

September 1, 2022

Cindy Mulkey
Deputy Director
Division of Water Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 3500
Tallahassee, Florida 32399-2400

Subject: JEA Brandy Branch Generating Station Warehouse Project / Modification of PA00-43

Dear Ms. Mulkey,

Black and Veatch is supporting the engineering design and permitting efforts for the JEA Brandy Branch Generating Station Warehouse Project. Andrew Sears has been in touch with the Siting Office regarding the proposed project and modification of PA00-43. He will be submitting the processing fee. This submittal is a follow-up to his introduction and includes the project plans and application forms, as follows:

- Attachment A: ERP Sec A (signed)
- Attachment B: ERP Sec E
- Attachment C: Vicinity Map
- Attachment D: Drainage Calculations (sealed)
- Attachment E: Grading, Paving, and Drainage Plans (sealed)
- Attachment F: Construction Stormwater Pollution Prevention Plan
- Attachment G: Email correspondence with FDEP – NE District (Paul Duff) confirming no wetland permitting required for this project.

The engineer of record for this project is John Barranco. Please reach out to him with any questions pertaining to the engineering design by phone at 913-458-9913 or by email at BarrancoJC@bv.com. Please reach out to Andrew or me with any other questions or requests for additional information. I can be reached by phone at 407-419-3597 or email WalkerLR@bv.com and Andrew Sears can be reached by phone at 904-665-7719 or email Searar@jea.com.

Regards,
Black & Veatch Corporation

Lisa Walker

Lisa Walker
Environmental Project Manager

Enclosures

CC: Andrew Sears, JEA
 John Barranco, Black & Veatch
 James Walawender, Black & Veatch

Attachment A: ERP Section A (Signed)

**Application for
Individual and Conceptual Approval
Environmental Resource Permit,
State 404 Program Permit,
and Authorization to Use State-Owned
Submerged Lands**

Florida Department of Environmental Protection/

Water Management Districts

Effective December 22, 2020



Instructions for Use of This Form:

This form is designed to assist you in submitting a complete application. All applications must include Section A- General Information for All Activities. Sections B through H list typical information that is needed based on the proposed activities and are only required as applicable. Part 1-C of Section A will guide you to the correct sections needed based on your proposed activities. Applicants are advised to consult Chapter 62-330, F.A.C., and the Environmental Resource Permit Applicant's Handbook Volumes I and II for information regarding the ERP permitting process and requirements while preparing their application. Internet addresses for Chapter 62-330, F.A.C., and the Applicant's Handbook, Agency contact information, and additional instructions for this form can be found in Attachment 1.

What Sections of the Application Must I Fill Out?

Type of Activity	Section A	Section B	Section C	Section D	Section E	Section F	Section G	Section H	Section I
Fill in wetlands or waters for a single family residence?	Y	Y	N	N	N	N	N	N	Y, if in assumed waters
Docks, shoreline stabilization, seawalls associated with a single family residence?	Y	Y	N	N	N	Y, as needed	N	N	Y, if in assumed waters
Wetland impacts (other than association with an individual residence)?	Y	N	Y	N	N	N	N	N	Y, if in assumed waters
Boating facilities, a marina, jetty, reef, or dredging?	Y	N	Y	Y	N	Y, as needed	N	N	Y, if in assumed waters
Any work on state owned submerged land?	Y	N	Y	N	N	Y	N	N	Y, if in assumed waters
Construction of a stormwater management system?	Y	N	Y, as needed	N	Y	N	N	N	N
Constructing a mitigation bank?	Y	N	Y	N	Y, as needed	N	Y	N	Y, if in assumed waters
Creating a mine?	Y	N	Y, as needed	N	N	N	N	Y	Y, if in assumed waters

If you have any questions, or would like assistance completing this form, please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD) (see Attachment 2).

Section A: General Information for All Activities

Part 1: Name, Application Type, Location, and Description of Activity

A. Name of project, including phase if applicable: **Brandy Branch Warehouse Project**

B. This is for (check all that apply):

- ☒ Construction and operation of **new** works, activities, and/ or a stormwater management system
- ☐ **Conceptual Approval** of proposed works, activities and/ or a stormwater management system
- ☒ Modification or alteration of **existing** works, activities, and/or a stormwater management system. Provide the existing DEP or WMD permit #, if known: **DEP ERP 156348-007**
Note: Minor modifications do not require completion of this form, and may instead be requested by letter in accordance with section 6.2 of Applicant's Handbook Volume I.
- ☐ **Maintenance or repair** of works, activities, and/ or a stormwater management system previously permitted by the DEP or WMD. Provide existing permit #, if known:
- ☐ Abandonment or removal of works, activities, and/ or a stormwater management system.
Provide existing DEP or WMD permit #, if known:
- ☐ Operation of an **existing unpermitted** work, activity, and/or stormwater management system.
- ☐ Construction of additional phases of a permitted work, activity, or system.
Provide the existing DEP or WMD permit #, if known:
- ☐ A State 404 Program authorization:
- ☐ Exemption ☐ General Permit ☐ Individual Permit
- If requesting an Exemption or General Permit provide Rule #, if known:

☐ **By checking this box**, I hereby voluntarily waive, in accordance with Rule 62-330.090(8), F.A.C., the agency action deadlines in section 5.5.3 of Volume I in the event my project also requires a State 404 Program authorization (other than an exemption) under Chapter 62-331, F.A.C., and request that the agency actions for the ERP and State 404 Program authorizations be issued at the same time. (This is strongly recommended to ensure consistency, and to reduce the potential need for project modifications to resolve inconsistencies that may occur when the agency actions are issued at different times.) If this box is checked and the Agency(ies) determines that no State 404 Program authorization is required, the Agency will continue to abide by section 5.5.3 of Volume I.

C. List the type of activities proposed. Check all that apply, and provide the supplemental information requested in each of the referenced application sections. Please also reference Applicant's Handbook Volumes I and II for the type of information that may be needed.

- ☐ Activities associated with one single-family residence, duplex, triplex, or quadruplex that do not qualify for an exemption or a General Permit: **Provide the information requested in Section B. Do not complete Section C.**
- ☐ Activities within wetlands or surface waters, or within 25 feet of a wetland or surface water, (not including the activities associated with an individual single-family residence). Examples include dredging, filling, outfall structures, docks, piers, over-water structures, shoreline stabilization, mitigation, reclamation, and restoration/enhancement. **Provide the information requested in Section C.**
- ☐ Activities within navigable or flowing surface waters such as a multi-slip dock or marina, dry storage facility, dredging, bridge, breakwaters, reefs, or other offshore structures: **In addition to Section C, also provide the information requested in Section D.**
- ☐ Activities that are (or may be) located within, on, or over state-owned submerged lands (See Chapter 18-21, F.A.C. <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=18-21>): **In addition to Section B or C, also provide the information requested in Section F.**
- ☒ Construction or alteration of a stormwater management system serving residential, commercial, transportation, industrial, agricultural, or other land uses, or a solid waste facility (excluding mines that are regulated by DEP). **Provide the information requested in Section E.**
- ☐ Creation or modification of a Mitigation Bank (refer to Chapter 62-342, F.A.C. <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-342>): **Provide the information requested in Section G.**
- ☐ Mines (as defined in Section 2.0 of Applicant's Handbook Volume I) that are regulated by the DEP: **Provide the information requested in Section H.**
- ☐ Other, describe: Please contact the Agency to determine which additional sections of the application are needed. See Attachment 2 for Agency contacts.

D. Describe in general terms the proposed project, system, works, or other activities. For permit modifications, please briefly describe the changes requested to the permit: **JEA proposes to construct and operate a drive-through warehouse facility at its Brandy Branch Generating Station. The warehouse will be constructed in uplands west of the existing facilities. Proposed activities also include construction of a permanent retention stormwater management pond to the north of the proposed warehouse.**

E. Project/Activity Street/Road Address or other location (if applicable): **15701 W Beaver Street**
City: **Jacksonville** County(ies): **Duval** Zip: **32202**

Note: For utility, road, or ditch/canal activities, provide a starting and ending point using street names and nearest house numbers or provide length of project in miles along named streets or highways.

- F. Project location map and Section, Township, and Range information (use additional sheets if needed):

Please attach a location map showing the location and boundaries of the proposed activity in relation to major intersections or other landmarks. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

Section(s): **13** Township: **2S** Range: **23E** Land Grant name, if applicable:

Section(s): **18** Township: **2S** Range: **24E**

1. Section(s): Township: Range:

- G. Latitude (DMS) **30°19'14.06"N** Longitude (DMS) **81°56'58.18"W** (Taken from central location of the activity). Explain source for obtaining latitude and longitude (i.e. U.S.G.S. Quadrangle Map, GPS, online resource): **Google Earth**

- H. Tax Parcel Identification Number(s): **16 A, B, C, D**

[Number may be obtained from property tax bill or from the county property appraiser's office; if on multiple parcels, provide multiple Tax Parcel Identification Numbers]

- I. Directions to Site (from major roads; include distances and landmarks as applicable): **From the Baldwin HWY 301 Bypass intersection (just west of Baldwin, FL) follow State Road 90 (W Beaver Street) east for approximately 2.3 miles and the entrance road to JEA Brandy Branch Generating Station will be on the left (north side) of the road.**

- J. Project area or phase area: **2.78 acres**

- K. Name of waterbody(ies) (if known) in which activities will occur or into which the system will discharge: **Indirectly to Brandy Branch Creek**

The following questions (M-O) are not applicable to activities related to an individual single-family residence, including a dock, pier, and/or seawall associated with that residence.

- L. Is it part of a larger plan of development or sale? ☒ yes ☐ no

- M. Impervious or semi-impervious area excluding wetlands and other surface waters (if applicable):

0.78 acres or square feet

- N. Volume of water the system is capable of impounding (if applicable):

Normal Pool: **0 acre-feet. Depth 0 ft.**
Maximum Pool: **0.29 acre-feet. Depth 2.8 ft.**

Part 2: Supplemental Information, and Permit History

- A. Is this an application to modify an existing Environmental Resource Permit or to construct or implement part of a multi-phase project, such as a project with a Conceptual Approval permit? ☒ Yes ☐ No (If you answered “yes”, please provide permit numbers below):

Agency	Date	Permit/Application No.	Project Name
FDEP	12/8/2017 (date of SCA Mod)	0156348007SA	JEA Brandy Branch Generating Facility

- B. Indicate if there have been any **pre-application meeting(s)** with the DEP, WMD, or delegated local government, or other discussions, meetings, or coordination with other stakeholders or agencies about the proposed project, system or activity. If so, please provide the date(s), location(s) of the meeting, and the name(s) of Agency staff that attended the meeting(s):

Agency	Date	Location	Meeting Attendees
FDEP	05/16/22	Virtual	Paul Duff, Junhong Shi (FDEP) Andrew Sears (JEA) Lisa Walker, John Barranco (Black & Veatch)

- C. **Attach a depiction (plan and section views), which clearly shows the works or other activities proposed to be constructed.** Use multiple sheets, if necessary, a scale sufficient to show the location and type of works, and include a north arrow and a key to any symbols used. **Specific information to be included in the plans is based on the activities proposed and is further described in Sections B-H.** However, supplemental information may be required based on the specific circumstances or location of the proposed works or other activities.
- D. Processing Fee: **Please submit the application processing fee along with this application form and supplemental information.** Processing fees vary based on the size of the activity, the type of permit applied for, and the reviewing Agency. Please reference Appendix D of Applicant’s Handbook Volume I to determine the appropriate fee.

Part 3: Applicant and Associated Parties Information

Instructions: Please complete the following sections. For corporations, list a person who is a registered agent or officer of the corporation who has the legal authority to bind the corporation.

A. Applicant (Entity Must Have Sufficient Real Property Interest)

☒ This is a Contact Person for Additional Information

Last Name: Sears	First Name: Andrew	Middle Initial:
Title: Sr. Environmental Scientist	Company: JEA	
Address: 21 West Church Street		
City: Jacksonville	State: FL	Zip: 32202
Home Telephone:	Work Telephone: (904) 665-7719	
Cell Phone: (510) 258-2707	E-mail Address: searar@jea.com	

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

B. Land Owner(S) (If Different or in Addition to Applicant) Same as Applicant

☐ Check here if land owner is also a co-applicant

Last Name:	First Name:	Middle Initial:
Title:	Company:	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:	E-mail Address:	

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

C. Operation and Maintenance Entity(see Applicant's Handbook I, Section 12.3)

Last Name:	First Name:	Middle Initial:
Title:	Company: JEA	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:	E-mail Address:	

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

D. Co-Applicant (If Different or In Addition to Applicant and Owner)

Last Name:	First Name:	Middle Initial:
Title:	Company:	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:		
E-mail Address:		

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

E. Registered Professional Consultant

☐ This is a contact person for additional information

Form 62-330.060(1) - Application for Individual and Conceptual Approval Environmental Resource Permit, State 404 Program Permit, and Authorization to Use State-Owned Submerged Lands
Incorporated by reference in subsection 62-330.060(1), F.A.C. (effective date: December 22, 2020)

Last Name: **Barranco**
Title: **Civil/Structural Section Manager**
Address: 4500 Salisbury Rd Suite 190
City: Jacksonville
Home Telephone:
Cell Phone:
E-mail Address: **BarrancoJC@BV.com**

First Name: John
Company: **Black & Veatch**

State: **Florida**
Work Telephone: **9134589913**

Middle Initial:

Zip: 32216

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

F. Environmental Consultant

☐ **This is a contact person for additional information**

Last Name: **Walker**
Title: **Environmental Project Manager**
Address:
City: **Jacksonville**
Home Telephone:
Cell Phone: **9047167429**
E-mail Address: **WalkerLR@BV.com**

First Name: **Lisa**
Company: **Black & Veatch**

State: **FL**
Work Telephone:

Middle Initial:

Zip:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

G. Agent Authorized to Secure Permit (If Different from Consultant)

Last Name:
Title:
Address:
City:
Home Telephone:
Cell Phone:
E-mail Address:

First Name:
Company:

State:
Work Telephone:

Middle Initial:

Zip:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

If necessary, please add additional pages for other contacts and property owners related to this project.

H. Real Property Interest

- a. Permits are only issued to entities having sufficient real property interest as described in Section 4.2.3(d) of Applicant's Handbook Volume I. **Please attach evidence of the applicant's real property interest over the land upon which the activities subject to the application will be conducted, including mitigation areas (if applicable).** Refer to Sections 4.2.3(d)-(e) for sufficient real property interest documentation.
- b. For activities that require a recorded notice in accordance with rule 62-330.090(7), F.A.C., please provide either the complete legal description of the property or a copy of the pages of the document recorded in the public records that contains the complete legal description. If the land upon which the proposed activities are to occur is not owned by the applicant, the applicant must also provide copies of any right-of-way, leases, easements, or other legal agreement which authorizes the applicant to perform the activities on those lands.

Part 4: Signatures and Authorization to Access Property

Form 62-330.060(1) - Application for Individual and Conceptual Approval Environmental Resource Permit, State 404 Program Permit, and Authorization to Use State-Owned Submerged Lands
Incorporated by reference in subsection 62-330.060(1), F.A.C. (effective date: December 22, 2020)

Instructions: For multiple applicants please provide a separate Part 4 for each applicant. For corporations, the application must be signed by a person authorized to bind the corporation. A person who has sufficient real property interest (see Section 4.2.3(d) of Applicant's Handbook Volume I) is required in (B) to authorize access to the property, except when the applicant has the power of eminent domain.

A. By signing this application form, I am applying for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto does not relieve me of any obligation for obtaining any other required federal, state, water management district, or local permit prior to commencement of construction. I agree to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a different responsible operation and maintenance entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant or
Applicant's Authorized Agent

Signature of Applicant or Applicant's
Authorized Agent

Date

(Corporate Title if applicable)

B. Certification of Sufficient Real Property Interest And Authorization For Staff To Access The Property:

I certify that:

☐ **I possess sufficient real property interest in or control, as defined in Section 4.2.3 (d) of Applicant's Handbook Volume I**, over the land upon which the activities described in this application are proposed and I have legal authority to grant permission to access those lands. I hereby grant permission, evidenced by my signature below, for staff of the Agency to access, inspect, and sample the lands and waters of the property as necessary for the review of the proposed works and other activities specified in this application, upon advance notice. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review, inspection, and/ or sampling. Further, if a permit is granted, upon advance notice, I agree to provide entry to the project site for such agents or personnel with proper identification to determine compliance with permit conditions and permitted plans and specifications.

OR

☐ I represent an entity having **the power of eminent domain and condemnation authority**, and I/we shall make appropriate arrangements to enable staff of the Agency to legally access, inspect, and sample the property as described above.

Typed/Printed Name

Signature

Date

(Corporate Title if applicable)

C. Designation of Authorized Agent (If Applicable):

I hereby designate and authorize _____ to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant

Signature of Applicant

Date

(Corporate Title if applicable)

Attachment B: ERP Section E

SECTION E: SUPPLEMENTAL INFORMATION REQUIRED FOR WORKS OR OTHER ACTIVITIES INVOLVING A STORMWATER MANAGEMENT SYSTEM (OTHER THAN A SINGLE-FAMILY PROJECT)

Instructions: The information listed in the checklists below represents the level of information that is usually required to evaluate an application. Information can be provided within reports, plans and documents. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. The supplemental information required by this section is in addition to the information required by Section A of the ERP application.

PART 1: STORMWATER MANAGEMENT SYSTEM SUMMARY

Provide drainage calculations, signed and sealed by an appropriate registered professional, and supporting documentation demonstrating that the proposed project meets the conditions for issuance under 62-330.301(1)(a),(b),(c),(e), F.A.C. The drainage calculations should include, but not necessarily be limited to, the following:

1. General Site Information:

- a. ☐ Provide pre-development and post-development drainage map(s), as appropriate, that include drainage patterns and basin boundaries with acreage served by each hydraulically separate system, showing the direction of flows, including any off-site runoff being routed through or around the system; topographic information; and connections between wetlands and other surface waters.
- b. ☐ Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions. Identify the wet season high water table elevations, soil profiles, and hydraulic conductivity. Include dates, datum, and methods used to determine these soil parameters.
- c. ☐ Identify the onsite hydrologic soil classification (e.g. Type A, B/D, D). Reference the source, such as the USDA/NRCS Soil Survey, used in estimating the onsite hydrologic soil classification. Provide maps, as appropriate, with the project limits delineated.
- d. ☐ Identify the seasonal high water or mean high tide elevation for receiving waters/wetlands into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.
- e. ☐ Identify the name of each receiving waterbody to which the proposed stormwater management system will discharge: .
- f. ☐ Indicate the existing land use and land cover.
- g. ☐ Provide the acreage, and percentages of the total project, of the following:
 1. Impervious surfaces, excluding buildings, wetlands and other surface waters;
 2. Buildings;



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3. Pervious surfaces (green areas not including wetlands);
 4. Lakes, canals, retention areas, other open water areas; and
 5. Wetlands (Please refer to Section C to ensure consistency in wetland acreages).
- h. ☐ Provide the location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.

2. Water Quality Analysis:

- a. ☐ Provide a description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis.
- b. ☐ Is the receiving waterbody known to be impaired, and/or has an established Total Maximum Daily Load (TMDL) or Basin Management Action Plan (BMAP)? If so, please provide specific descriptions of all water quality parameters for which the waterbody is known to be impaired? For more information about water quality, impaired waters, and to determine whether a TMDL has been adopted in your project area, refer to:
<http://waterwebprod.dep.state.fl.us/basin411/downloads/Florida-Adopted-TMDLs.pdf>. To determine whether a BMAP exists, or is being developed in your project area, refer to:
<http://www.dep.state.fl.us/water/watersheds/bmap.htm#rad>.
☐ yes ☐ no ☐ don't know
If yes, provide calculations demonstrating that the proposed project will not contribute to violations of state water quality standards in accordance with the applicable Applicant's Handbook, Vol. II.
- c. ☐ Does the project have a direct discharge to a Class I, Class II, Outstanding Florida Waters or Class III waters, which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting? *To determine whether your project is within, or will discharge to an OFW, or for more information about OFWs in general, refer to:*
<http://www.dep.state.fl.us/water/wqssp/ofw.htm>.
☐ yes ☐ no ☐ don't know
If yes, additional treatment in accordance with the applicable Applicant's Handbook, Vol. II, may be required.
- d. ☐ Provide construction plans and calculations that address the required treatment volume and recovery, as well as stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria in the applicable Applicant's Handbook, Vol. II.

Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, and justification for model selection.

3. Water Quantity Analysis:

Provide calculations and documentations demonstrating that the project, as proposed, meets the applicable design criteria as indicated in the applicable Applicant's Handbook, Vol. II. Typically, the information would include, at a minimum, but is not necessarily be limited to, the following:

- a. ☐ For projects requiring pre-development analysis, provide an analysis of the pre-development peak rate of discharge and / or volume of runoff, for all design storm events. Account for all onsite depressional storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) that apply to your project.
- b. ☐ Provide an analysis of the post-development peak rate of discharge and / or volume of runoff for all applicable design storm events. Account for all onsite storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) and criteria that apply to your project.

These analyses should include:

- ☐ Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basins in the pre-development and post-development condition;
- ☐ Design storms used including rainfall depth, duration, frequency, and distribution;
- ☐ Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);
- ☐ Stage-storage computations for any area such as a reservoir, closed basin, detention area, or channel, used in storage routing;
- ☐ Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;
- ☐ Flood routings through on-site conveyance and storage areas;
- ☐ Water surface profiles in the primary drainage system for each required design storm event(s);
- ☐ Runoff peak rates and volumes discharged from the site for each required design storm event(s);
- ☐ Design tailwater elevation(s) for each storm event at all points of discharge (include source or method of estimate); and
- ☐ Pump specifications and operating curves for range of possible operating conditions (if used in system). n/a

Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, input and output data, justification for model selection, and, if necessary, a description of the program.

4. Floodplain Analysis (where applicable).

- a. ☐ If the project is in a known floodplain of a stream or other water course, identify the appropriate floodplain boundary and approximate flooding elevations of any lake, stream or other watercourse located on or adjacent to the site. n/a
- b. ☐ For traversing works, in accordance with the applicable Applicant's Handbook, Vol. II, provide: n/a

- ☐ Hydraulic calculations for all proposed traversing works; and
- ☐ Water surface profiles showing upstream impact of traversing works.
- c. ☐ For impacts to regulated floodplains, in accordance with the applicable Applicant's Handbook, Vol. II, provide: n/a
- ☐ Location and volume of encroachment within regulated floodplain(s); and
- ☐ Plans and calculations for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

PART 2: CONSTRUCTION PLANS

1. Provide clear, construction level detailed plans for the system. The plans must be signed and sealed by an appropriate registered professional as required by law. These plans should include cumulative information from all applicable sections; as well as the following:
 - a. ☐ Project area boundary and total area, including distances and orientation from roads or other landmark.
 - b. ☐ Existing topography extending at least 100 feet off the project area. All topography shall include location and description of benchmarks, reference to NGVD 1929 or NAVD 1988 along with the conversion factor.
 - c. ☐ Proposed site plan with acreage, including the following:
 - ☐ plan view of proposed development, including impervious surfaces and water management areas;
 - ☐ land cover and natural communities*;
 - ☐ wetlands and other surface waters*;
 - ☐ undisturbed uplands*;
 - ☐ aquatic communities*; n/a
 - ☐ proposed buffers*; n/a
 - ☐ proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands, (if applicable); and
 - ☐ onsite wetland mitigation areas*.

*Please refer to Section C.
 - ☐ For phased projects, provide a master development plan clearing delineating the limits of each phase of construction.
 - d. ☐ Paving, Grading, and Drainage Information, which includes, but not necessarily limited to, the following:
 - ☐ Existing topography;
 - ☐ Boundaries of wetlands and other surface waters and upland buffers (see Section C);
 - ☐ Plan view of proposed development;
 - ☐ Proposed elevations and/or profiles, including:
 - ☐ roadway, parking, and pavement grades;
 - ☐ floor slabs, walkways, and other paved surfaces;
 - ☐ earthwork grades for pervious landscaped areas; and
 - ☐ perimeter site grading, tying back into existing grades.

- ☐ Location of all water management areas, including elevations, dimensions, side slopes, and design water depths;
 - ☐ Location, size, and invert elevations of existing and proposed stormwater conveyance systems;
 - ☐ Vegetative cover plan for all on-site and off-site earth surfaces disturbed by construction; and
 - ☐ Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes (including access), and rights-of-way and easements for the existing drainage system, if any.
- e. ☐ Stormwater detail information, including but not necessarily limited to, the following:
- ☐ Cross section of all stormwater management areas, including elevations, dimensions, side slopes, and proposed stabilization measures (with location of the cross section(s) shown on the corresponding plan view);
 - ☐ Detail of all proposed control structures, including elevations, dimensions, and skimmer, where applicable; and
 - ☐ Details of proposed stormwater management systems, such as underdrains, exfiltration trenches, vaults, and other proposed Best Management Practices (BMPs).
- f. ☐ Location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.

PART 3: CONSTRUCTION SCHEDULE AND TECHNIQUES

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should include, as applicable, the following.

- a. ☐ Access and staging of equipment;
- b. ☐ Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions.
- c. ☐ The location of disposal site(s) for any excavated material, including temporary and permanent disposal sites.
- d. ☐ A demolition plan for any existing structures to be removed. **n/a**
- e. ☐ Dewatering plan details. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place; **Note: a Consumptive Use or Water Use permit may be required for dewatering. n/a**
- f. ☐ Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;

PART 4: OPERATION AND MAINTENANCE AND LEGAL DOCUMENTATION:

- a. ☐ Describe the overall maintenance and operation schedule for the proposed system.
- b. ☐ Identify the entity (or entities) that will be responsible for operating and maintaining the system (or parts of the system) to demonstrate that the entity (or entities) meet(s) the requirements of section 12.3 of the Applicant's Handbook, Vol. I.

- ☐ If different from the permittee, provide a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance.
- ☐ If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system.
- c. ☐ Provide drafts of all proposed conservation easements, stormwater management system easements, draft property owner's association documents, and plats for the property containing the proposed system. n/a
- d. ☐ Provide legal reservations for access to the treatment system for maintenance and operation by future maintenance entities for subdivided projects. n/a
- e. ☐ Provide indication of how water and wastewater service will be supplied. n/a
- f. ☐ Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled the applicant.

PART 5: WATER USE

- a. ☐ Describe how irrigation will be provided to the project. Will the surface water system be used for water supply, including landscape irrigation, or recreation?
- b. ☐ If a Consumptive Use or Water Use permit has been issued for the project, state the permit number:
- c. ☐ If a Consumptive Use or Water Use permit has not been issued for the project, indicate if such a permit will be required. ☐ yes ☐ no ☐ don't know
If yes, please indicate when the application for a permit will be submitted:
- d. ☐ Indicate how any existing wells located within the project site will be utilized or abandoned.

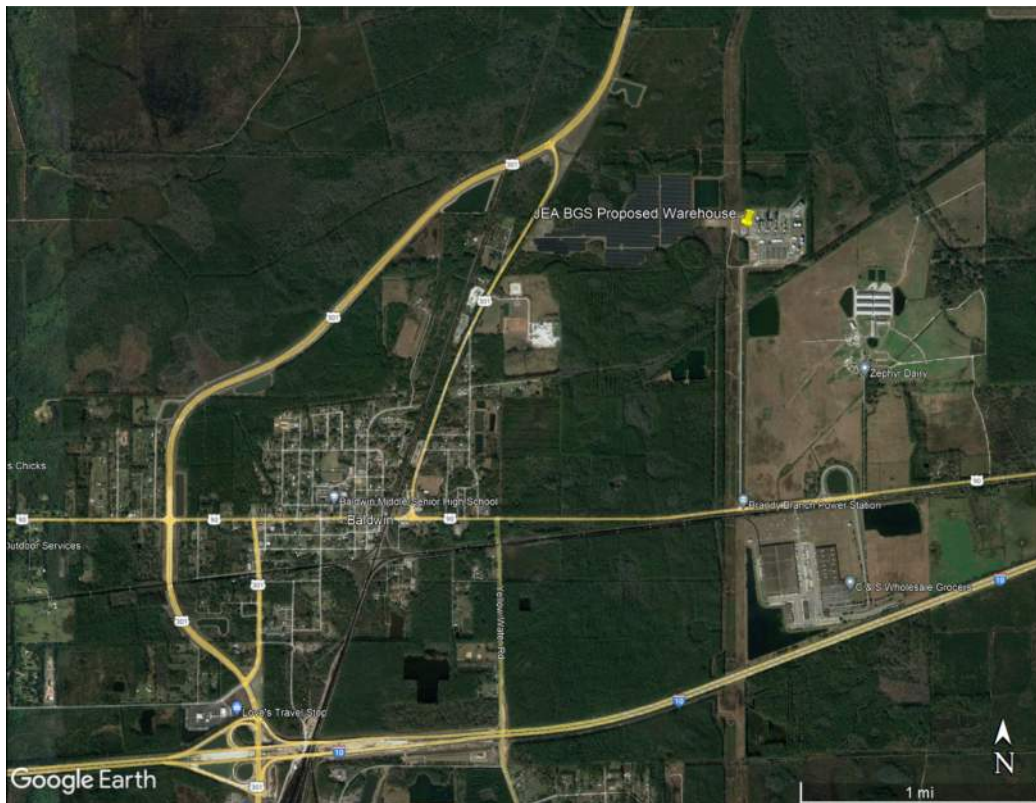
PART 6: SPECIAL BASIN INFORMATION

Is your project within a special basin as described in the applicable Applicant's Handbook, Vol. II?

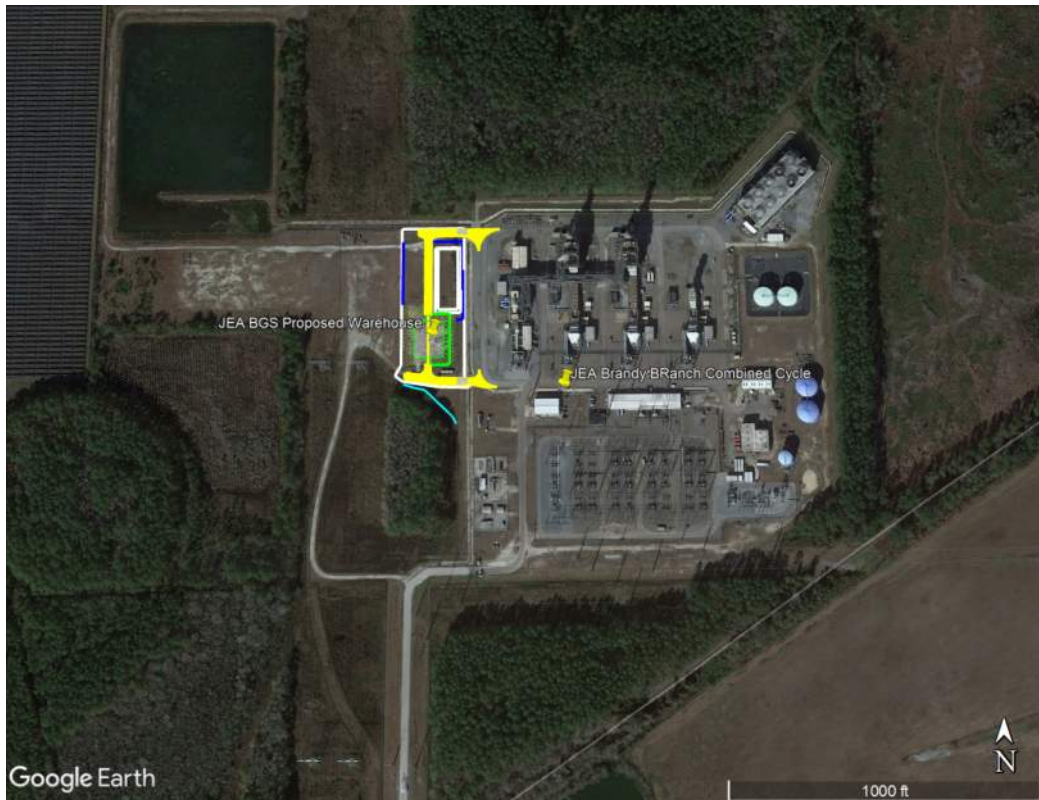
☐ yes ☐ no ☐ don't know

If yes, please demonstrate that the project will meet the applicable special basin criteria.

Attachment C: Vicinity Map



VICINITY MAP



JEA BRANDY BRANCH GENERATING STATION
SITE AERIAL VIEW

Attachment D: Drainage Calculations

**BLACK & VEATCH****CALCULATION RECORD***Confidential and Proprietary Business Information of Black & Veatch*Client Name JEA Brandy Branch Page 1 of 25Project Name JEA BGS Warehouse Project No. 410518Calculation Title Post Development Stormwater DesignCalculation No./File No. 58.5406.1101Verification Method: ☒ Check and Review ☐ Alternate Calculations

Objective: The objective of this calculation is to determine the post development storm water management system design for the JEA BGS warehouse for the design storm event of 25year-24 hours and to recover the pond within 72 hours for the next storm event as stated in reference 2.1.

Unverified Assumptions Requiring Subsequent Verification

No.	Assumption	Verified By*	Date
N/A	N/A	N/A	N/A

Refer to Page ____ of this calculation for additional assumptions.

This Section Used for Software-Generated Calculations

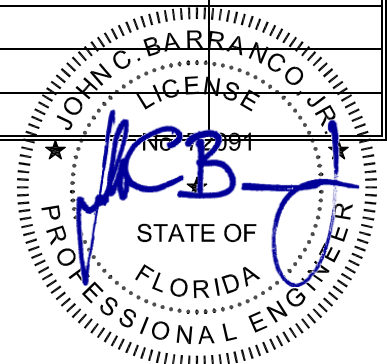
BV Standard Application

Program Name/Version HydroCAD 10.00**Review and Approval**

Rev	Prepared By*	Date	Verified By*	Date	Approved By*	Date
0	Rutvee Sojitra	6/23/2022	J C Barranco Jr.	06/29/2022	J C Barranco Jr	7/18/2022

*Signature required.

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Client: JEA Brandy Branch
Project: Warehouse
Project No. 410518
Title: Post Development Stormwater Design
File no: 58.5406.1101

Prepared by: Rutvee Sojitra
Verified by: JC Barranco Jr.
Date: 06-23-2022
Page no: 2

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1.0 Purpose

The objective of this calculation is to design a retention pond that will retain the design storm of 25 year- 24 hours and to recover the pond within 72 hours 3eriod through percolation for the next event as stated in Reference 2.1. The purpose of this hydrologic model is to meet the Pre vs. Post flow requirements.

2.0 References

- 2.1 St. Johns River Water Management District Permit Information Manual, June 1st 2018
- 2.2 HydroCAD version 10.0
- 2.3 NOAA Atlas 14 Volume 9 Version 2 Precipitation Frequency Estimates for Jacksonville, FL
- 2.4 NCRS National Engineering Handbook, Part 6330 Hydrology
- 2.5 FDOT Chapter 14-86, Drainage Connections, 2019
- 2.6 FDOT Drainage Manual IDF Curves

3.0 Conclusion

- 3.1 The total attenuation and infiltration of the peak runoff volume within the dry retention basin i.e., the post development peak runoff of the SJRWMD 25-year 24 hours is less than the pre development discharge, and therefore satisfying the SJRWMD criteria of water quality volume (Ref 2.1). See table 1B below for discharge information.
- 3.2 The provided treatment volume in the dry retention pond is 0.286 acre-ft. the required treatment volume is 0.118 acre-ft, therefore the provided treatment volume exceeds the required treatment volume (Ref 2.1).
- 3.3 The total treatment volume for the dry retention basin is drawn down by natural infiltration. The total volume drawdown time for the designed storm event is less than 72 hours and the total pond recovery within 72 hours is met (Ref 2.1). Recovery time is summarized in the table 1A below.
- 3.4 The maximum peak stage elevation for the dry detention for the SJRWMD storm event duration is summarized in Table 1A below, representing that a minimum freeboard of 1 ft is provided.

Table 1A

Storm Event	Top of the Bank EL	Peak Stage EL	Freeboard (ft)	Recovery Time (hrs)
25 Yr 24 Hr	85.50	84.39	1.11	25

Table 1B

Area	Peak Discharge (cfs)
Pre-Development	10.34
Post Development	9.79

4.0 Design and Methodology

- 4.1 The proposed project site will drain the stormwater runoff into a proposed dry retention pond. The pond bottom elevation is set at 82.70 ft-NAVD88 and top of the pond is 85.50 ft-NAVD88.
- 4.2 The proposed dry retention pond is designed such that the post development discharge from the site for a 25 yr 24 hr Storm event does not exceed the pre development discharge from the project area.
- 4.3 The required treatment volume for on-line retention pond must satisfy the following: (Reference 2.1) and will naturally infiltrate into the ground.
- Off-line retention of the first one-half inch of runoff or 1.25 inches of runoff from the impervious area, whichever is greater.
 - On-line retention of an additional one-half inch of runoff from the drainage area over that volume specified for off-line treatment.
 - On-line retention that provides for percolation of the runoff from the three year, one-hour storm.

5.0 Definition of Units and Constants

CN= NRCS Curve Number for Stormwater Runoff

CFS= Cubic feet per second

Tc= Time of Concentration

SJRWMD= St. Johns River Water Management District

TOB= Top of Bank

6.0 Analysis

General Drainage Design Criteria

Applicable Regulations:

The project to be developed is located in Jacksonville, FL hence the storm water management system (SWMS) is governed by Environmental Resource Permitting (ERP) (Chapter 62-330,

F.A.C.) and the Florida Department of Environmental Protection (FDEP) regulations for Storm Water Discharge (Chapter 62-25, F.A.C.). According to these regulations, the rules of the local water management district is adopted by reference for FDEP ERP requirements. Volume II and portions of Volume I are adopted by reference in chapter 62-330, F.A.C., and are therefore rules of the (FDEP). In accordance with paragraph 373.4131(2)(a), F.S. (2012), they are also rules of the District. The storm water management regulations for the Project site location in Duval County is administered by St Johns River Water Management District (SJRWMD). Thus, the SWMS for this project will be designed to meet or exceed the criteria set forth in the SJRWMD ERP Information Manual, Volume I and Volume II.

6.1 Rainfall Depth, Duration and Distribution

The design rainfall depths for the Project Site have been obtained from the NOAA Atlas 14, Volume 9, Version 2 (Att 2). The rainfall depths are summarized in the Table 3 Below. Storm events were modeled using HydroCAD analysis software.

Rainfall depths are summarized in Table 2 below.

Table 2

Rainfall Data		
Storm Event	Design Purpose	Rainfall Depth (in)
Mean Annual (2.3 yr- 24 hr)	HydroCAD requires for the sheet flow Tc	4.60
25year- 24 hr	Design Storm Event to be attenuated in the pond	8.55

6.2 Post Development Site Conditions

The total drainage area for the project consists of 2.78 acres (Att 1). The proposed conditions will be capture and treat the runoff from the proposed drainage area into a dry retention pond.

The existing area of the proposed project is considered 75% Grass covered and the currently discharges via overland flow to the north of the project site.

The proposed site will be retaining 1.16 cfs by infiltration into the ground and 8.59 cfs will be discharge via broad crested rectangular weir at Elevation 84.00.

6.3 Areas contributing to the Retention Pond

See Table 3 below for the summary of surfacing contributing.

Table 3

SUMMARY SURFACING		
SURFACING	ACRES	PERCENTAGE
PERVIOUS	1.68	60.43%
POND	0.32	11.52%
IMPERVIOUS	0.78	28.05%
TOTAL	2.78	100%

6.4 Time of Concentration

Time of concentration (Tc) was calculated using HydroCAD software (Ref. 2.2). HydroCAD uses the methodology for determining Tc as set forth in the NRCS National Engineering Handbook, Part 6330 Hydrology (Ref. 2.4).

Data used to calculate the Tc of the basins in HydroCAD is presented in Table 3. Each table presents the travel data for one segment of a runoff travel path. A minimum Tc has been established as being equal to 10.0 minutes to prevent unreasonably short Tc durations for small or highly impervious areas. In cases where the calculated Tc values are less than 10.0 minutes, Tc will be set equal to 10.0 minutes. HydroCAD also requires the entry of the 2 year - 24 hr storm event rainfall depth for determination of sheet flow Tc. The 2 year - 24 hr storm event rainfall depth has been determined to be equal to 4.60 inches (Ref. 2.3).

Table 4

TIME OF CONCENTRATION DATA-FLOW SEGMENT					
AREA	LENGT H	SLOP E	SURFACE TYPE	FLOW TYPE	TRAVEL TIME Tc (MIN)
PRE DEVELOPMENT	170	0.005	GRASS: SHORT	SHEET	21.8
	170	0.005	SHORT GRASS PASTURE	SCF	5.7
POST DEVELOPMENT	170	0.005	GRASS: SHORT	SHEET	21.8
	170	0.005	SHORT GRASS PASTURE	SCF	5.7

6.5 Treatment Volume Calculation

For discharges to Class III receiving water bodies, the retention system shall provide (a) Off-line retention of the first 1 inch of runoff over the entire site or 1.75 inches of runoff from the impervious area, whichever is greater. (b) On-line retention that provides for percolation of the runoff from the three year, one-hour storm (Ref 2.1)

Treatment Volume Option A- 1.75 inch over the impervious area (excluding the pond)

TV= 1.75 inch of runoff over the impervious area

DA= Drainage area = 0.78 acre

CF= Conversion factor = $12 \frac{\text{in}}{\text{ft}}$

RO= Runoff = 1.75 inches

TV= RO x $\frac{DA}{CF}$ TV = 0.113 acre-ft

Treatment Volume Option B- runoff from the three year, one-hour storm

The runoff for a 3-year 1 hour storm event has been taken from the FDOT Drainage Manual IDF curves. (Ref 2.6)

TV= 1.75 inch of runoff over the impervious area

DA= Drainage area = 0.78 acre

CF= Conversion factor = $12 \frac{\text{in}}{\text{ft}}$

RO= Runoff = 2.5 inches

TV= RO x $\frac{DA}{CF}$ TV = 0.162 acre-ft

Treatment Volume Option B governs, therefore the required treatment volume is 0.162 acre-ft

Actual treat volume provided is 0.286 acre-ft.

Therefore, TV actual > TV required.

6.6 Recovery Time Calculation

The retention system must provide the capacity for the appropriate treatment volume of stormwater specified in reference 2.1 within 72 hours following a storm event. In retention systems, the stormwater is drawn down by natural soil infiltration and dissipation into the ground water table.

An average saturated horizontal permeability of 2.83 in/hr and groundwater was a not discovered within the test pits that's were excavated to 9+ ft below existing grade, therefore for the purpose of conservatively modeling the effects of groundwater mounding, the ground water elevation was set at 2.7 ft below the bottom of the basin at El 80.00 ft-NAVD88. With the input parameters mentioned above, the HydroCAD report shows that the maximum recovery time of the basin is 25 hrs, therefore satisfying the criteria 72-hour recovery time.

The recovery time is summarized in the table below.

Table 5

Storm Event	Top of Bank EL	Peak Stage EL	Freeboard (ft)	Recovery Time (hrs)
25 yr 24 hr	85.50	84.39	1.11	25

6.7 Retention Pond Design

A dry retention pond with an emergency overflow weir is the mechanism by which the stormwater from onsite will be retained and treated without discharging offsite. The dry retention pond has been designed according to the requirements of the SJRWMD (Ref 2.1 and Ref 2.5). The dry retention pond will have a bottom elevation set approximately 2.7 feet above the estimated seasonal high groundwater level (SHGWT). For stormwater evaluation, the bottom was set to 82.70 ft-NAVD 88, to allow the bottom foot of the pond for sediment settlement.

The dry retention pond was designed using HydroCAD software (Ref 2.2). The previously described site basin data was inputted into HydroCAD to develop the runoff volume and rate information needed to size the ponds.

The pond was set to a depth determined from proposed and existing grade elevations and SHGWT Elevation. The pond was set to a depth of 2.8 feet. The elevation of the Pond bottom is set at 82.7 feet-NAVD 88 and the top of bank of the pond is set at 85.5 feet-NAVD 88. The sides of the pond are sloped at 4:1 per SJRWMD requirements (Ref 1).

During the 25 year- 24hr design storm event, the retention pond peak stage elevation is 84.39 ft - NAVD 88, providing 1.11 feet of free board in the pond (Att 3) controlled by a broad crested weir of 13 ft at EL 84.00 ft..

A summary of the pond design storm peak discharge rate, detention volume storage, and 24-hour detention volume discharge for the SWMS is presented in Table 6. More detailed information, including HydroCAD model reports are provided in Attachments 3.

Storm Water Pond Hydrology Summary					
Basin	Pond Peak Stage Elevation	Treatment Volume Storage		*Treatment Volume Recovery Time	
	25yr-24hr (ft-NAVD88)	Required	Provided	Allowed	Provided
		(ac-ft)	(ac-ft)	hours	hours
New Retention Pond	84.39	0.162	0.286	72	25
*The appropriate treatment volume must be drawn down within 72 hours of the storm event.					

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Client: JEA Brandy Branch
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ATTACHMENT 1

SITE LAYOUT

Client: JEA Brandy Branch
Project: Warehouse
Project No. 410518
Title: Post Development Stormwater Design
File no: 58.5406.1101

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ATTACHMENT 2

RAINFALL DATA



NOAA Atlas 14, Volume 9, Version 2
Location name: Jacksonville, Florida, USA*
Latitude: 30.2871°, Longitude: -81.6569°
Elevation: 17.97 ft**

* source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffrey Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_ &_aerials](#)

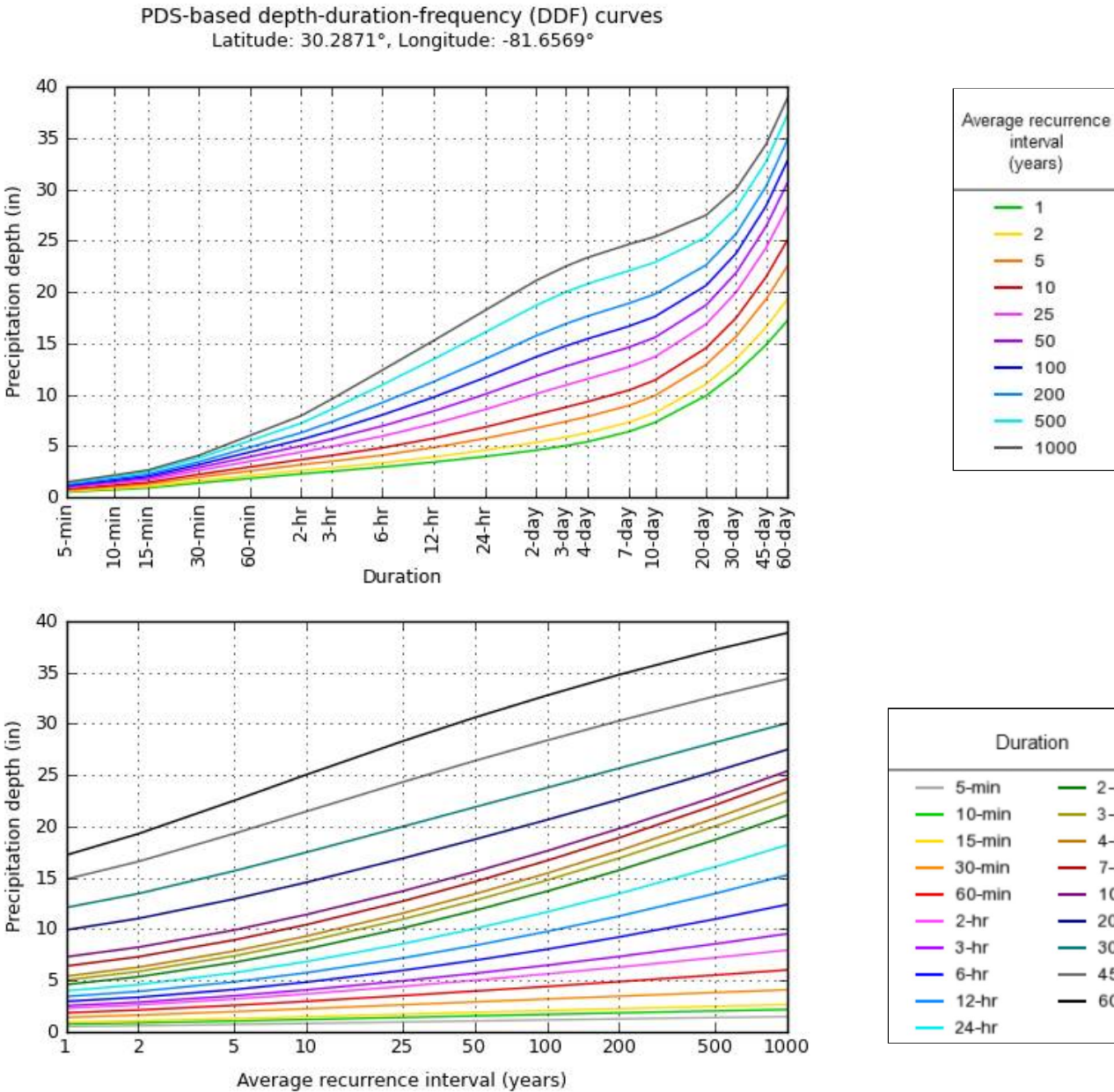
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.524 (0.436-0.635)	0.601 (0.499-0.729)	0.725 (0.600-0.881)	0.825 (0.679-1.01)	0.961 (0.759-1.20)	1.06 (0.820-1.35)	1.16 (0.864-1.52)	1.26 (0.896-1.69)	1.39 (0.946-1.92)	1.49 (0.985-2.09)
10-min	0.768 (0.639-0.930)	0.880 (0.731-1.07)	1.06 (0.878-1.29)	1.21 (0.994-1.48)	1.41 (1.11-1.76)	1.56 (1.20-1.98)	1.71 (1.26-2.22)	1.85 (1.31-2.48)	2.04 (1.39-2.81)	2.18 (1.44-3.06)
15-min	0.936 (0.779-1.13)	1.07 (0.892-1.30)	1.29 (1.07-1.57)	1.47 (1.21-1.80)	1.72 (1.36-2.15)	1.90 (1.46-2.41)	2.08 (1.54-2.71)	2.26 (1.60-3.02)	2.49 (1.69-3.43)	2.66 (1.76-3.73)
30-min	1.42 (1.18-1.72)	1.63 (1.36-1.98)	1.98 (1.64-2.40)	2.26 (1.86-2.75)	2.63 (2.08-3.30)	2.92 (2.25-3.71)	3.20 (2.37-4.16)	3.47 (2.46-4.65)	3.83 (2.60-5.27)	4.10 (2.71-5.74)
60-min	1.86 (1.55-2.25)	2.13 (1.77-2.58)	2.59 (2.14-3.14)	2.97 (2.45-3.63)	3.53 (2.80-4.45)	3.97 (3.07-5.07)	4.42 (3.29-5.79)	4.89 (3.47-6.58)	5.53 (3.76-7.64)	6.03 (3.98-8.45)
2-hr	2.30 (1.93-2.77)	2.63 (2.20-3.17)	3.20 (2.66-3.86)	3.69 (3.06-4.48)	4.42 (3.54-5.57)	5.01 (3.91-6.40)	5.64 (4.23-7.37)	6.30 (4.51-8.45)	7.22 (4.96-9.95)	7.96 (5.29-11.1)
3-hr	2.54 (2.13-3.05)	2.89 (2.42-3.47)	3.51 (2.94-4.23)	4.09 (3.39-4.94)	4.96 (4.00-6.27)	5.69 (4.47-7.27)	6.48 (4.89-8.47)	7.34 (5.29-9.85)	8.56 (5.91-11.8)	9.55 (6.37-13.3)
6-hr	2.97 (2.51-3.53)	3.37 (2.84-4.01)	4.12 (3.46-4.93)	4.84 (4.04-5.81)	5.97 (4.88-7.56)	6.96 (5.51-8.88)	8.04 (6.12-10.5)	9.24 (6.71-12.4)	11.0 (7.63-15.1)	12.4 (8.33-17.1)
12-hr	3.44 (2.93-4.08)	3.93 (3.34-4.66)	4.86 (4.11-5.77)	5.76 (4.84-6.86)	7.17 (5.90-9.03)	8.40 (6.70-10.7)	9.76 (7.48-12.7)	11.3 (8.25-15.0)	13.5 (9.43-18.4)	15.3 (10.3-20.9)
24-hr	3.98 (3.41-4.68)	4.60 (3.93-5.41)	5.75 (4.89-6.78)	6.84 (5.78-8.11)	8.55 (7.07-10.7)	10.0 (8.05-12.6)	11.7 (8.99-15.0)	13.5 (9.91-17.8)	16.1 (11.3-21.8)	18.2 (12.4-24.8)
2-day	4.60 (3.96-5.38)	5.36 (4.61-6.27)	6.76 (5.79-7.92)	8.07 (6.86-9.49)	10.1 (8.37-12.5)	11.8 (9.51-14.8)	13.7 (10.6-17.5)	15.7 (11.6-20.6)	18.7 (13.3-25.1)	21.1 (14.5-28.5)
3-day	5.04 (4.35-5.87)	5.88 (5.07-6.84)	7.39 (6.35-8.63)	8.80 (7.51-10.3)	10.9 (9.11-13.5)	12.8 (10.3-15.9)	14.8 (11.5-18.8)	16.9 (12.6-22.1)	20.0 (14.2-26.8)	22.5 (15.5-30.3)
4-day	5.42 (4.69-6.29)	6.29 (5.44-7.30)	7.86 (6.77-9.15)	9.32 (7.97-10.9)	11.5 (9.61-14.1)	13.4 (10.9-16.6)	15.4 (12.0-19.6)	17.6 (13.1-22.9)	20.8 (14.8-27.7)	23.3 (16.1-31.3)
7-day	6.40 (5.57-7.39)	7.31 (6.35-8.44)	8.94 (7.74-10.4)	10.4 (8.98-12.1)	12.7 (10.6-15.4)	14.6 (11.9-18.0)	16.7 (13.0-21.0)	18.9 (14.1-24.4)	22.1 (15.8-29.2)	24.6 (17.1-32.9)
10-day	7.30 (6.37-8.39)	8.24 (7.18-9.48)	9.91 (8.60-11.4)	11.4 (9.85-13.2)	13.7 (11.5-16.5)	15.6 (12.7-19.0)	17.6 (13.8-22.0)	19.8 (14.8-25.4)	22.9 (16.5-30.2)	25.4 (17.7-33.8)
20-day	9.91 (8.71-11.3)	11.0 (9.68-12.6)	12.9 (11.3-14.8)	14.6 (12.6-16.7)	16.9 (14.2-20.1)	18.7 (15.3-22.6)	20.6 (16.3-25.5)	22.6 (17.0-28.7)	25.3 (18.3-33.0)	27.5 (19.3-36.3)
30-day	12.1 (10.7-13.8)	13.5 (11.8-15.3)	15.7 (13.7-17.9)	17.5 (15.2-20.0)	20.0 (16.8-23.5)	21.9 (17.9-26.1)	23.8 (18.8-29.1)	25.7 (19.4-32.3)	28.2 (20.4-36.4)	30.0 (21.1-39.6)
45-day	14.9 (13.1-16.8)	16.6 (14.6-18.8)	19.3 (17.0-21.9)	21.5 (18.8-24.5)	24.3 (20.4-28.3)	26.4 (21.6-31.3)	28.4 (22.4-34.4)	30.3 (22.9-37.8)	32.7 (23.7-41.9)	34.4 (24.3-45.1)
60-day	17.2 (15.3-19.4)	19.3 (17.1-21.8)	22.5 (19.9-25.5)	25.0 (22.0-28.5)	28.3 (23.8-32.8)	30.6 (25.1-36.1)	32.7 (25.9-39.6)	34.8 (26.3-43.2)	37.2 (27.0-47.5)	38.8 (27.5-50.8)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical



NOAA Atlas 14, Volume 9, Version 2

Created (GMT): Wed Jun 22 15:53:51 2022

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Maps & aerals

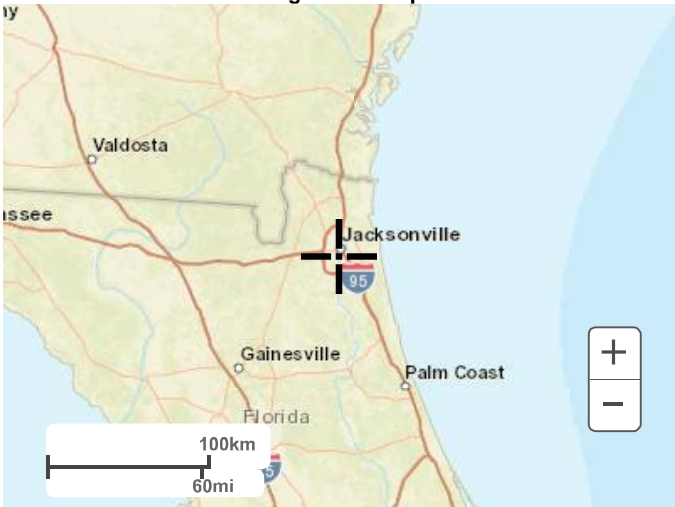
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



[Back to Top](#)

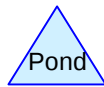
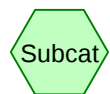
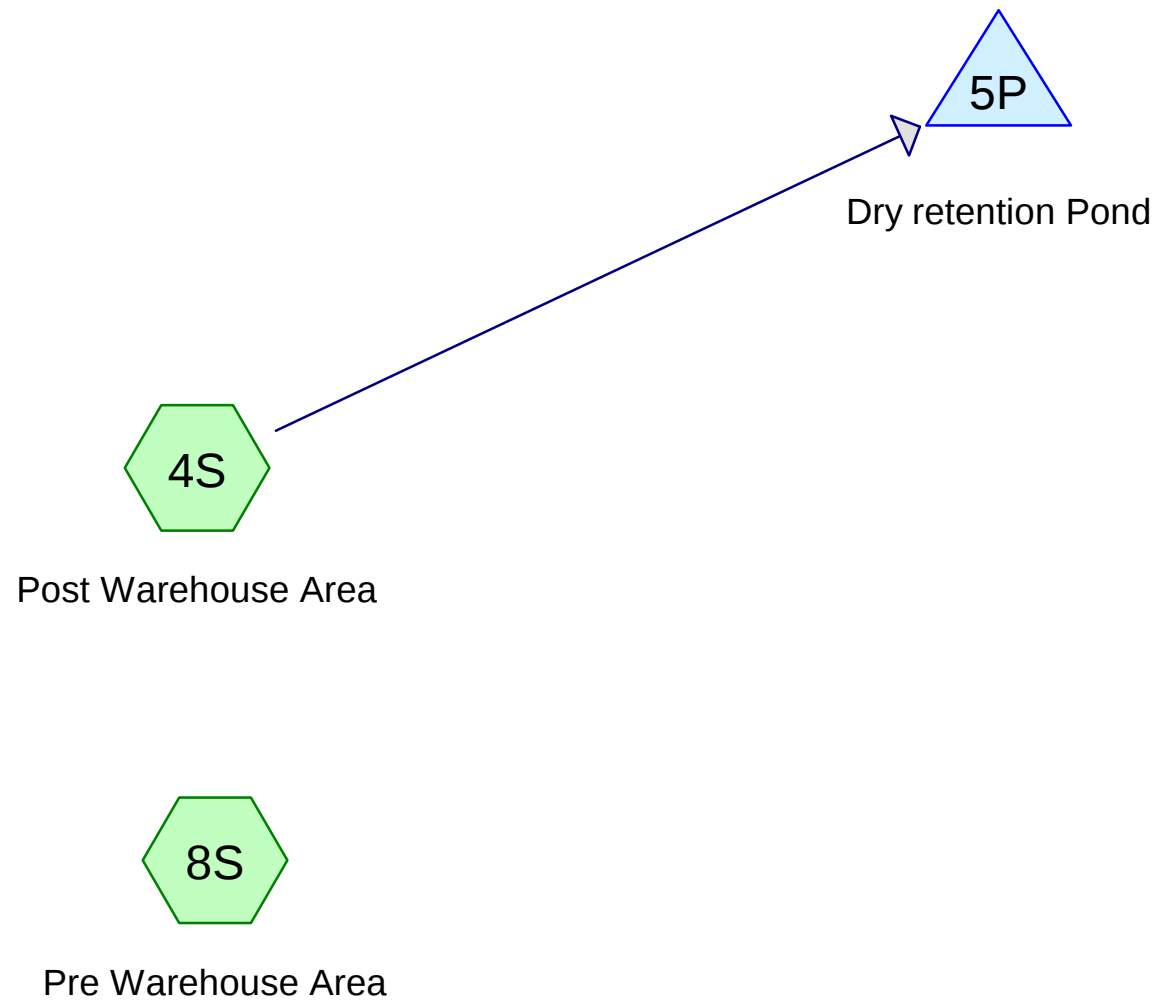
[US Department of Commerce](#)
[National Oceanic and Atmospheric Administration](#)
[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov
[Disclaimer](#)

Client: JEA Brandy Branch
Project: Warehouse
Project No. 410518
Title: Post Development Stormwater Design
File no: 58.5406.1101

Prepared by: Rutvee Sojitra
Verified by: JC Barranco Jr.
Date: 06-23-2022
Page no: 12

ATTACHMENT 3

HydroCAD 25 Yr 24 Hr REPORT



Routing Diagram for 58.5406.1101 Warehouse SWMS Calculation

Prepared by B&V, Printed 6/28/2022

HydroCAD® 10.00-14 s/n 02393 © 2015 HydroCAD Software Solutions LLC

58.5406.1101 Warehouse SWMS Calculation

Type III 24-hr Rainfall=8.55"

Prepared by B&V

Printed 6/28/2022

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Summary for Subcatchment 8S: Pre Warehouse Area

Runoff = 10.34 cfs @ 12.38 hrs, Volume= 1.256 af, Depth= 5.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=8.55"

Area (ac)	CN	Description
2.780	74	>75% Grass cover, Good, HSG C
2.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.8	170	0.0050	0.13		Sheet Flow, Overland Flow Grass: Short n= 0.150 P2= 4.60"
5.7	170	0.0050	0.49		Shallow Concentrated Flow, Shallow Concentrated Flow Short Grass Pasture Kv= 7.0 fps
27.5	340	Total			

58.5406.1101 Warehouse SWMS Calculation

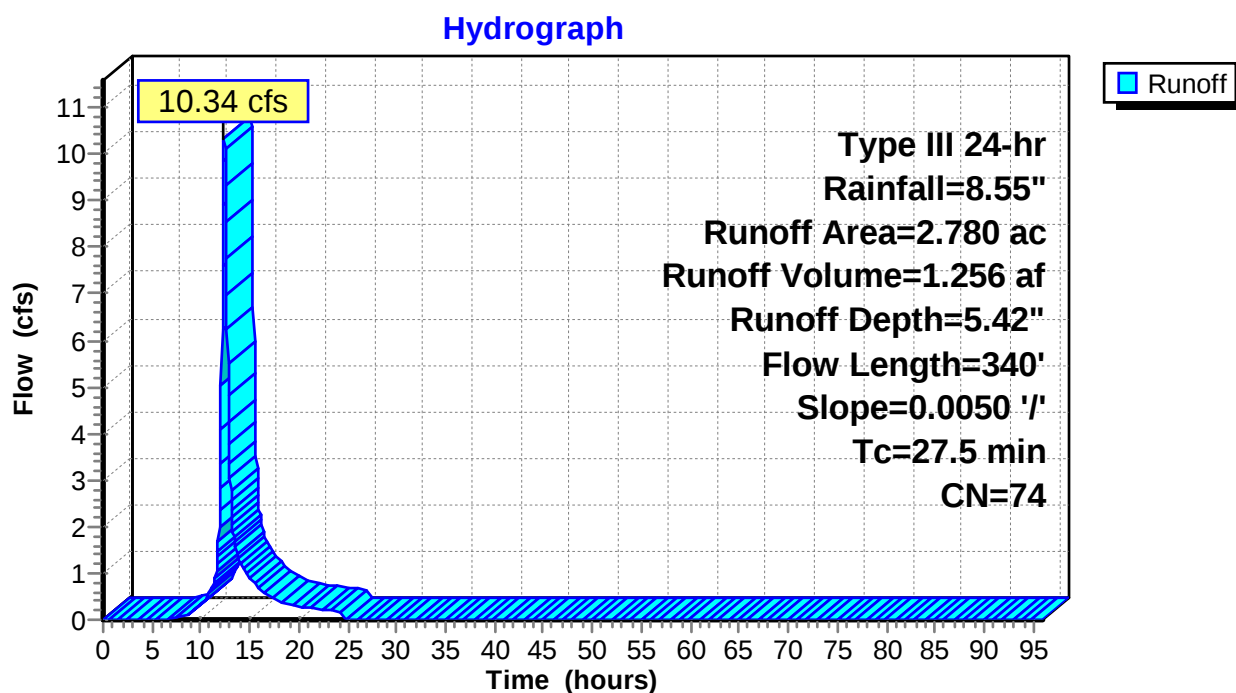
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Type III 24-hr Rainfall=8.55"

Printed 6/28/2022

Subcatchment 8S: Pre Warehouse Area



58.5406.1101 Warehouse SWMS Calculation

Type III 24-hr Rainfall=8.55"

Prepared by B&V

Printed 6/28/2022

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Summary for Subcatchment 4S: Post Warehouse Area

Runoff = 12.15 cfs @ 12.37 hrs, Volume= 1.507 af, Depth= 6.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=8.55"

Area (ac)	CN	Description
0.320	98	Water Surface, 0% imp, HSG C
0.780	98	Paved roads w/curbs & sewers, HSG C
1.680	74	>75% Grass cover, Good, HSG C
2.780	83	Weighted Average
2.000		71.94% Pervious Area
0.780		28.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.8	170	0.0050	0.13		Sheet Flow, Overland Flow Grass: Short n= 0.150 P2= 4.60"
5.7	170	0.0050	0.49		Shallow Concentrated Flow, Shallow Concentrated Flow Short Grass Pasture Kv= 7.0 fps
27.5	340	Total			

58.5406.1101 Warehouse SWMS Calculation

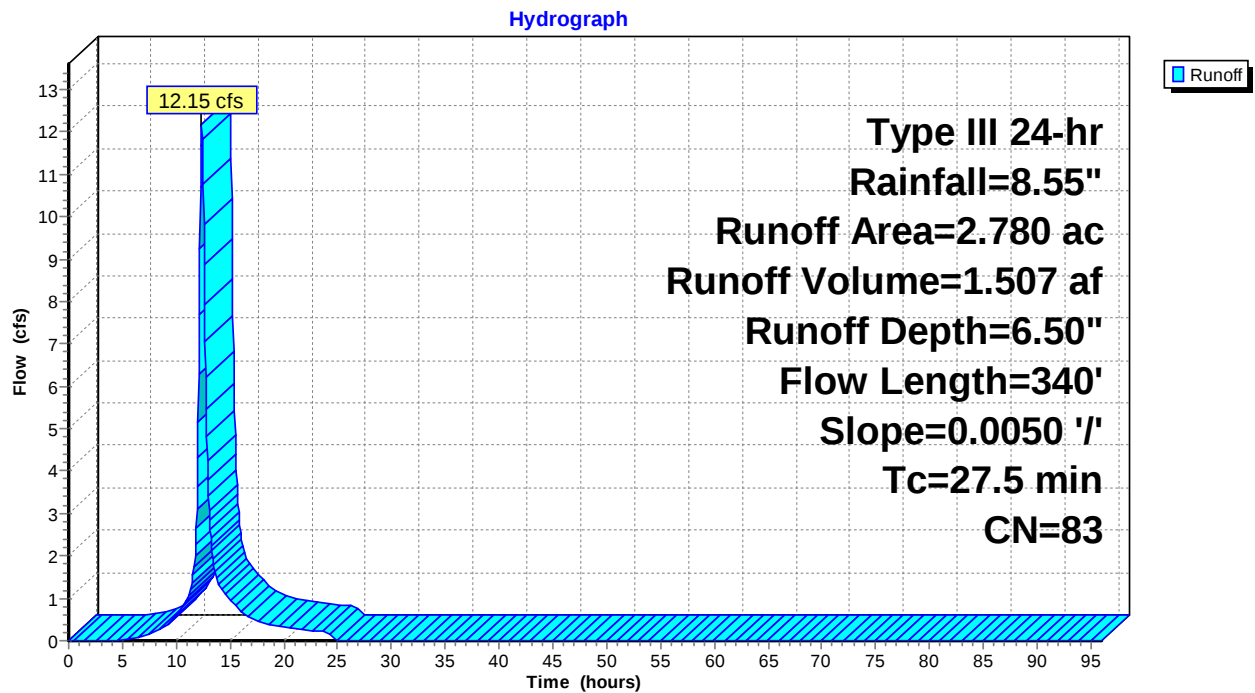
Prepared by B&V

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Type III 24-hr Rainfall=8.55"

Printed 6/28/2022

Subcatchment 4S: Post Warehouse Area



58.5406.1101 Warehouse SWMS Calculation

Type III 24-hr Rainfall=8.55"

Prepared by B&V

Printed 6/28/2022

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Summary for Pond 5P: (new Pond)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)

Inflow Area = 2.780 ac, 28.06% Impervious, Inflow Depth = 6.50"
 Inflow = 12.15 cfs @ 12.37 hrs, Volume= 1.507 af
 Outflow = 9.79 cfs @ 12.56 hrs, Volume= 1.507 af, Atten= 19%, Lag= 11.4 min
 Discarded = 1.16 cfs @ 12.56 hrs, Volume= 1.033 af
 Primary = 8.63 cfs @ 12.56 hrs, Volume= 0.474 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Peak Elev= 84.39' @ 12.56 hrs Surf.Area= 0.268 ac Storage= 0.388 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 92.7 min (905.9 - 813.2)

Volume	Invert	Avail.Storage	Storage Description
#1	82.70'	0.714 af	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
82.70	0.190	0.000	0.000
85.50	0.320	0.714	0.714

Device	Routing	Invert	Outlet Devices
#1	Discarded	82.70'	2.830 in/hr Percolation over Surface area Conductivity to Groundwater Elevation = 80.00'
#2	Primary	84.00'	13.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=1.16 cfs @ 12.56 hrs HW=84.39' (Free Discharge)↑ **1=Percolation** (Controls 1.16 cfs)**Primary OutFlow** Max=8.59 cfs @ 12.56 hrs HW=84.39' (Free Discharge)↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 8.59 cfs @ 1.70 fps)

58.5406.1101 Warehouse SWMS Calculation

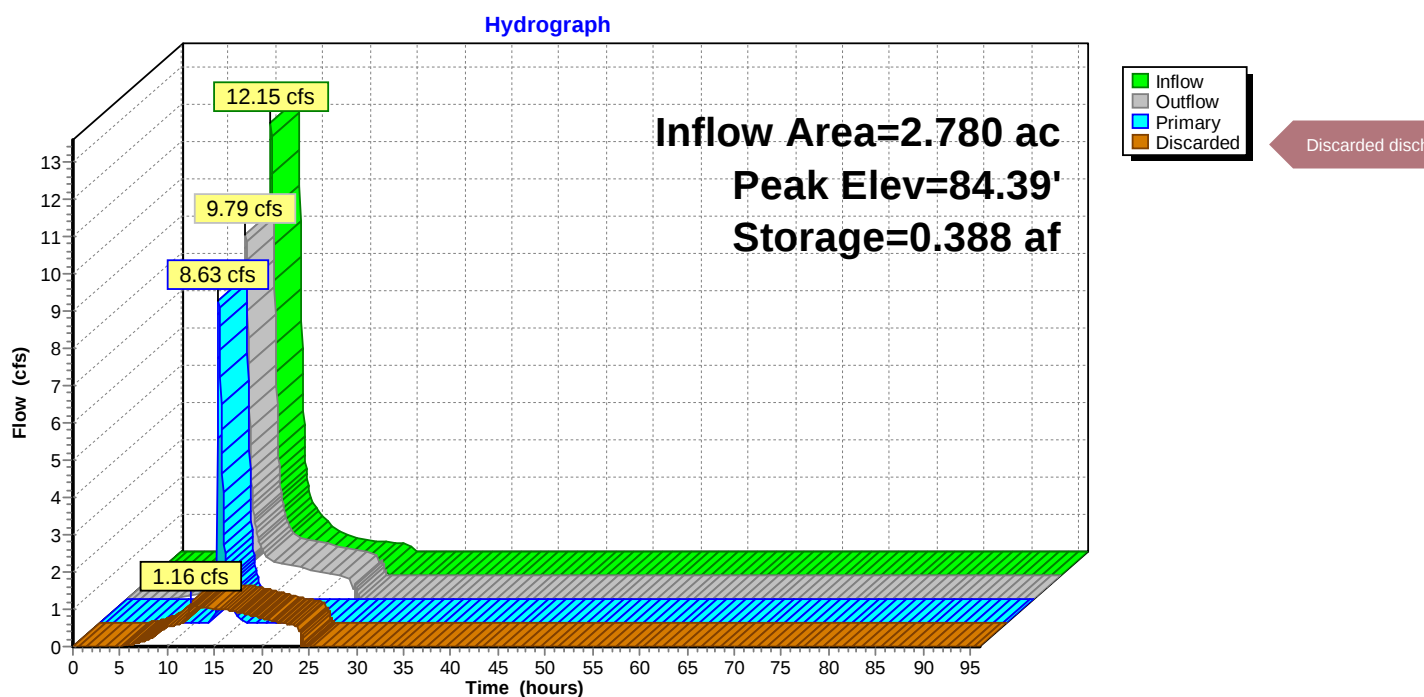
Prepared by B&V

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Type III 24-hr Rainfall=8.55"

Printed 6/28/2022

Pond 5P: (new Pond)



58.5406.1101 Warehouse SWMS Calculation

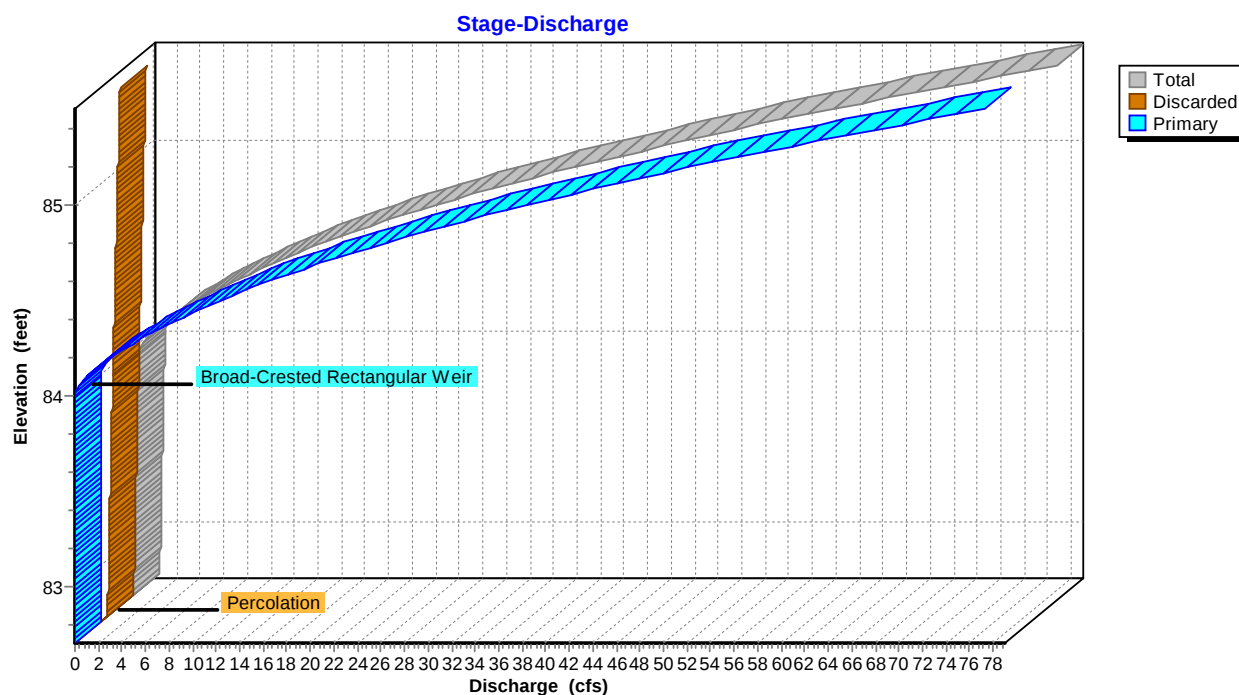
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Type III 24-hr Rainfall=8.55"

Printed 6/28/2022

Pond 5P: (new Pond)



58.5406.1101 Warehouse SWMS Calculation

Type III 24-hr Rainfall=8.55"

Prepared by B&V

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Hydrograph for Pond 5P: (new Pond)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0.000	82.70	0.00	0.00	0.00
2.50	0.00	0.000	82.70	0.00	0.00	0.00
5.00	0.01	0.000	82.70	0.01	0.01	0.00
7.50	0.15	0.000	82.70	0.15	0.15	0.00
10.00	0.59	0.000	82.70	0.54	0.54	0.00
12.50	10.78	0.385	84.38	9.42	1.16	8.26
15.00	0.96	0.290	84.01	1.07	1.02	0.06
17.50	0.47	0.226	83.75	0.92	0.92	0.00
20.00	0.31	0.129	83.33	0.76	0.76	0.00
22.50	0.24	0.044	82.93	0.62	0.62	0.00
25.00	0.00	0.000	82.70	0.01	0.01	0.00
27.50	0.00	0.000	82.70	0.00	0.00	0.00
30.00	0.00	0.000	82.70	0.00	0.00	0.00
32.50	0.00	0.000	82.70	0.00	0.00	0.00
35.00	0.00	0.000	82.70	0.00	0.00	0.00
37.50	0.00	0.000	82.70	0.00	0.00	0.00
40.00	0.00	0.000	82.70	0.00	0.00	0.00
42.50	0.00	0.000	82.70	0.00	0.00	0.00
45.00	0.00	0.000	82.70	0.00	0.00	0.00
47.50	0.00	0.000	82.70	0.00	0.00	0.00
50.00	0.00	0.000	82.70	0.00	0.00	0.00
52.50	0.00	0.000	82.70	0.00	0.00	0.00
55.00	0.00	0.000	82.70	0.00	0.00	0.00
57.50	0.00	0.000	82.70	0.00	0.00	0.00
60.00	0.00	0.000	82.70	0.00	0.00	0.00
62.50	0.00	0.000	82.70	0.00	0.00	0.00
65.00	0.00	0.000	82.70	0.00	0.00	0.00
67.50	0.00	0.000	82.70	0.00	0.00	0.00
70.00	0.00	0.000	82.70	0.00	0.00	0.00
72.50	0.00	0.000	82.70	0.00	0.00	0.00
75.00	0.00	0.000	82.70	0.00	0.00	0.00
77.50	0.00	0.000	82.70	0.00	0.00	0.00
80.00	0.00	0.000	82.70	0.00	0.00	0.00
82.50	0.00	0.000	82.70	0.00	0.00	0.00
85.00	0.00	0.000	82.70	0.00	0.00	0.00
87.50	0.00	0.000	82.70	0.00	0.00	0.00
90.00	0.00	0.000	82.70	0.00	0.00	0.00
92.50	0.00	0.000	82.70	0.00	0.00	0.00
95.00	0.00	0.000	82.70	0.00	0.00	0.00

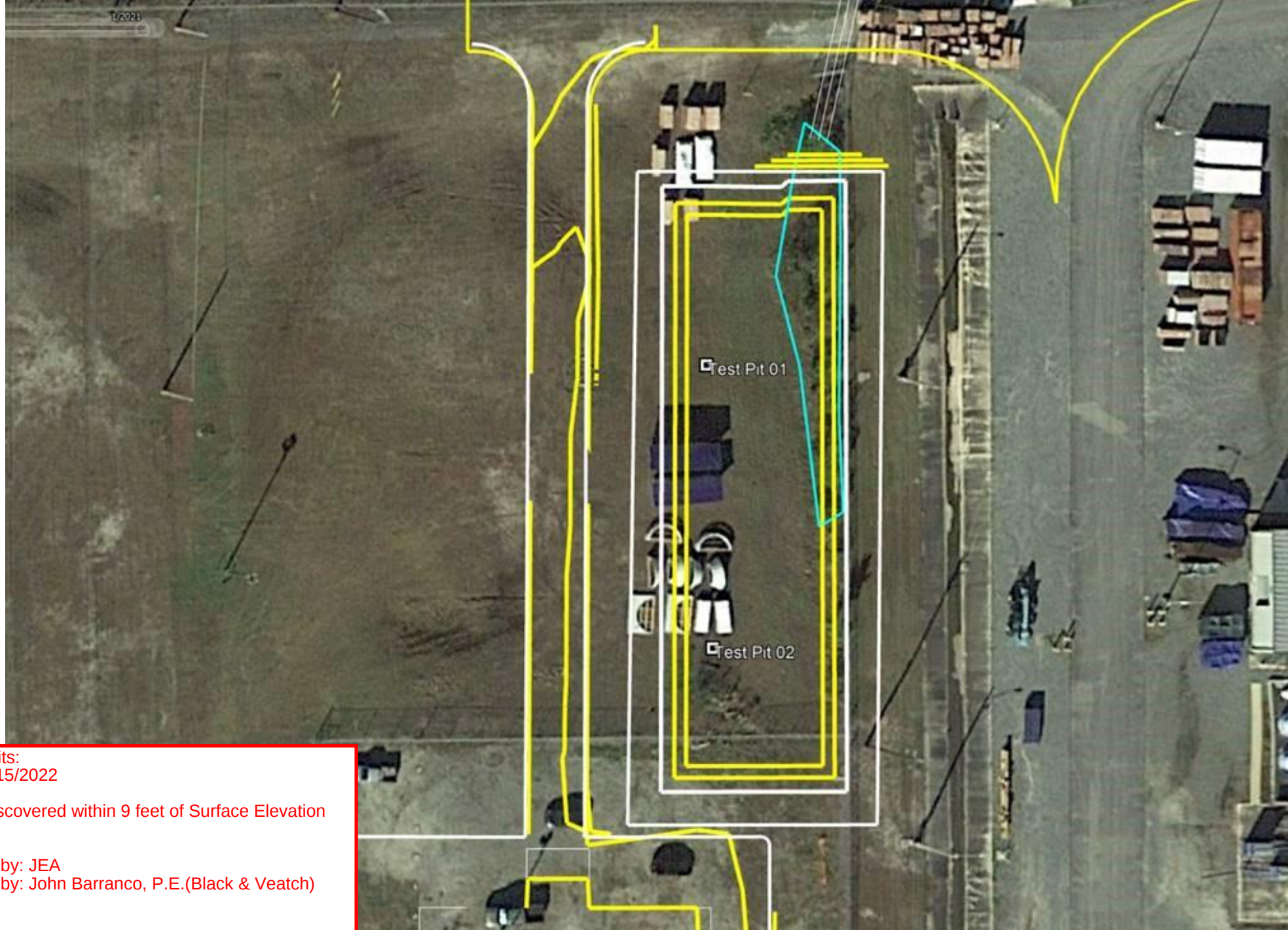
Peak 25 yr 24 hr disc

25 yr 24 hr drawdown

Client: JEA Brandy Branch
Project: Warehouse
Project No. 410518
Title: Post Development Stormwater Design
File no: 58.5406.1101

Prepared by: Rutvee Sojitra
Verified by: JC Barranco Jr.
Date: 06-23-2022
Page no: 13

Attachment 4
Groundwater Test Pits



Groundwater Test Pits:
Date of Test Pits: 6/15/2022

Groundwater Not Discovered within 9 feet of Surface Elevation
(~EL 85 NAVD88)

Test Pits Performed by: JEA
Test Pits Witnessed by: John Barranco, P.E.(Black & Veatch)

South test pit #2



South test pit #2



South test pit #2





South test pit #2, no ground water encountered @ ~9ft



North Test
Pit #1

South Test
Pit #2

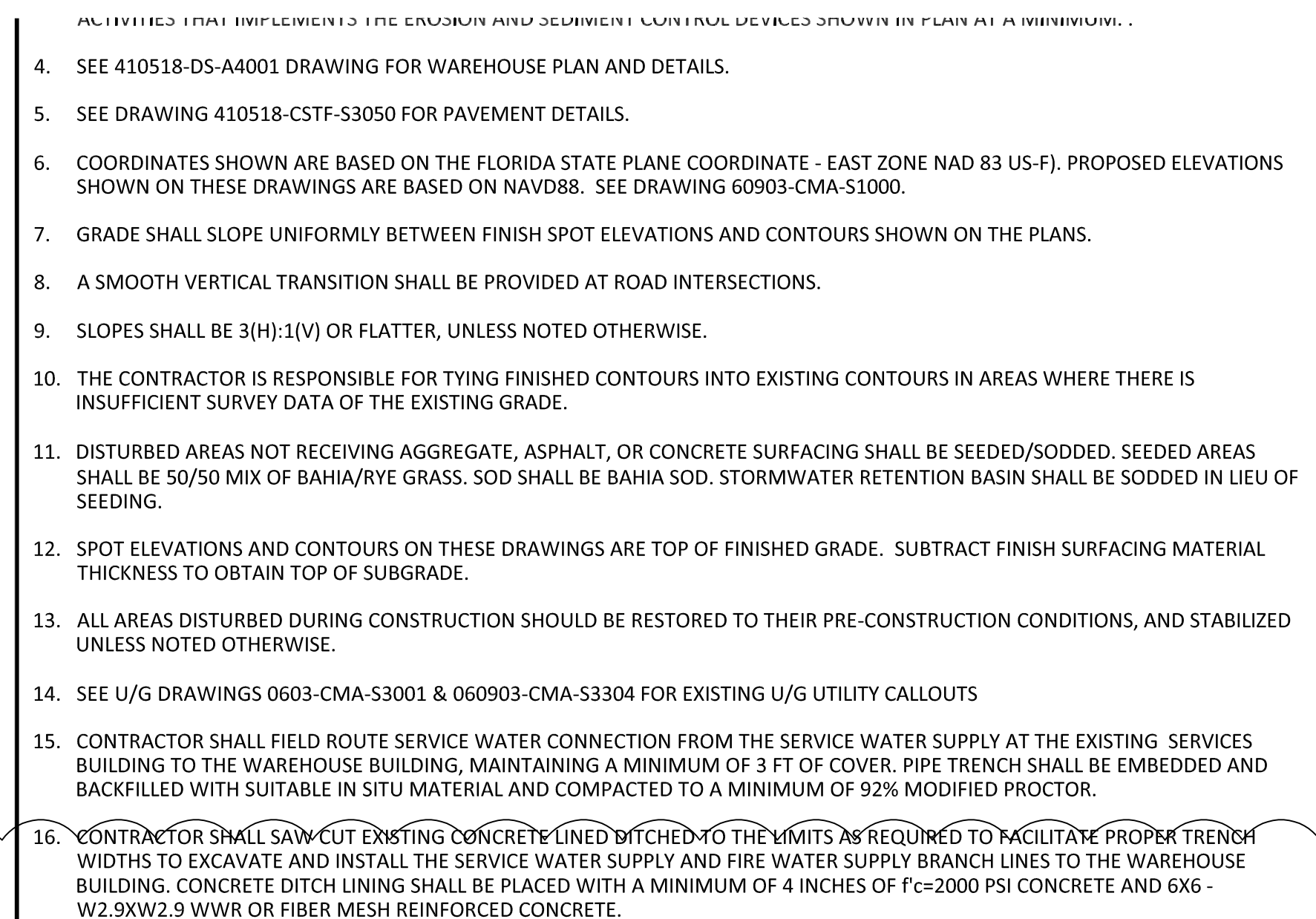


North Test Pit `9ft, no
groundwater
encountered

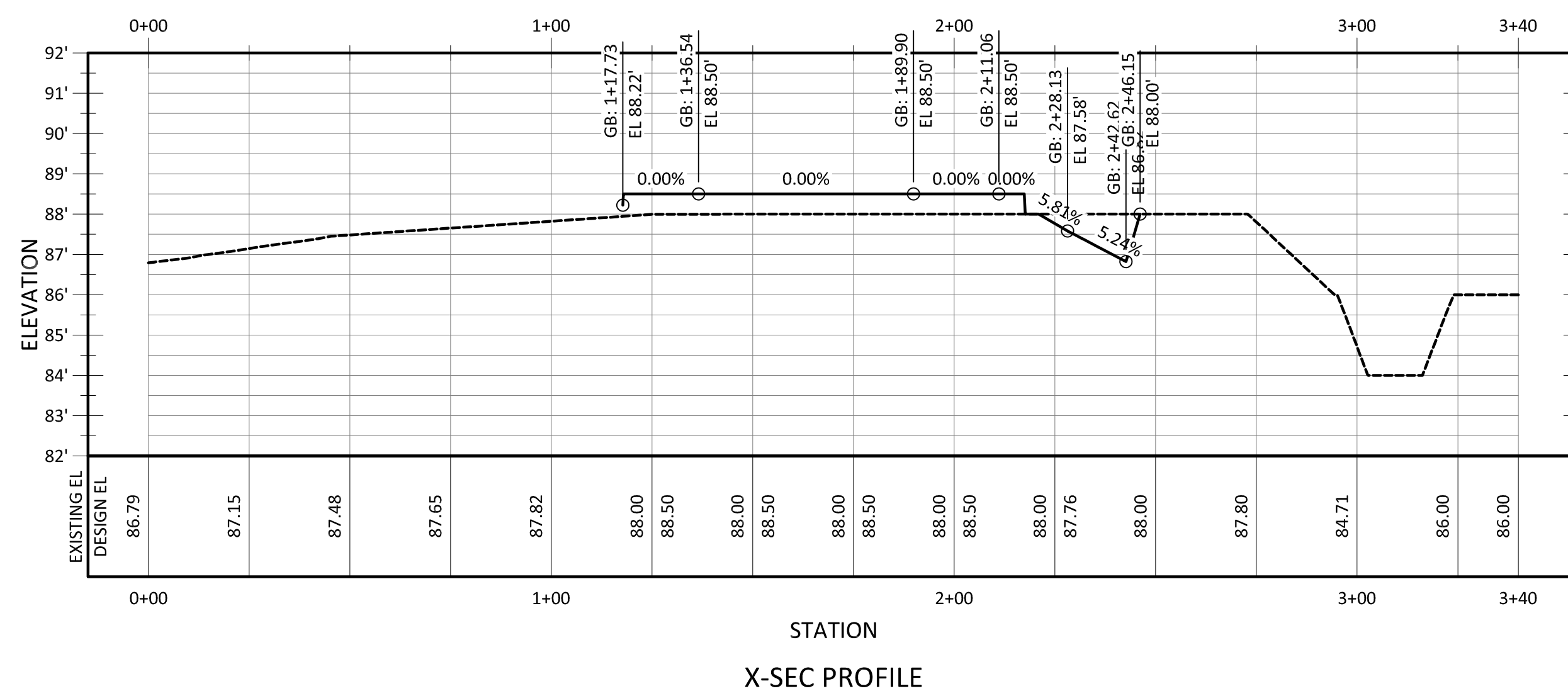


North Test
Pit #1

Attachment E: Grading, Paving, and Drainage Plans (Sealed)



	PROPERTY LINE		ASPHALT SURFACING
	LIMIT OF RIGHT-OF-WAY		AGGREGATE SURFACING
	NEW SECURITY FENCE		CONCRETE
	SWITCHYARD FENCE		EARTH
	PERIMETER FENCE		RIPRAP
	NEW CONTOUR		SAND/BEDDING MAT'L
	NEW STORM WATER SYSTEM		GRASS
	NEW CULVERT		WETLANDS
	DITCH/SWALE FLOW INDICATOR		
	GRADE SURFACE FLOW INDICATOR		
	NEW SPOT ELEVATION		
	SURVEY CONTROL MONUMENT		
	EXISTING FENCE		
	EXISTING CONTOUR		
	EXISTING SPOT ELEVATION		
	TEMPORARY 9\"/>		



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[illegible]



SEE THIS DWG
NO SCALE

 BLACK & VEATCH  JEA Building Community	
ENGINEER	DRAWN MTS
CHECKED JB	DATE

Attachment F: Construction Stormwater Pollution Prevention Plan

JEA NGS Warehouse Addition

Storm Water Pollution Prevention Plan

For

Storm Water Discharges from Construction Activities

Prepared for:

JEA

Issued for Permit

02 August 2022

Prepared by:

Black & Veatch Corporation

11401 Lamar Ave

Overland Park, KS 66211

Florida Registration No. 8132

Storm Water Pollution Prevention Plan

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

Name (Operator and/or Responsible Authority)

Date

Project Name and Location Information	JEA BGS Warehouse Addition JEA Brandy Branch Generating Station 5701 W Beaver St Jacksonville, FL 32234
--	--

Site Description

Describe the nature of the construction activities:	<i>JEA is planning to construct a Warehouse to store plant equipment spare parts within the western portion of the existing Brandy Branch Generating Station, that was previously used as construction laydown area.</i> <i>Soil-disturbing activities will include creation of a temporary construction driveway, earthwork cut and fill, excavation for foundations and utilities, construction of the new warehouse and associated driveways, and final stabilization and finish work.</i> <i>The planned stormwater retention pond to provide water quality and quantity treatment for the new warehouse area will developed at the beginning of the construction.</i>
Describe the intended sequence of major soil disturbing activities:	<i>Construction will generally follow the sequence below:</i> • <i>Install initial silt fence and filter socks,</i> • <i>Construct temporary construction stabilized driveway entrances,</i> • <i>Clear and grub, extend erosion controls and storm water diversions,</i> • <i>Strip and stockpile topsoil for reuse,</i> • <i>Excavate for stormwater retention pond</i> • <i>Construct storm water management system,</i> • <i>Excavate foundations and utility trenches</i> • <i>Install stormwater conveyance culverts</i> • <i>Construct subbase for warehouse driveways</i> • <i>Construct foundations and subsurface utilities,</i> • <i>Erect Warehouse Building</i> • <i>Finish road, driveways and permanent surfaces,</i> • <i>Remove temporary facilities,</i> • <i>Final site grading and finish, and</i> • <i>Final stabilization.</i>
Total area of the project area:	2.8 acres
Total area of the site to be disturbed:	2.8 acres
Existing data describing the soil or quality of any stormwater discharge from the site:	Turbidity levels of the stormwater discharge to offsite sources will be maintained below 29 NTU above background and will be measured at the point of discharge from the project area.

Estimate the drainage area in size for each discharge point:	2.8 acres
Latitude and longitude of each discharge point and identify the receiving water or MS4 for each discharge point:	N 30.321124°, W 81.949267°
Give a detailed description of all controls, Best Management Practices (BMPs) and measures that will be implemented at the construction site for each activity identified in the intended sequence of major soil disturbing activities section. Provide time frames in which the control will be implemented. NOTE: All controls shall be consistent with performance standards for erosion and sediment control and storm water treatment set forth in s. 62-40.432, F.A.C., the applicable Stormwater or Environmental Resource Permitting requirements of the Department or a Water Management District, and the guidelines contained in the Florida Development Manual: A Guide to Sound Land and Water Management (DEP, 1988) and any subsequent amendments.	
<i>Surface runoff from the disturbed areas of the Project site will be diverted around the work areas to the existing culvert that discharges water offsite, until the new retention pond is construction. During this stage, sediment controls will be installed, preventing runoff-induced migration of sediments. Culverts, Storm Inlets, Ditches, and Swales will be protected from construction runoff by sediment filters (staked silt fences, inlet protection, filter socks, and vegetation). Sediment controls are designed in accordance with the Florida Erosion and Sediment Control Manual best management practices. Once the new stormwater retention pond is constructed, surface runoff from the disturbed area of the Project site will be diverted around work areas to the newly constructed retention pond. Erosion and Sediment controls will be maintained throughout construction.</i>	
Describe all temporary and permanent stabilization practices. Stabilization practices include temporary seeding, mulching, permanent seeding, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, vegetative preservations, etc.	
<i>Temporary and permanent stabilization methods will be used on the Project site. Two major stabilization methods that will be used on the site are preserving existing vegetation where possible and disturbing only the area needed for project construction. Disturbed areas will be stabilized within 7 days after construction activity has temporarily or permanently ceased, with one exception: when construction will resume within 21 days within that area. Stabilization practices may include seeding, mulching, geotextiles, sodding, or aggregate surfacing. Soil will be tested to determine the appropriate seed mix and application rates. Temporary access facilities (construction parking or staging areas, equipment laydown areas) will be surfaced with aggregate to reduce sediment tracking.</i>	
Describe all structural controls to be implemented to divert stormwater flow from exposed soils and structural practices to store flows, retain sediment on-site or in any other way limit stormwater runoff. These controls include silt fences, earth dikes, diversions, swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm	

drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, coagulating agents and temporary or permanent sediment basins.	
<i>Temporary and permanent structural devices to divert, store, or limit runoff from disturbed areas will be used on the Project site. Such device may include silt fence, synthetic bale dikes, culvert inlet/outlet protection (rock or rip-rap), filter socks, and the storm water retention pond.</i>	
<i>Details of the temporary control measures are shown on the Black & Veatch 410518-CSTF-S3000 Paving, Grading and U/G Plant drawings, that will be implemented at a minimum.</i>	
Describe all sediment basins to be implemented for areas that will disturb 10 or more acres at one time. The sediment basins (or an equivalent alternative) should be able to provide 3,600 cubic feet of storage for each acre drained. Temporary sediment basins (or an equivalent alternative) are recommended for drainage areas under 10 acres.	
<i>Construction Storm Water Management System Establishment: As soon as construction sequencing allow it, the permanent stormwater retention pond will be developed. The Pond will also provide water quality treatment through retention with discharge to the groundwater via infiltration. The Pond has a design capacity of 0.29 acre-ft, which exceeds the sediment basin requirement of 3600 cubic-ft per acre drained (3600 CF/acre x 2.8 acres = 0.23 acre-ft).</i>	
Describe all permanent stormwater management controls such as, but not limited to, detention or retention systems or vegetated swales that will be installed during the construction process.	
The SWMS has been designed in accordance with the FDEP and SJRWMD ERP Applicant's Handbook. The storm water runoff from the development area is designed to be routed via overland flow and via culverts to the dry retention pond (Pond). The proposed dry retention pond was also designed to provide water quality treatment through retention, an drawdown of the water quality treatment volume via natural infiltration.	
Describe in detail controls for the following potential pollutants:	
Waste disposal, this may include construction debris, chemicals, litter, and sanitary wastes:	<i>The contractor will maintain regulated waste disposal procedures associated with the construction activities. This function will take place within the existing earthen berm and surrounding silt fences.</i> <i>All waste material will be collected and stored in a securely covered metal dumpster provided by a licensed solid waste management company in Duval County. The dumpster will meet all local, state, and federal regulations. All trash and construction debris will be deposited in the dumpster. The dumpster will be monitored and emptied as necessary to prevent overflow. Trash</i>

	<i>will be hauled to the local dump. All personnel will be instructed regarding the correct procedure for waste disposal.</i> <u><i>Sanitary Waste</i></u> <i>A licensed sanitary waste company will collect all sanitary waste from portable units on the regulated time frame as required by local regulations.</i> <u><i>Equipment and Concrete Truck Wash Areas</i></u> <i>Large equipment and concrete trucks will be allowed to discharge wash water in the project area in such a manner that prevents contact with storm waters discharged from the site. Dikes, barriers, or a shallow excavation may be constructed to contain the washwaters. Materials collected in such areas will be disposed of in an acceptable manner.</i>
Offsite vehicle tracking from construction entrances/exits:	<i>The vehicle tracking of sediment will be reduced by installing stabilized construction road aprons. Plant roads and off site roads will be routinely inspected for excess sediment tracking, and if necessary, will be cleaned to remove excess mud, dirt, or rock tracked from the construction site.</i>
The proper application rates of all fertilizers, herbicides and pesticides used at the construction site:	<i>In the event fertilizers, herbicides and pesticides are required on the construction side, they will be applied by a State licensed applicator. Fertilizers are only to be applied at the minimum rate recommended by the manufacturer to establish and maintain vegetation.</i>
The storage, application, generation and migration of all toxic substances:	<i>All toxic substance containers will be tightly sealed and properly stored to prevent leaks or spills. Storage will be in a rain protected facility. Unused paints, cleaners, or other toxic substance will be disposed of according to local and/or state regulations, or manufacturer's recommendations. All construction personnel will be instructed regarding the correct procedure for hazardous waste handling and disposal. The Construction Site Manager will be responsible for overall compliance with these procedures.</i>

Other:	<i>Test for levels of impairment performed as required by FDEP and SJRWMD requirements. Analytical results shall be reviewed for compliance with these requirements. Copies of the results to be kept with the storm water management plan.</i>
Provide a detailed description of the maintenance plan for all structural and non-structural controls to assure that they remain in good and effective operating condition. <i>The inspection and maintenance practices that will be used to maintain erosion and sediment controls at the project area are listed below. The Storm Water Management System Weekly Inspection Form included as Appendix B of this plan addresses items for weekly inspection. Documentation will be retained onsite for the duration of the construction project.</i> <i>• Turbidity barriers will be installed at all locations as shown on Black & Veatch drawing 410518-CSTF-S3000. These barriers will be inspected and maintained in good working condition.</i> <i>• All control measures will be inspected at least once each week and following any storm event of 0.50 inches or greater.</i> <i>• All control measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report and completed within 7 days.</i> <i>• Built up sediment will be removed from sediment barriers when it has reached one-third the height of the barrier.</i> <i>• Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.</i> <i>• The retention pond will be inspected for depth of sediment. Built up sediment will be removed when it reaches 10 percent of the design capacity or at the end of the job.</i> <i>• The retention pond bottom will be tested at the end of the project to assure the final average saturated horizontal permeability is 2.1 in/hr or greater, unless approved otherwise by the responsible engineer.</i> <i>• Embankments and will be inspected weekly and following each storm event, and any breaches or erosion will be promptly repaired.</i> <i>• Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.</i> <i>• The Construction Site Manager will designate one or more individuals, as needed, to be responsible for inspections, maintenance, repair, and reporting activities. The selected personnel will receive instruction from the Site Manager or qualified designee.</i> <i>A signed copy of this Plan and any supporting materials must be maintained at the Project site from the date of project initiation to the date of final stabilization. All records and supporting documents will be compiled in an orderly manner and maintained for a period of three years following final site stabilization.</i> <i>The generation of reports, as part of the construction process and inspection or amendment procedures, provides accurate records that can be used to evaluate the effectiveness of this Plan, and document compliance with the regulatory requirements. Changes in design or</i>	

<i>construction of the storm water management system must be documented and included with the Plan to facilitate Plan review or evaluation.</i>
Inspections: Describe the inspection and inspection documentation procedures, as required by Part V.D.4. of the permit. Inspections must occur at least once a week and within 24 hours of the end of a storm event that is 0.50 inches or greater (see attached form).
See previous descriptions.
Identify and describe all sources of non-stormwater discharges as allowed in Part IV.A.3. of the permit. Flows from fire-fighting activities do not have to be listed or described.
<i>It is expected that the following non-storm water discharges will occur onsite during the construction period:</i> • <i>Water pipeline flushings*</i> • <i>Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).</i> • <i>Vehicle and building wash waters (where no detergents have been used).</i> • <i>Water for dust control.</i> • <i>Firefighting waters; fire hydrant flushings.</i> • <i>Vegetation watering; irrigation drainage.</i> • <i>Potable water discharges.</i> • <i>Air conditioning condensate.</i> • <i>Uncontaminated foundation or footing drains.</i> <i>*Waters from hydrostatic testing of new water lines will be discharged to the existing plant waste water drain system to the extent practical.</i>

This SWPPP must clearly identify, for each measure identified within the SWPPP, the contractor(s) or subcontractor(s) that will implement each measure. All contractor(s) and subcontractor(s) identified in the SWPPP must sign the following certification:

“I certify under penalty of law that I understand, and shall comply with, the terms and conditions of the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities and this Stormwater Pollution Prevention Plan prepared thereunder.”

Name	Title	Company Name, Address and Phone Number	Date

Stormwater Pollution Prevention Plan Inspection Report Form

Inspections must occur at least once a week and within 24 hours of the end of a storm event that is 0.50 inches or greater.

Project Name: _JEA BGS Warehouse Addition

FDEP NPDES Stormwater Identification Number: _____

Location	Rain data	Type of control (see below)	Date installed / modified	Current Condition (see below)	Corrective Action / Other Remarks

Condition Code:

G = Good

M = Marginal, needs maintenance or replacement soon

P = Poor, needs immediate maintenance or replacement

C = Needs to be cleaned

O = Other

Control Type Codes

1. Silt Fence	10. Storm drain inlet protection	19. Reinforced soil retaining system	28. Tree protection
2. Earth dikes	11. Vegetative buffer strip	20. Gabion	29. Detention pond
3. Structural diversion	12. Vegetative preservation area	21. Sediment Basin	30. Retention pond
4. Swale	13. Retention Pond	22. Temporary seed / sod	31. Waste disposal / housekeeping
5. Sediment Trap	14. Construction entrance stabilization	23. Permanent seed / sod	32. Dam
6. Check dam	15. Perimeter ditch	24. Mulch	33. Sand Bag
7. Subsurface drain	16. Curb and gutter	25. Synthetic Bales	34. Other
8. Pipe slope drain	17. Paved road surface	26. Geotextile	
9. Level spreaders	18. Rock outlet protection	27. Rip-rap	

Inspector Information:

Name

Qualification

Date

The above signature also shall certify that this facility is in compliance with the Stormwater Pollution Prevention Plan and the State of Florida Generic Permit for Stormwater Discharge from Large and Small Construction Activities if there are not any incidents of non-compliance identified above.

* * * * *

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

Name (Responsible Authority)

Date

Attachment G: Email correspondence with FDEP – NE District (Paul Duff) confirming no wetland permitting required for this project.

From: [Duff, Paul](#)
To: [Walker, Lisa](#); [Shi, Junhong](#)
Cc: [Gillean, Keith L.](#); [Sears, Andrew R.](#); [Barranco Jr., John](#)
Subject: RE: JEA Brandy Branch Warehouse - Issued ERP/ACOE Permits for Wetland Fill/Mitigation
Date: Monday, July 18, 2022 8:17:06 AM

Caution - External Email: This email originated outside of Black & Veatch. Please do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Lisa,

Yea, I think that approach is logical, those wetlands were proposed to be filled and were mitigated for.

FL-DEP-LOGO



Paul Duff, MS, CWE
Environmental Consultant
Northeast District - Jacksonville
paul.duff@floridadep.gov
8800 Baymeadows Way West, Suite 100
Jacksonville, FL 32256
Office: 904-256-1625

From: Walker, Lisa <WalkerLR@bv.com>
Sent: Friday, July 15, 2022 1:58 PM
To: Shi, Junhong <Junhong.Shi@FloridaDEP.gov>; Duff, Paul <Paul.Duff@FloridaDEP.gov>
Cc: Gillean, Keith L. <gillkl@jea.com>; Sears, Andrew R. <searar@jea.com>; Barranco Jr., John <BarrancoJC@bv.com>
Subject: JEA Brandy Branch Warehouse - Issued ERP/ACOE Permits for Wetland Fill/Mitigation

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Hi Paul,

Attached are the permit documents authorizing fill of the wetland on the north side of JEA's proposed Warehouse Project at the Brandy Branch site.

The entire portion of the wetland south of concrete lined swale (which encompasses the warehouse project area) was authorized to be filled by FDEP and USACE in 2000.

JEA provided mitigation for all of the authorized fill. It appears a narrow sliver of the wetland (west of the fence) was not filled during the original construction activities but will be affected by the stormwater pond proposed for the new warehouse.

FDEP ERP Documentation

Wetland fill was authorized under Permit No: 16-156348-003-ES dated 06/09/2000.

It was a major modification to Permit No. 16-156348-002EI.

It allows for fill 0.6 acre of wetlands eliminated by stormwater pond access road. This includes the

entire limits of the delineated wetland south of the concrete ditch.
For mitigation, 30 +/- acres of wetlands and upland buffer (forested wetland north of concrete ditch) was placed into a Conservation Easement.

USACE – Jax District Documentation

Notice to EPA about intent to issue modification for Department of Army Permit No. 199902804 (IP-MMS) for additional fill in wetlands for stormwater pond access road (dated 5/23/2000). Includes mitigation requirements for the additional fill.

Attached files:

- ERP Permit No: 16-156348-003-ES dated 06/09/2000
- ERP Modified Permit Plans (includes impact plans and conservation easement plans)
- FDEP interoffice memo from environmental staff to stormwater staff describing the wetland impacts/conservation easement.
- USACE Mod NOI to issue permit & plans (note – I don't see records for an actual re-issued Corps permit – this is all that was included in SCA docs. SCA final order states the Corps permit mod was issued so there's no question the fill was approved).

Based on our pre-app discussion, we assume that authorization for wetland fill that was previously permitted by USACE and FDEP ERP will not be required.

We will be submitting an SCA modification for the new warehouse and SWM pond in the next week or so and want to confirm you agree with this approach.

Please let us know if you have any questions or would like to discuss.

Thanks!

Lisa Walker, M.S.

Environmental Project Manager

Black & Veatch

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E WalkerLR@BV.com

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