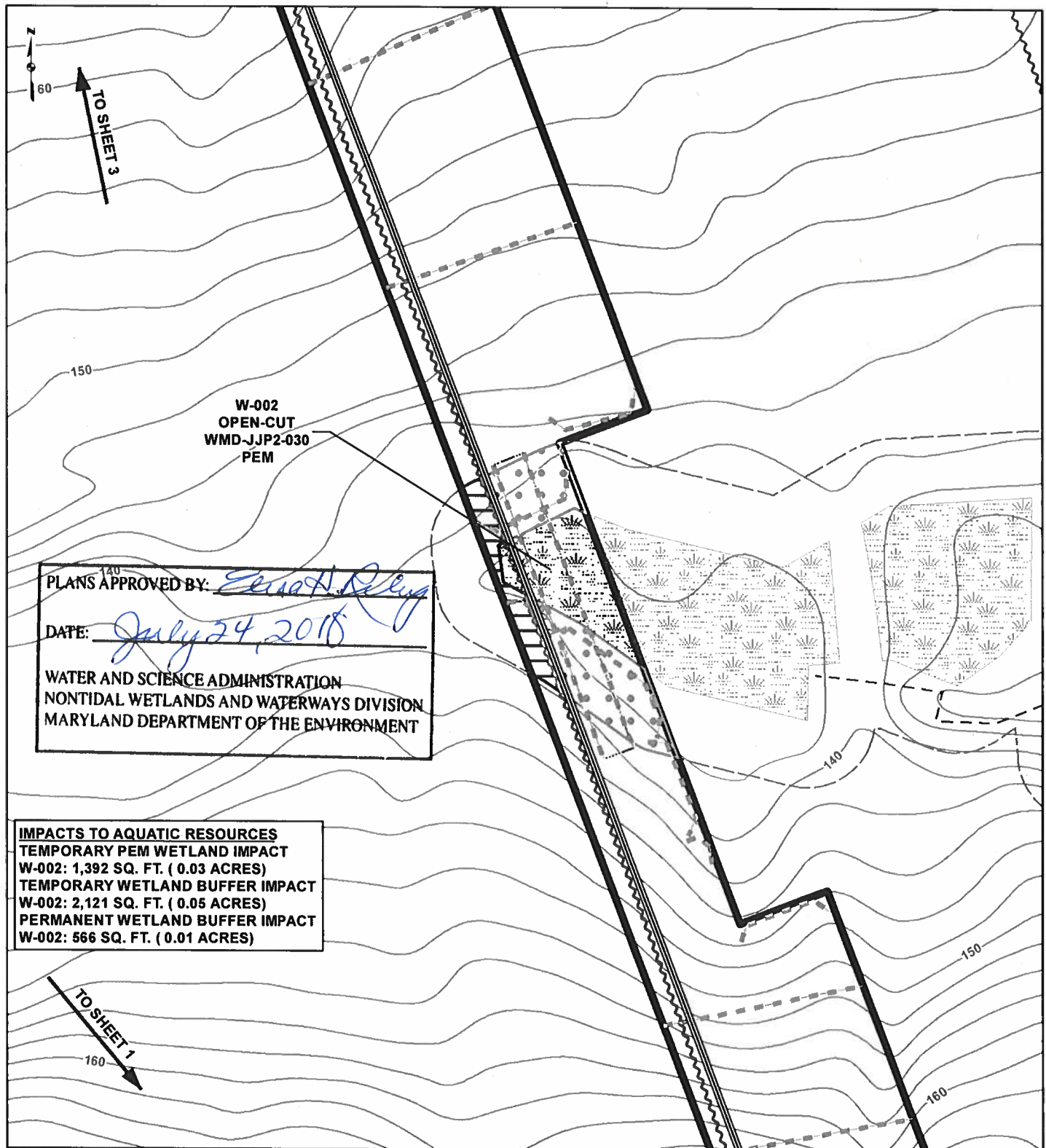
**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

DRAWN BY: JDP	DATE: 6/18/2018
CHECKED: SWW	APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acquisition\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd

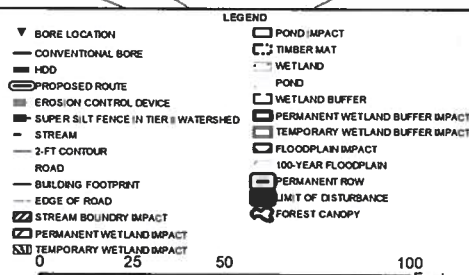
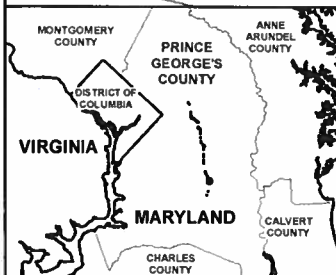


**FIGURE 3B  
PLAN VIEW MAP  
SHEET 2 OF 59**

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP  
CHECKED: SWW**

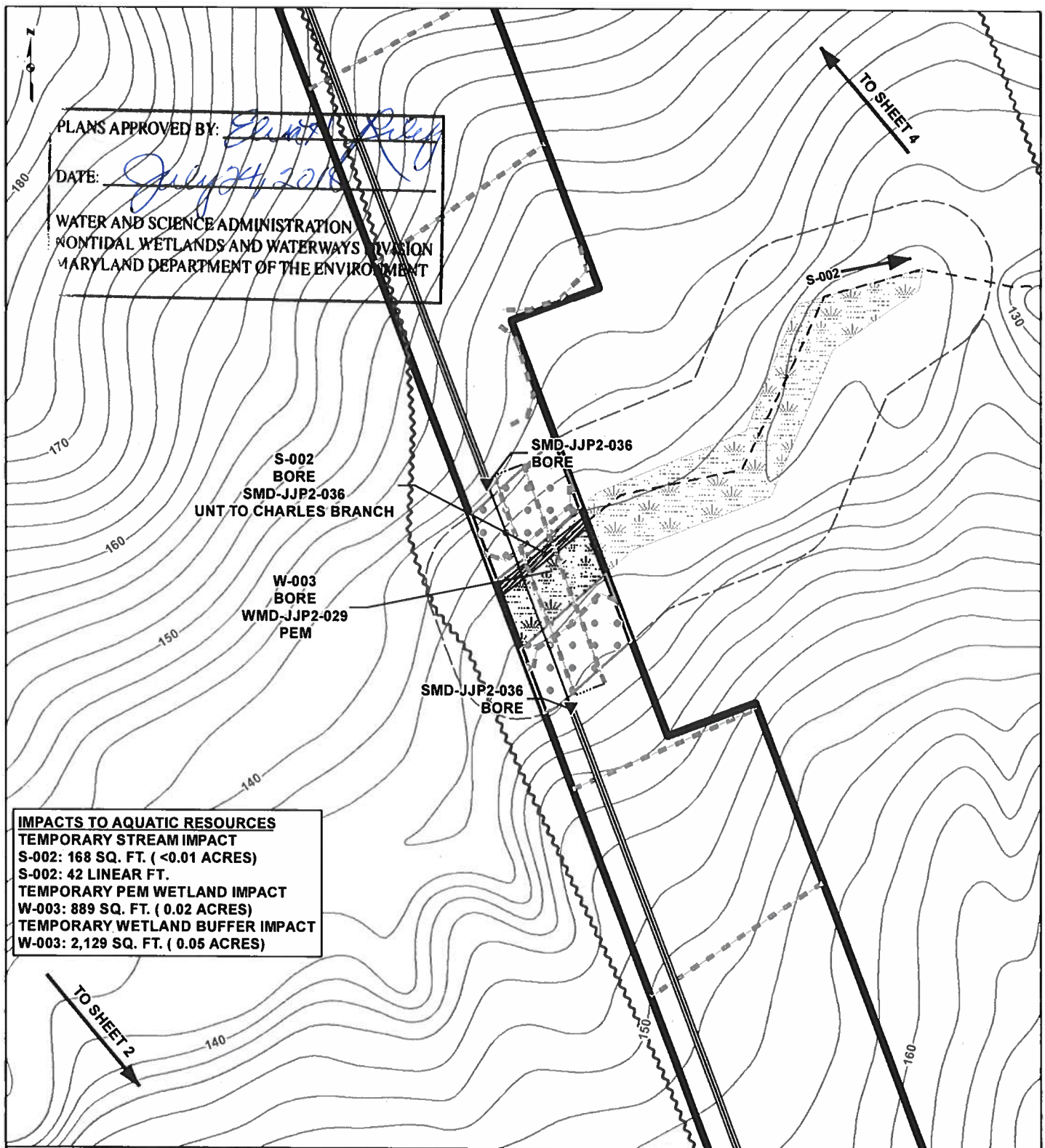
**DATE: 6/18/2018  
APPROVED: RDM**



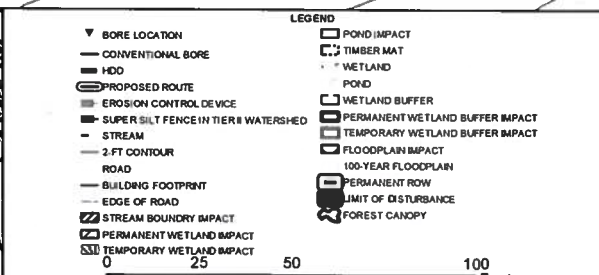
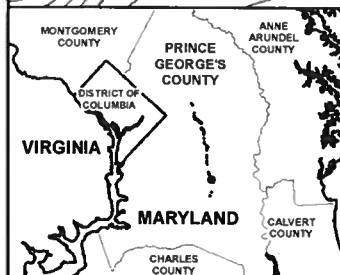
REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-002: 168 SQ. FT. (<0.01 ACRES)  
 S-002: 42 LINEAR FT.  
**TEMPORARY PEM WETLAND IMPACT**  
 W-003: 889 SQ. FT. (0.02 ACRES)  
**TEMPORARY WETLAND BUFFER IMPACT**  
 W-003: 2,129 SQ. FT. (0.05 ACRES)



**FIGURE 3B  
PLAN VIEW MAP  
SHEET 3 OF 59**

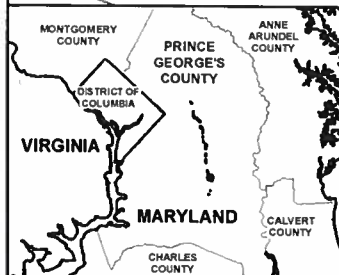
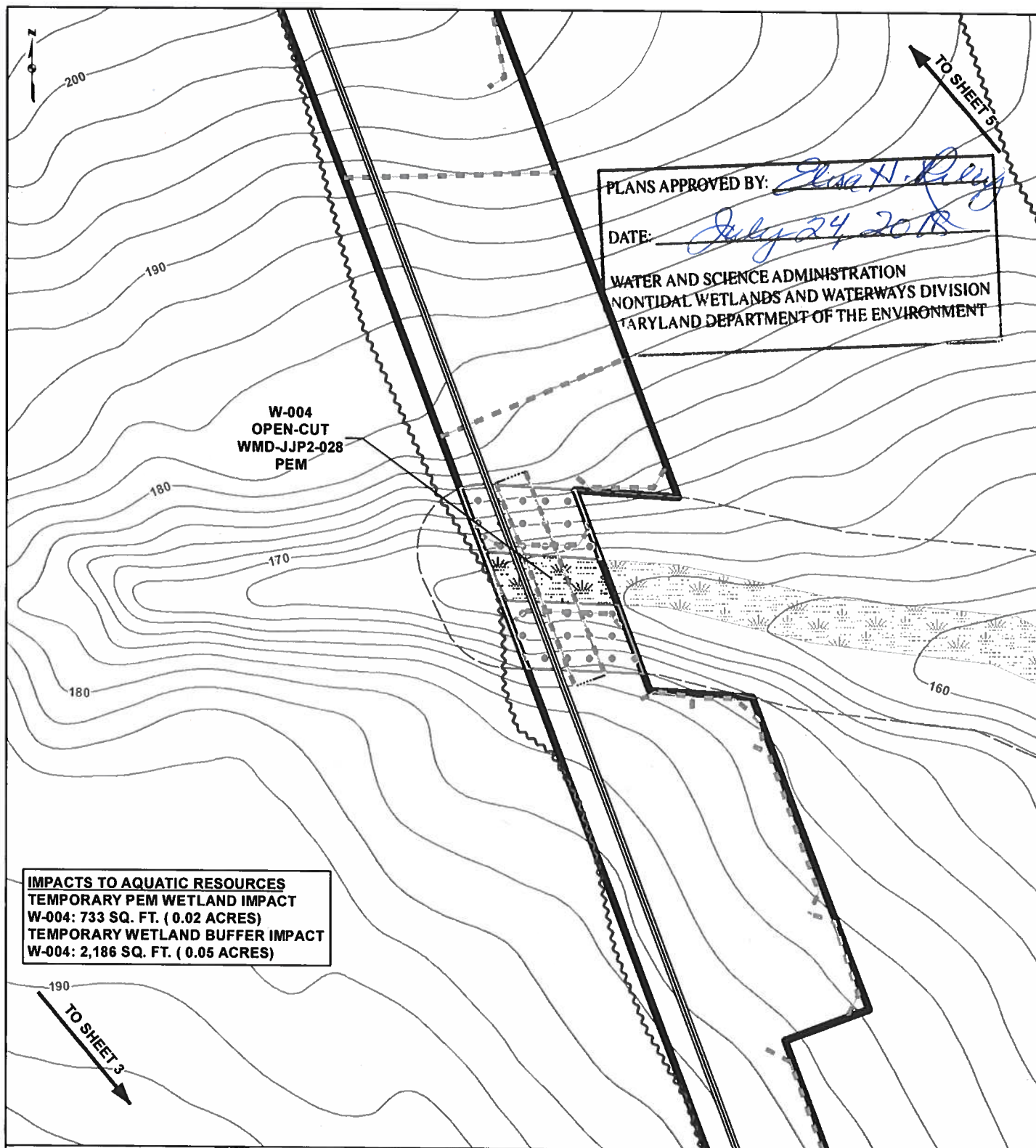
**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016 CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015 FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014 ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— 2 FT CONTOUR	□ TEMPORARY WETLAND BUFFER IMPACT
— ROAD	□ FLOODPLAIN IMPACT
— BUILDING FOOTPRINT	□ 100-YEAR FLOODPLAIN
— EDGE OF ROAD	□ PERMANENT ROW
— STREAM BOUNDARY IMPACT	□ LIMIT OF DISTURBANCE
— PERMANENT WETLAND IMPACT	□ FOREST CANOPY
— TEMPORARY WETLAND IMPACT	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 4 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

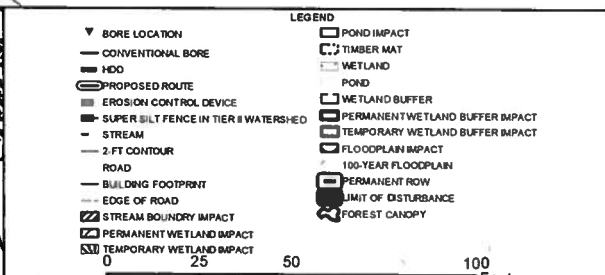
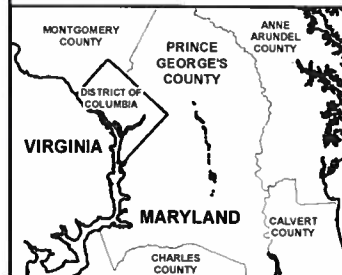
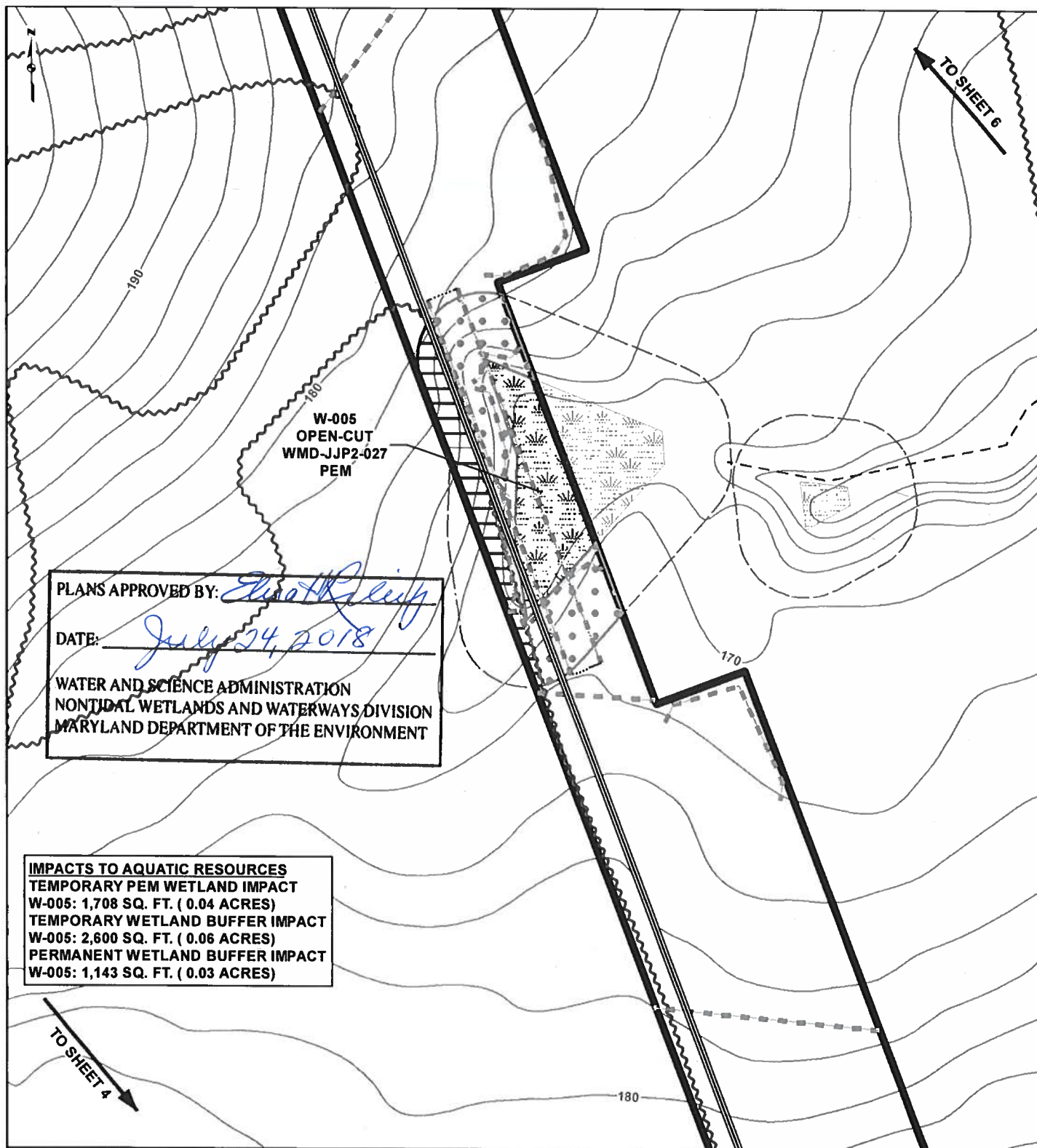
**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**FIGURE 3B  
PLAN VIEW MAP  
SHEET 5 OF 59**

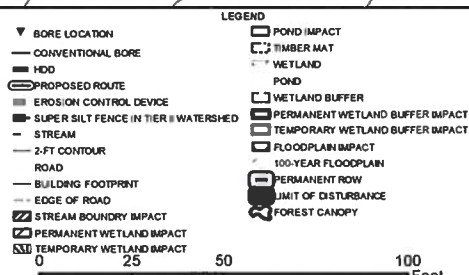
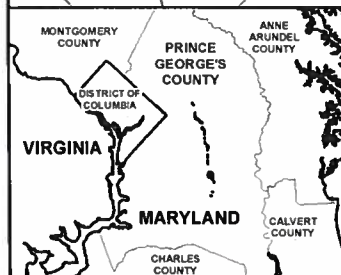
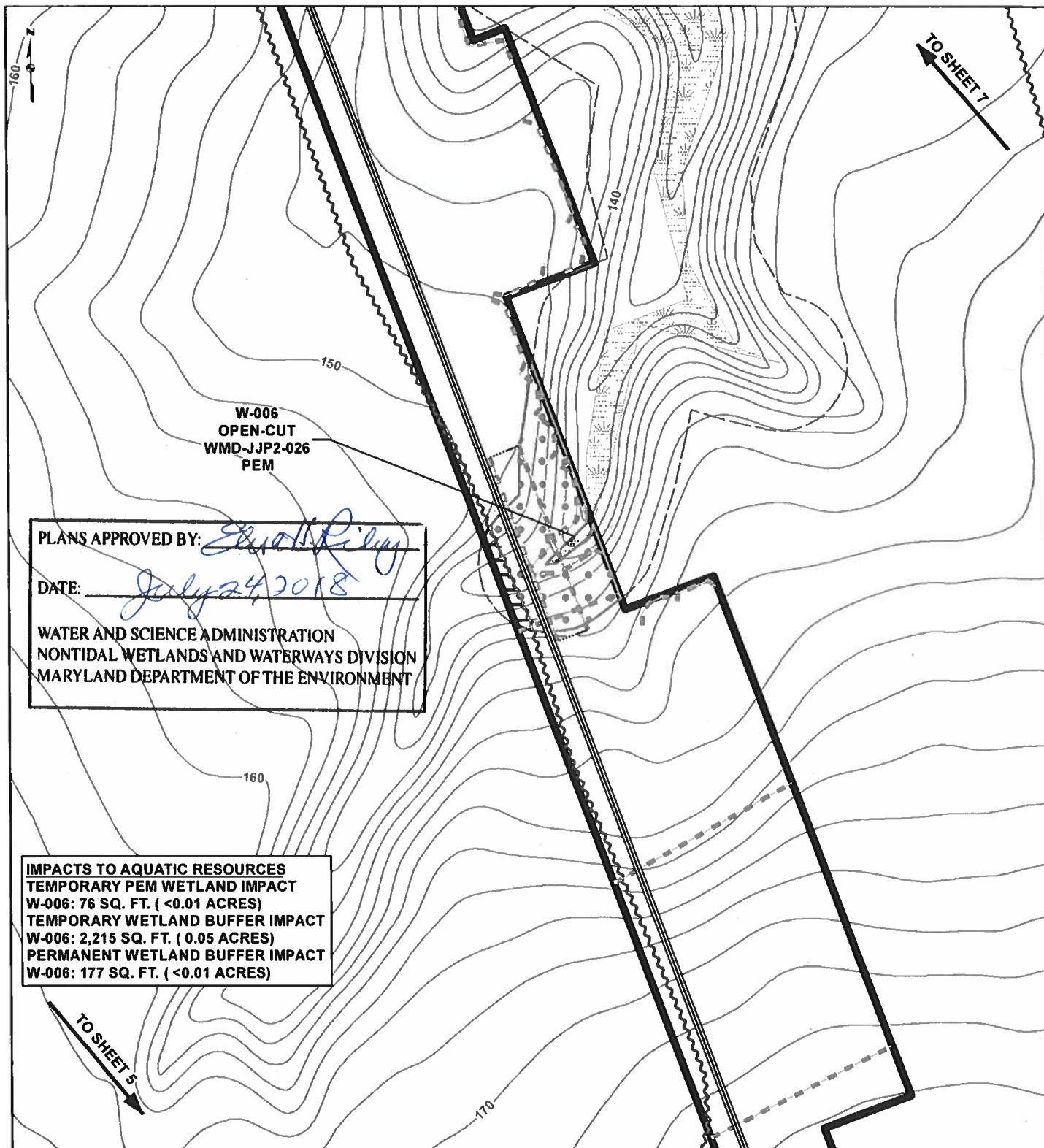
**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP  
CHECKED: SWW**

**DATE: 6/18/2018  
APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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### FIGURE 3B PLAN VIEW MAP SHEET 6 OF 59

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

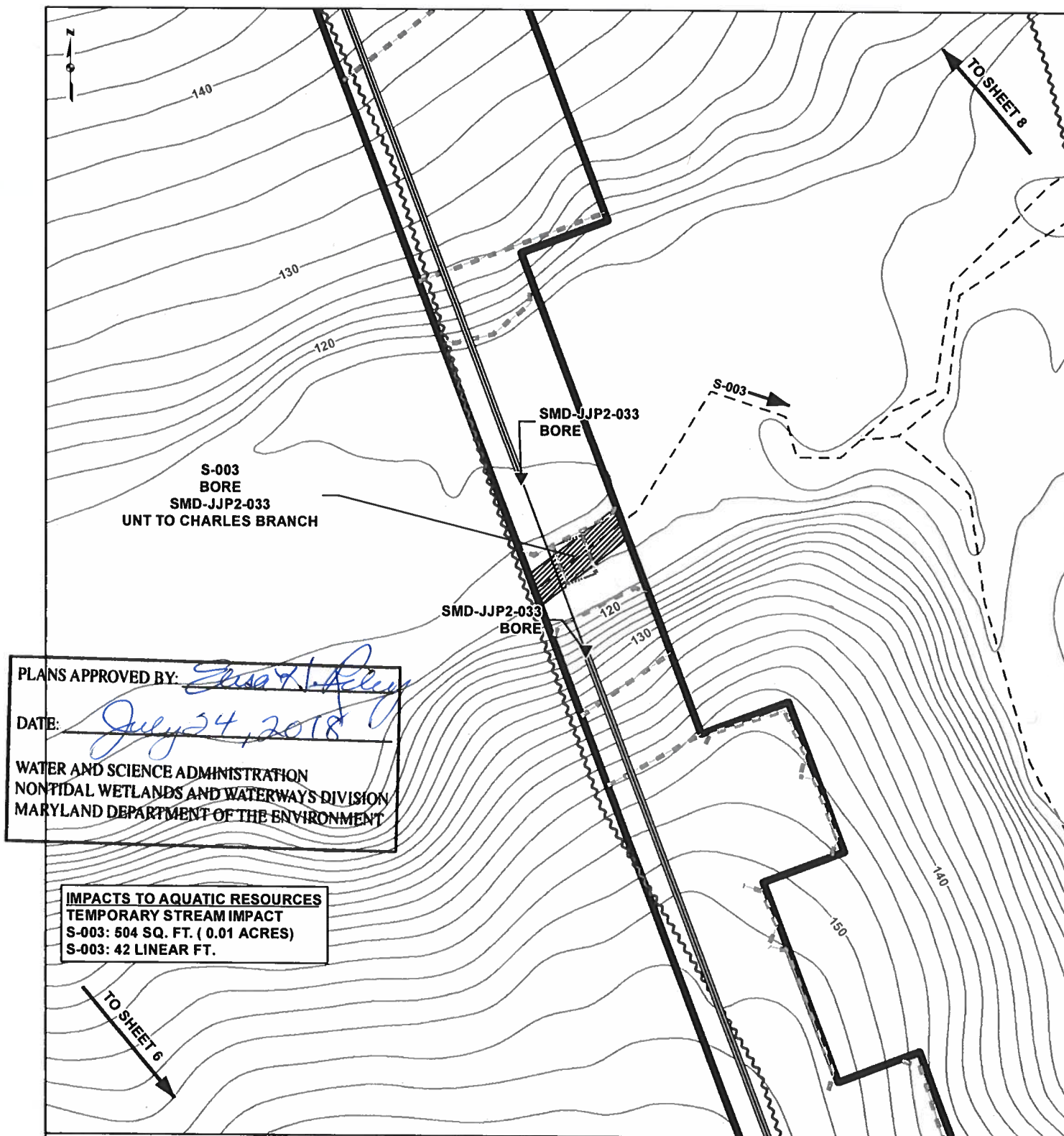
DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

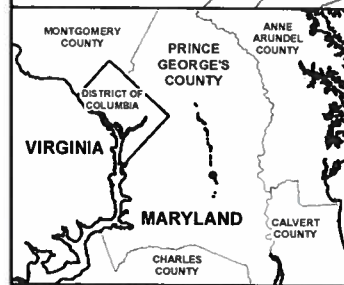
NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

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PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-003: 504 SQ. FT. ( 0.01 ACRES)  
 S-003: 42 LINEAR FT.



<ul style="list-style-type: none"> <li>▼ BORE LOCATION</li> <li>— CONVENTIONAL BORE</li> <li>— HDD</li> <li>— PROPOSED ROUTE</li> <li>— EROSION CONTROL DEVICE</li> <li>— SUPER SILT FENCE IN TIER II WATERSHED</li> <li>— STREAM</li> <li>— 2-FT CONTOUR</li> <li>— ROAD</li> <li>— BUILDING FOOTPRINT</li> <li>— EDGE OF ROAD</li> <li>— STREAM BOUNDARY IMPACT</li> <li>— PERMANENT WETLAND IMPACT</li> <li>— TEMPORARY WETLAND IMPACT</li> </ul>	<b>LEGEND</b> <ul style="list-style-type: none"> <li>□ POND IMPACT</li> <li>□ TIMBER MAT</li> <li>□ WETLAND</li> <li>□ POND</li> <li>□ WETLAND BUFFER</li> <li>□ PERMANENT WETLAND BUFFER IMPACT</li> <li>□ TEMPORARY WETLAND BUFFER IMPACT</li> <li>□ FLOODPLAIN IMPACT</li> <li>□ 100-YEAR FLOODPLAIN</li> <li>□ PERMANENT ROW</li> <li>□ LIMIT OF DISTURBANCE</li> <li>□ FOREST CANOPY</li> </ul>
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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 7 OF 59**

**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

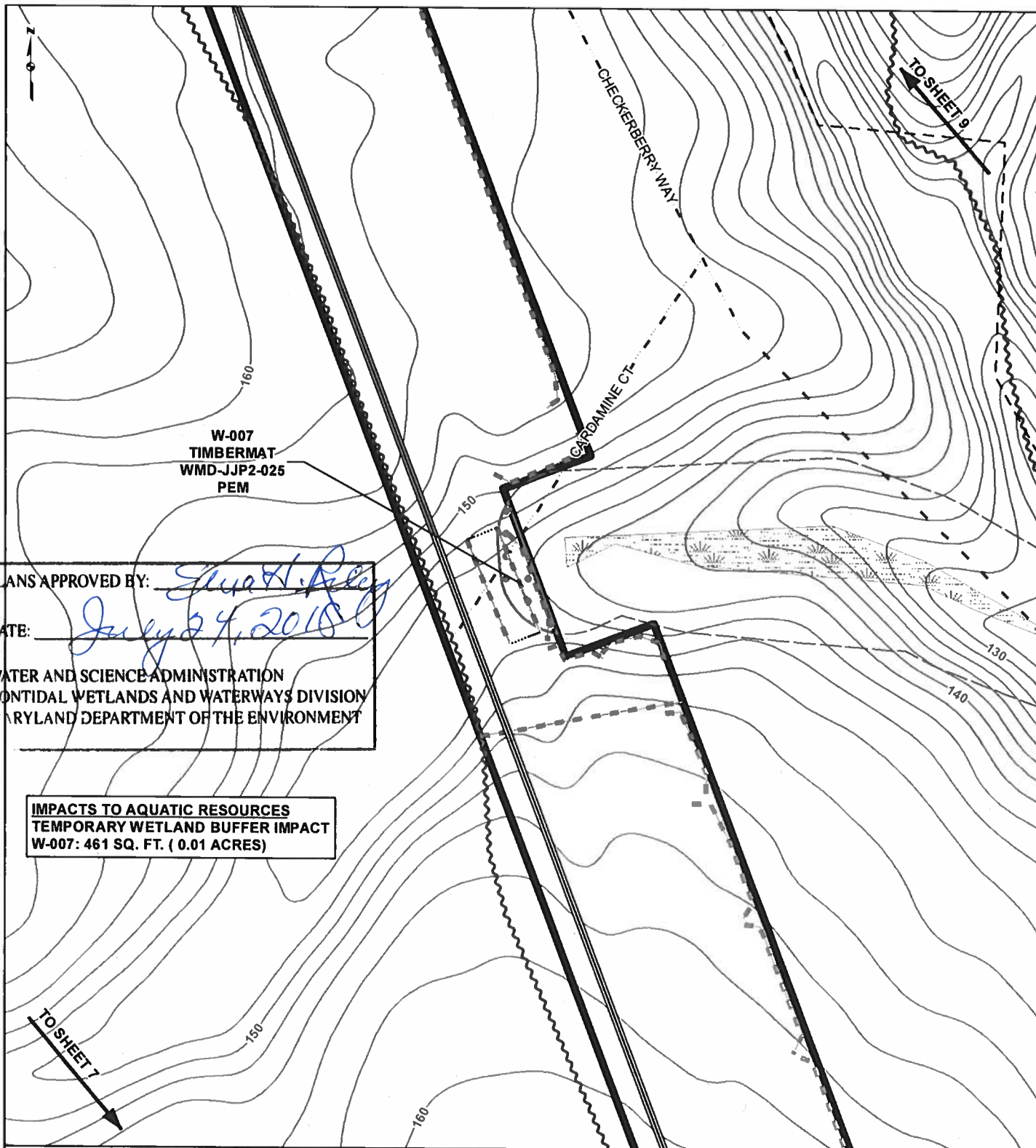
**DRAWN BY: JDP**      **DATE: 6/18/2018**  
**CHECKED: SWW**      **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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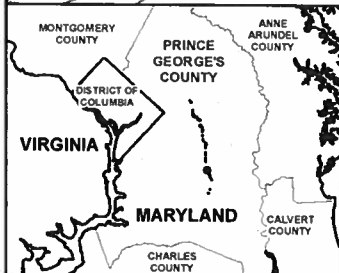


PLANS APPROVED BY: *Steve H. Riley*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
TIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY WETLAND BUFFER IMPACT**  
**W-007: 461 SQ. FT. ( 0.01 ACRES)**



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	▤ TIMBER MAT
— HDD	▤ WETLAND
— PROPOSED ROUTE	□ POND
▤ EROSION CONTROL DEVICE	▤ WETLAND BUFFER
▤ SUPER SILT FENCE IN TIER I WATERSHED	▤ PERMANENT WETLAND BUFFER IMPACT
— STREAM	▤ TEMPORARY WETLAND BUFFER IMPACT
— 3-FT CONTOUR	▤ FLOODPLAIN IMPACT
— ROAD	▤ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	▤ PERMANENT ROW
— EDGE OF ROAD	▤ LIMIT OF DISTURBANCE
▤ STREAM BOUNDARY IMPACT	▤ FOREST CANOPY
▤ PERMANENT WETLAND IMPACT	
▤ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 8 OF 59**

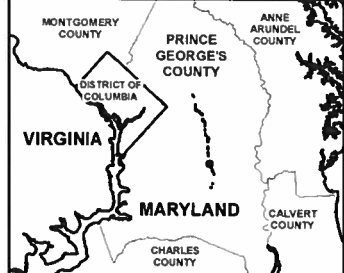
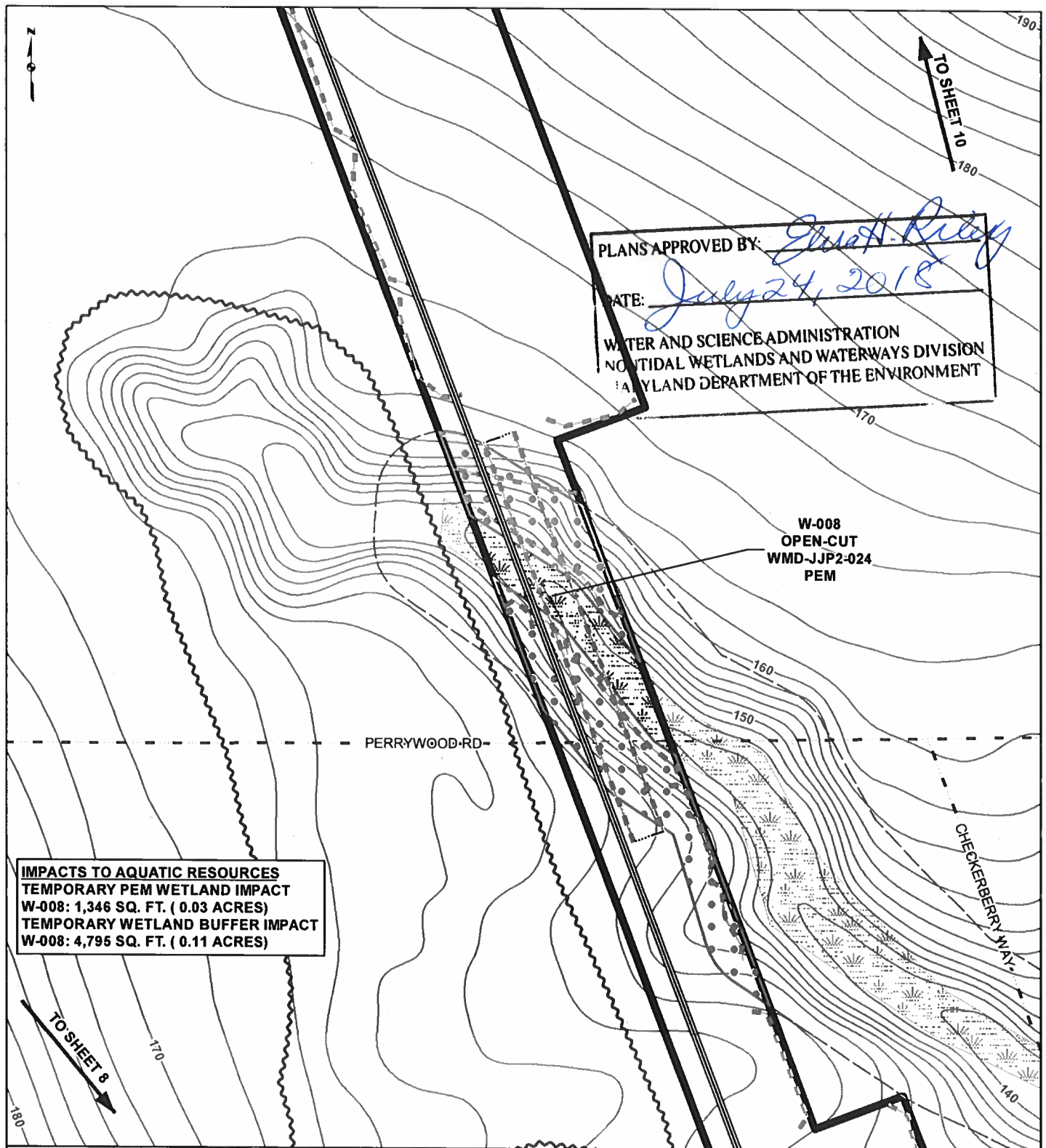
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2018. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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<ul style="list-style-type: none"> <li>BORE LOCATION</li> <li>CONVENTIONAL BORE</li> <li>HDD</li> <li>PROPOSED ROUTE</li> <li>EROSION CONTROL DEVICE</li> <li>SUPER SILT FENCE IN TIER II WATERSHED</li> <li>STREAM</li> <li>2 FT CONTOUR</li> <li>ROAD</li> <li>BUILDING FOOTPRINT</li> <li>EDGE OF ROAD</li> <li>STREAM BOUNDARY IMPACT</li> <li>PERMANENT WETLAND IMPACT</li> <li>TEMPORARY WETLAND IMPACT</li> </ul>	<ul style="list-style-type: none"> <li>POND IMPACT</li> <li>TIMBER MAT</li> <li>WETLAND</li> <li>POND</li> <li>WETLAND BUFFER</li> <li>PERMANENT WETLAND BUFFER IMPACT</li> <li>TEMPORARY WETLAND BUFFER IMPACT</li> <li>FLOODPLAIN IMPACT</li> <li>100-YEAR FLOODPLAIN</li> <li>PERMANENT ROW</li> <li>LIMIT OF DISTURBANCE</li> <li>FOREST CANOPY</li> </ul>
--	--

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 9 OF 59**

**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

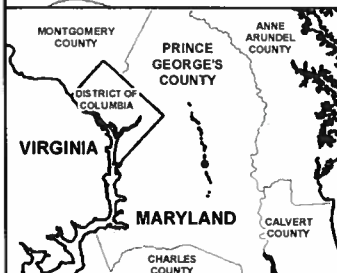
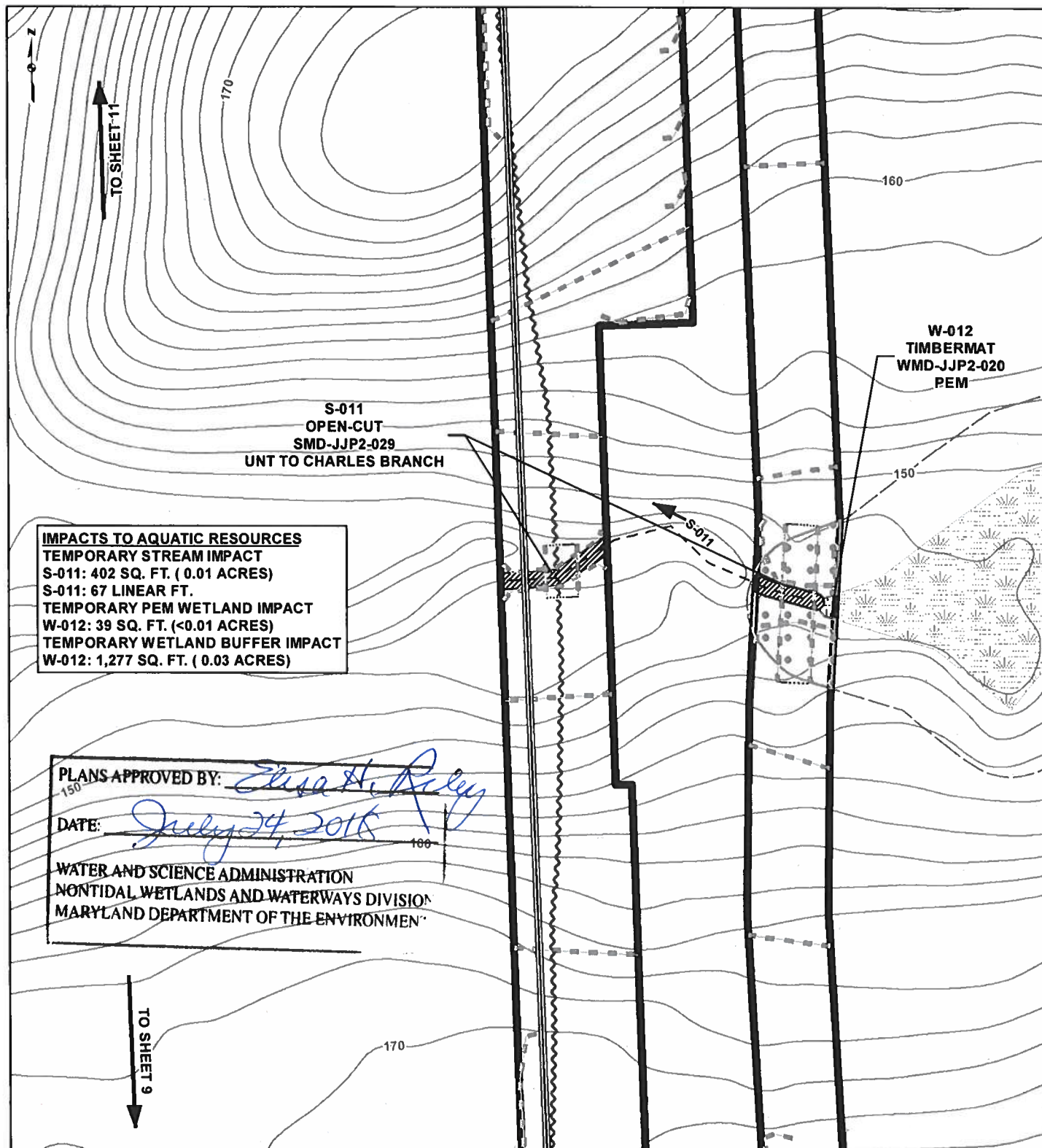
**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT): PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 10 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP  
 CHECKED: SWW**

**DATE: 6/18/2018  
 APPROVED: RDM**

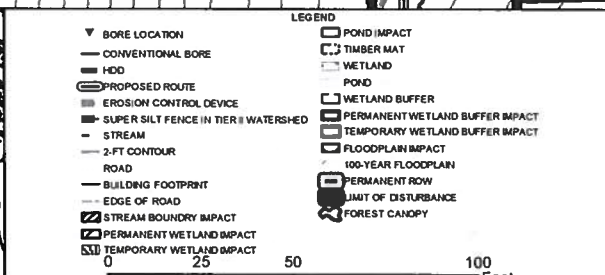
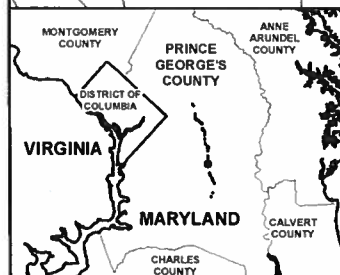
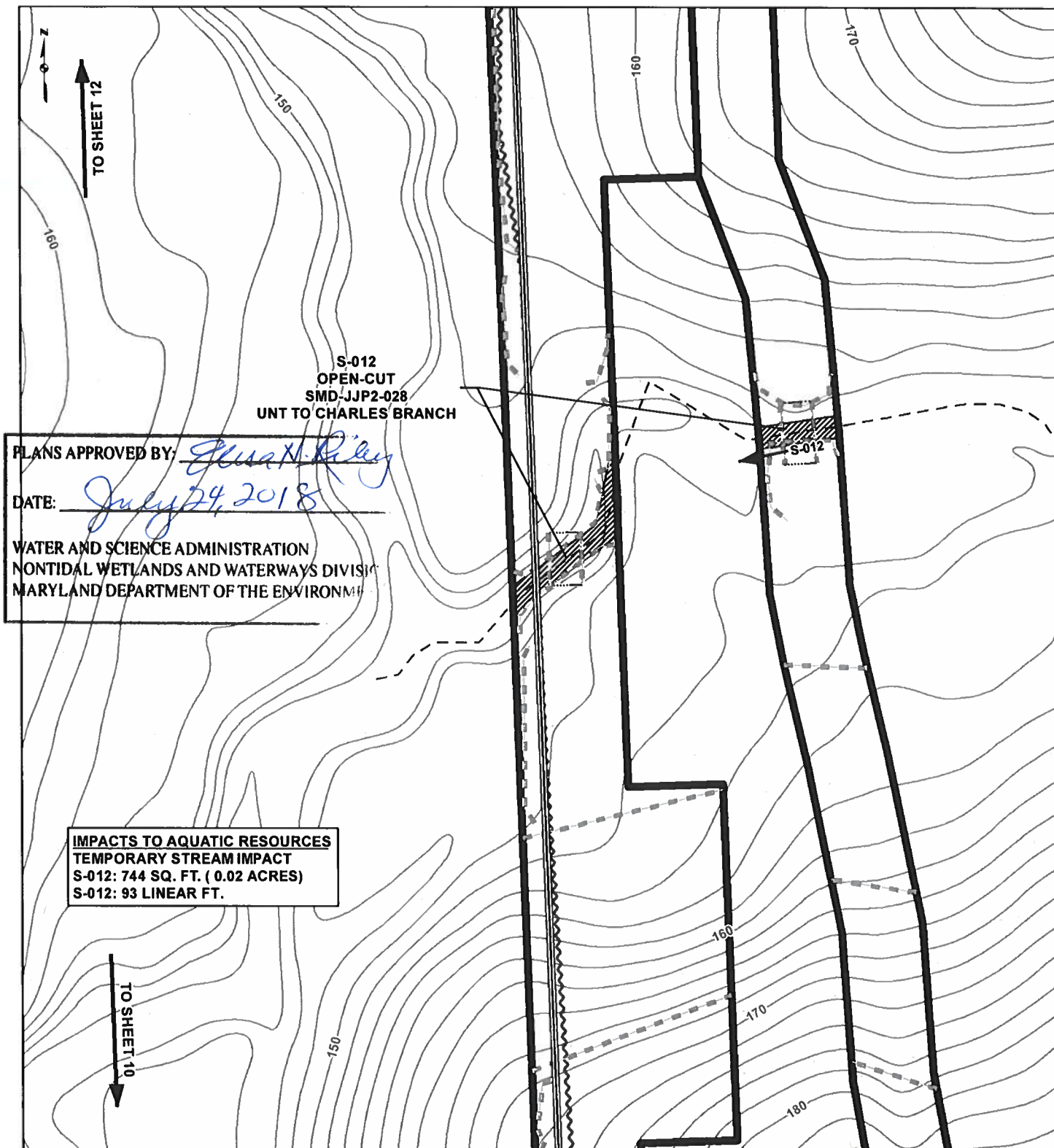


FIGURE 3B  
PLAN VIEW MAP  
SHEET 11 OF 59

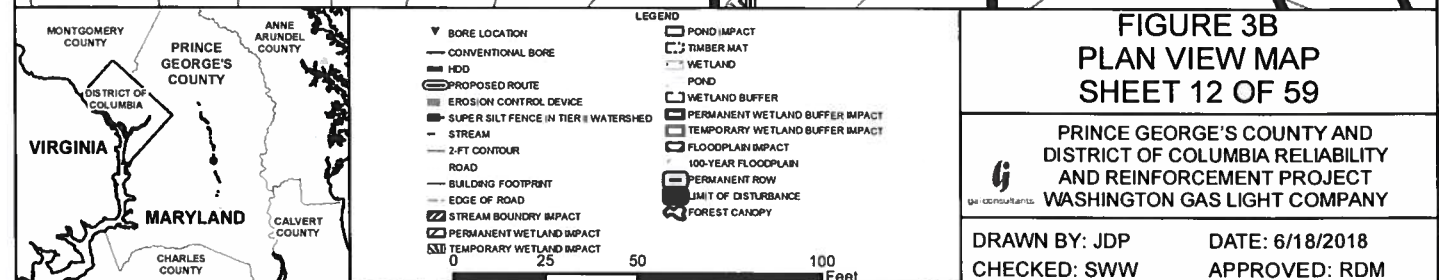
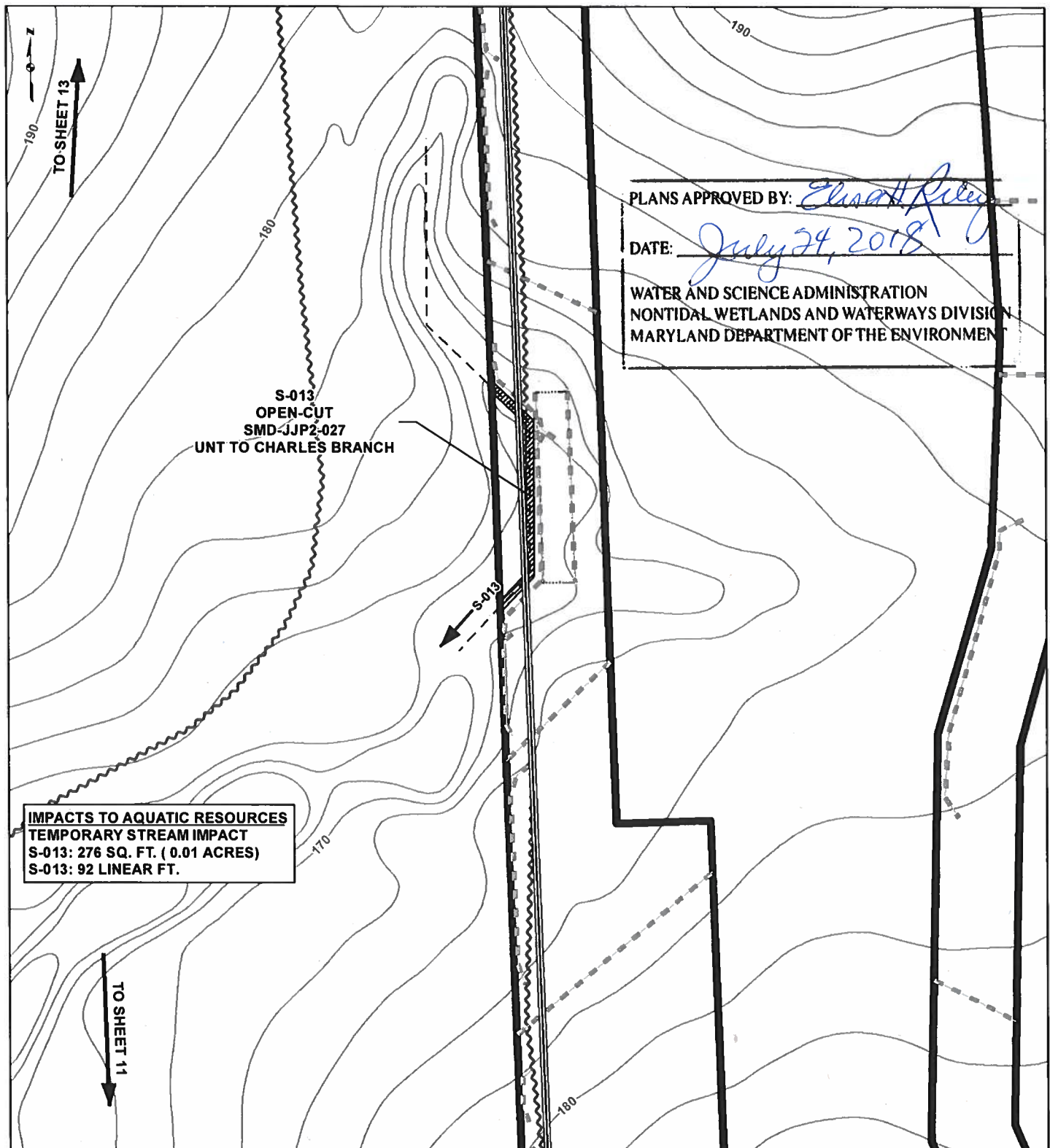
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP DATE: 6/18/2018  
CHECKED: SWW APPROVED: RDM

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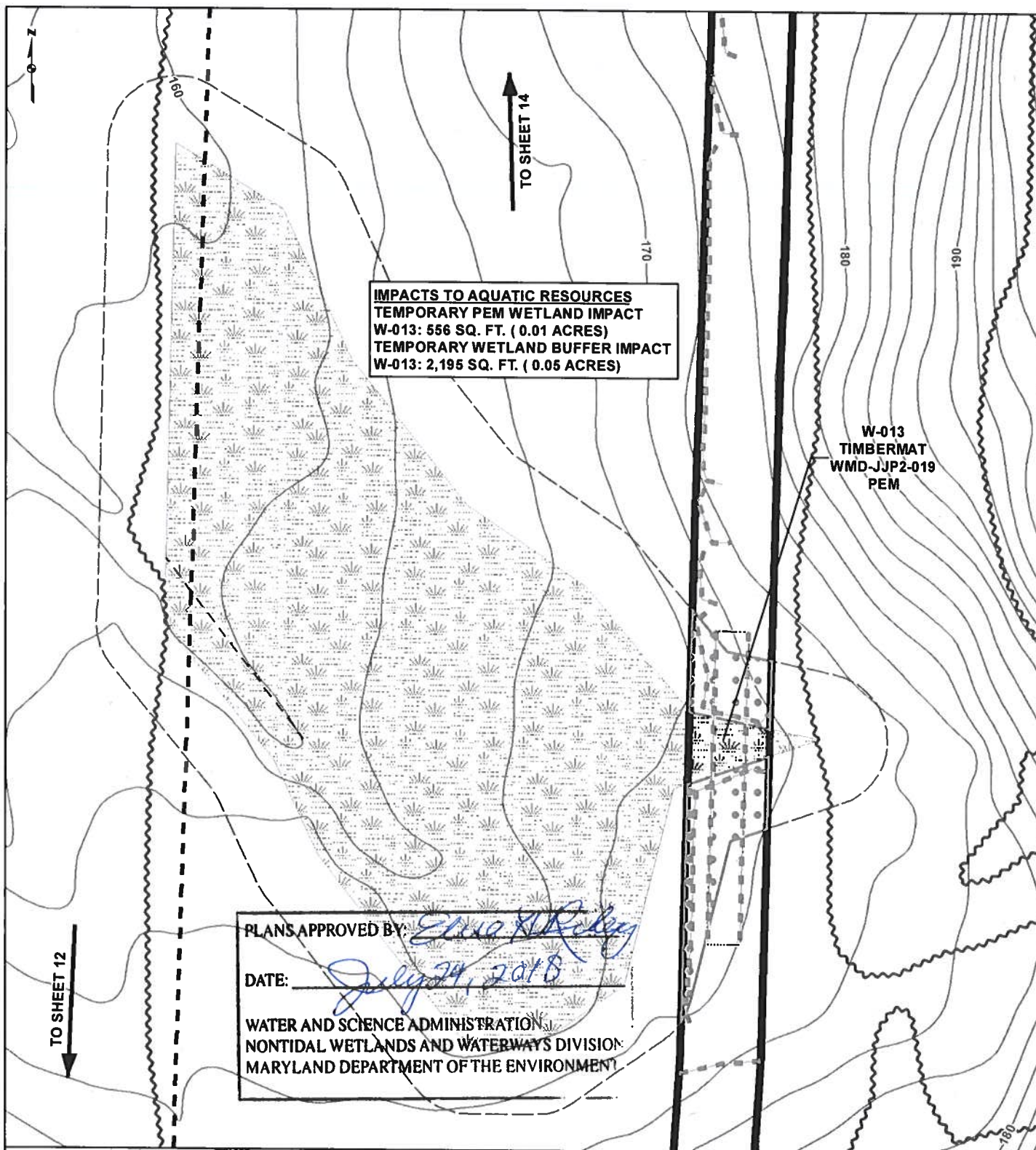




REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 13 OF 59**

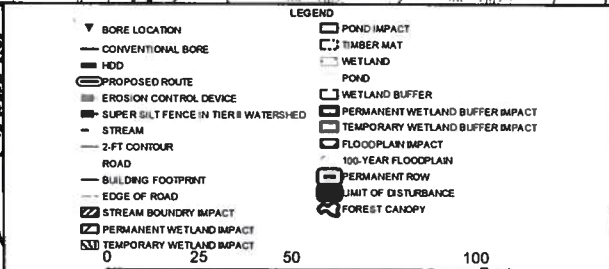
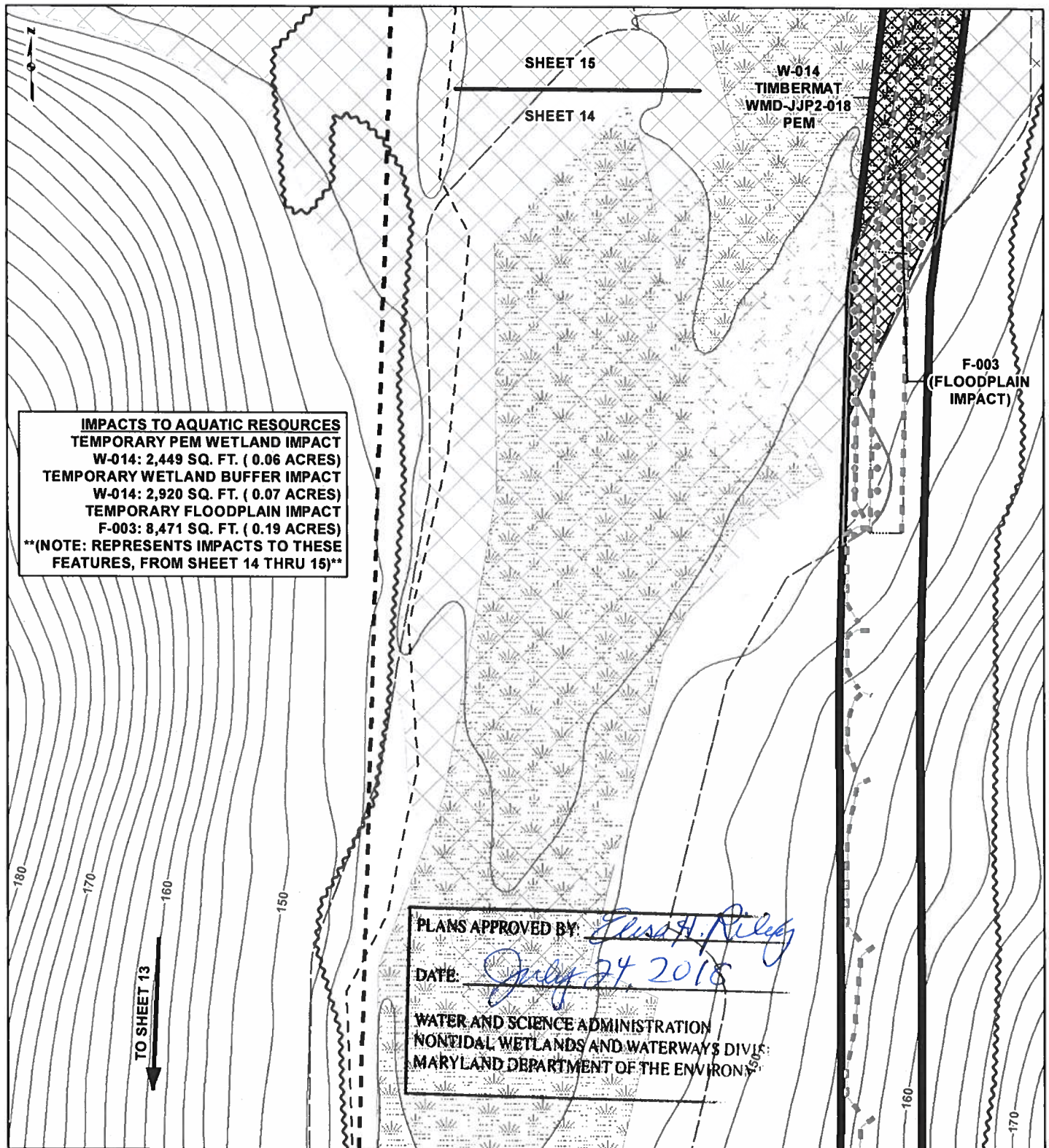
PRINCE GEORGE'S COUNTY AND  
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 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP DATE: 6/18/2018  
 CHECKED: SWW APPROVED: RDM

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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 14 OF 59**

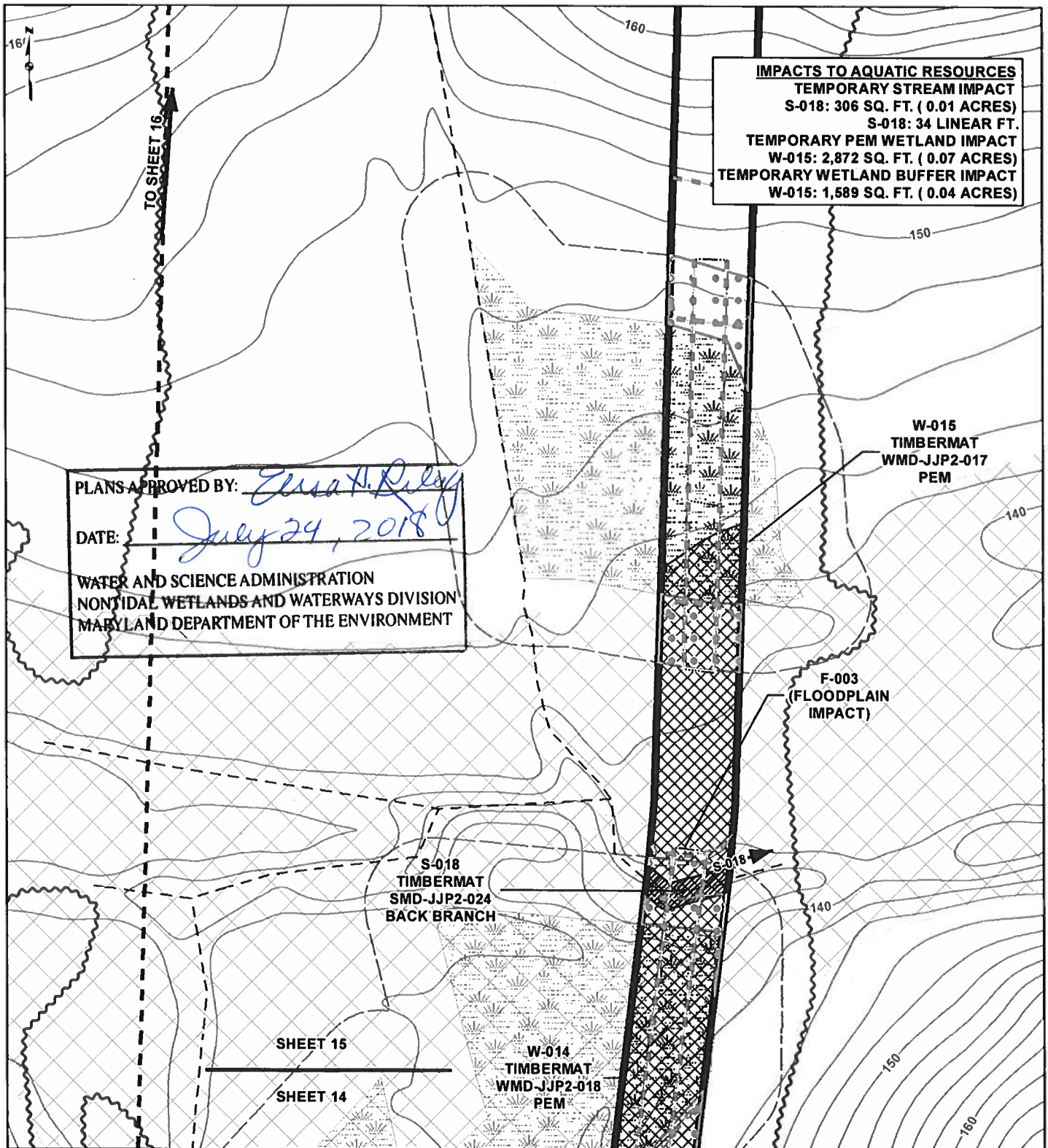
**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016; CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015; FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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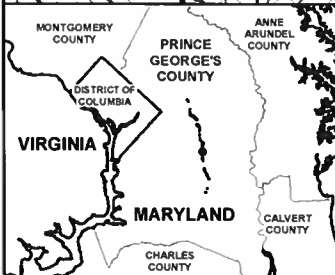


**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 15 OF 59**

**PRINCE GEORGE'S COUNTY AND**  
**DISTRICT OF COLUMBIA RELIABILITY**  
**AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP**  
**CHECKED: SWW**

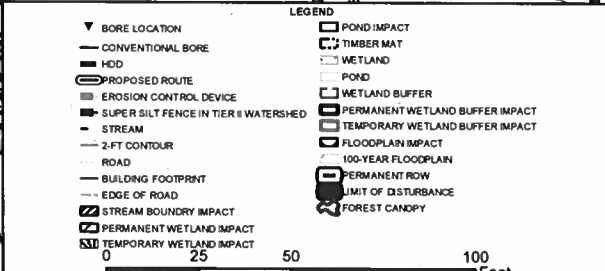
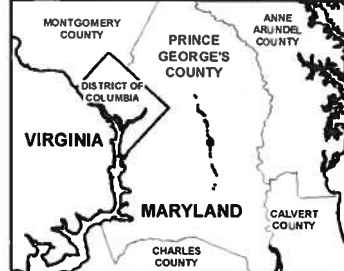
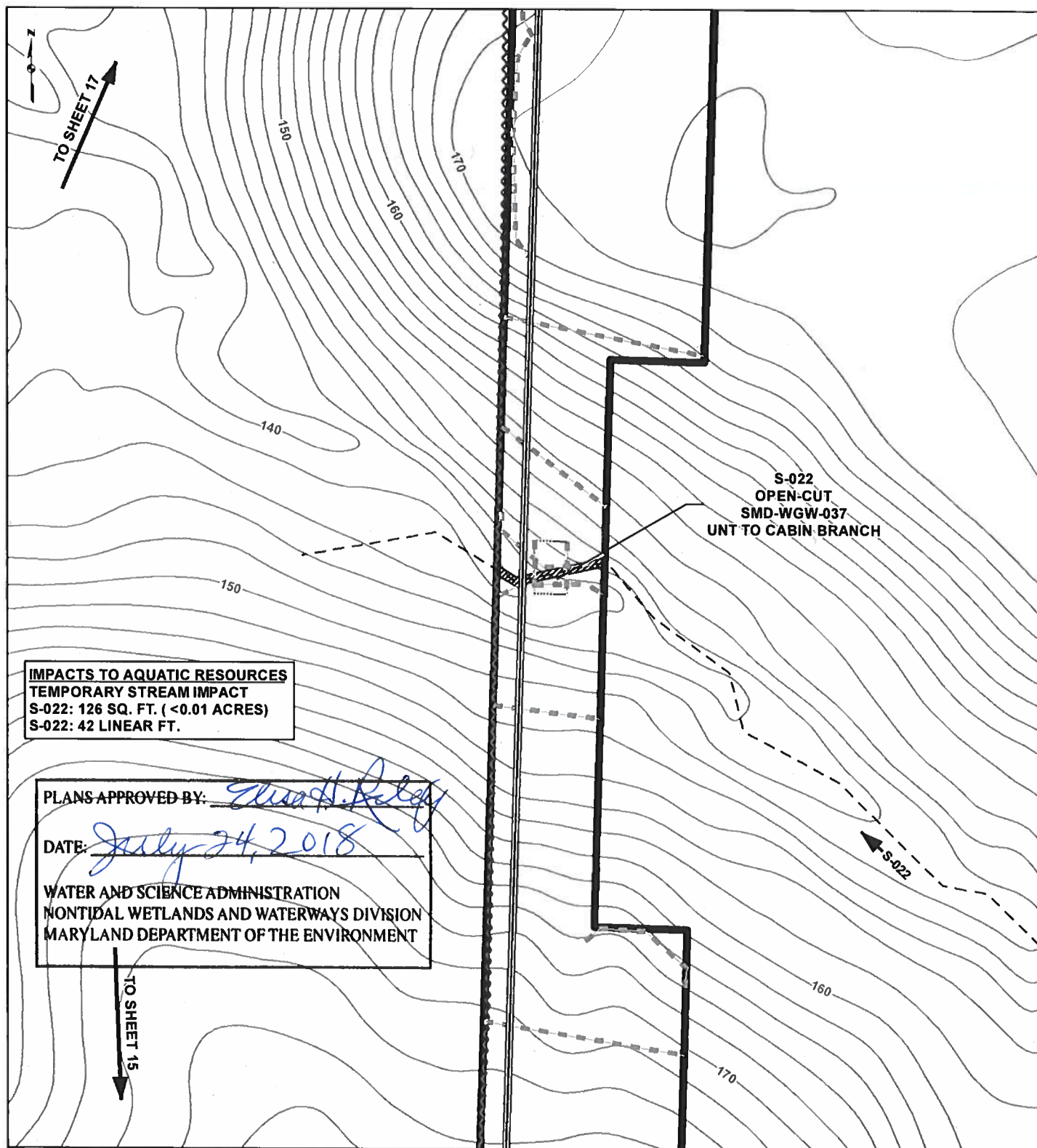
**DATE: 6/18/2018**  
**APPROVED: RDM**



- LEGEND**
- ▼ BORE LOCATION
  - CONVENTIONAL BORE
  - HDD
  - PROPOSED ROUTE
  - EROSION CONTROL DEVICE
  - SUPER SILT FENCE IN TIER II WATERSHED
  - STREAM
  - 2-FT CONTOUR
  - ROAD
  - BUILDING FOOTPRINT
  - EDGE OF ROAD
  - STREAM BOUNDARY IMPACT
  - PERMANENT WETLAND IMPACT
  - TEMPORARY WETLAND IMPACT
  - POND IMPACT
  - TIMBER MAT
  - WETLAND
  - POND
  - WETLAND BUFFER
  - PERMANENT WETLAND BUFFER IMPACT
  - TEMPORARY WETLAND BUFFER IMPACT
  - FLOODPLAIN IMPACT
  - 100-YEAR FLOODPLAIN
  - PERMANENT ROW
  - LIMIT OF DISTURBANCE
  - FOREST CANOPY

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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 16 OF 59**

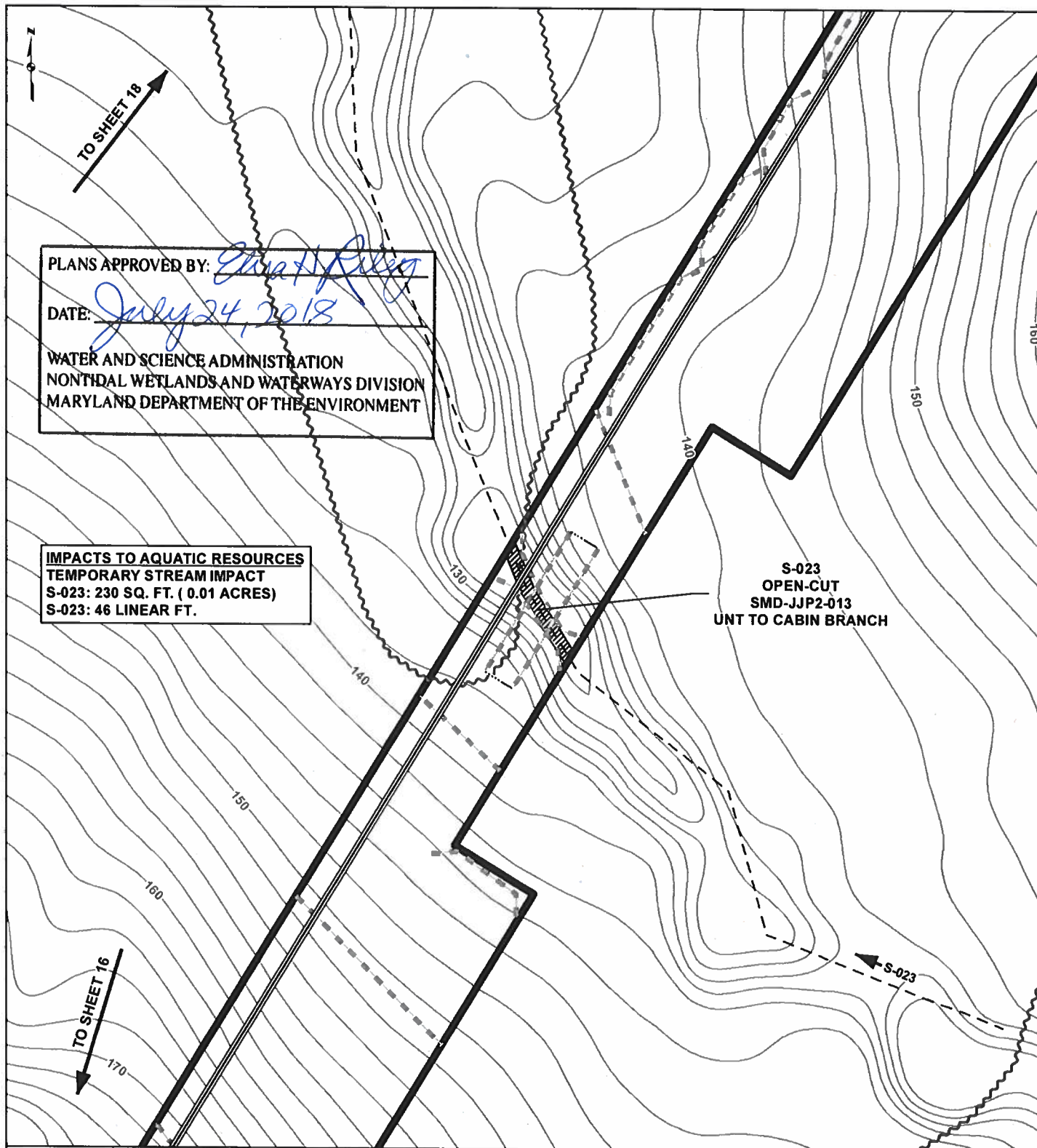
**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
S-023: 230 SQ. FT. ( 0.01 ACRES)  
S-023: 46 LINEAR FT.

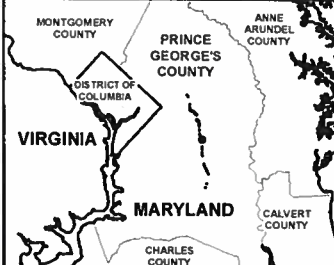
S-023  
OPEN-CUT  
SMD-JJP2-013  
UNIT TO CABIN BRANCH

### FIGURE 3B PLAN VIEW MAP SHEET 17 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

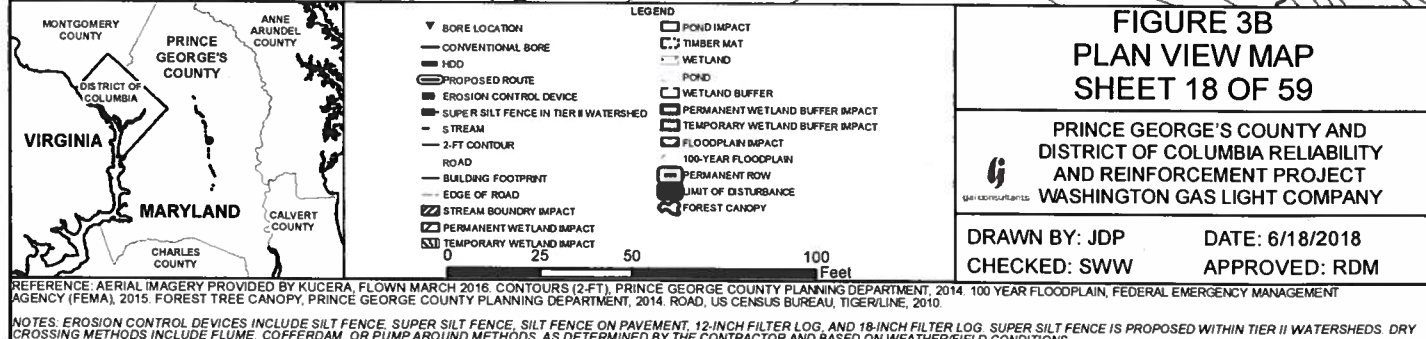
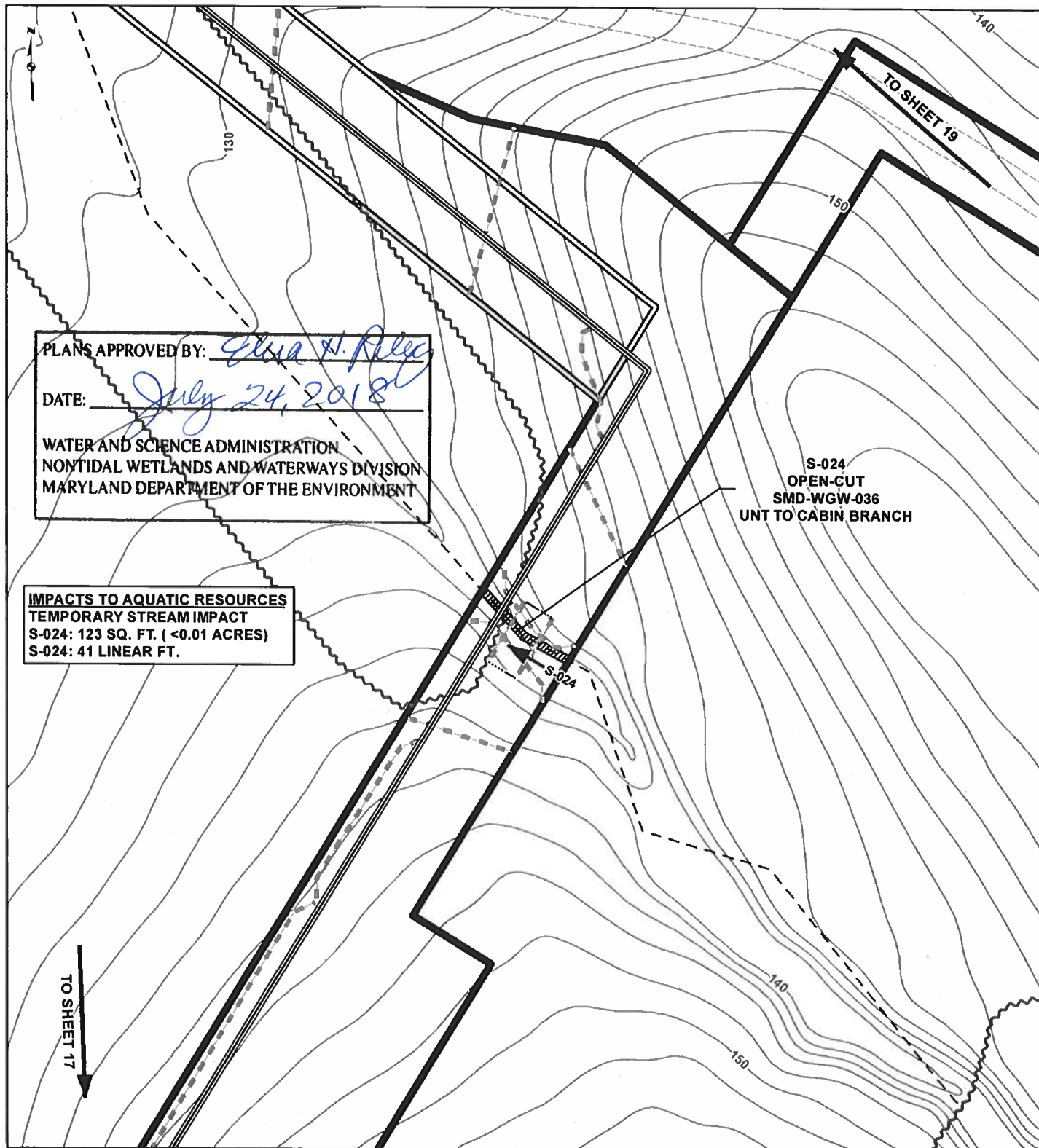
DATE: 6/18/2018  
APPROVED: RDM



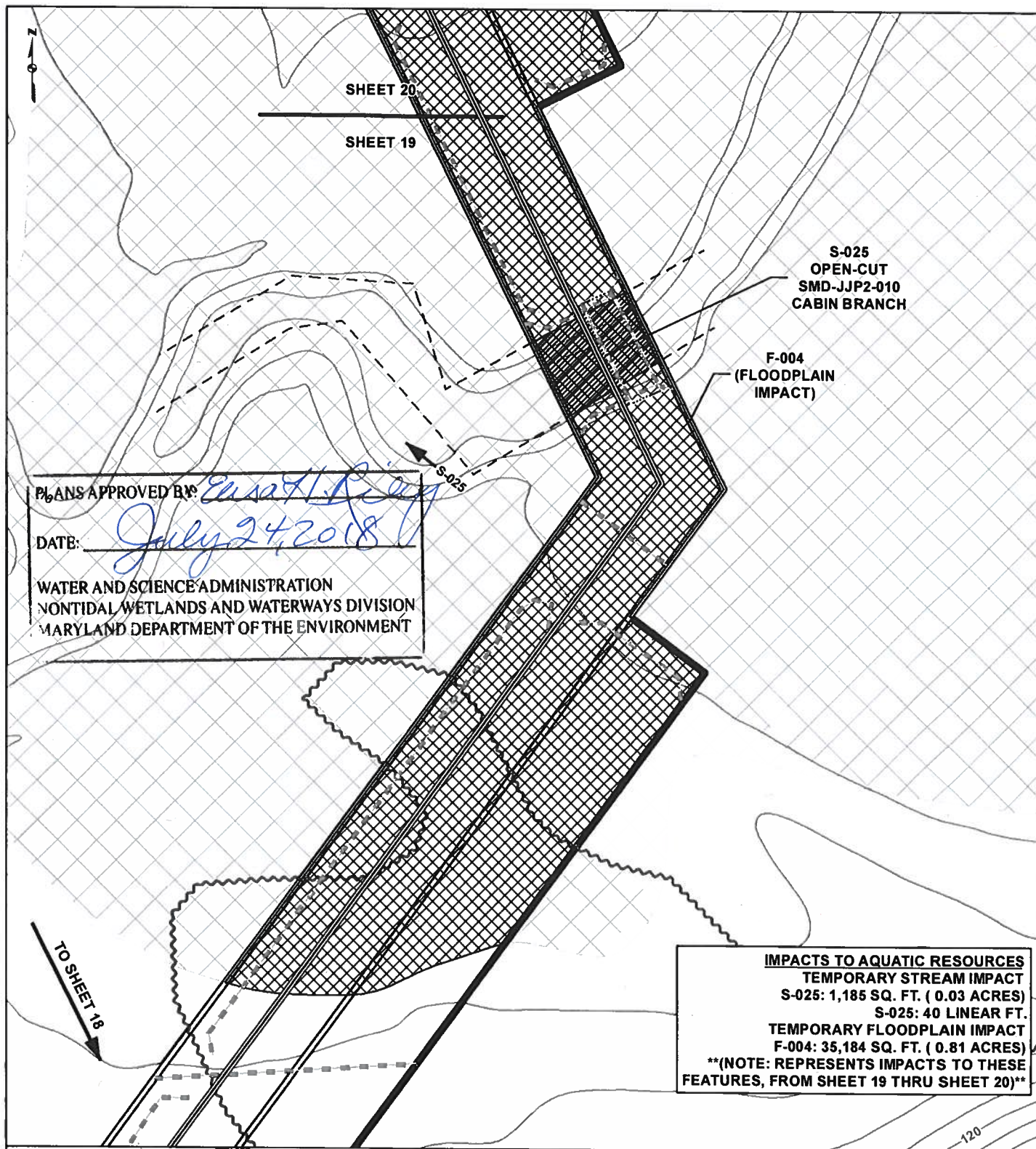
LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	• WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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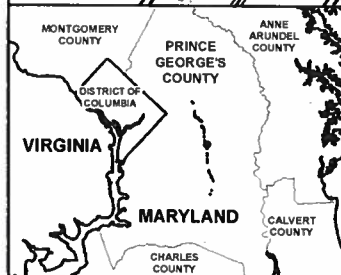
**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-025: 1,185 SQ. FT. ( 0.03 ACRES)  
 S-025: 40 LINEAR FT.  
**TEMPORARY FLOODPLAIN IMPACT**  
 F-004: 35,184 SQ. FT. ( 0.81 ACRES)  
**\*\* (NOTE: REPRESENTS IMPACTS TO THESE FEATURES, FROM SHEET 19 THRU SHEET 20)\*\***

### FIGURE 3B PLAN VIEW MAP SHEET 19 OF 59

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
 CHECKED: SWW

DATE: 6/18/2018  
 APPROVED: RDM



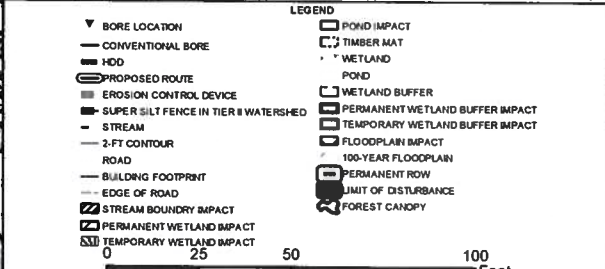
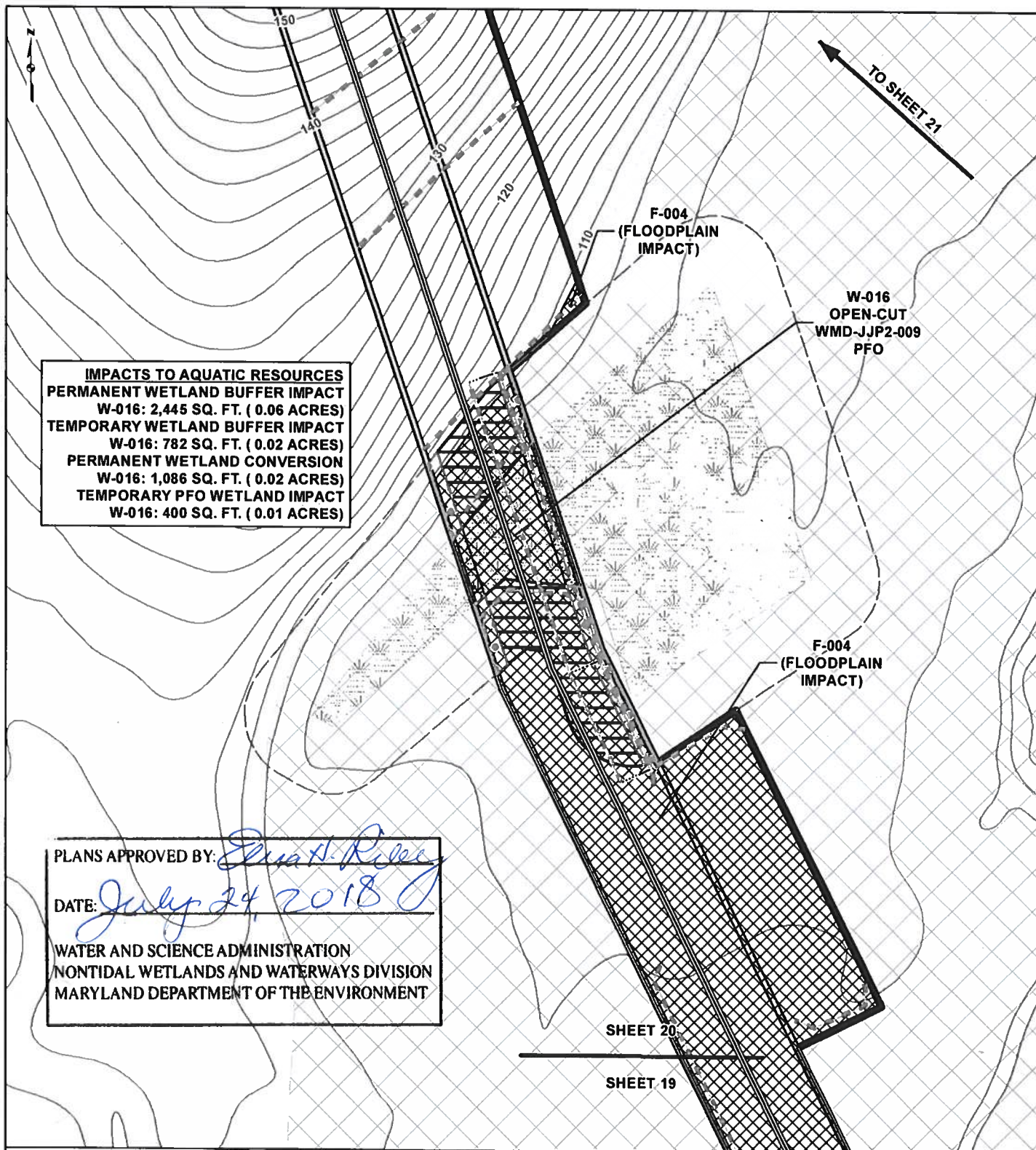
- LEGEND**
- ▼ BORE LOCATION
  - CONVENTIONAL BORE
  - HDD
  - PROPOSED ROUTE
  - EROSION CONTROL DEVICE
  - SUPER SILT FENCE IN TIER I WATERSHED
  - STREAM
  - 2-FT CONTOUR
  - ROAD
  - BUILDING FOOTPRINT
  - EDGE OF ROAD
  - STREAM BOUNDARY IMPACT
  - PERMANENT WETLAND IMPACT
  - TEMPORARY WETLAND IMPACT
  - POND IMPACT
  - TIMBER MAT
  - WETLAND
  - POND
  - WETLAND BUFFER
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  - TEMPORARY WETLAND BUFFER IMPACT
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  - PERMANENT ROW
  - LIMIT OF DISTURBANCE
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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 20 OF 59**

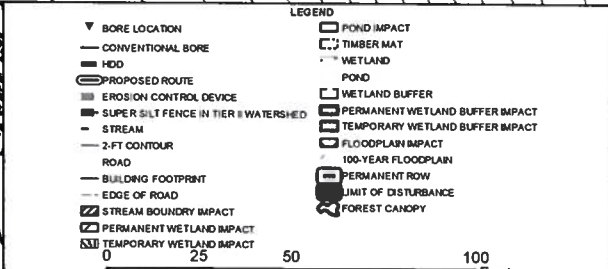
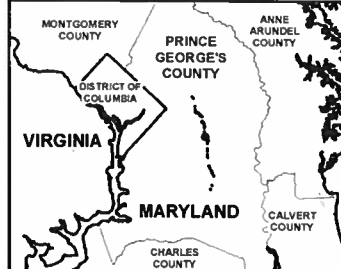
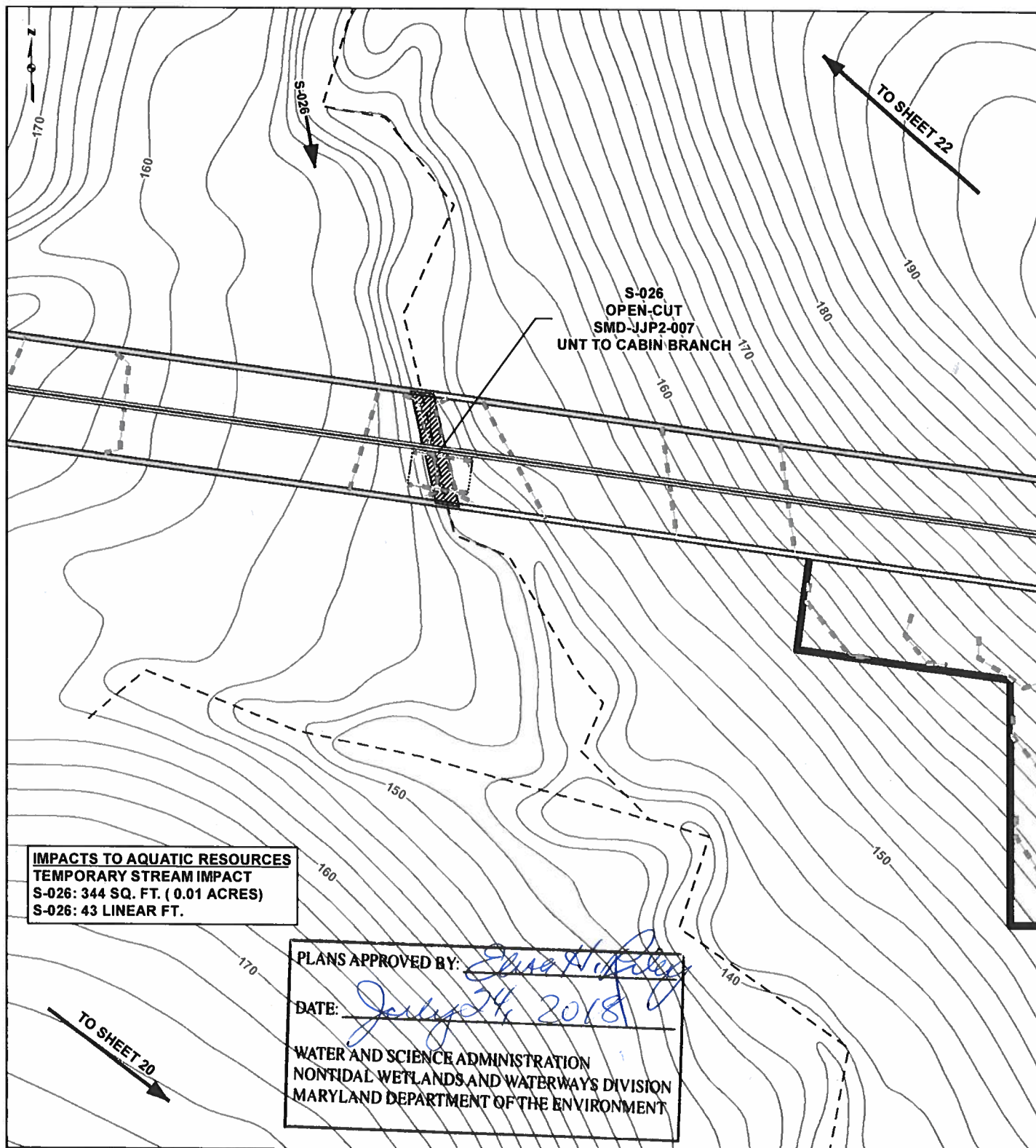
**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016, CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014, 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015, FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014, ROAD, US CENSUS BUREAU, TIGER/LINE, 2010

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Z:\Energy\2013\IC131838.00 - WGL - Strip 12 Land Acqui\GIS\MXD\JP\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd

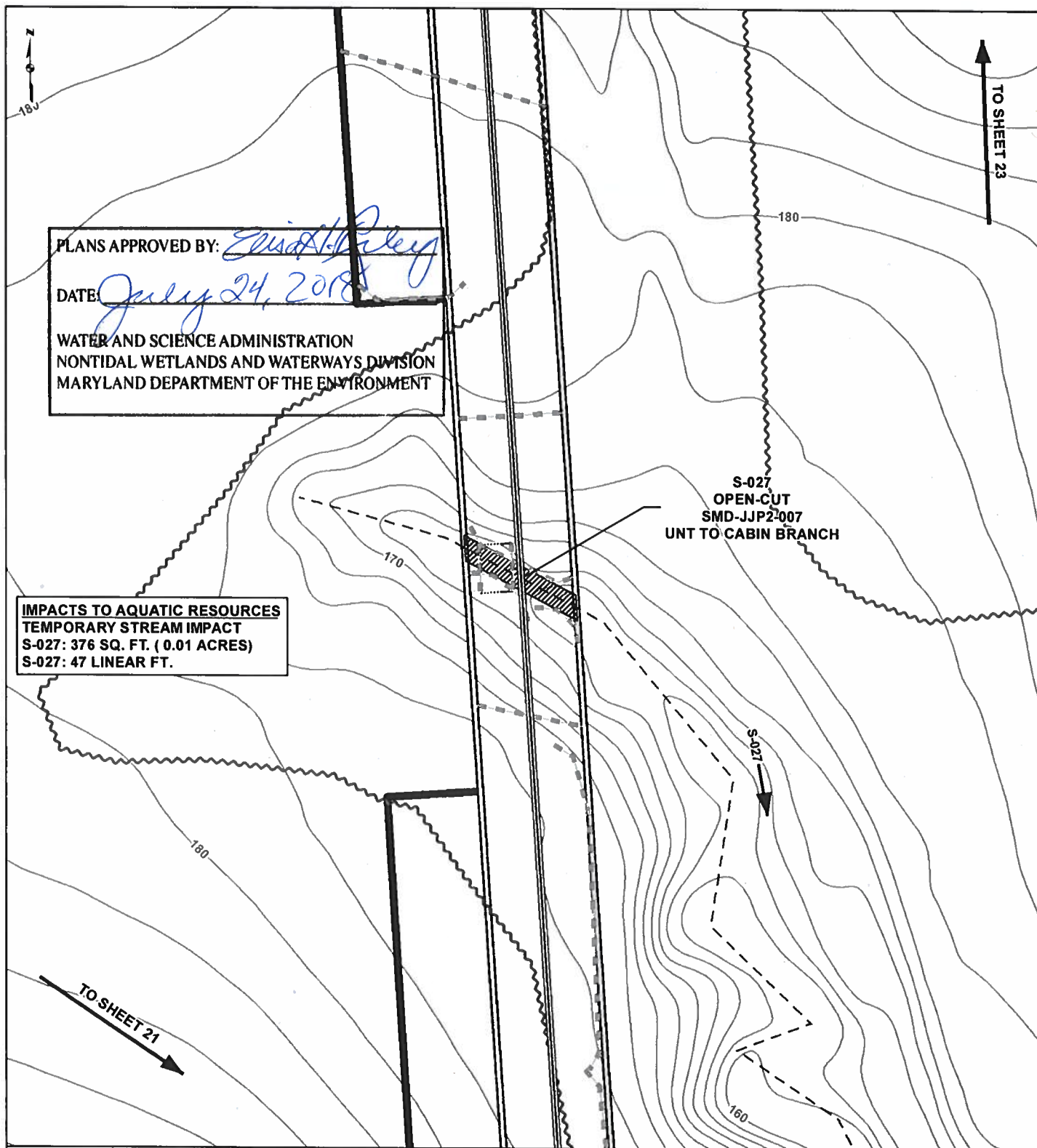


REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acquisition\GIS\WMD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd

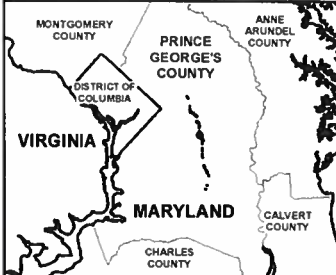




PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-027: 376 SQ. FT. ( 0.01 ACRES)  
 S-027: 47 LINEAR FT.

S-027  
 OPEN-CUT  
 SMD-JJP2-007  
 UNT TO CABIN BRANCH



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▼ BORE LOCATION</li> <li>— CONVENTIONAL BORE</li> <li>— HDD</li> <li>— PROPOSED ROUTE</li> <li>— EROSION CONTROL DEVICE</li> <li>— SUPER SILT FENCE IN TIER II WATERSHED</li> <li>— STREAM</li> <li>— 2-FT CONTOUR</li> <li>— ROAD</li> <li>— BUILDING FOOTPRINT</li> <li>— EDGE OF ROAD</li> <li>— STREAM BOUNDARY IMPACT</li> <li>— PERMANENT WETLAND IMPACT</li> <li>— TEMPORARY WETLAND IMPACT</li> </ul> | <p>LEGEND</p> <ul style="list-style-type: none"> <li>□ POND IMPACT</li> <li>▨ TIMBER MAT</li> <li>▨ WETLAND</li> <li>□ POND</li> <li>□ WETLAND BUFFER</li> <li>▨ PERMANENT WETLAND BUFFER IMPACT</li> <li>▨ TEMPORARY WETLAND BUFFER IMPACT</li> <li>▨ FLOODPLAIN IMPACT</li> <li>▨ 100-YEAR FLOODPLAIN</li> <li>□ PERMANENT ROW</li> <li>▨ LIMIT OF DISTURBANCE</li> <li>▨ FOREST CANOPY</li> </ul> |
|--|--|

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 22 OF 59**

**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

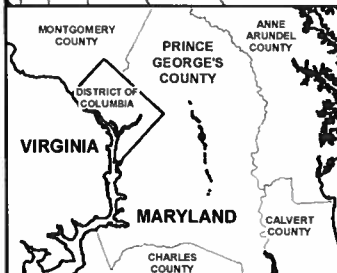
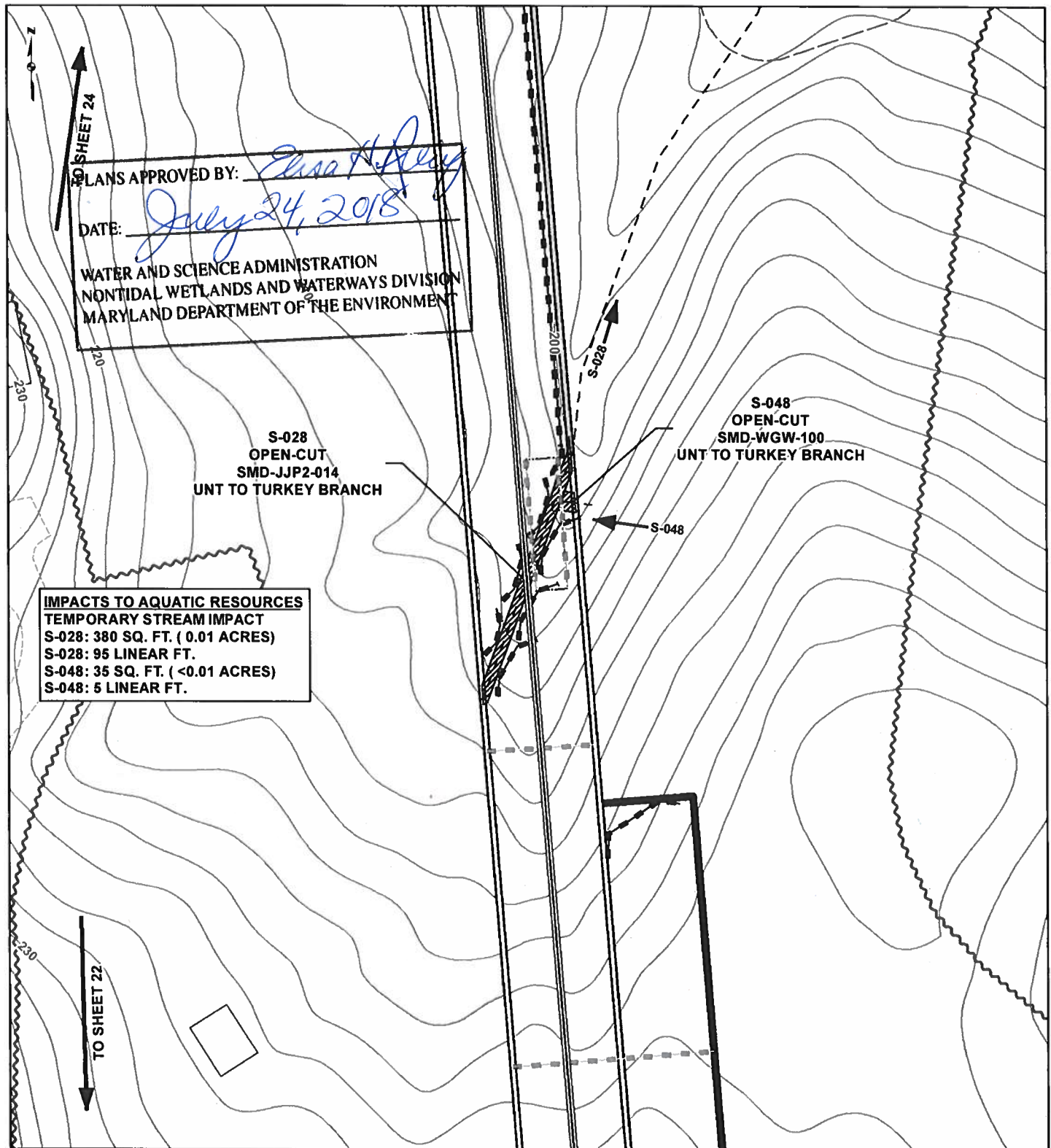
DRAWN BY: JDP      DATE: 6/18/2018  
 CHECKED: SWW      APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 23 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP DATE: 6/18/2018**  
**CHECKED: SWW APPROVED: RDM**

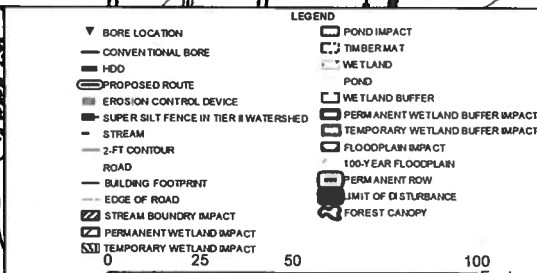
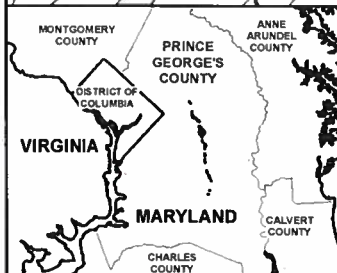
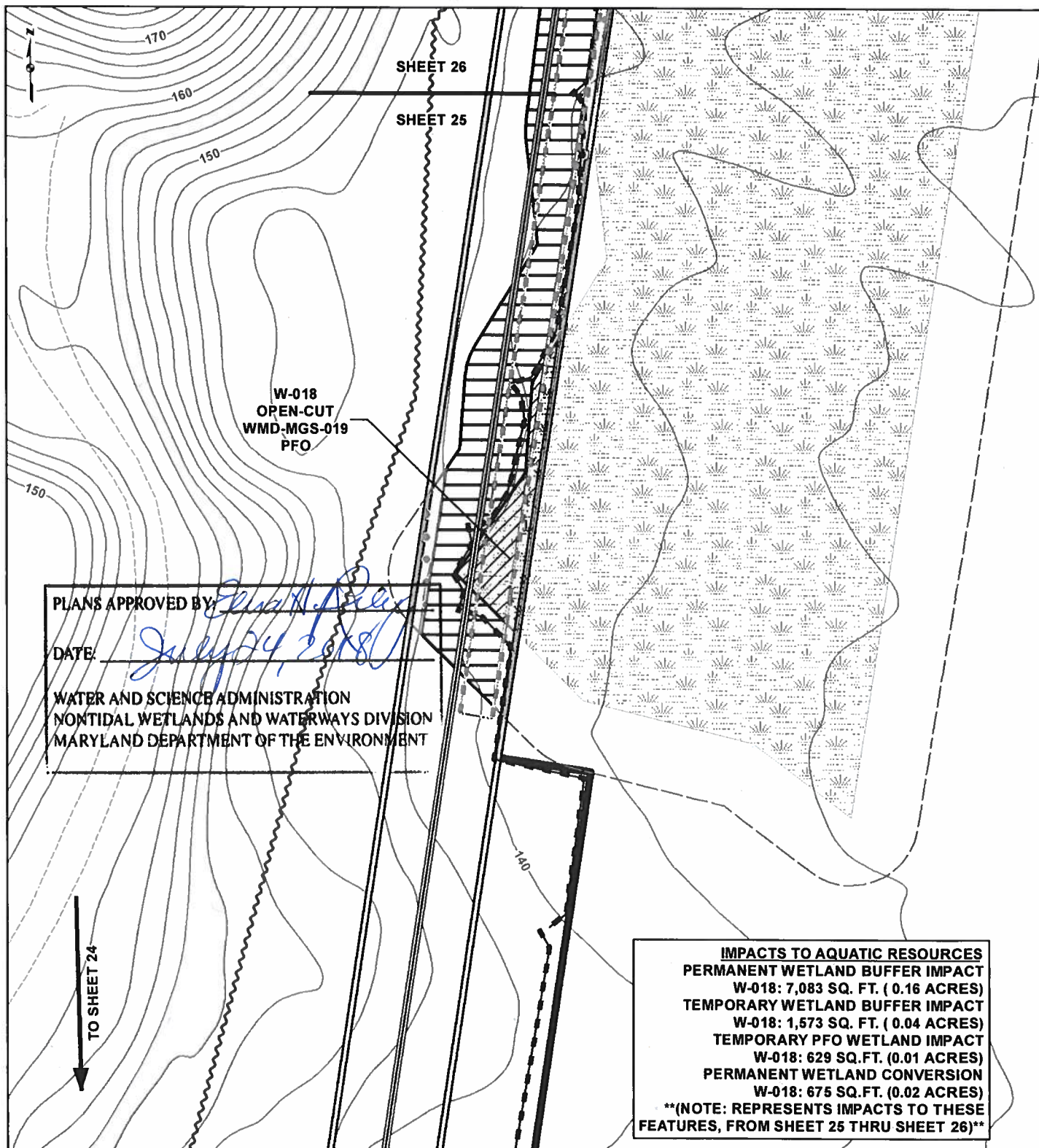
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NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHERFIELD CONDITIONS.

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**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 25 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

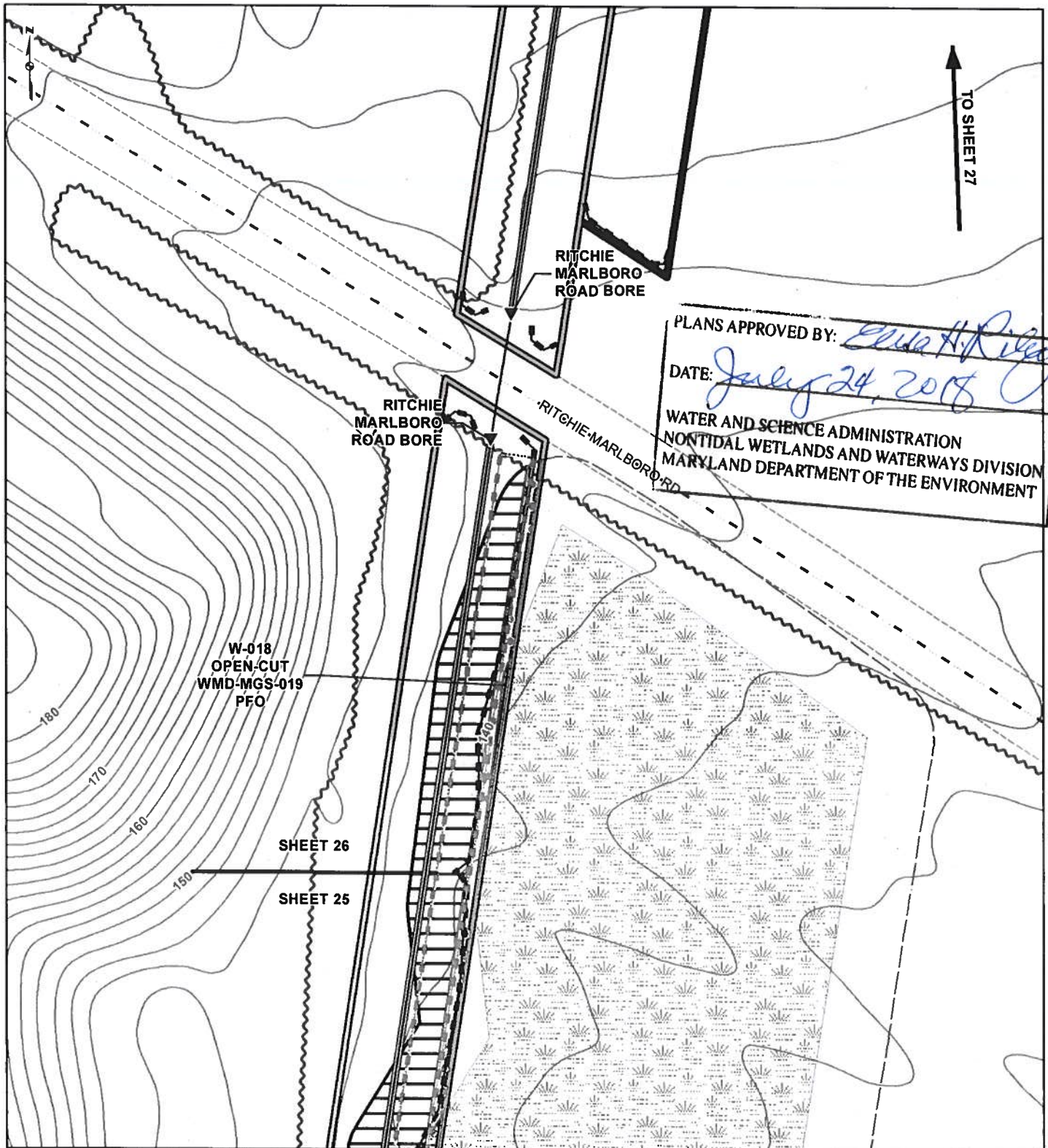
**DRAWN BY: JDP  
 CHECKED: SWW**

**DATE: 6/18/2018  
 APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT.) PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



<p>▼ BORE LOCATION</p> <p>— CONVENTIONAL BORE</p> <p>— HDD</p> <p>— PROPOSED ROUTE</p> <p>— EROSION CONTROL DEVICE</p> <p>— SUPER SILT FENCE IN TIER II WATERSHED</p> <p>— STREAM</p> <p>— 2-FT CONTOUR</p> <p>— ROAD</p> <p>— BUILDING FOOTPRINT</p> <p>— EDGE OF ROAD</p> <p>— STREAM BOUNDARY IMPACT</p> <p>— PERMANENT WETLAND IMPACT</p> <p>— TEMPORARY WETLAND IMPACT</p>	<p>LEGEND</p> <p>□ POND IMPACT</p> <p>□ TIMBER MAT</p> <p>□ WETLAND</p> <p>□ POND</p> <p>□ WETLAND BUFFER</p> <p>□ PERMANENT WETLAND BUFFER IMPACT</p> <p>□ TEMPORARY WETLAND BUFFER IMPACT</p> <p>□ FLOODPLAIN IMPACT</p> <p>□ 100-YEAR FLOODPLAIN</p> <p>□ PERMANENT ROW</p> <p>□ LIMIT OF DISTURBANCE</p> <p>□ FOREST CANOPY</p>
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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 26 OF 59**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

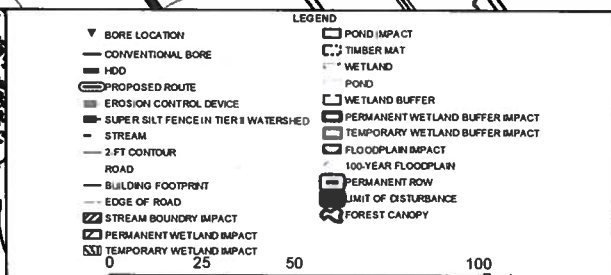
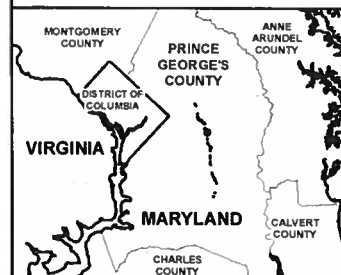
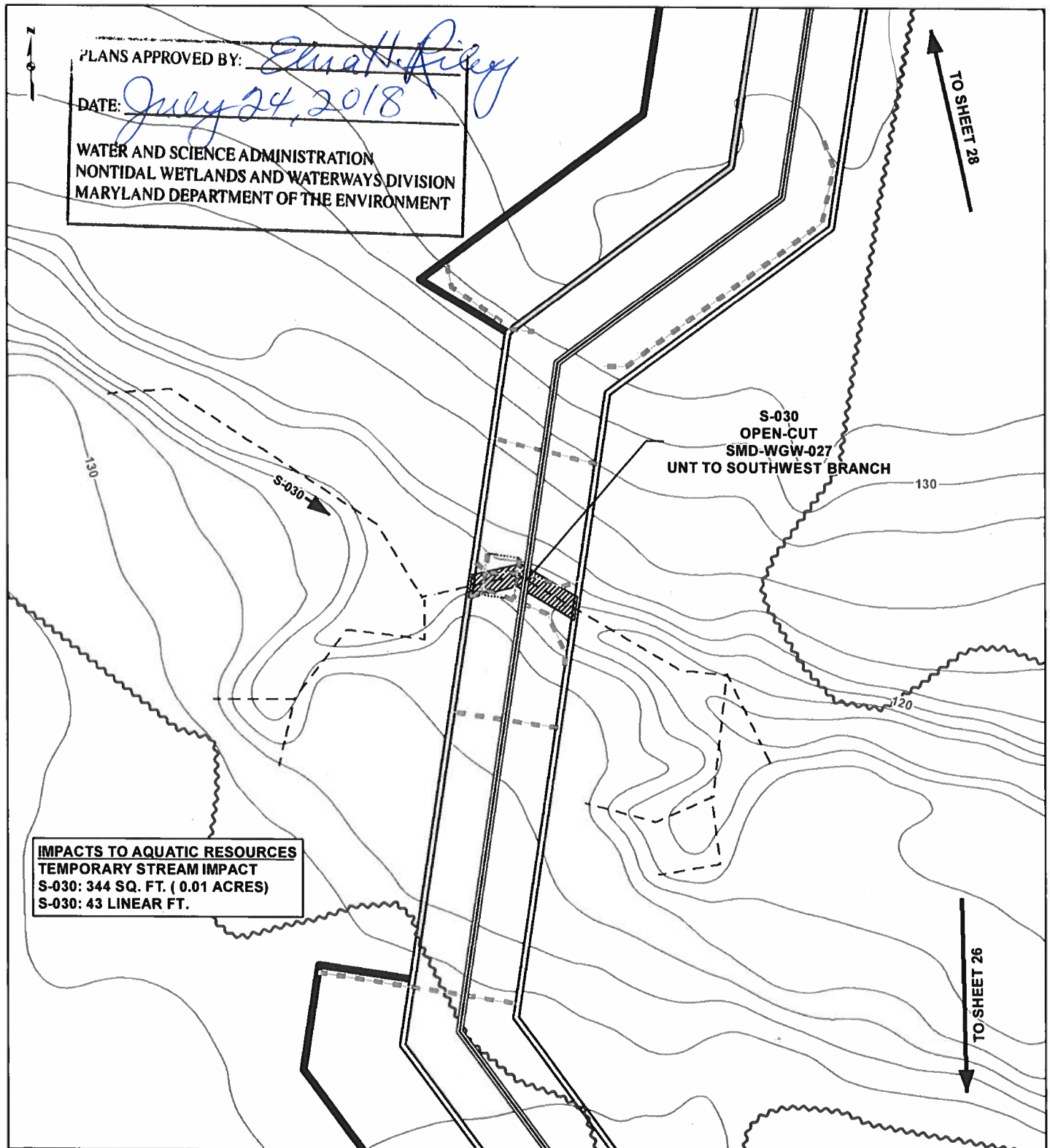
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 CHECKED: SWW

DATE: 6/18/2018  
 APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**FIGURE 3B  
PLAN VIEW MAP  
SHEET 27 OF 59**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

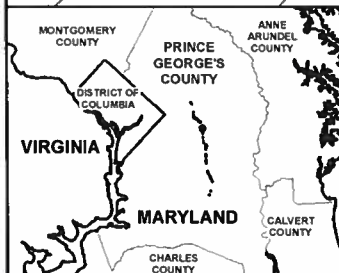
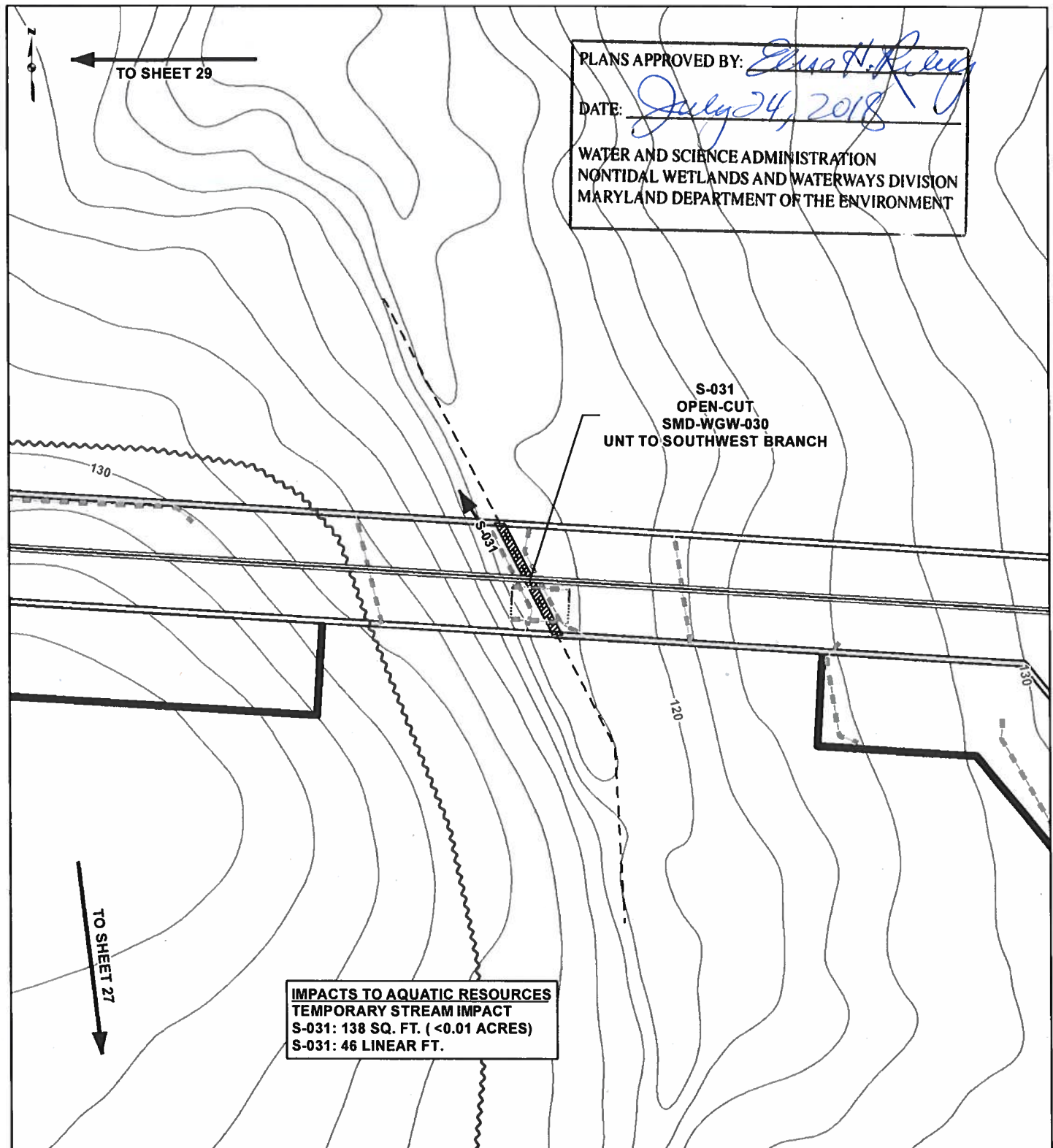
**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016; CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015; FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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**LEGEND**

▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	

0 25 50 100 Feet

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 28 OF 59**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

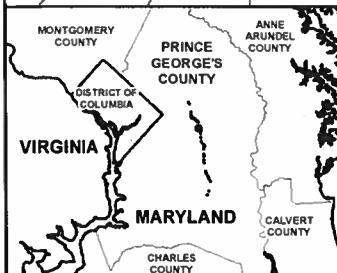
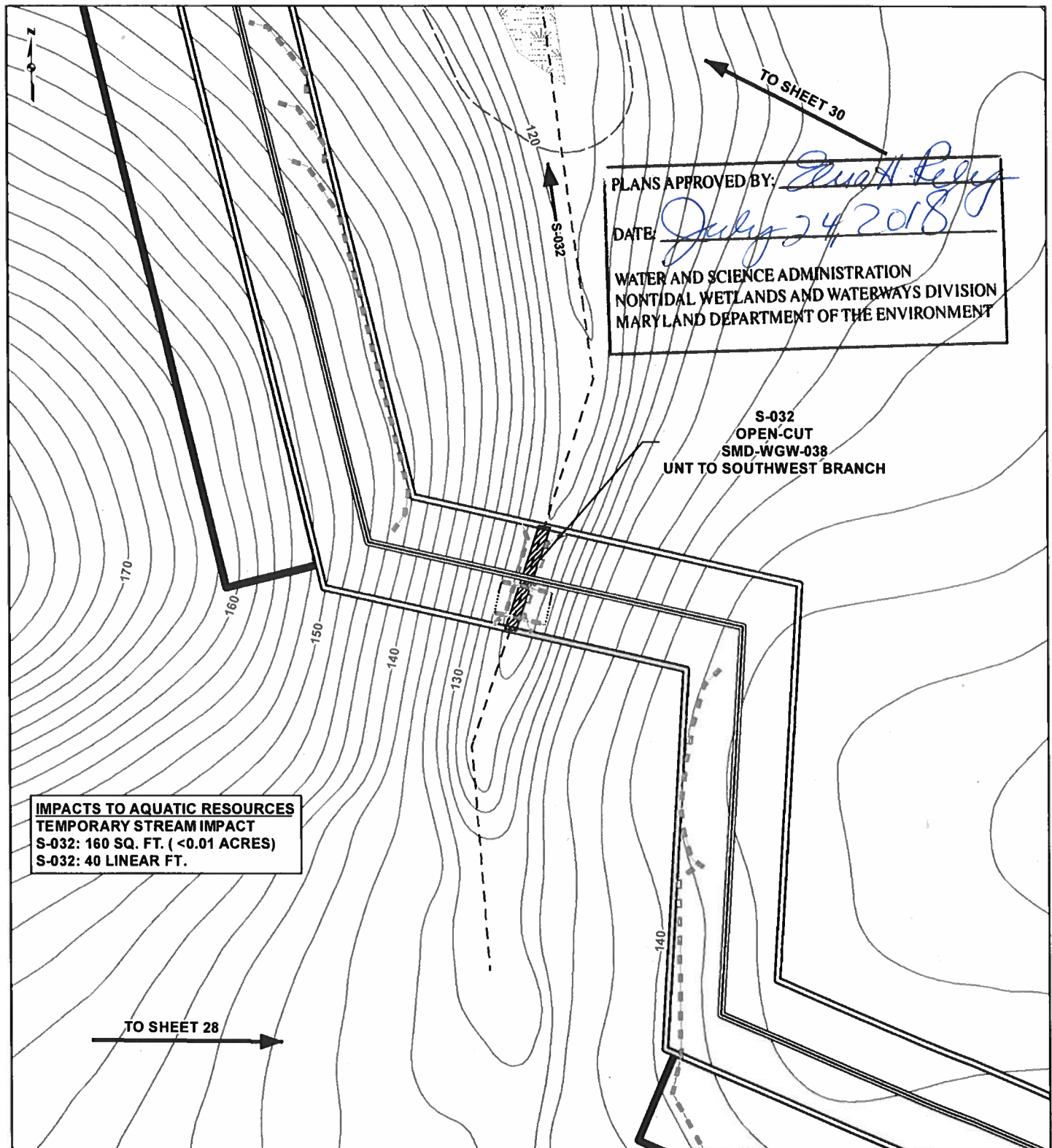
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**CHECKED: SWW**      **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 29 OF 59**

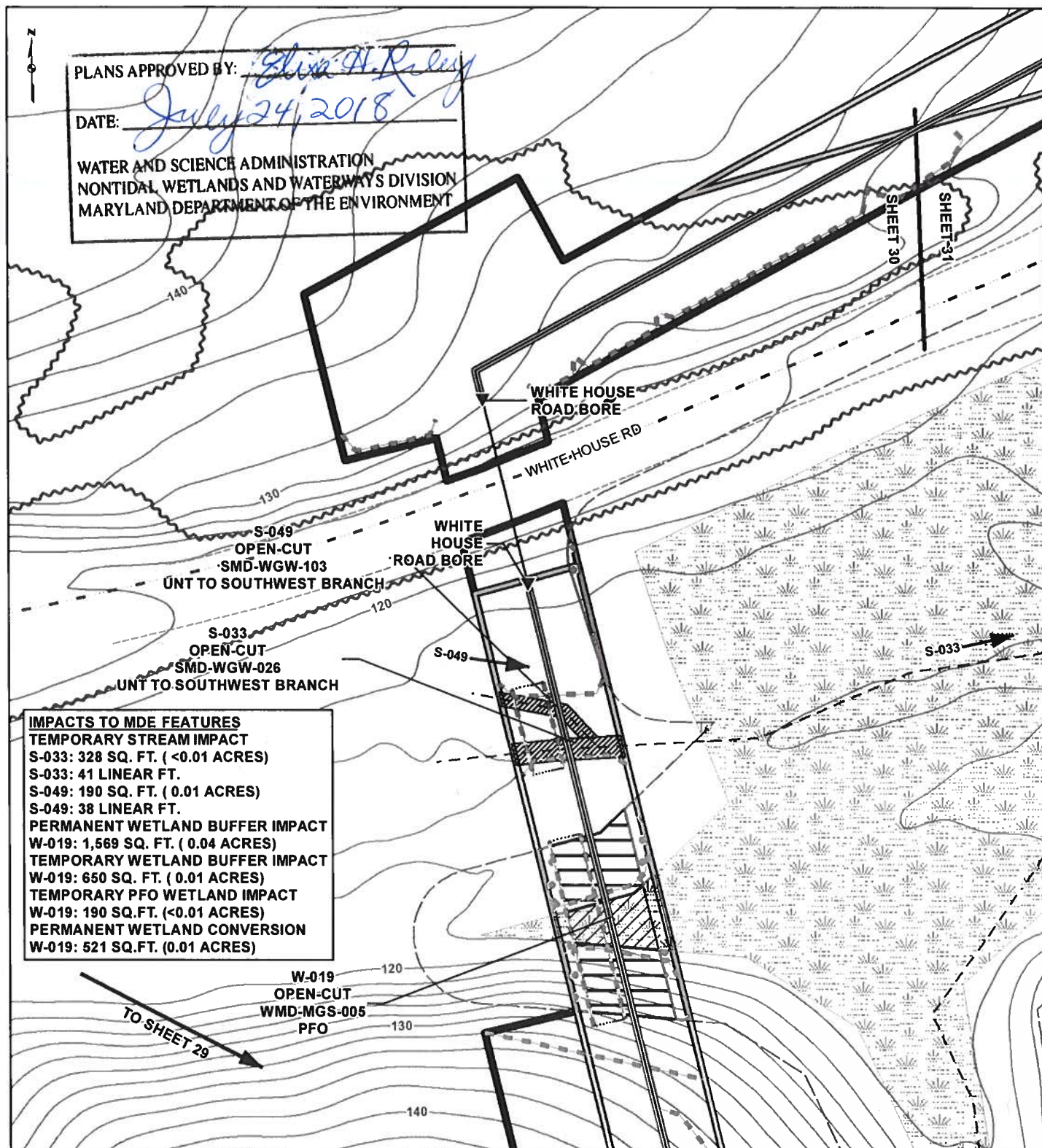
**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP DATE: 6/18/2018**  
**CHECKED: SWW APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2018. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100-YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 30 OF 59**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

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CHECKED: SWW

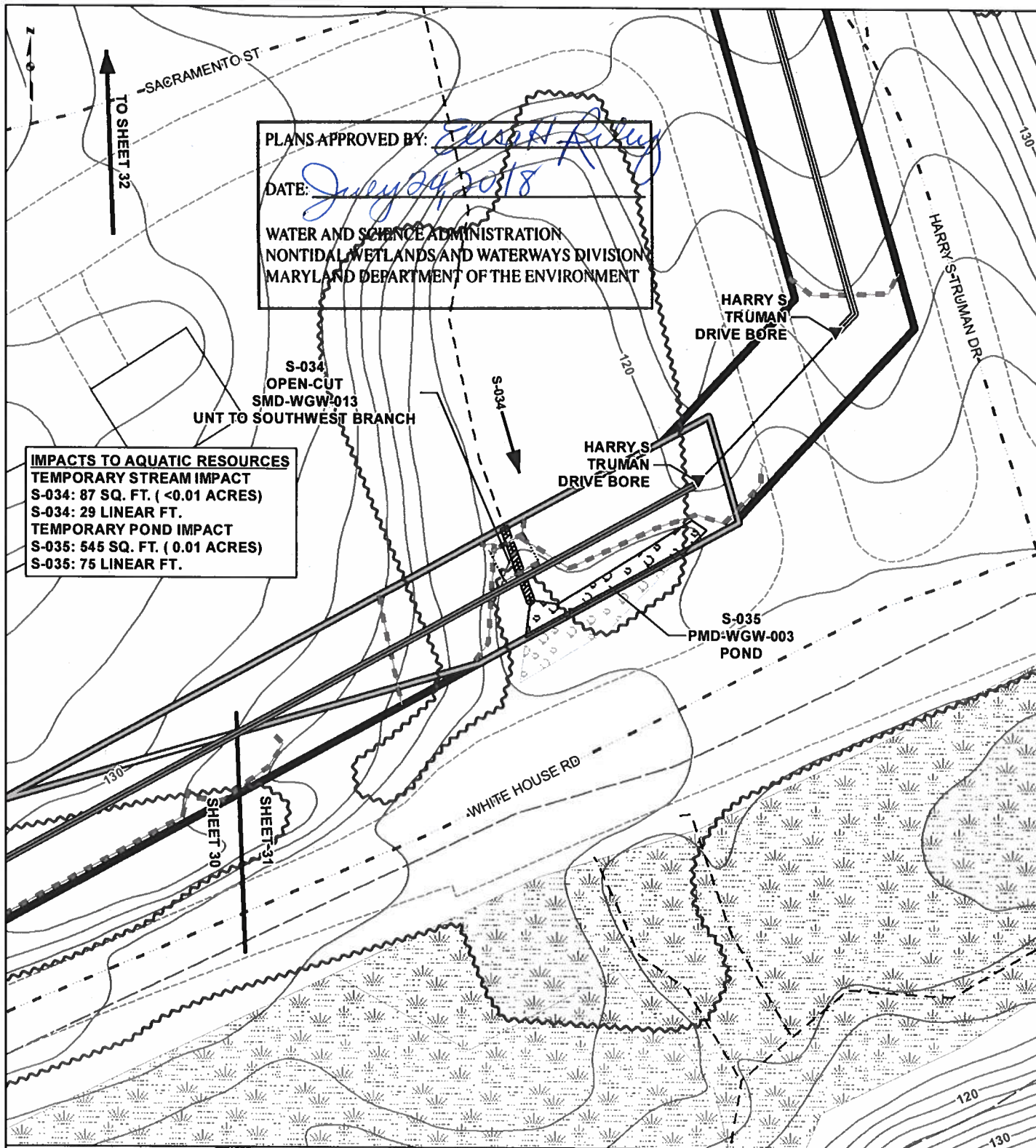
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APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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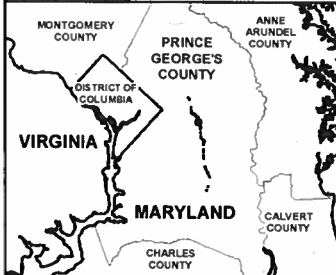
PLANS APPROVED BY: *Elisabeth Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-034: 87 SQ. FT. (<0.01 ACRES)  
 S-034: 29 LINEAR FT.  
**TEMPORARY POND IMPACT**  
 S-035: 545 SQ. FT. (0.01 ACRES)  
 S-035: 75 LINEAR FT.

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 31 OF 59**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP      DATE: 6/18/2018  
 CHECKED: SWW      APPROVED: RDM



<p>▼ BORE LOCATION</p> <p>— CONVENTIONAL BORE</p> <p>— HDD</p> <p>— PROPOSED ROUTE</p> <p>— EROSION CONTROL DEVICE</p> <p>— SUPER SILT FENCE IN TIER II WATERSHED</p> <p>— STREAM</p> <p>— 2-FT CONTOUR</p> <p>— ROAD</p> <p>— BUILDING FOOTPRINT</p> <p>— EDGE OF ROAD</p> <p>— STREAM BOUNDARY IMPACT</p> <p>— PERMANENT WETLAND IMPACT</p> <p>— TEMPORARY WETLAND IMPACT</p>	<p><b>LEGEND</b></p> <p>□ POND IMPACT</p> <p>▨ TIMBER MAT</p> <p>▨ WETLAND</p> <p>□ POND</p> <p>▨ WETLAND BUFFER</p> <p>▨ PERMANENT WETLAND BUFFER IMPACT</p> <p>▨ TEMPORARY WETLAND BUFFER IMPACT</p> <p>▨ FLOODPLAIN IMPACT</p> <p>▨ 100-YEAR FLOODPLAIN</p> <p>▨ PERMANENT ROW</p> <p>▨ LIMIT OF DISTURBANCE</p> <p>▨ FOREST CANOPY</p>
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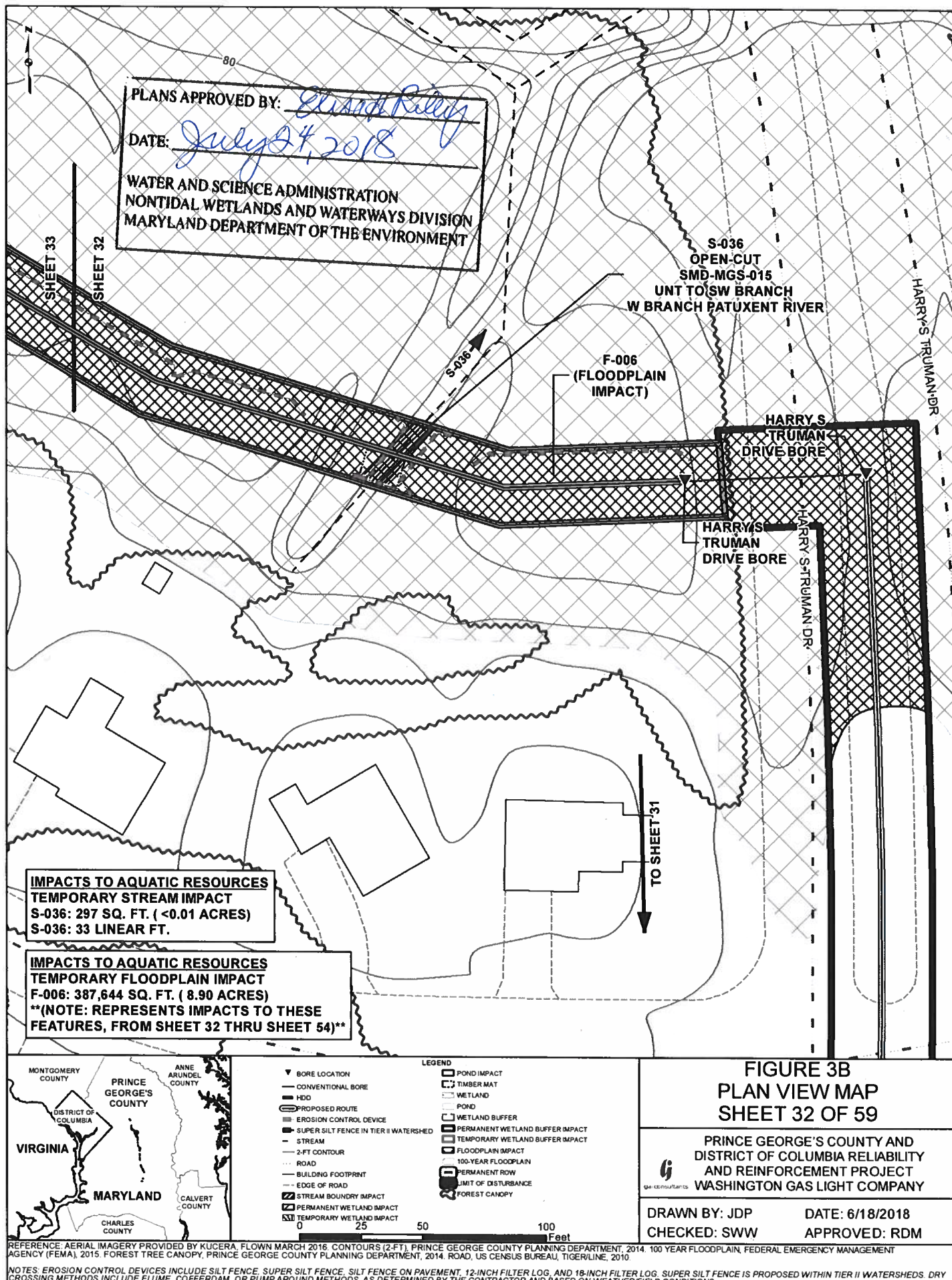
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REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

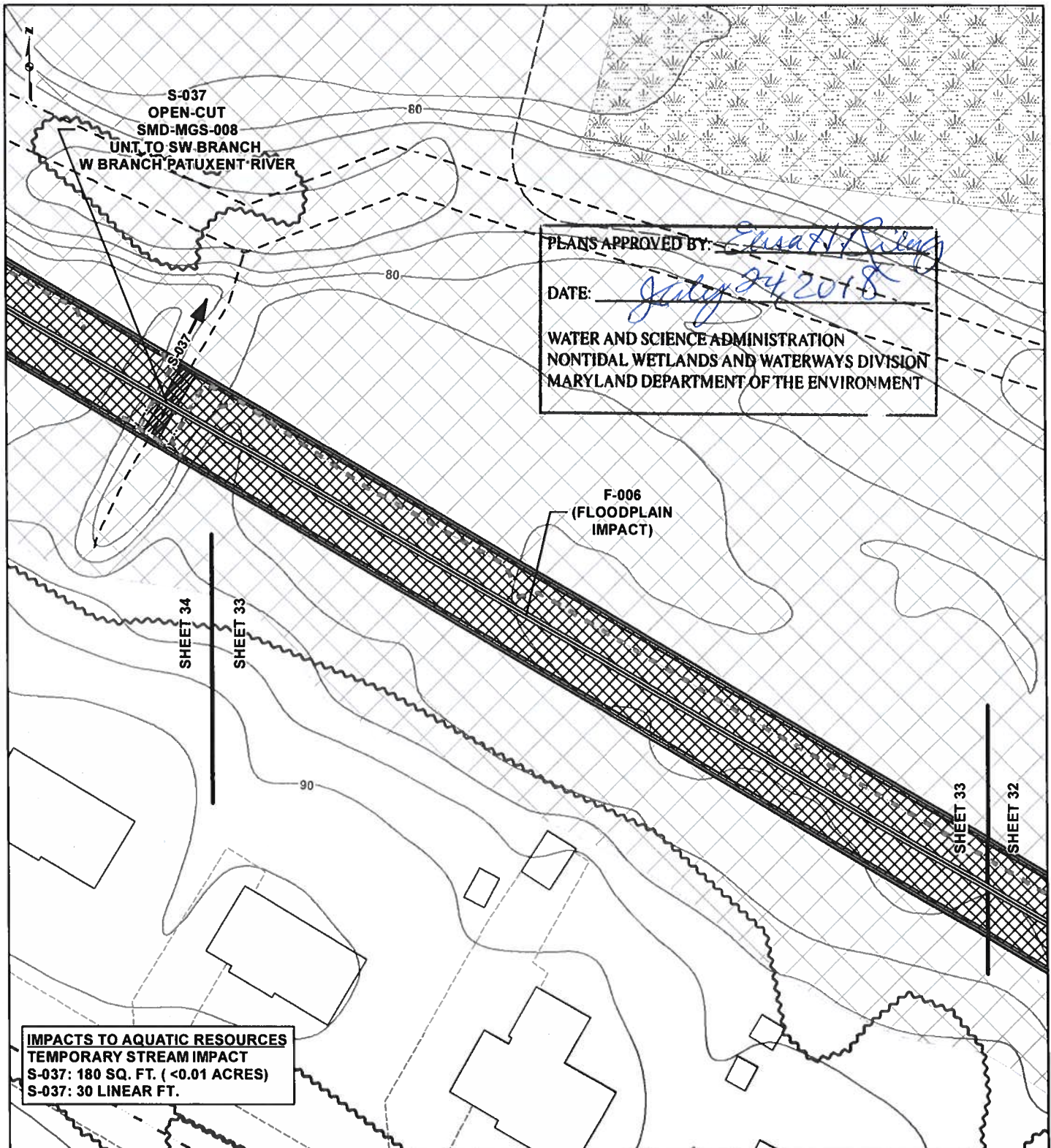
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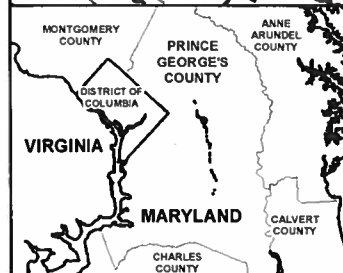




PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
— PERMANENT WETLAND IMPACT	
— TEMPORARY WETLAND IMPACT	

### FIGURE 3B PLAN VIEW MAP SHEET 33 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

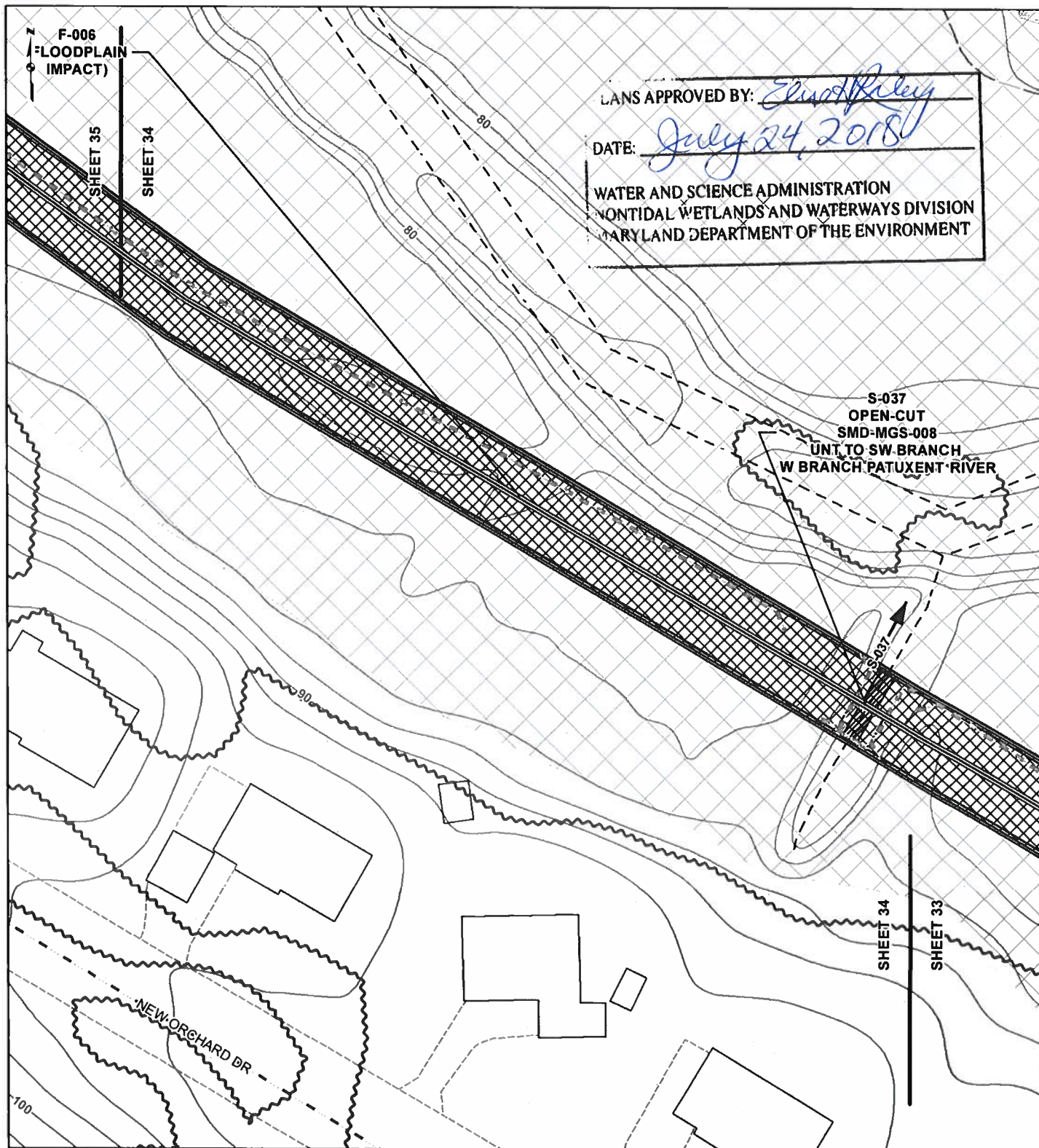
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APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHERFIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acquisition\GIS\WMD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd

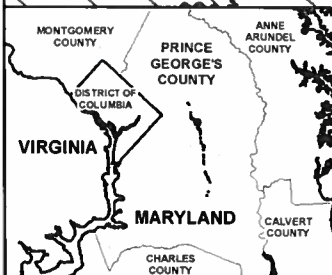




PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

S-037  
 OPEN-CUT  
 SMD-MGS-008  
 UNT. TO SW BRANCH  
 W BRANCH PATUXENT RIVER

SHEET 34  
 SHEET 33



- LEGEND**
- ▼ BORE LOCATION
  - CONVENTIONAL BORE
  - HDD
  - PROPOSED ROUTE
  - EROSION CONTROL DEVICE
  - SUPER SILT FENCE IN TIER II WATERSHED
  - STREAM
  - 2-FT CONTOUR
  - ROAD
  - BUILDING FOOTPRINT
  - EDGE OF ROAD
  - STREAM BOUNDARY IMPACT
  - PERMANENT WETLAND IMPACT
  - TEMPORARY WETLAND IMPACT
  - POND IMPACT
  - TIMBER MAT
  - WETLAND
  - POND
  - WETLAND BUFFER
  - PERMANENT WETLAND BUFFER IMPACT
  - TEMPORARY WETLAND BUFFER IMPACT
  - FLOODPLAIN IMPACT
  - 100-YEAR FLOODPLAIN
  - PERMANENT ROW
  - LIMIT OF DISTURBANCE
  - FOREST CANOPY

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 34 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

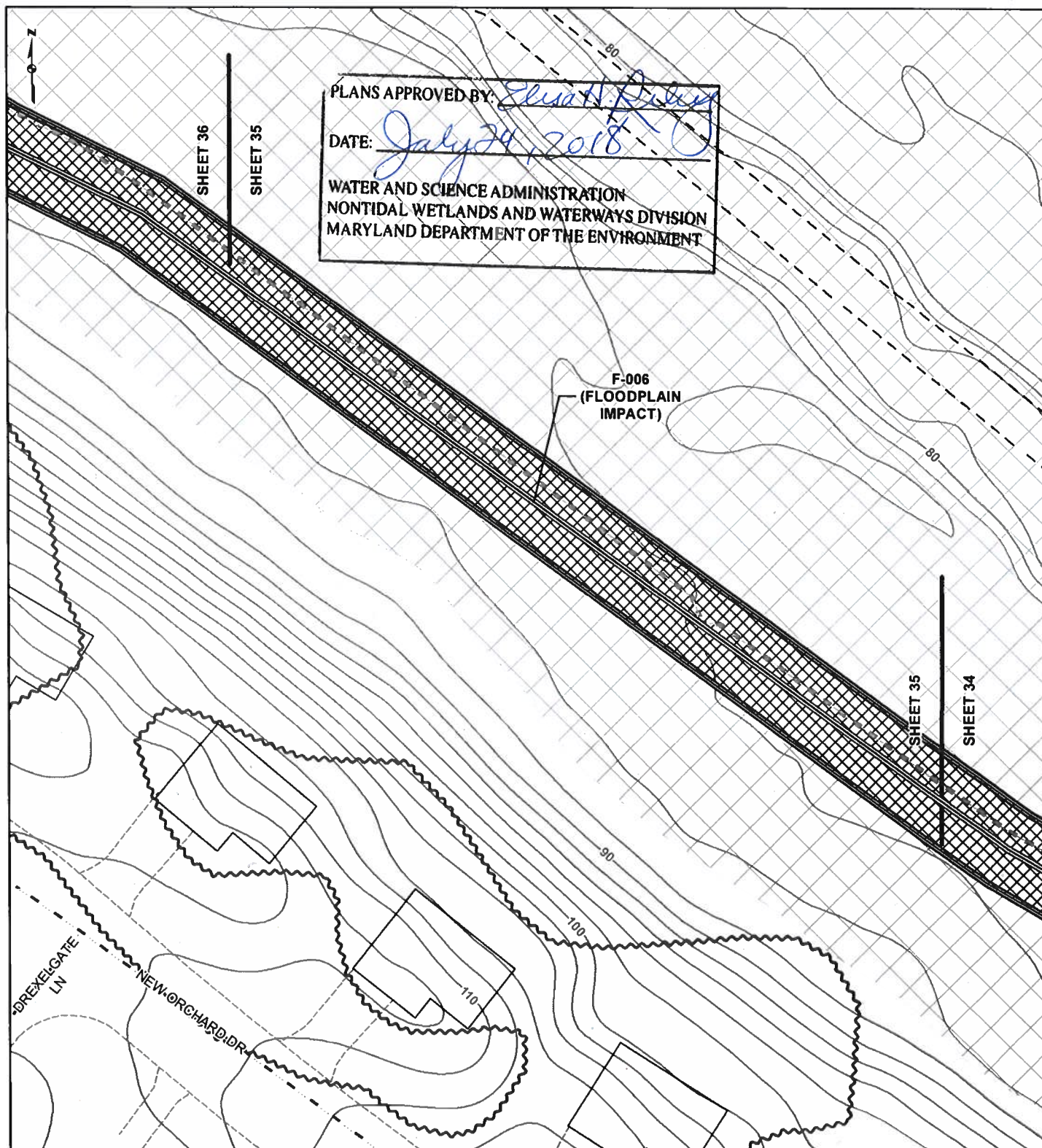
**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land AcquiGIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd





PLANS APPROVED BY: *[Signature]*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 35 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

DRAWN BY: JDP DATE: 6/18/2018  
 CHECKED: SWW APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acqui\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd



PLANS APPROVED BY: *Elisabeth Riley*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
CONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

S-038  
OPEN-CUT  
SMD-MGS-009  
UNT TO SW BRANCH  
W BRANCH PATUXENT RIVER

F-006  
(FLOODPLAIN  
IMPACT)

IMPACTS TO AQUATIC RESOURCES  
TEMPORARY STREAM IMPACT  
S-038: 398 SQ. FT. (0.01 ACRES)  
S-038: 33 LINEAR FT.



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
— PERMANENT WETLAND IMPACT	
— TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

### FIGURE 3B PLAN VIEW MAP SHEET 36 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

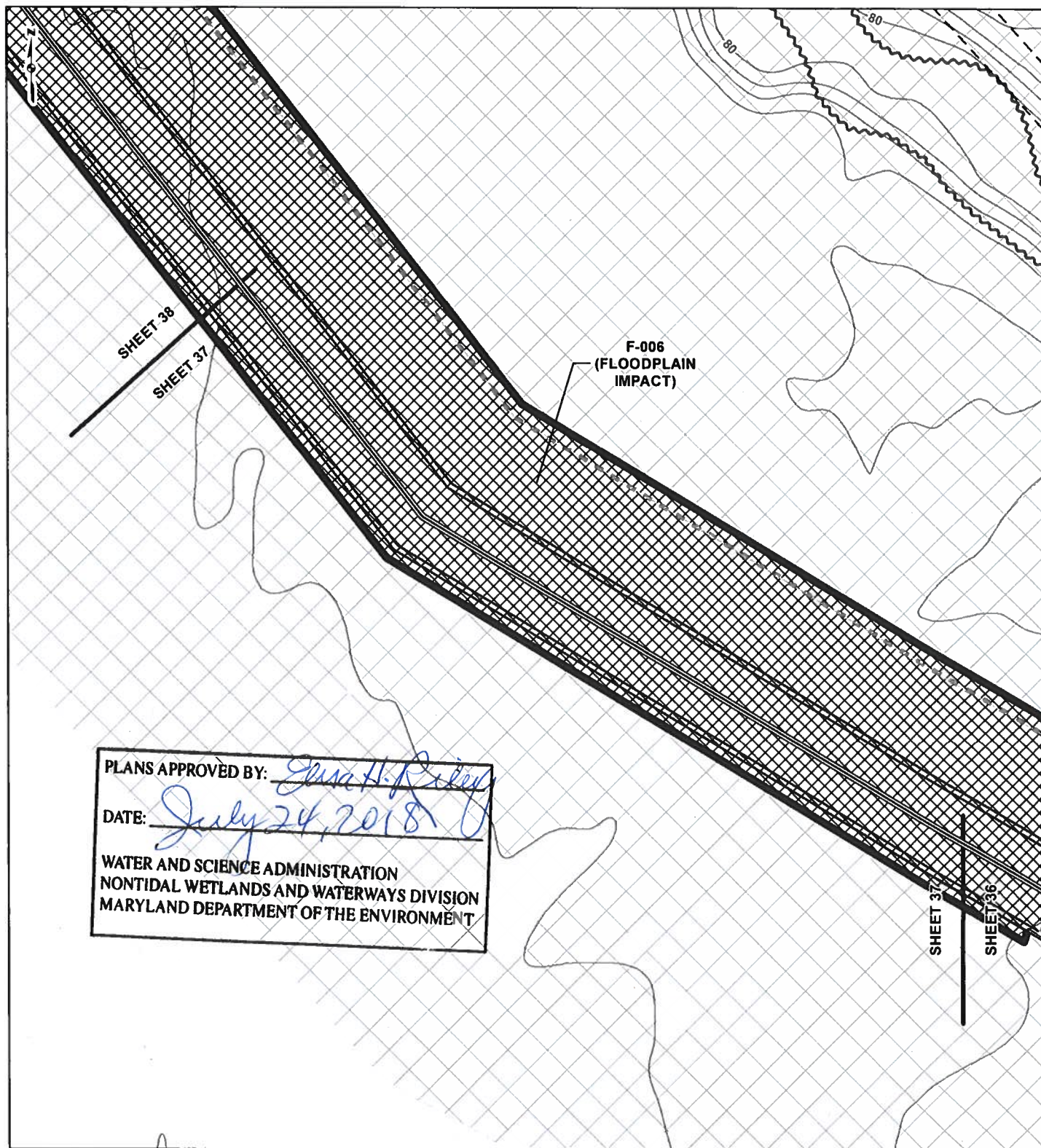
DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

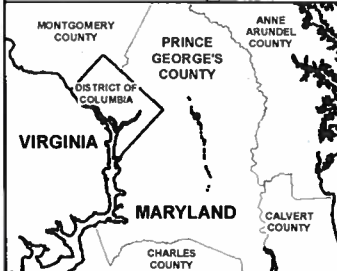
NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acqui\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd





PLANS APPROVED BY: *John H. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



- LEGEND**
- ▼ BORE LOCATION
  - CONVENTIONAL BORE
  - HDD
  - PROPOSED ROUTE
  - EROSION CONTROL DEVICE
  - SUPER SILT FENCE IN TIER II WATERSHED
  - STREAM
  - 2-FT CONTOUR
  - ROAD
  - BUILDING FOOTPRINT
  - EDGE OF ROAD
  - STREAM BOUNDARY IMPACT
  - PERMANENT WETLAND IMPACT
  - TEMPORARY WETLAND IMPACT
  - POND IMPACT
  - TIMBER MAT
  - WETLAND
  - POND
  - WETLAND BUFFER
  - PERMANENT WETLAND BUFFER IMPACT
  - TEMPORARY WETLAND BUFFER IMPACT
  - FLOODPLAIN IMPACT
  - 100-YEAR FLOODPLAIN
  - PERMANENT ROW
  - LIMIT OF DISTURBANCE
  - FOREST CANOPY

### FIGURE 3B PLAN VIEW MAP SHEET 37 OF 59

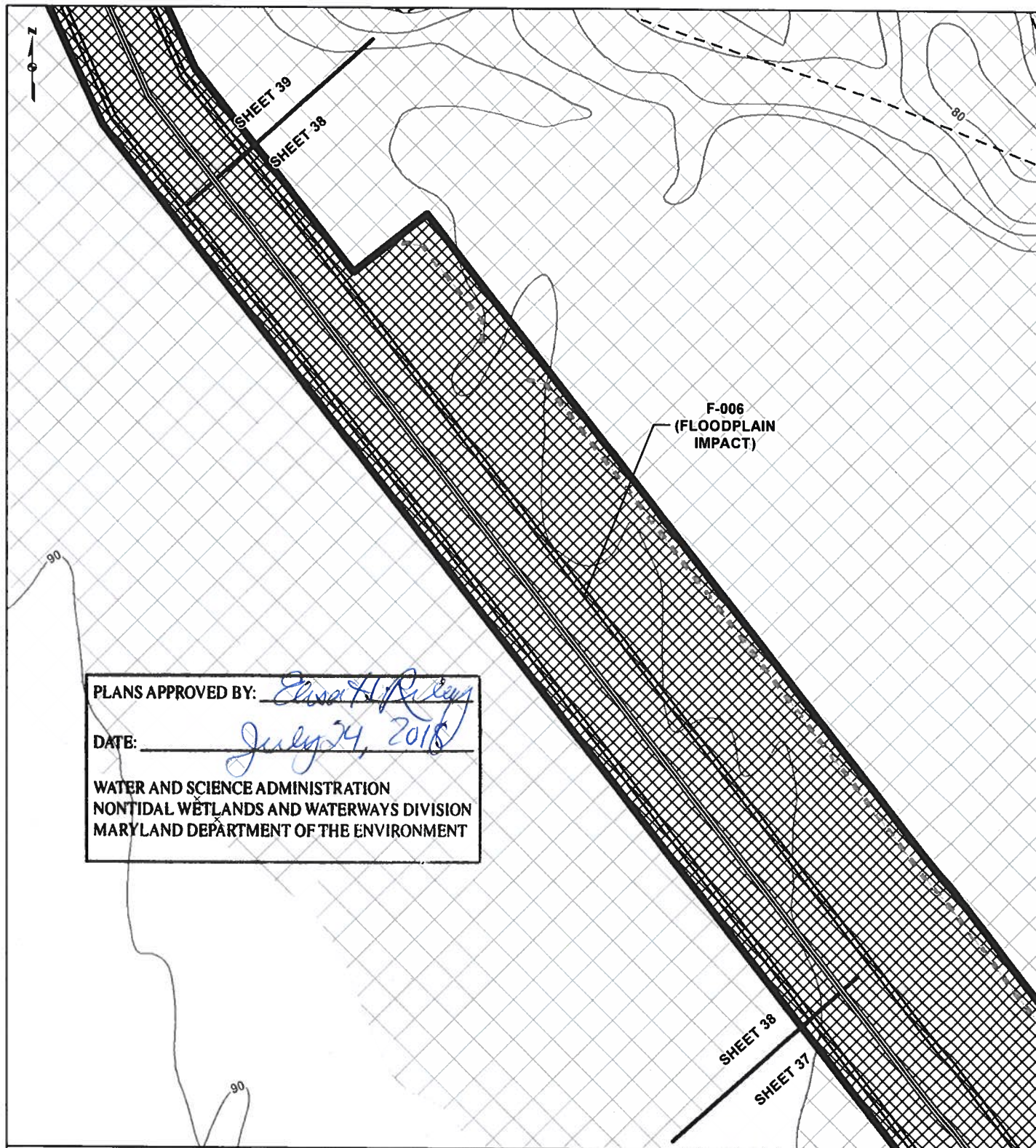
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP DATE: 6/18/2018  
 CHECKED: SWW APPROVED: RDM

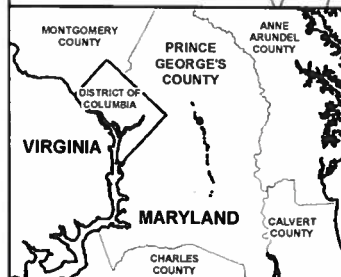
REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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PLANS APPROVED BY: *Elisa H. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	• WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

### FIGURE 3B PLAN VIEW MAP SHEET 38 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

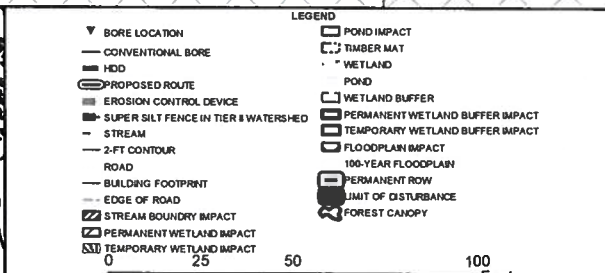
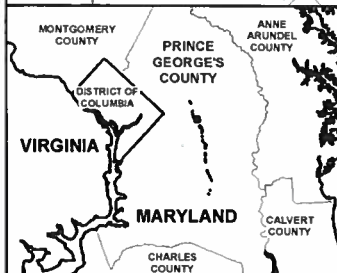
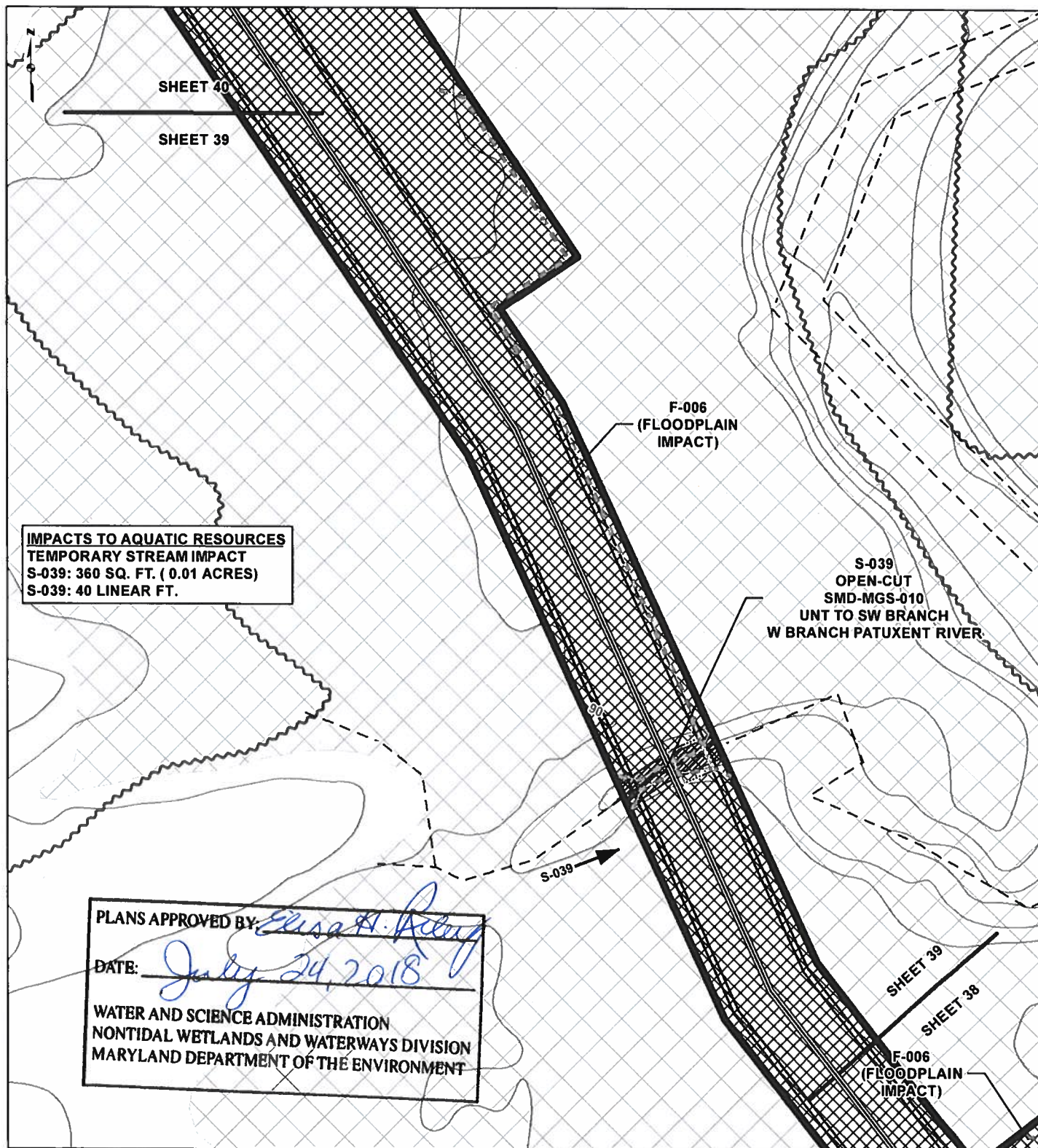
DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

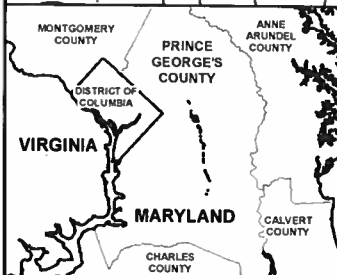
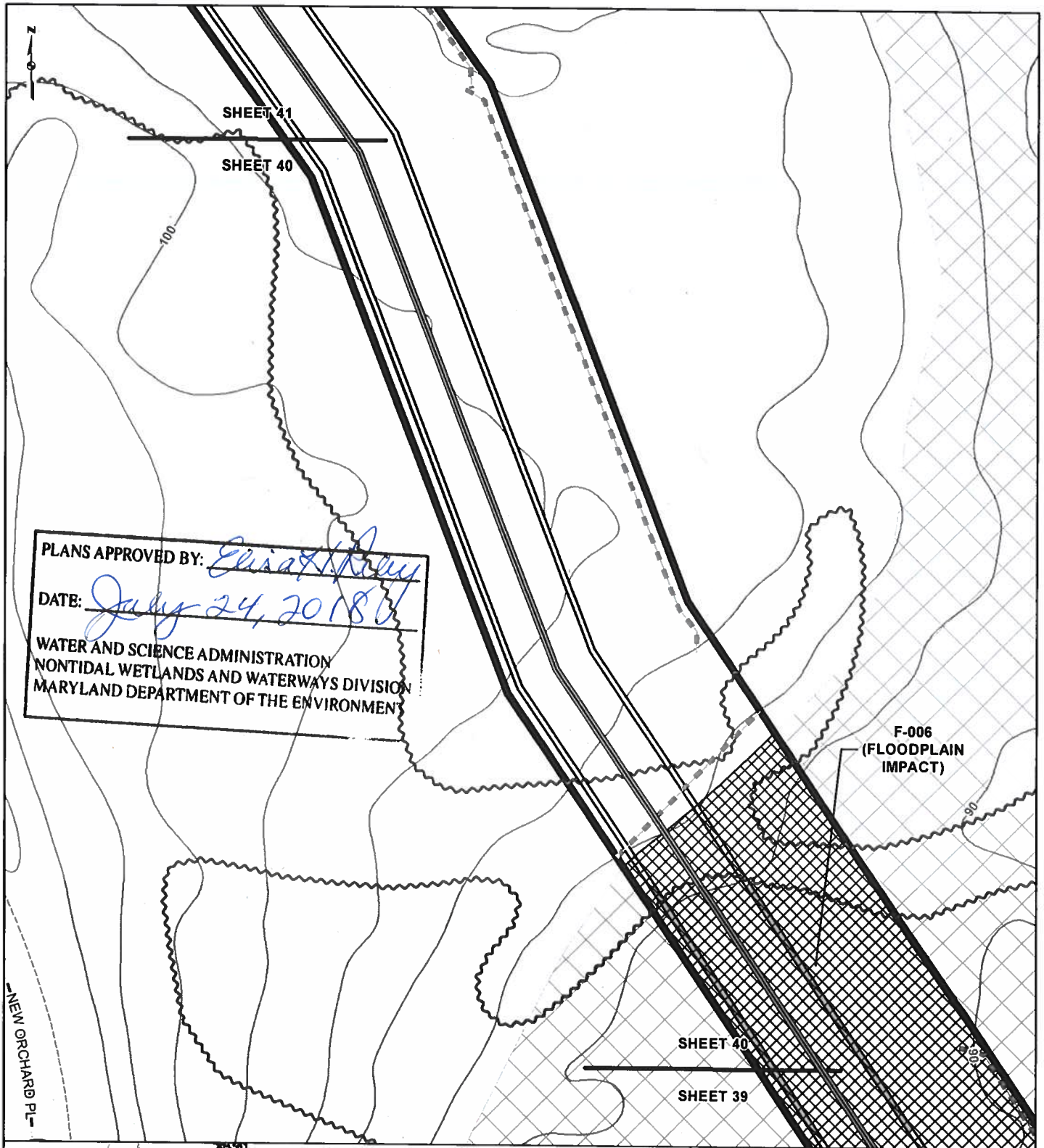




REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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▼ BORE LOCATION	LEGEND
— CONVENTIONAL BORE	□ POND IMPACT
— HDD	▨ TIMBER MAT
— PROPOSED ROUTE	▨ WETLAND
— EROSION CONTROL DEVICE	□ POND
— SUPER SILT FENCE IN TIER II WATERSHED	▨ WETLAND BUFFER
— STREAM	▨ PERMANENT WETLAND BUFFER IMPACT
— 2-FT CONTOUR	▨ TEMPORARY WETLAND BUFFER IMPACT
— ROAD	▨ FLOODPLAIN IMPACT
— BUILDING FOOTPRINT	▨ 100-YEAR FLOODPLAIN
— EDGE OF ROAD	▨ PERMANENT ROW
▨ STREAM BOUNDARY IMPACT	▨ LIMIT OF DISTURBANCE
▨ PERMANENT WETLAND IMPACT	▨ FOREST CANOPY
▨ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 40 OF 59**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

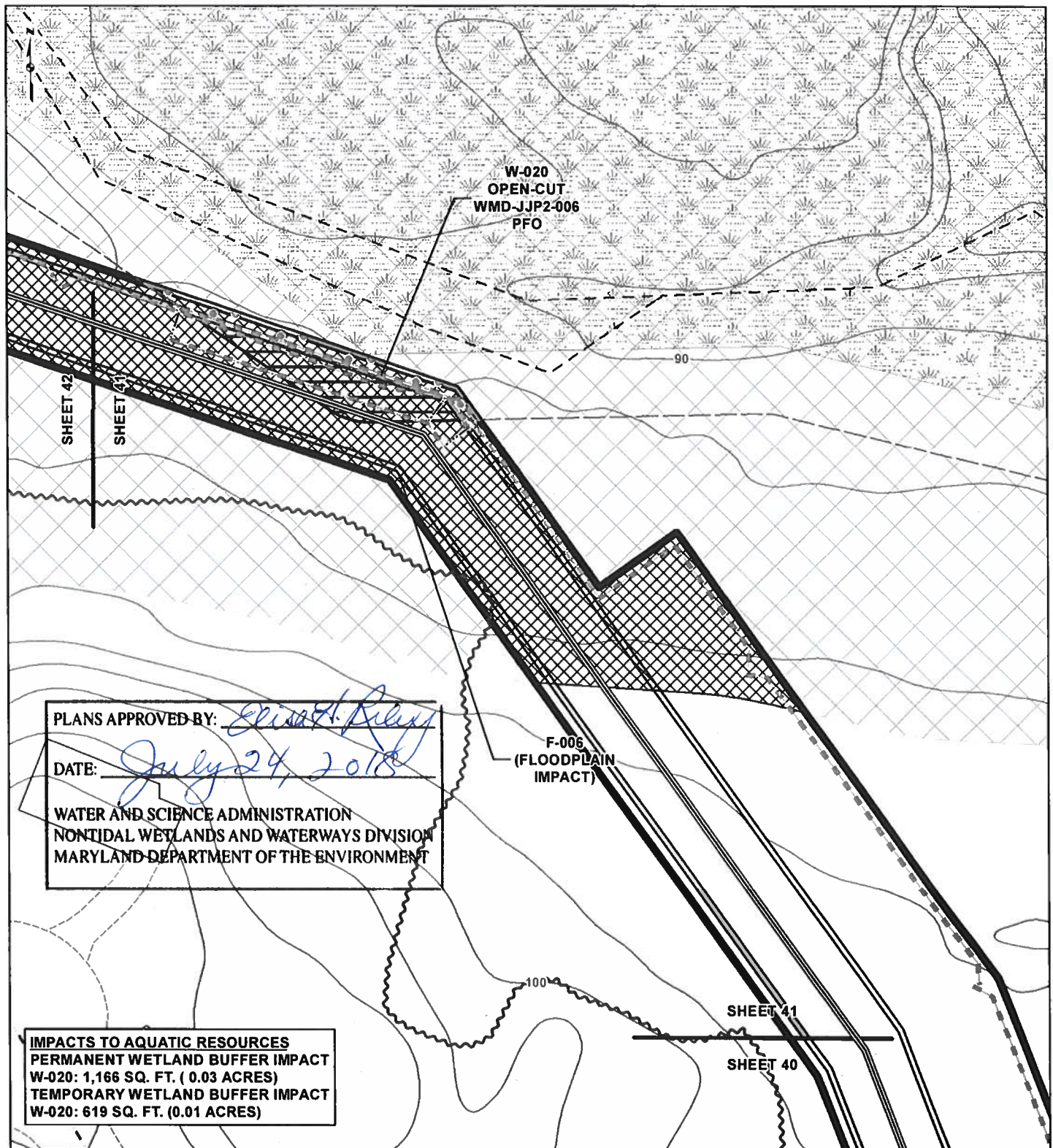
DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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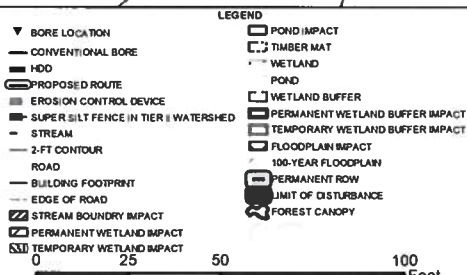
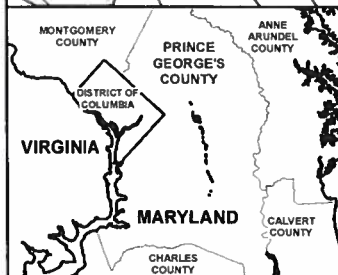


PLANS APPROVED BY:

DATE:

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

**IMPACTS TO AQUATIC RESOURCES**  
**PERMANENT WETLAND BUFFER IMPACT**  
**W-020: 1,166 SQ. FT. ( 0.03 ACRES)**  
**TEMPORARY WETLAND BUFFER IMPACT**  
**W-020: 619 SQ. FT. (0.01 ACRES)**



**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 41 OF 59**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

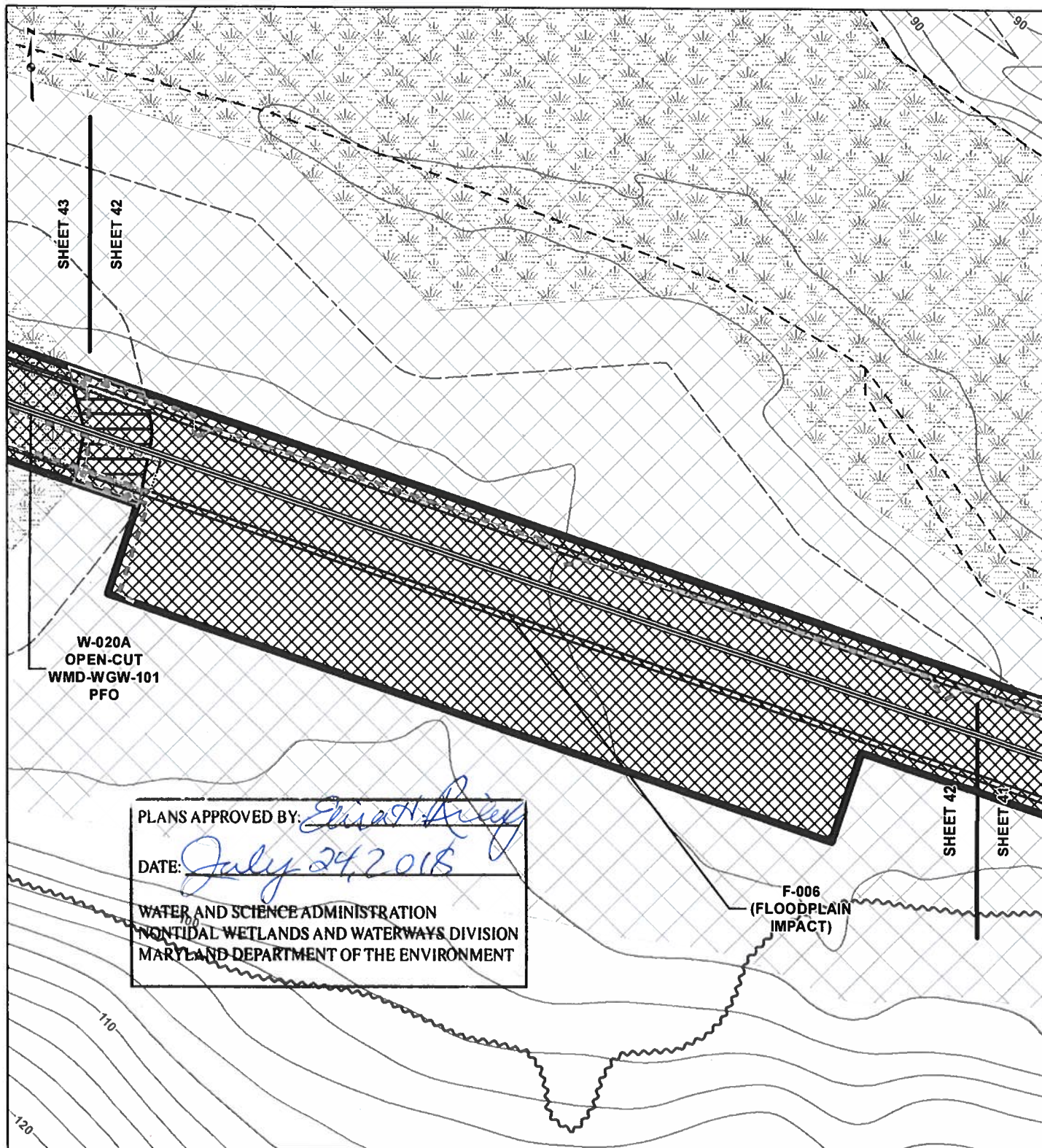
DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acquisition\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd





PLANS APPROVED BY: *Erica N. Riley*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 MONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
— PERMANENT WETLAND IMPACT	
— TEMPORARY WETLAND IMPACT	

**FIGURE 3B  
PLAN VIEW MAP  
SHEET 42 OF 59**

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

DRAWN BY: JDP      DATE: 6/18/2018  
 CHECKED: SWW      APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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Z:\Energy\2013\IC131838.00 - WGL - Strip 12 Land Acq\GIS\WMD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd



PLANS APPROVED BY: *Elisa H. Kelly*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT

W-020B  
OPEN-CUT  
WMD-WGW-102  
PFO

SHEET 43

SHEET 42

SHEET 44

SHEET 43

F-006  
(FLOODPLAIN  
IMPACT)

W-020A  
OPEN-CUT  
WMD-WGW-101  
PFO

#### IMPACTS TO AQUATIC RESOURCES

##### PERMANENT WETLAND BUFFER IMPACT

W-020A: 1,578 SQ. FT. ( 0.04 ACRES)

W-020B: 1,921 SQ. FT. ( 0.04 ACRES)

##### TEMPORARY WETLAND BUFFER IMPACT

W-020A: 532 SQ. FT. ( 0.01 ACRES)

W-020B: 531 SQ. FT. ( 0.01 ACRES)

##### TEMPORARY PFO WETLAND IMPACT

W-020A: 449 SQ.FT. (0.01 ACRES)

W-020B: 96 SQ.FT. (<0.01 ACRES)

##### PERMANENT WETLAND CONVERSION

W-020A: 1,387 SQ.FT. (0.03 ACRES)

W-020B: 228 SQ.FT. (0.01 ACRES)

**\*\* (NOTE: REPRESENTS IMPACTS TO THESE  
FEATURES, FROM SHEET 42 THRU SHEET 43)\*\***

### FIGURE 3B PLAN VIEW MAP SHEET 43 OF 59

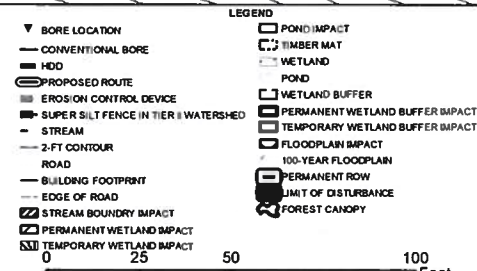
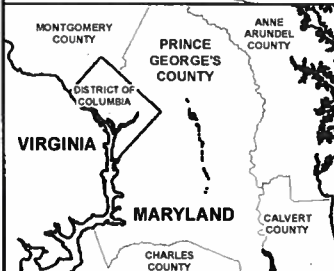
PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP

DATE: 6/18/2018

CHECKED: SWW

APPROVED: RDM

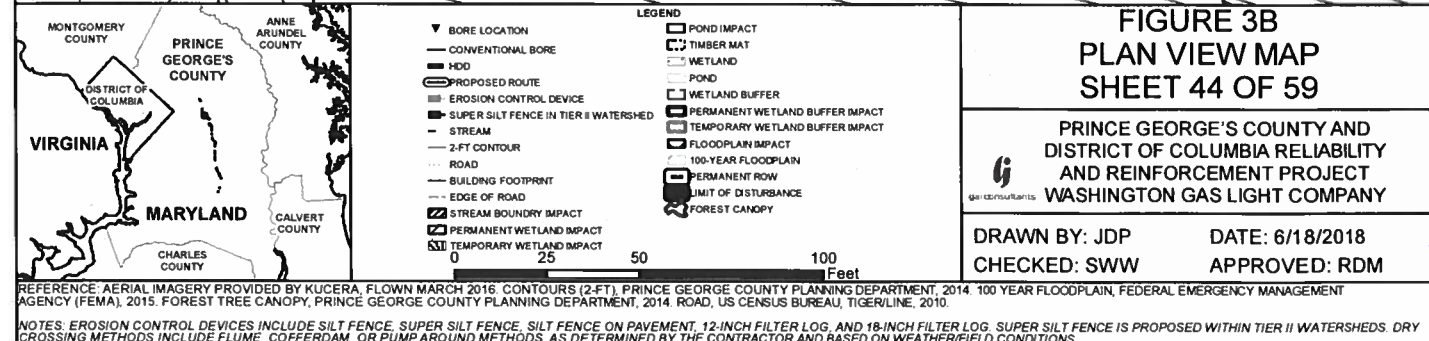
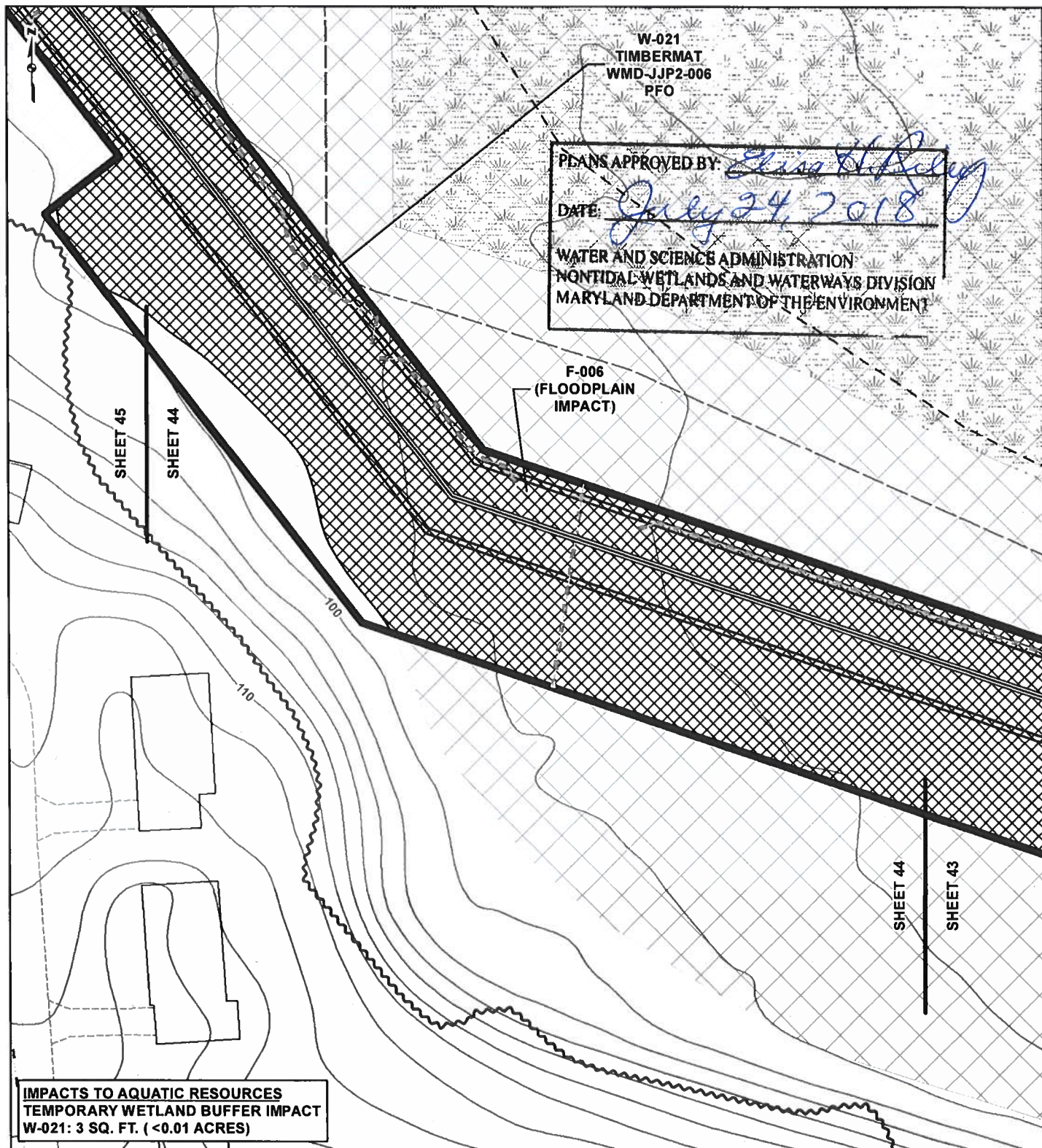


REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHERFIELD CONDITIONS.

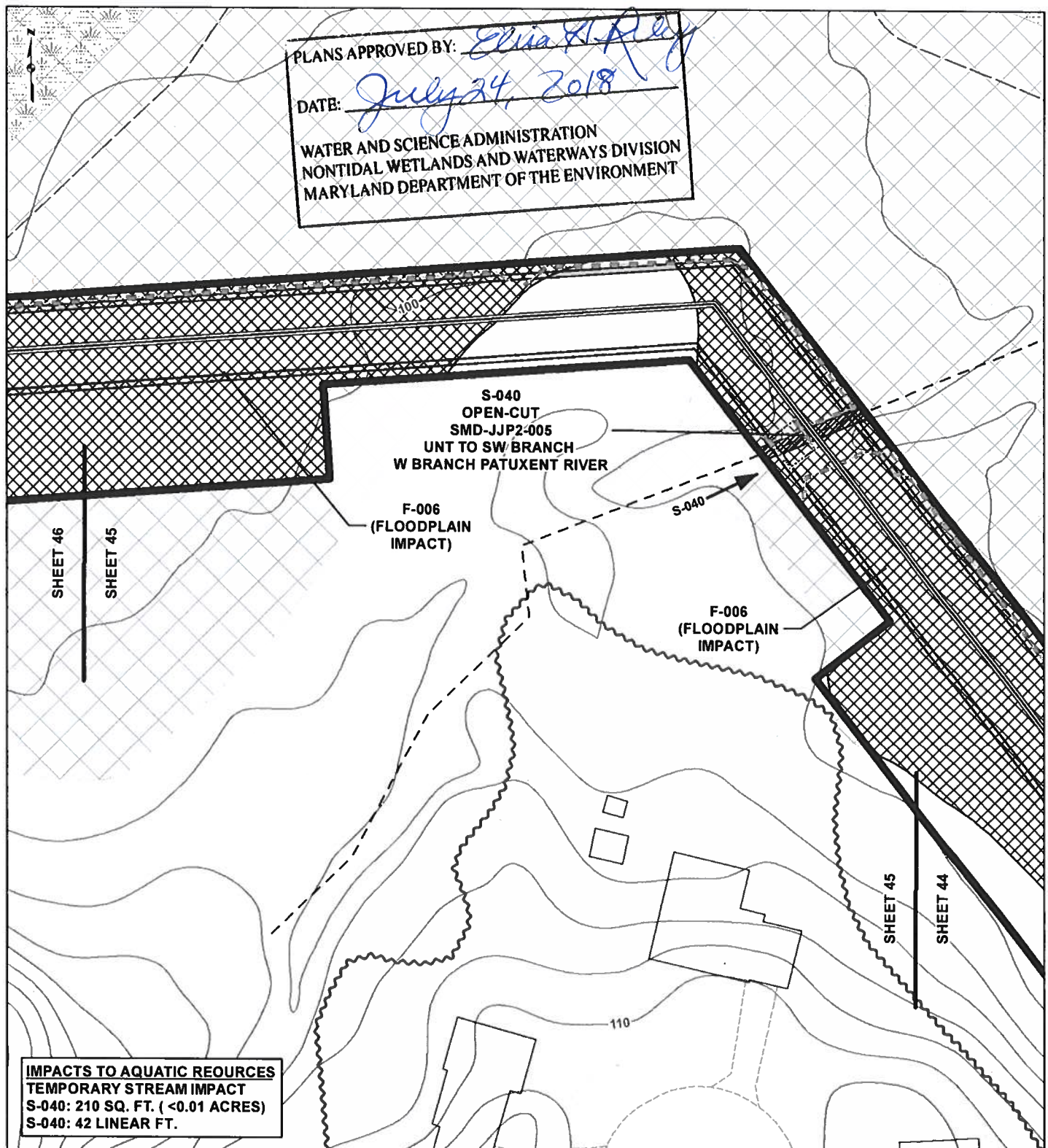
Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acqui\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd







PLANS APPROVED BY: *Elia R. Ray*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



**IMPACTS TO AQUATIC RESOURCES**  
**TEMPORARY STREAM IMPACT**  
 S-040: 210 SQ. FT. (<0.01 ACRES)  
 S-040: 42 LINEAR FT.



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	▤ TIMBER MAT
— HDD	• WETLAND
— PROPOSED ROUTE	□ POND
▨ EROSION CONTROL DEVICE	□ WETLAND BUFFER
▤ SUPER SILT FENCE IN TIER II WATERSHED	▤ PERMANENT WETLAND BUFFER IMPACT
— STREAM	▤ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	▤ FLOODPLAIN IMPACT
— ROAD	▤ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	▤ PERMANENT ROW
— EDGE OF ROAD	▤ LIMIT OF DISTURBANCE
▤ STREAM BOUNDARY IMPACT	▤ FOREST CANOPY
▤ PERMANENT WETLAND IMPACT	
▤ TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 45 OF 59**

**PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT**  
**WASHINGTON GAS LIGHT COMPANY**

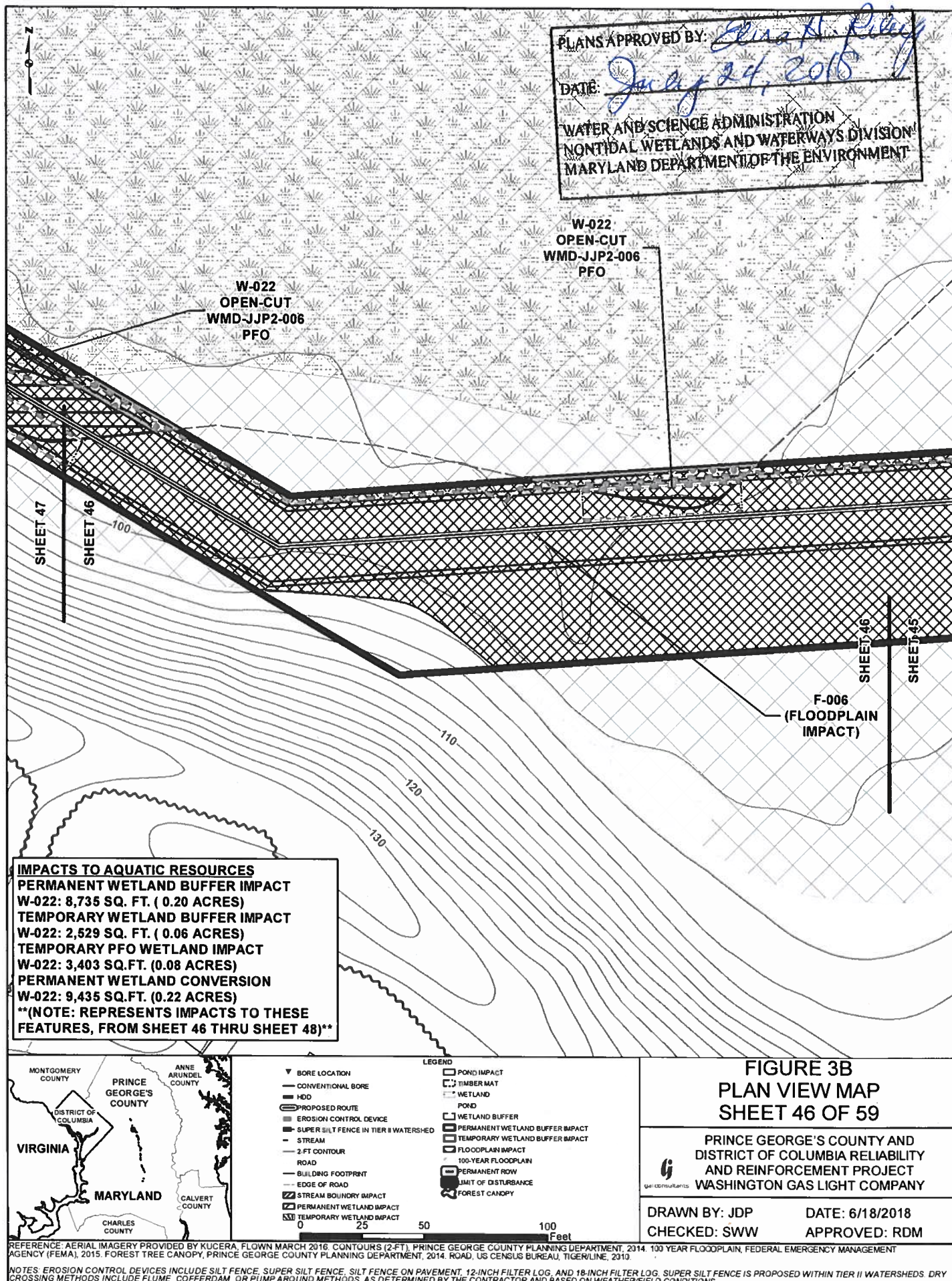
**DRAWN BY: JDP** **DATE: 6/18/2018**  
**CHECKED: SWW** **APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

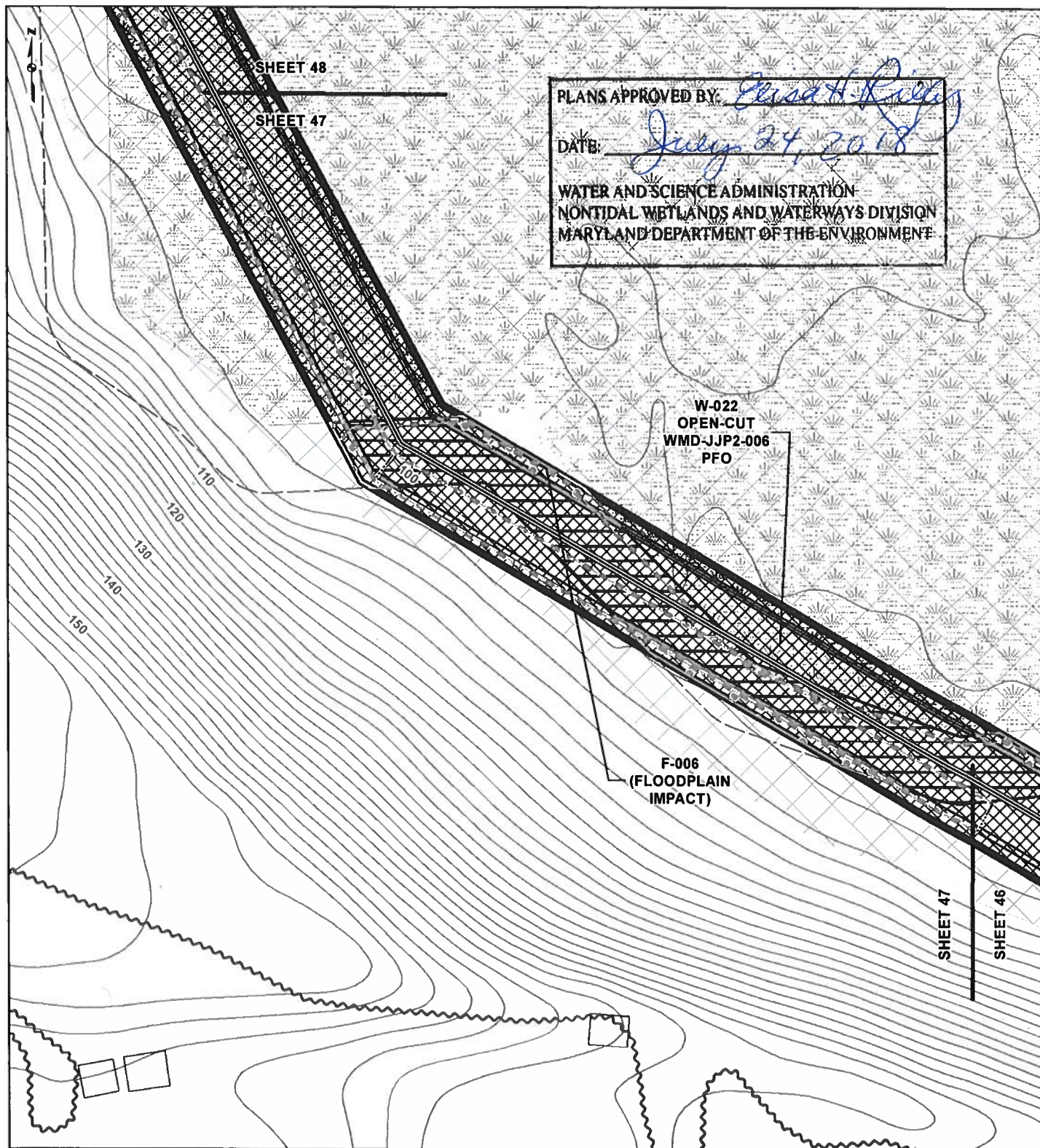
NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHERFIELD CONDITIONS.

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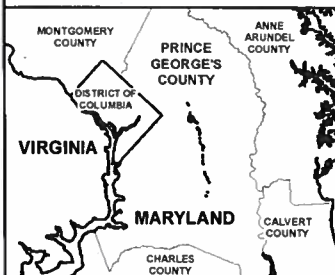
PLANS APPROVED BY: *Patricia H. Riden*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT

W-022  
 OPEN-CUT  
 WMD-JJP2-006  
 PFO

F-006  
 (FLOODPLAIN  
 IMPACT)

SHEET 47

SHEET 46



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
— PERMANENT WETLAND IMPACT	
— TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 47 OF 59**

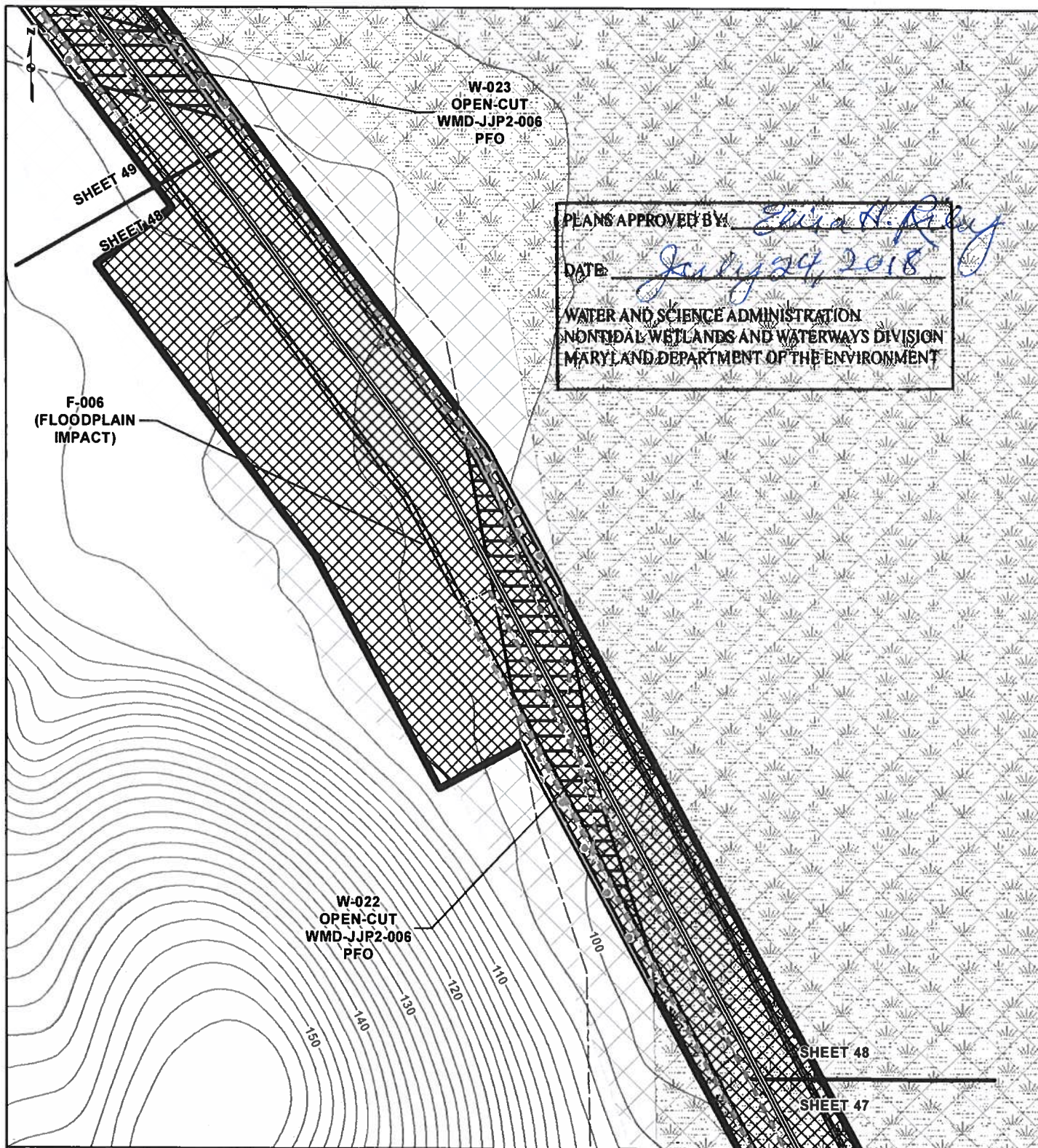
PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP DATE: 6/18/2018  
 CHECKED: SWW APPROVED: RDM

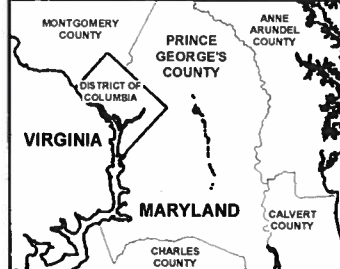
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PLANS APPROVED BY: Edna H. Riley  
 DATE: July 24, 2018  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HDD	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
— STREAM BOUNDARY IMPACT	□ FOREST CANOPY
— PERMANENT WETLAND IMPACT	
— TEMPORARY WETLAND IMPACT	
0 25 50 100 Feet	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 48 OF 59**

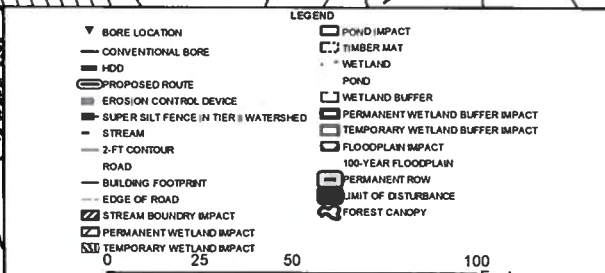
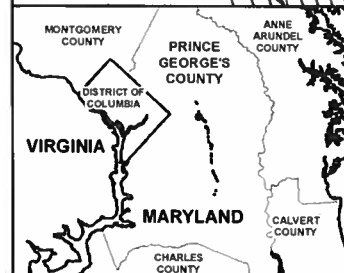
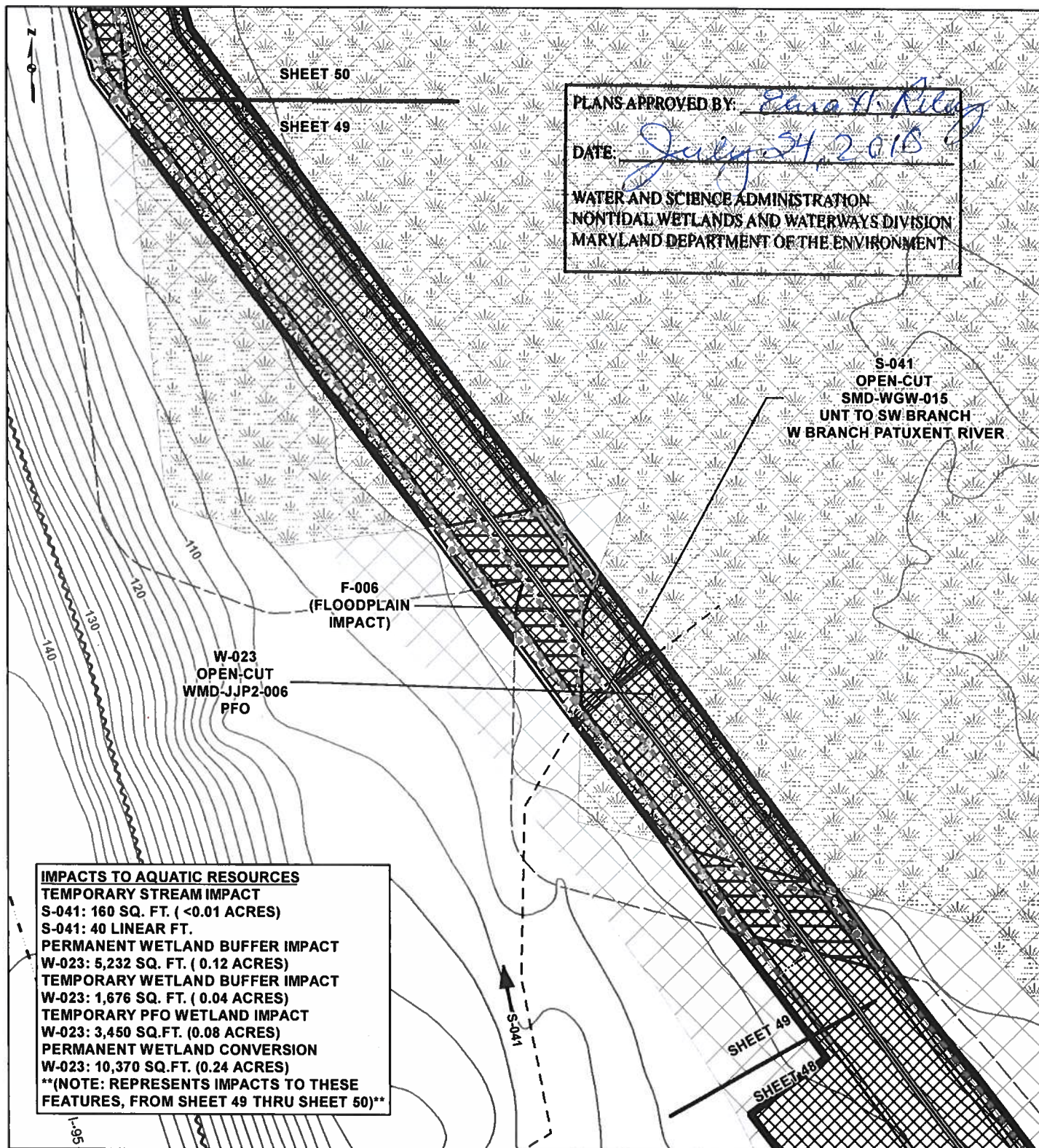
PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP DATE: 6/18/2018  
 CHECKED: SWW APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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**FIGURE 3B**  
**PLAN VIEW MAP**  
**SHEET 49 OF 59**

PRINCE GEORGE'S COUNTY AND DISTRICT OF COLUMBIA RELIABILITY AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

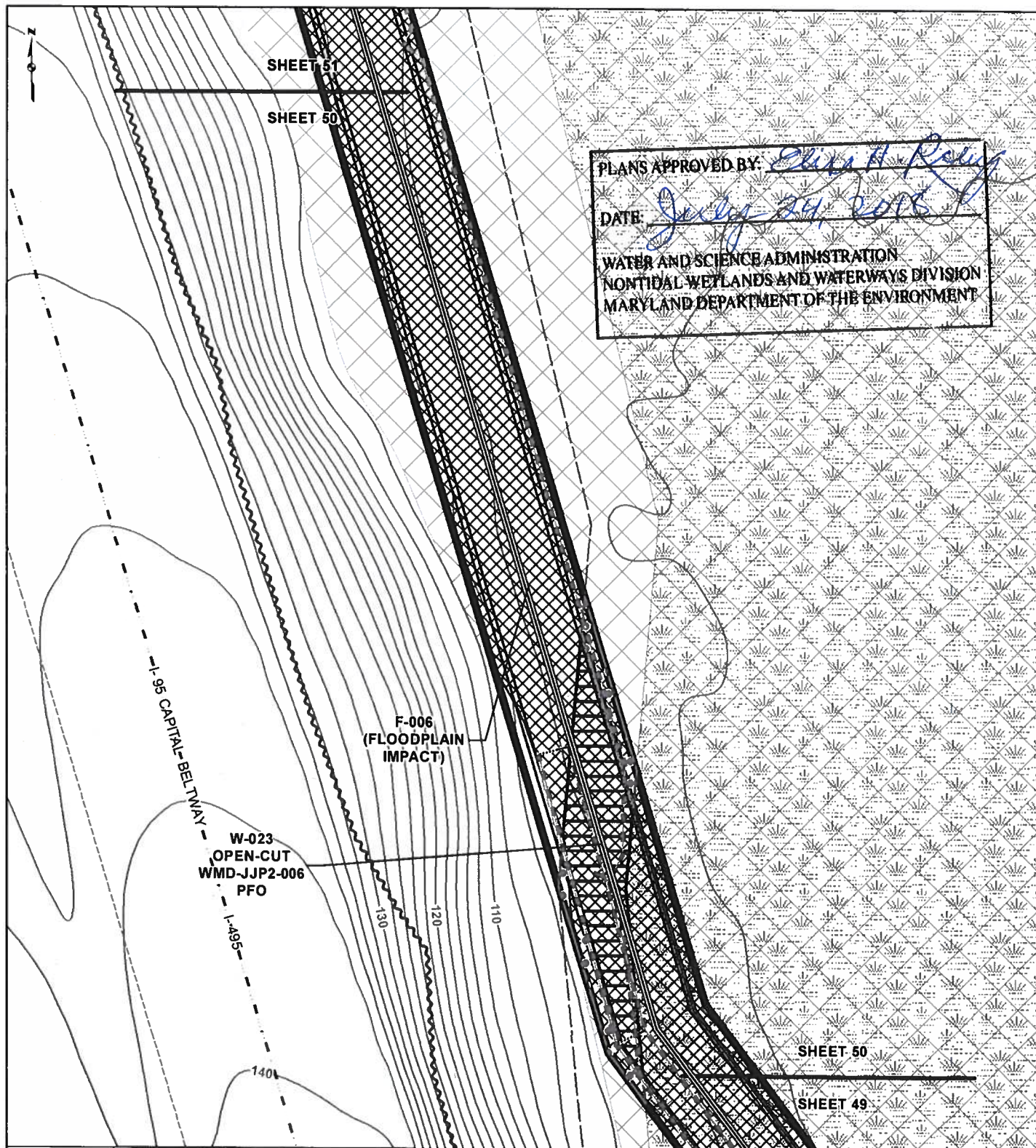
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 CHECKED: SWW

DATE: 6/18/2018  
 APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT.), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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PLANS APPROVED BY: *Shirley H. Roush*  
 DATE: *July 24, 2018*  
 WATER AND SCIENCE ADMINISTRATION  
 NONTIDAL WETLANDS AND WATERWAYS DIVISION  
 MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	▨ TIMBER MAT
— HDD	▨ WETLAND
— PROPOSED ROUTE	□ POND
▨ EROSION CONTROL DEVICE	▨ WETLAND BUFFER
▨ SUPER SILT FENCE IN TIER II WATERSHED	▨ PERMANENT WETLAND BUFFER IMPACT
— STREAM	▨ TEMPORARY WETLAND BUFFER IMPACT
— 3-FT CONTOUR	▨ FLOODPLAIN IMPACT
— ROAD	▨ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	▨ PERMANENT ROW
— EDGE OF ROAD	▨ LIMIT OF DISTURBANCE
▨ STREAM BOUNDARY IMPACT	▨ FOREST CANOPY
▨ PERMANENT WETLAND IMPACT	
▨ TEMPORARY WETLAND IMPACT	

**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 50 OF 59**

PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY

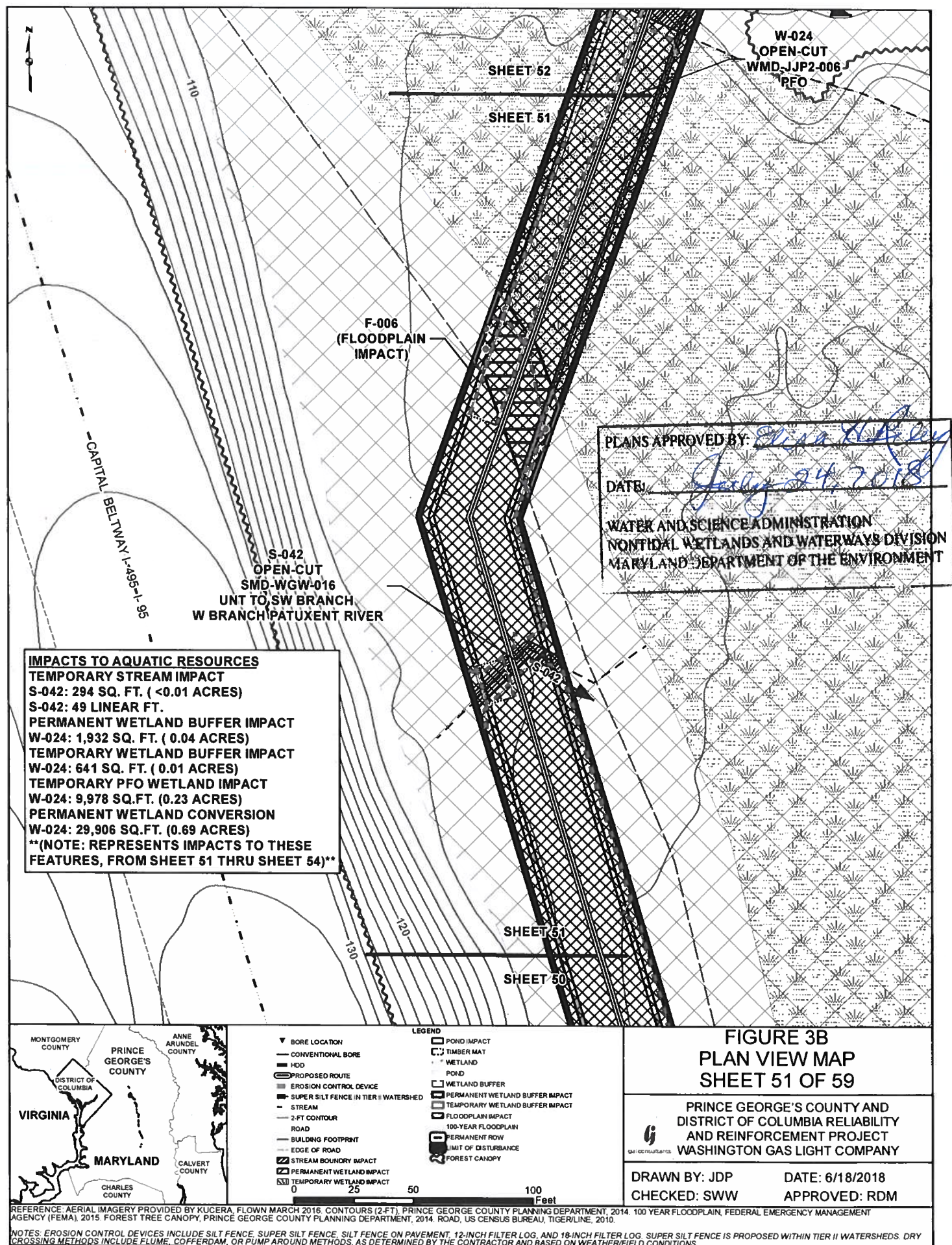
DRAWN BY: JDP  
 CHECKED: SWW  
 DATE: 6/18/2018  
 APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016; CONTOURS (2-FT) PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; 100-YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015; FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014; ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

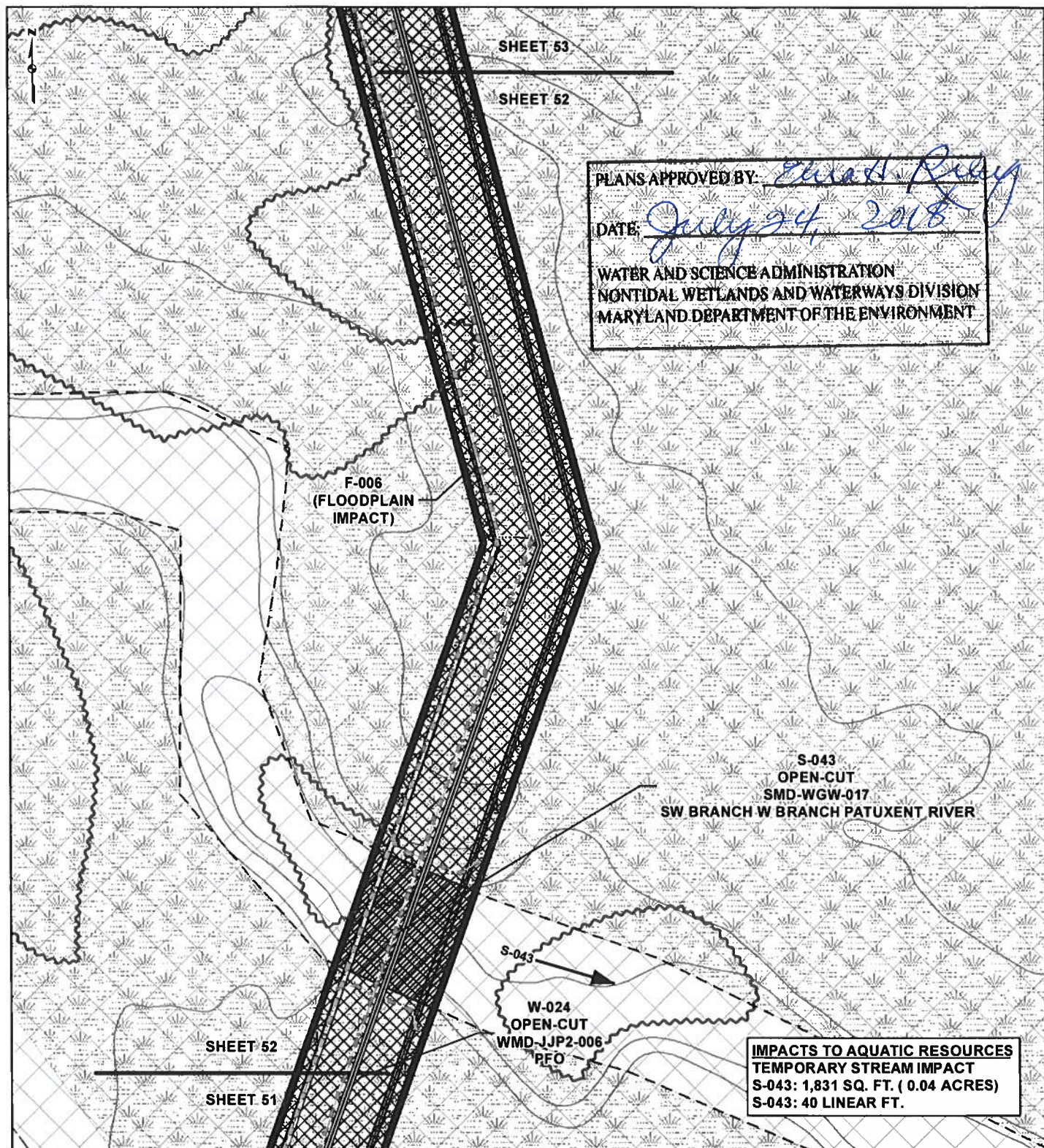
NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acquisition\GIS\WMD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd









<ul style="list-style-type: none"> <li>▼ BORE LOCATION</li> <li>— CONVENTIONAL BORE</li> <li>— HDD</li> <li>— PROPOSED ROUTE</li> <li>— EROSION CONTROL DEVICE</li> <li>— SUPER SILT FENCE IN TIER II WATERSHED</li> <li>— STREAM</li> <li>— 2-FT CONTOUR</li> <li>— ROAD</li> <li>— BUILDING FOOTPRINT</li> <li>— EDGE OF ROAD</li> <li>— STREAM BOUNDARY IMPACT</li> <li>— PERMANENT WETLAND IMPACT</li> <li>— TEMPORARY WETLAND IMPACT</li> </ul>	<ul style="list-style-type: none"> <li>□ POND IMPACT</li> <li>□ TIMBER MAT</li> <li>□ WETLAND</li> <li>□ POND</li> <li>□ WETLAND BUFFER</li> <li>□ PERMANENT WETLAND BUFFER IMPACT</li> <li>□ TEMPORARY WETLAND BUFFER IMPACT</li> <li>□ FLOODPLAIN IMPACT</li> <li>□ 100-YEAR FLOODPLAIN</li> <li>□ PERMANENT ROW</li> <li>□ LIMIT OF DISTURBANCE</li> <li>□ FOREST CANOPY</li> </ul>
--	--

**FIGURE 3B  
PLAN VIEW MAP  
SHEET 52 OF 59**

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

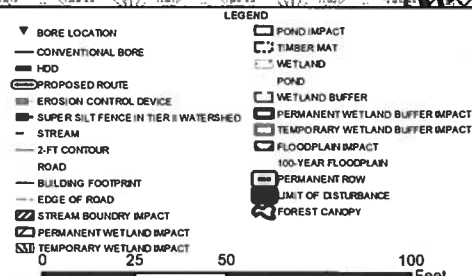
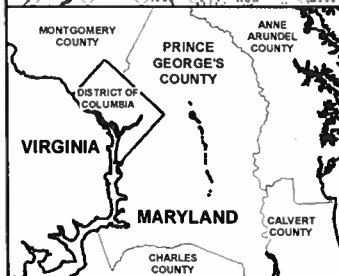
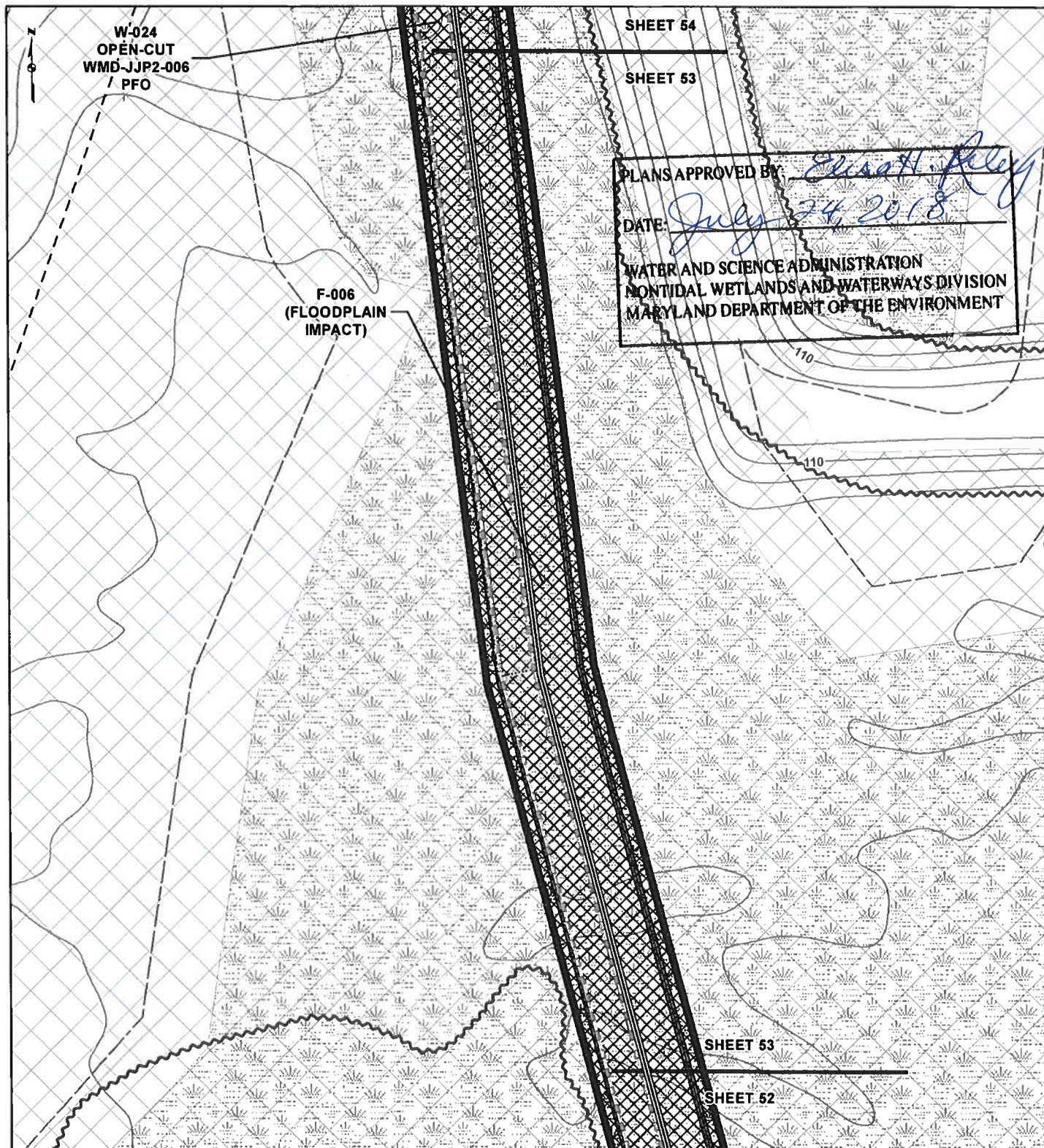
**DRAWN BY: JDP  
CHECKED: SWW**

**DATE: 6/18/2018  
APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGER/LINE, 2010.

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### FIGURE 3B PLAN VIEW MAP SHEET 53 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

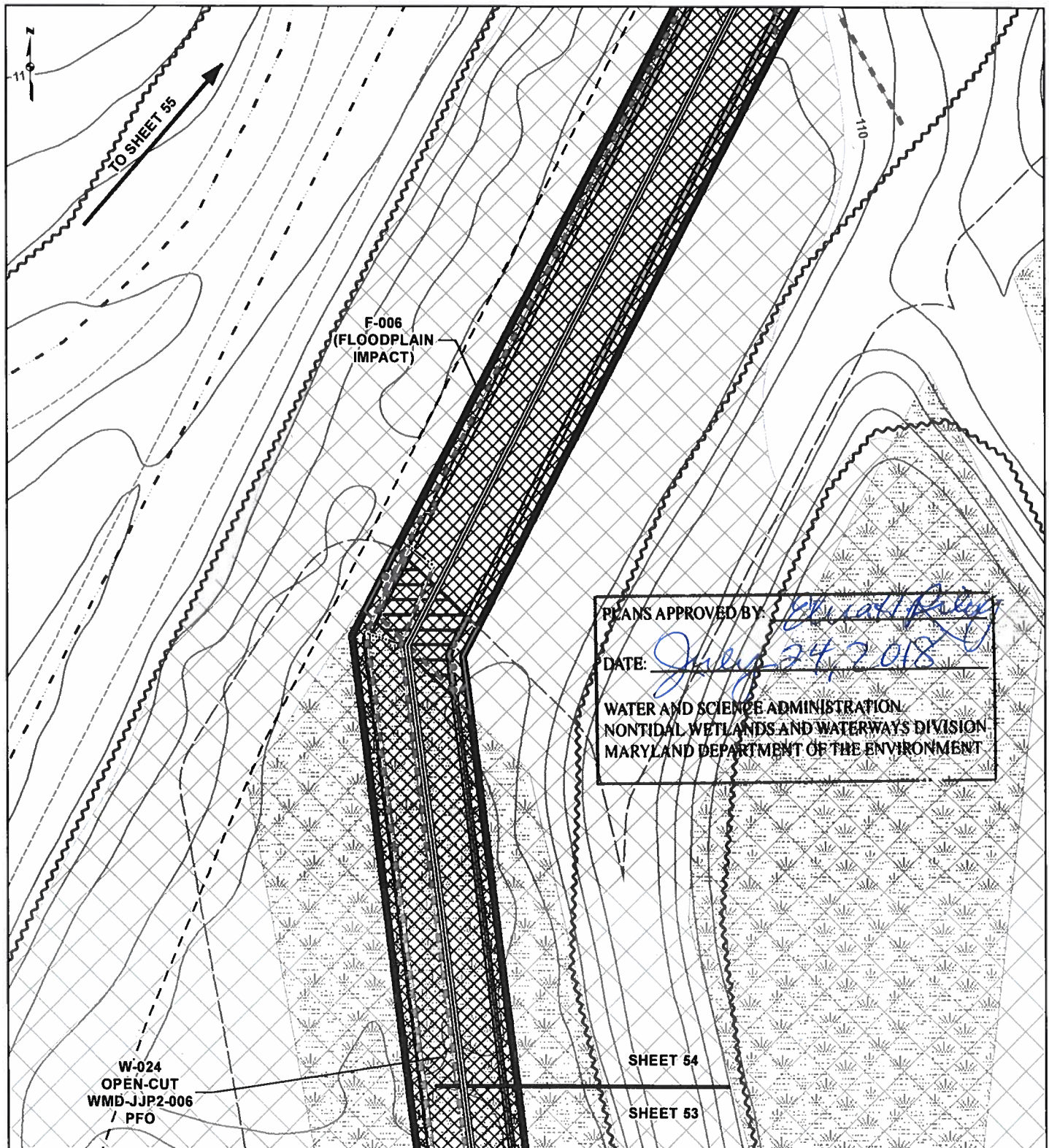
DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

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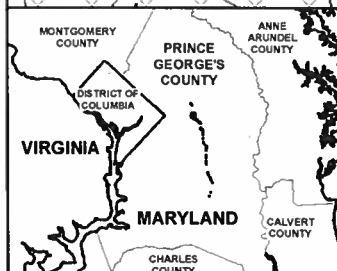




PLANS APPROVED BY: *[Signature]*

DATE: *July 24, 2018*

WATER AND SCIENCE ADMINISTRATION  
NONTIDAL WETLANDS AND WATERWAYS DIVISION  
MARYLAND DEPARTMENT OF THE ENVIRONMENT



LEGEND	
▼ BORE LOCATION	□ POND IMPACT
— CONVENTIONAL BORE	□ TIMBER MAT
— HOO	□ WETLAND
— PROPOSED ROUTE	□ POND
— EROSION CONTROL DEVICE	□ WETLAND BUFFER
— SUPER SILT FENCE IN TIER II WATERSHED	□ PERMANENT WETLAND BUFFER IMPACT
— STREAM	□ TEMPORARY WETLAND BUFFER IMPACT
— 2-FT CONTOUR	□ FLOODPLAIN IMPACT
— ROAD	□ 100-YEAR FLOODPLAIN
— BUILDING FOOTPRINT	□ PERMANENT ROW
— EDGE OF ROAD	□ LIMIT OF DISTURBANCE
□ STREAM BOUNDARY IMPACT	□ FOREST CANOPY
□ PERMANENT WETLAND IMPACT	
□ TEMPORARY WETLAND IMPACT	
0 25 50 100	Feet

### FIGURE 3B PLAN VIEW MAP SHEET 54 OF 59

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

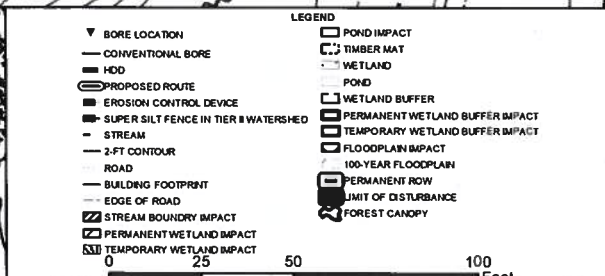
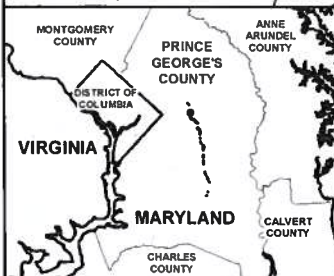
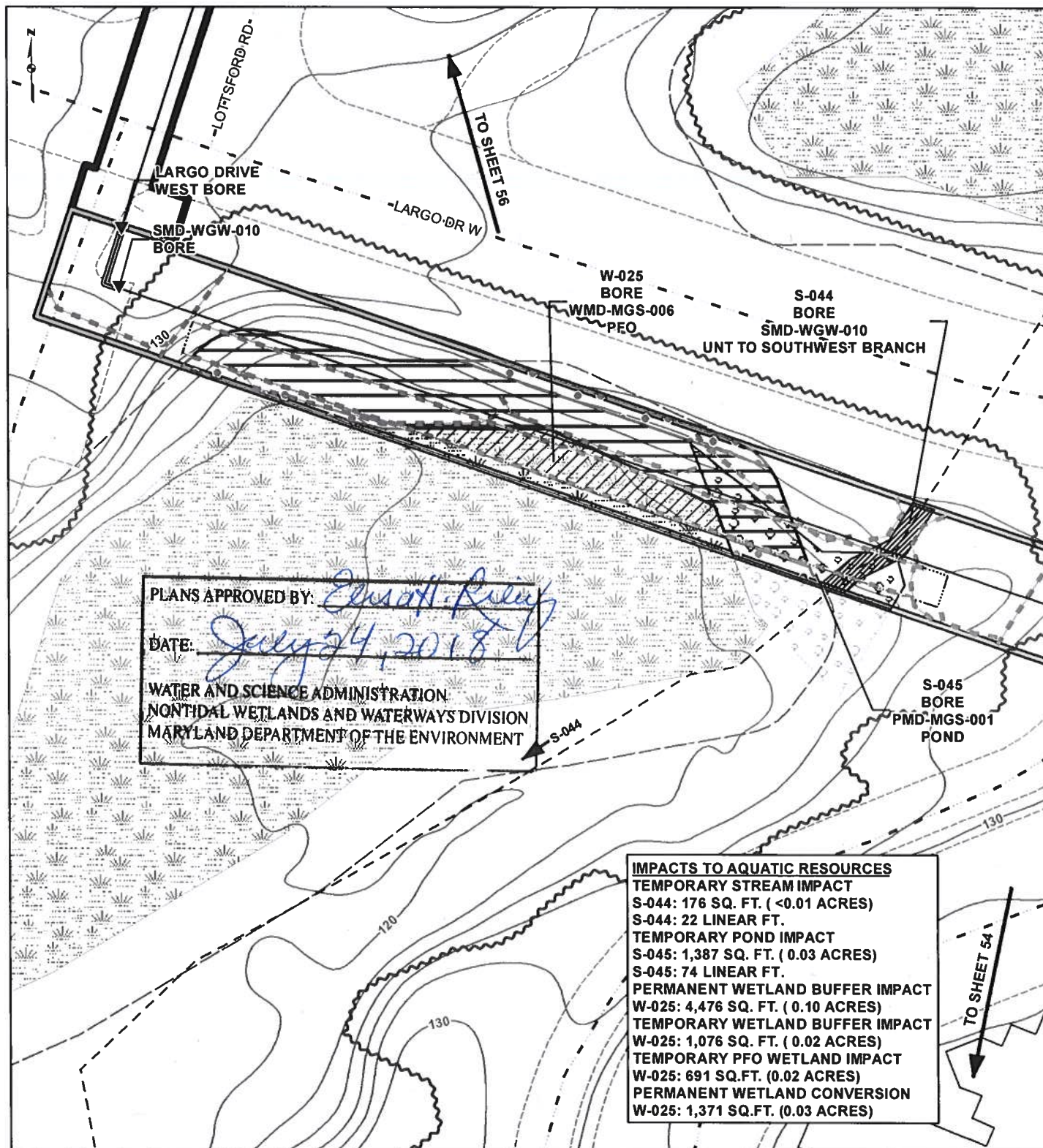
DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2018. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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Z:\Energy\2013\IC131838.00 - WGL - Strip 12 Land AcquiGIS\WMD\JJP2\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd





REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT), PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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Z:\Energy\2013\131838.00 - WGL - Strip 12 Land AcquiGIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd

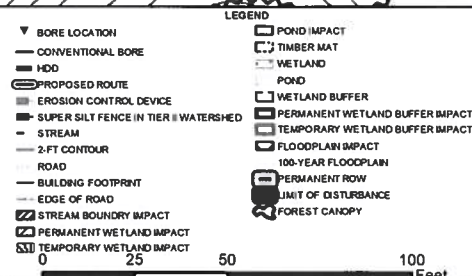
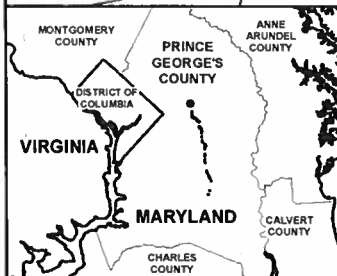
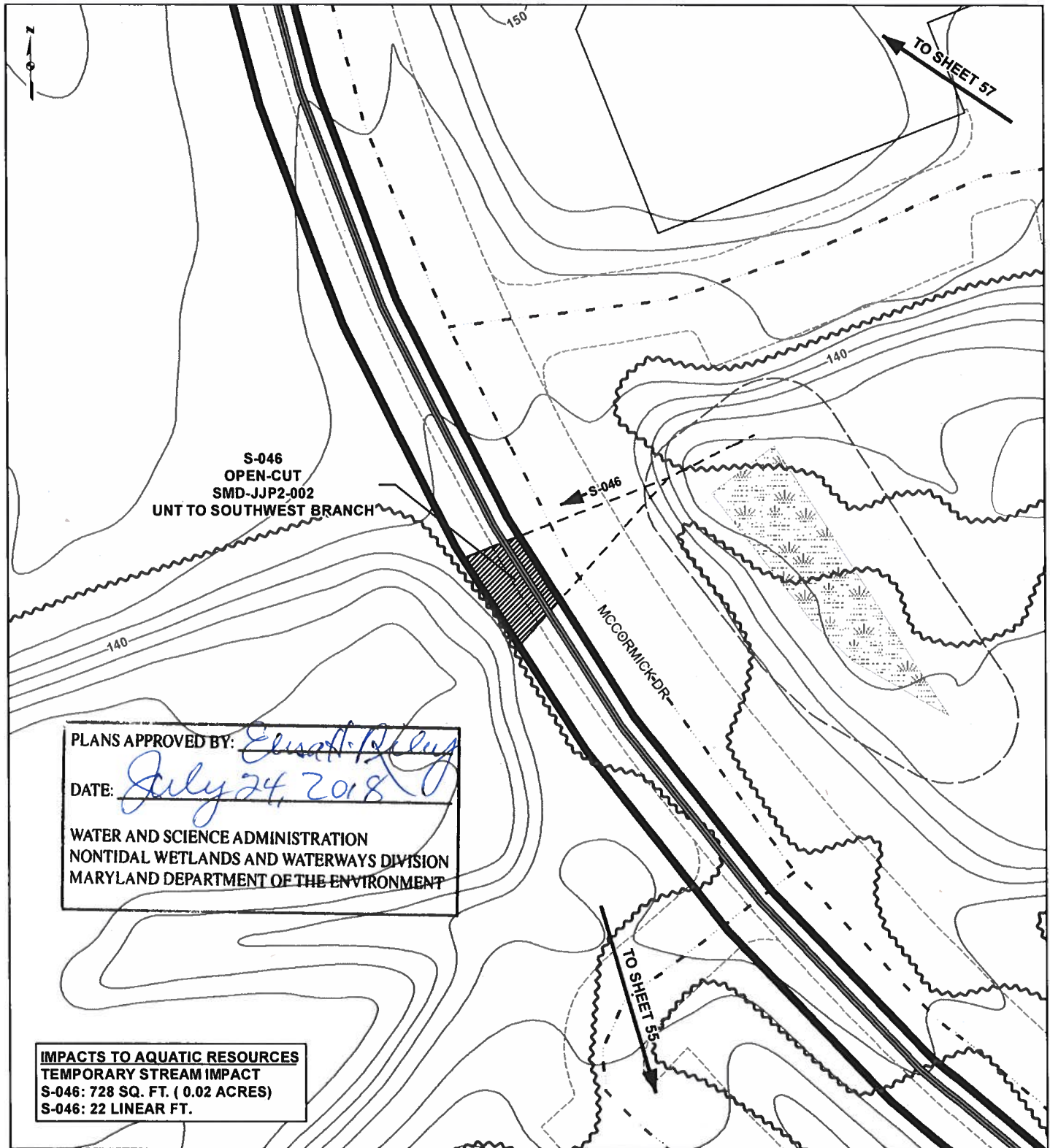
**FIGURE 3B  
PLAN VIEW MAP  
SHEET 55 OF 59**

**PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY**

**DRAWN BY: JDP  
CHECKED: SWW**

**DATE: 6/18/2018  
APPROVED: RDM**





**FIGURE 3B  
 PLAN VIEW MAP  
 SHEET 56 OF 59**

**PRINCE GEORGE'S COUNTY AND  
 DISTRICT OF COLUMBIA RELIABILITY  
 AND REINFORCEMENT PROJECT  
 WASHINGTON GAS LIGHT COMPANY**

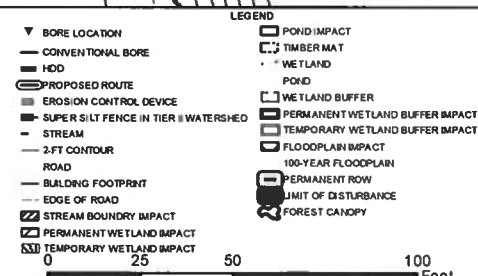
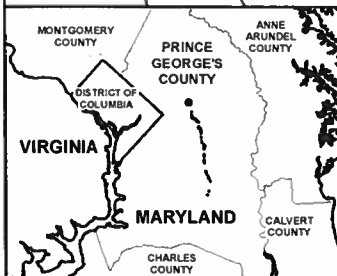
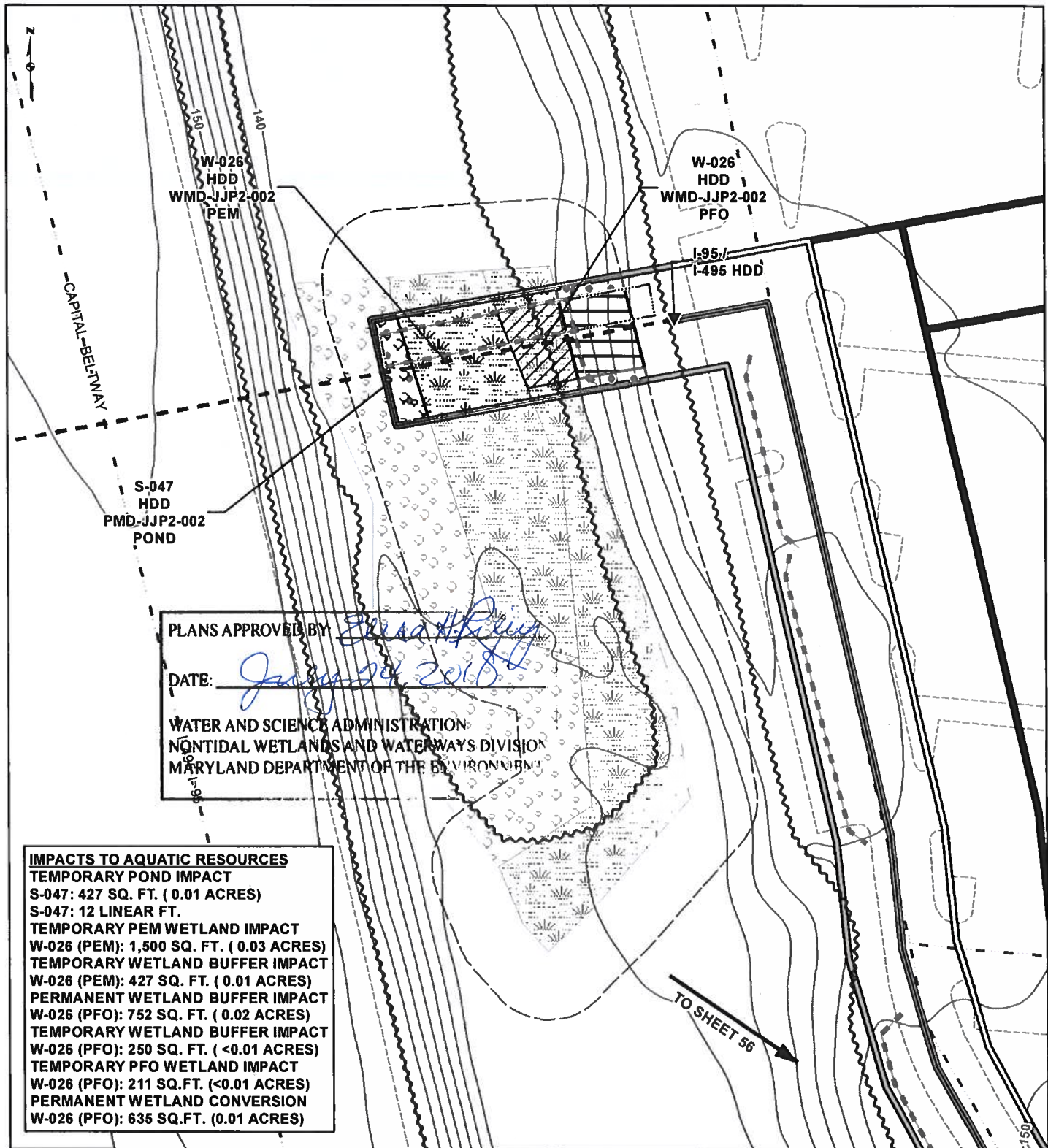
**DRAWN BY: JDP  
 CHECKED: SWW**

**DATE: 6/18/2018  
 APPROVED: RDM**

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

NOTES: EROSION CONTROL DEVICES INCLUDE SILT FENCE, SUPER SILT FENCE, SILT FENCE ON PAVEMENT, 12-INCH FILTER LOG, AND 18-INCH FILTER LOG. SUPER SILT FENCE IS PROPOSED WITHIN TIER II WATERSHEDS. DRY CROSSING METHODS INCLUDE FLUME, COFFERDAM, OR PUMP AROUND METHODS, AS DETERMINED BY THE CONTRACTOR AND BASED ON WEATHER/FIELD CONDITIONS.

Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acqui\GIS\MXD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd



**FIGURE 3B  
PLAN VIEW MAP  
SHEET 57 OF 59**

PRINCE GEORGE'S COUNTY AND  
DISTRICT OF COLUMBIA RELIABILITY  
AND REINFORCEMENT PROJECT  
WASHINGTON GAS LIGHT COMPANY

DRAWN BY: JDP  
CHECKED: SWW

DATE: 6/18/2018  
APPROVED: RDM

REFERENCE: AERIAL IMAGERY PROVIDED BY KUCERA, FLOWN MARCH 2016. CONTOURS (2-FT). PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. 100 YEAR FLOODPLAIN, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015. FOREST TREE CANOPY, PRINCE GEORGE COUNTY PLANNING DEPARTMENT, 2014. ROAD, US CENSUS BUREAU, TIGERLINE, 2010.

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Z:\Energy\2013\131838.00 - WGL - Strip 12 Land Acqui\GIS\WMD\JPA\Fig\_3B\_Plan\_View\_Map\_B&W\_2018\_06\_18.mxd