October 2, 2023

Florida Department of Environmental Protection
Waste Management Department
Solid Waste Division
13051 N. Telecom Drive
Temple Terrace, Florida 33637

**Re: Waste Services, LLC – Permit Application**
Proposed Materials Recycling Facility
5003 Dover Street, Tampa Florida 33619

To Whom it May Concern:

Attached with this transmittal letter you will find a combined electronic submittal with the appropriate forms and supporting information, and payment in the amount of $2,000.00 (F.A.C. 62-701.315) submitted as the application fee. All supporting documents and information are intended to meet the regulatory guidance to acquire a permit to operate a Waste Processing Facility noted above.

Verdantas has been retained by Waste Services, LLC to initiate site investigations as well as, completing a feasibility analysis to determine the potential for the development of a Materials Recycling Facility. All site investigations and work completed to date adhere to specific regulatory requirements for a formal permit request as noted in F.A.C. 62-701.710.

Please review all of the attached information and, if further information is required, please contact the undersigned at (813) 335-2140 or Cheryl Nichols, P.E. at (813) 968-2583.

Sincerely,
**HSW Consulting, LLC.**

Steven Folsom, P.E., BCEE
Vice President/Area Leader

Cheryl Nichols, P.E., CHMM
Senior Consultant

cc: Mark Kara, American XVII-Managing Partner
Laurel Lockett, Esq, Carlton Fields

# Florida Department of Environmental Protection

Solid Waste Section, Mail Station 4565
2600 Blair Stone Road, Tallahassee, Florida 32399-2400

DEP Form # 62-709.901(3)
Form Title Appl for Reg. and Ann Rep for a YT Trans Station or SW Organic Recycling Facility
Effective Date February 15, 2010
DEP Facility ID No. _____ (Filled in by DEP)
DEP WACS ID No: _____ (Filled in by DEP)
This form is adopted by reference in subsection 62-709.901(3), F.A.C.

**Application for Registration and Annual Report for a Yard Trash Transfer Station or a Solid Waste Organics Recycling Facility**

## PART A - GENERAL INFORMATION

1. Type of Application: New [X] Renewal (due July 1) [ ] Annual report only for facility operating under permit: [ ]

2. Type of Facility: Yard trash recycling [ ] Manure blending [ ]
   Yard trash transfer station [X] Vegetative, animal byproducts or manure composting [ ]

3. Type of Waste Processed: Yard trash [X] Manure [ ] Animal byproducts [ ] Pre-consumer Vegetative [ ]
   Vegetative (could/did come into contact with animal products or byproducts or end user) [ ]

4. Facility Name: Waste Services, LLC

5. Registrant Name (or Permittee if annual report only): _____

6. Federal Employer Identification Number: _____

7. Mailing Address: PO Box 25653
   City Sarasota State FL Zip 34277
   Street Mailing Address (if different): _____
   City _____ State _____ Zip _____

8. Facility Location - Street Address or Property Number: 5003 Dover Street
   City Tampa County Hillsborough

9. Contact Person: Mark Kara Telephone: 813-376-3362

## PART B - ADDITIONAL INFORMATION REQUIRED FOR REGISTRATION APPLICATION

10. Records required by Rule 62-709.320, F.A.C., will be kept at the facility? Yes [X] No [ ]
    If no, please indicate where these records will be kept and made available upon Department request to review the records:
    _____

11. Does the registrant own the facility site? Yes [X] No [ ]
    **If you answered no, please attach evidence that the facility owner or operator has permission from the landowner to operate a yard trash transfer station or a solid waste organics recycling facility at this site.**

12. Has the organic recycling facility begun operations? Yes [ ] No [X]
    **If this facility was operating in the previous calendar year, the annual report in Part C must be completed.**

13. Include a check or money order for the $35.00 registration fee made payable to the Florida Department of Environmental Protection.

I affirm that I have read Rules 62-709.320, 62-709.330 and 62-709.350, F.A.C., and shall comply with the requirements specified in those rules. I also affirm that the information provided in the application is true, accurate, and correct to the best of my knowledge. I have attached all documents and/or authorizations that are required.

Mark Kara, owner — Print Name and Title of Registrant or Authorized Agent
Signature
9/29/23 — Date

Email address (if available): americanmk92@yahoo.com

## PART C - ANNUAL REPORT

14. Calendar Year (January 1 through December 31) Covered by this Report: _____

15. Values used in this report are in (SELECT ONE): Tons ☐ Cubic Yards ☐

16. **For Existing Facilities that have not reported this information in the past**, Amount of

    a. Unprocessed Material On Site at Beginning of Report Year: _____

    b. Processed Material On Site at Beginning of Report Year (total): _____

17. Total Quantity of Material Received During Report Year: _____

18. Total Quantity of Material Lost Due to Processing (e.g. grinding, drying, shrinkage, fires, etc.) During Report Year: _____

19. Total Quantity of Material Removed from Site for:

    a. Use (e.g., landfill cover, fuel, mulch, compost, etc.): _____

    b. Disposal: _____

    c. Other (transfer stations) _____

20. Total Quantity On Site at End of Report Year of:

    a. Unprocessed Material: _____

    b. Processed Material: _____

Note that the total sum of items 16 a and b plus 17 must equal to sum of items 18, plus 19 a, b and c, plus 20 a and b.

Total of items 16 and 17 [ ] Total of Items 18, 19 and 20 [ ]

I affirm that the information provided in the annual report is true, accurate, and correct to the best of my knowledge.

| Print Name and Title of Registrant/Permittee or Authorized Agent | Signature | Date |
|---|---|---|
| | | |

Email address (if available): _____

## PART D - MAILING INSTRUCTIONS

**Remember to include the $35.00 fee if this is also a registration application.** Mail completed form to:

Department of Environmental Protection
Solid Waste Section, MS 4565
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

# Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(4), F.A.C.

Form Title: Application to Construct, Operate, or Modify a Waste Processing Facility

Effective Date: February 15, 2015

Incorporated in Rule: 62-701.710(2), F.A.C.

## APPLICATION TO CONSTRUCT, OPERATE, OR MODIFY A WASTE PROCESSING FACILITY

**GENERAL REQUIREMENT**: Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes (F.S.) and in accordance with Florida Administrative Code (F.A.C.) Chapter 62-701. A permit application shall be submitted in accordance with the requirements of Rule 62-701.320(5)(a), F.A.C., to the Department District Office having jurisdiction over the facility. The appropriate fee in accordance with subsection 62-701.315(4), F.A.C., shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP). Complete appropriate sections for the type of facility for which application is made and include all additional information, drawings, and reports necessary to evaluate the facility.

Please Type or Print in Ink

### A. GENERAL INFORMATION

1. Type of facility (check all that apply):

☐ Transfer Station:

☐ C&D ☐ Class III ☐ Class I

☐ Other Describe: _____

■ Materials Recovery Facility:

■ C&D Recycling ■ Class III MRF ☐ Class I MRF

☐ Other Describe: _____

☐ Other Facility That Processes But Does Not Dispose Of Solid Waste On-Site:

☐ Storage, Processing or Disposal for Combustion Facilities (not addressed in another permit)

☐ Other Describe: _____

NOTE: C&D Disposal facilities that also recycle C&D, shall apply on DEP FORM 62-701.900(6), F.A.C.

2. Type of application:

■ Construction/Operation

☐ Operation without Additional Construction

3. Classification of application:

■ New ☐ Substantial Modification

☐ Renewal ☐ Intermediate Modification

☐ Minor Modification

4. Facility name: Waste Services, LLC

5. DEP ID number: _____ County: Hillsborough County

6. Facility location (main entrance): 5003 Dover Street, Tampa, FL 33619

7. Location coordinates:

Section: 3 Township: 30 S Range: 19 E

Latitude: 89 ° 37 ' 42 " Longitude: 00 ° 22 ' 50 "

Datum: NAVD1988 Coordinate Method: US Survey Feet

Collected by: SurvTech Solutions Company/Affiliation: surveyor

8. Applicant name (operating authority): Waste Services, LLC

Mailing address: PO Box 25653, Sarasota, FL 34277
Street or P.O. Box City State Zip

Contact person: Mark Kara Telephone: (813) 376-3362

Title: manager americanmk92@yahoo.com
E-Mail address (if available)

9. Authorized agent/Consultant: Verdantas LLC

Mailing address: 15711 Mapledale Blvd, Suite B., Tampa, FL 33624
Street or P.O. Box City State Zip

Contact person: Cheryl Nichols Telephone: (813) 376-3362

Title: Sr Engineer cnichols@verdantas.com
E-Mail address (if available)

10. Landowner (if different than applicant): American XVII, LLC

Mailing address: 960 E Dr. Martin Luther King Jr Blvd, Seffner, FL 33584
Street or P.O. Box City State Zip

Contact person: Mark Kara Telephone: (813) 376-3362

americanmk92@yahoo.com
E-Mail address (if available)

11. Cities, towns and areas to be served: Tampa, Hillsborough County

12. Date site will be ready to be inspected for completion: _____

13. Estimated costs:

Total Construction: $_____ Closing Costs: $ _____

14. Anticipated construction starting and completion dates:

From: _____ To: _____

15. Expected volume of waste to be received: _____ $yds^3$/day 250 tons/day

16. Provide a brief description of the operations planned for this facility: _____

Material screening and sorting to ensure the appropriate routing and disposal at landfill facilities.

See Attached Operation Plan/ Maintenance Manual (O&M Plan)

**B. ADDITIONAL INFORMATION**

Please attach the following reports or documentation as required.

1. Provide a description of the operation of the facility that shall include (62-701.710(2)(a), F.A.C.):
   a. The types of materials, i.e., wastes, recyclable materials or recovered materials, to be managed or processed;
   b. The expected daily average and maximum weights or volumes of materials to be managed or processed;
   c. How the materials will be managed or processed;
   d. How the materials will flow through the facility including locations of the loading, unloading, sorting, processing and storage areas;
   e. The types of equipment that will be used;
   f. The maximum time materials will be stored at the facility;
   g. The maximum amounts of wastes, recyclable materials, and recovered materials that will be stored at the facility at any one time; and
   h. The expected disposition of materials after leaving the facility.

2. Attach a site plan, signed and sealed by a professional engineer registered under Chapter 471, F.S., with a scale not greater than 200 feet to the inch, which shows the facility location, total acreage of the site, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, potable water wells on or within 500 feet of the site (62-701.710(2)(b), F.A.C.).

3. Provide a boundary survey and legal description of the property (62-701.710(2)(c), F.A.C.).

4. Provide a construction plan, including engineering calculations, that describes how the applicant will comply with the design requirements of subsection 62-701.710(3), F.A.C. (62-701.710(2)(d), F.A.C.).

5. Provide an operation plan that describes how the applicant will comply with subsection 62-701.710(4), F.A.C. and the recordkeeping requirements of subsection 62-701.710(8), F.A.C. (62-701.710(2)(e), F.A.C.).

6. Provide a closure plan that describes how the applicant will comply with subsection 62-701.710(6), F.A.C. (62-701.710(2)(f), F.A.C.).

7. Provide a contingency plan that describes how the applicant will comply with subsection 62-701.320(16), F.A.C. (62-701.710(2)(g), F.A.C.).

8. Unless exempted by subparagraph 62-701.710(1)(d)1., F.A.C., provide the financial assurance documentation required by subsection 62-701.710(7), F.A.C. (62-701.710(2)(h), F.A.C.).

9. Provide a history and description of any enforcement actions by the applicant described in subsection 62-701.320(3), F.A.C. relating to solid waste management facilities in Florida. (62-701.710(2), F.A.C. and 62-701.320(7)(i), F.A.C.)

10. Provide documentation that the applicant either owns the property or has legal authorization from the property owner to use the site for a waste processing facility (62-701.710(2), F.A.C. and 62-701.320(7)(g), F.A.C.)

## C. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of Waste Services, LLC

is aware that statements made in this form and attached information are an application for a materials recovery facility

_____ Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.

Signature of Applicant or Agent

Mark Kara, MGRM

Name and Title (please type)

americanmk@yahoo.com

E-Mail address (if available)

PO Box 25653

Mailing Address

Sarasota, FL 34277

City, State, Zip Code

(813) 376-3362

Telephone Number

9/29/23

Date

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this waste processing facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Signature

Cheryl Nichols, Sr. Engineer

Name and Title (please type)

CHERYL-ANNE P NICHOLS LICENSEE No. 71530 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by cheryl nichols
Reason: This item has been digitally signed and sealed by Cheryl Nichols, PE. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
Date: 2023.10.03 14:34:41 -04'00'

71530

Florida Registration Number
(please affix seal)

15711 Mapledale Blvd., Suite B

Mailing Address

Tampa, FL 33624

City, State, Zip Code

cnichols@verdantas.com

E-Mail address (if available)

(813) 968-2583

Telephone Number

10/02/2023

Date

Print Form Reset Form

# Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(28), F.A.C.

Form Title: Closure Cost Estimating Form For Solid Waste Facilities

Effective Date: January 6, 2010

Incorporated in Rule 62-701.630(3), F.A.C.

## CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

### I. GENERAL INFORMATION:

Facility Name: Waste Services, LLC WACS ID: _____

Permit Application or Consent Order No.: _____ Expiration Date: _____

Facility Address: 5003 Dover Street, Tampa, FL 33619

Permittee or Owner/Operator: American XVII, LLC

Mailing Address: 960E Dr. Martin Luther King Jr Blvd, Seffner, FL 33584

Latitude: 27 ° 53 ' 48.53 " Longitude: 82 ° 24 ' 1.86 "

Coordinate Method: Survey Datum: NAVD88

Collected by: _____ Company/Affiliation: SurvTech Solutions

Solid Waste Disposal Units Included in Estimate:

| Phase / Cell | Acres | Date Unit Began Accepting Waste | Active Life of Unit From Date of Initial Receipt of Waste | If active: Remaining life of unit | If closed: Date last waste received | If closed: Official date of closing |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Total disposal unit acreage included in this estimate: Closure: X Long-Term Care: _____

Facility type: ☐ Class I ☐ Class III ☐ C&D Debris Disposal
(Check all that apply) ☒ Other: Waste Recovery Facility

### II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

☐ Letter of Credit* ☐ Insurance Certificate ☒ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☐ Guarantee Bond* ☐ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement


Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-681-6600

## III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate ajustment below.

☐ **(a) Inflation Factor Adjustment** ☐ **(b) Recalculated or New Cost Estimates**

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflatory by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: NA

| Latest Department Approved **Closing Cost** Estimate: | | Current Year Inflation Factor, ***e.g. 1.02*** | | Inflation Adjusted Closing Cost Estimate: |
|---|---|---|---|---|
| | × | | = | |

This adjustment is based on the Department approved long-term care cost estimate dated:

| Latest Department Approved Annual **Long-Term Care** Cost Estimate: | | Current Year Inflation Factor, ***e.g. 1.02*** | | Inflation Adjusted Annual Long-Term Care Cost Estimate: |
|---|---|---|---|---|
| | × | | = | |

Number of Years of Long Term Care Remaining: ×

**Inflation Adjusted Long-Term Care Cost Estimate:** =

**Signature by:** ☐ **Owner/Operator** ☒ **Engineer** (check what applies)

Signature

15711 Mapledale Blvd., Suite B
Address

Cheryl Nichols, PE, Senior Engineer
Name & Title

Tampa, FL 33624
City, State, Zip Code

10/02/2023
Date

cnichols@verdantas.com
E-Mail Address

813-968-2583
Telephone Number

## IV. ESTIMATED CLOSING COST (check what applies)

☐ **Recalculated Cost Estimate** ☒ **New Facility Cost Estimate**

Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most exp
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
4. In some cases, a price quote in support of individual item estimates may be required.

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|---|---|---|---|---|
| **1. Proposed Monitoring Wells (Do not include wells already in existence.)** | | | | |
| | EA | | | |
| | | | Subtotal Proposed Monitoring Wells: | |
| **2. Slope and Fill (bedding layer between waste and barrier layer):** | | | | |
| Excavation | CY | | | |
| Placement and Spreading | CY | | | |
| Compaction | CY | | | |
| Off-Site Material | CY | | | |
| Delivery | CY | | | |
| | | | Subtotal Slope and Fill: | |
| **3. Cover Material (Barrier Layer):** | | | | |
| Off-Site Clay | CY | | | |
| Synthetics - 40 mil | SY | | | |
| Synthetics - GCL | SY | | | |
| Synthetics - Geonet | SY | | | |
| Synthetics - Other (explain) _____ | | | | |
| | | | Subtotal Cover Material: | |
| **4. Top Soil Cover:** | | | | |
| Off-Site Material | CY | | | |
| Delivery | CY | | | |
| Spread | CY | | | |
| | | | Subtotal Top Soil Cover: | |
| **5. Vegetative Layer** | | | | |
| Sodding | SY | | | |
| Hydroseeding | AC | | | |
| Fertilizer | AC | | | |
| Mulch | AC | | | |
| Other (explain) _____ | | | | |
| | | | Subtotal Vegetative Layer: | |
| **6. Stormwater Control System:** | | | | |
| Earthwork | CY | | | |
| Grading | SY | | | |
| Piping | LF | | | |
| Ditches | LF | | | |
| Berms | LF | | | |
| Control Structures | EA | | | |
| Other (explain)_____ | | | | |
| | | | Subtotal Stormwater Control System: | |

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|---|---|---|---|---|
| **7. Passive Gas Control:** | | | | |
| Wells | EA | | | |
| Pipe and Fittings | LF | | | |
| Monitoring Probes | EA | | | |
| NSPS/Title V requirements | LS | 1 | | |
| | | | Subtotal Passive Gas Control: | |
| **8. Active Gas Extraction Control:** | | | | |
| Traps | EA | | | |
| Sumps | EA | | | |
| Flare Assembly | EA | | | |
| Flame Arrestor | EA | | | |
| Mist Eliminator | EA | | | |
| Flow Meter | EA | | | |
| Blowers | EA | | | |
| Collection System | LF | | | |
| Other (explain) _____ | | | | |
| | | | Subtotal Active Gas Extraction Control: | |
| **9. Security System:** | | | | |
| Fencing | LF | | | |
| Gate(s) | EA | | | |
| Sign(s) | EA | | | |
| | | | Subtotal Security System: | |
| **10. Engineering:** | | | | |
| Closure Plan Report | LS | 1 | | |
| Certified Engineering Drawings | LS | 1 | | |
| NSPS/Title V Air Permit | LS | 1 | | |
| Final Survey | LS | 1 | | |
| Certification of Closure | LS | 1 | | |
| Other (explain) _____ | | | | |
| | | | Subtotal Engineering: | |

| Description | Hours | Cost / Hour | Hours | Cost / Hour | Total Cost |
|---|---|---|---|---|---|
| **11. Professional Services** | | | | | |
| | Contract Management | | Quality Assurance | | |
| P.E. Supervisor | | | | | |
| On-Site Engineer | | | | | |
| Office Engineer | | | | | |
| On-Site Technician | | | | | |
| Other (explain) | | | | | |

| Description | Unit | Number of Units | Cost / Unit | Total Cost |
|---|---|---|---|---|
| Quality Assurance Testing | LS | 1 | | |
| | | | Subtotal Professional Services: | |

**Subtotal of 1-11 Above:** _____

**12. Contingency** _____ % of Subtotal of 1-11 Above _____

Subtotal Contingency: _____

**Estimated Closing Cost Subtotal:** _____

| Description | Total Cost |
|---|---|
| **13. Site Specific Costs** | |
| Mobilization | |
| Waste Tire Facility | |
| Materials Recovery Facility | |
| Special Wastes | |
| Leachate Management System Modification | |
| Other (explain) See Attached Basis of Closure Cost Estimate | |
| Subtotal Site Specific Costs: | |

**TOTAL ESTIMATED CLOSING COSTS ($):** 45894.10

## V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☐ 5 Years ☐ 20 Years ☐ 30 Years ☐ Other, ___ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

**All items must be addressed.** Attach a detailed explanation for all entries left blank.

| Description | Sampling Frequency (Events / Year) | Number of Wells | (Cost / Well) / Event | Annual Cost |
|---|---|---|---|---|
| **1. Groundwater Monitoring [62-701.510(6), and (8)(a)]** | | | | |
| Monthly | 12 | | | |
| Quarterly | 4 | | | |
| Semi-Annually | 2 | | | |
| Annually | 1 | | | |
| | | | Subtotal Groundwater Monitoring: | |
| **2. Surface Water Monitoring [62-701.510(4), and (8)(b)]** | | | | |
| Monthly | 12 | | | |
| Quarterly | 4 | | | |
| Semi-Annually | 2 | | | |
| Annually | 1 | | | |
| | | | Subtotal Surface Water Monitoring: | |
| **3. Gas Monitoring [62-701.400(10)]** | | | | |
| Monthly | 12 | | | |
| Quarterly | 4 | | | |
| Semi-Annually | 2 | | | |
| Annually | 1 | | | |
| | | | Subtotal Gas Monitoring: | |
| **4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]** | | | | |
| Monthly | 12 | | | |
| Quarterly | 4 | | | |
| Semi-Annually | 2 | | | |
| Annually | 1 | | | |
| Other (explain) _____ | _____ | | | |
| | | | Subtotal Leachate Monitoring: | |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|---|---|---|---|---|
| **5. Leachate Collection/Treatment Systems Maintenance** | | | | |
| Maintenance | | | | |
| Collection Pipes | LF | | | |
| Sumps, Traps | EA | | | |
| Lift Stations | EA | | | |
| Cleaning | LS | 1 | | |
| Tanks | EA | | | |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|---|---|---|---|---|
| **5. (continued)** | | | | |
| Impoundments | | | | |
| Liner Repair | SY | | | |
| Sludge Removal | CY | | | |
| Aeration Systems | | | | |
| Floating Aerators | EA | | | |
| Spray Aerators | EA | | | |
| Disposal | | | | |
| Off-site (Includes transportation and disposal) | 1000 gallon | | | |
| | | | Subtotal Leachate Collection / Treatment Systems Maintenance: | |
| **6. Groundwater Monitoring Well Maintenance** | | | | |
| Monitoring Wells | LF | | | |
| Replacement | EA | | | |
| Abandonment | EA | | | |
| | | | Subtotal Groundwater Monitoring Well Maintenance: | |
| **7. Gas System Maintenance** | | | | |
| Piping, Vents | LF | | | |
| Blowers | EA | | | |
| Flaring Units | EA | | | |
| Meters, Valves | EA | | | |
| Compressors | EA | | | |
| Flame Arrestors | EA | | | |
| Operation | LS | 1 | | |
| | | | Subtotal Gas System Maintenance: | |
| **8. Landscape Maintenance** | | | | |
| Mowing | AC | | | |
| Fertilizer | AC | | | |
| | | | Subtotal Landscape Maintenance: | |
| **9. Erosion Control and Cover Maintenance** | | | | |
| Sodding | SY | | | |
| Regrading | AC | | | |
| Liner Repair | SY | | | |
| Clay | CY | | | |
| | | | Subtotal Erosion Control and Cover Maintenance: | |
| **10. Storm Water Management System Maintenance** | | | | |
| Conveyance Maintenance | LS | 1 | | |
| | | | Subtotal Storm Water Management System Maintenance: | |
| **11. Security System Maintenance** | | | | |
| Fences | LS | 1 | | |
| Gate(s) | EA | | | |
| Sign(s) | EA | | | |
| | | | Subtotal Security System Maintenance: | |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|---|---|---|---|---|
| **12. Utilities** | LS | 1 | | |
| | | | Subtotal Utilities: | |
| **13. Leachate Collection/Treatment Systems Operation** | | | | |
| Operation | | | | |
| P.E. Supervisor | HR | | | |
| On-Site Engineer | HR | | | |
| Office Engineer | HR | | | |
| OnSite Technician | HR | | | |
| Materials | LS | 1 | | |
| | | Subtotal Leachate Collection/Treatment Systems Operation: | | |
| **14. Administrative** | | | | |
| P.E. Supervisor | HR | | | |
| On-Site Engineer | HR | | | |
| Office Engineer | HR | | | |
| OnSite Technician | HR | | | |
| Other _____ | | | | |
| | | | Subtotal Administrative: | |
| | | | **Subtotal of 1-14 Above:** | |
| **15. Contingency** | | % of Subtotal of 1-14 Above | | |
| | | | Subtotal Contingency: | |

| Description | Unit | Number of Units / Year | Cost / Unit | Annual Cost |
|---|---|---|---|---|
| **16. Site Specific Costs** | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | Subtotal Site Specific Costs: | |
| | | | **ANNUAL LONG-TERM CARE COST ($ / YEAR):** | |
| | | | Number of Years of Long-Term Care: | |
| | | | **TOTAL LONG-TERM CARE COST ($):** | |

## VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.

Signature

Cheryl Nichols, PE CHMM
Name and Title (please type)

10/02/2023
Date

Digitally signed by cheryl nichols
Reason: This item has been digitally signed and sealed by Cheryl Nichols, PE. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
Date: 2023.10.03 14:34:14 -04'00'

71530
Florida Registration Number

(please affix seal)

15711 Mapledale Blvd, Suite B
Mailing Address

Tampa, FL 33624
City, State, Zip Code

cnichols@verdantas.com
E-Mail address (if available)

(813) 451-5795
Telephone Number

## VII. SIGNATURE BY OWNER/OPERATOR

Signature of Applicant

Mark Kara, MGRM
Name and Title (please type)

americanmk92@yahoo.com
E-Mail address (if available)

PO Box 25653
Mailing Address

Sarasota, FL 34277
City, State, Zip Code

(813) 376-3362
Telephone Number

October 2, 2023

Florida Department of Environmental Protection
Waste Management Department
Solid Waste Division
13051 N. Telecom Drive
Temple Terrace, Florida 33637

Re: Waste Services, LLC – Permit Application
Proposed Waste Processing Facility
5003 Dover Street, Tampa, FL 33619

To whom it may concern:

The closure cost (**Attachment 1**) of the Proposed Waste Services, LLC waste recovery facility assumes that the facility would be closed based on unforeseen circumstances that would influence site operations. In addition, the closure cost estimates also assumed that prior to closure and cessation of operations, that the site would have materials stockpiled at or near capacity as permitted to be managed at the site. Furthermore, the closure estimate assumes a qualified contractor would be utilized to manage and complete all clean-up operations and a third-party would be retained to appropriately dispose of all stored materials. If possible and practicable, any remaining recyclable materials would be disposed of; however, it was assumed that the recoverable costs were not utilized to offset the closure estimates.

Inventory estimates (i.e., daily volumes of stockpiled materials) were based on the capacity calculations included in Appendix A of the facility Operations and Maintenance Plan. The Operations and Maintenance Plan for the proposed facility includes assumptions regarding the following;

- Volumes of waste materials placed on the tipping floor;
- Handling and processing of select materials volumes;
- The maximum volume of leachate storage;
- General estimates of recovered materials to include; (i) concrete, (ii) metals, and (iii) tires and other specially regulated wastes.

Disposal costs for Class I, Class III and C&D wastes are from current pricing for commercial disposal fees noted within Hillsborough County. Trucking fees were estimated from current market rates within the county as well. Labor and equipment costs were also estimated based on current market rates for specialty contractors and equipment rental fees, respectively. Additionally, it is also assumed that the existing facility infrastructure could be utilized to support material removal and disposal operations as part of facility closure activities.

**CERTIFICATION**

This is to certify that the engineering features of this waste processing facility have been designed/examined by me and found to conform to engineering principles applicable to such

facilities. Based on our professional judgement, this facility when properly maintained and operated will comply with applicable statutes of the Florida Administrative Codes as referenced by the Department. It is agreed that the undersigned will provide the applicant with a set of instructions for the proper maintenance and operation of the proposed facility.

Sincerely,
Verdantas, LLC

Cheryl Nichols, PE, CHMM
Senior Consultant

Steven D Folsom, PE, BCEE
Vice President

# Attachment 1

Closure Cost Estimate

**American XVII, LLC**
**Dover Street MRF**
**FDEP Initial Permit Application**
**Financial Responsibility Calculation**

## Waste Estimates Retained 1-Day Operations

| Waste Type | Quantity | Units |
|---|---|---|
| Class I | 50 | |
| Class III | 50 | |
| C&D | 50 | Tons |
| Yard Waste | 50 | |
| Total Capacity | 200 | |

## Number of Trucks Hauled

Assume 20 Tons per Truck

$N_{trucks}$ = Tons-Per-Truck/Waste Retained

$N_{trucks}$ = 10 Loads

## Estimate Hauling Costs

| | | | | Total |
|---|---|---|---|---|
| Fuel Surcharge ($60 per load) | 10 | Loads | | $600.00 |
| $22.00 Haul Cost Per Ton | 200 | Tons | | $4,400.00 |
| | | | Sub-Total= | $5,000.00 |

## Landfill Disposal Charges

| | | | | |
|---|---|---|---|---|
| Class I | $71.74 | per/ton | | $3,587.00 |
| Class III | $47.00 | per/ton | | $2,350.00 |
| C&D | $46.00 | per/ton | | $2,300.00 |
| Yard Waste | $44.55 | per/ton | | $2,227.50 |
| | | | Sub-Total= | $10,464.50 |

## Special Disposal Charges

| | | | | |
|---|---|---|---|---|
| Passenger Tires | $156.25 | per/ton | | $312.50 |
| Tires with Rims | $222.30 | per/ton | | $444.60 |
| Semi-Truck/Oversized and Off-Road Tires | $186.25 | per/ton | | $372.50 |
| | | | Sub-Total (assumes 2 Tons)= | $1,129.60 |

## Leachate Disposal Charges

| | | | | |
|---|---|---|---|---|
| $0.95 Charge per Gallon of Leachate | 4,000 | gallons | | $3,800.00 |

## Labor Costs/Charges

| | | | | | |
|---|---|---|---|---|---|
| Site Manager | $185.00 | per/hour | 40 | hours | $7,400.00 |
| Operator | $135.00 | per/hour | 40 | hours | $5,400.00 |
| Laborer | $95.00 | per/hour | 40 | hours | $3,800.00 |
| Administrative/Clerical | $70.00 | per/hour | 40 | hours | $2,800.00 |

## Equipment Rental Charges

| | | | | | |
|---|---|---|---|---|---|
| Tracked Excavator | $4,200.00 | per/week | 1 | week | $4,200.00 |
| Loader | $2,900.00 | per/week | 1 | week | $2,900.00 |
| Skid Loader | $1,800.00 | per/week | 1 | week | $1,800.00 |

| | |
|---|---|
| Total Labor Charge | $16,600.00 |
| Total Equipment Charge | $8,900.00 |
| Total Disposal Charge | $20,394.10 |
| Total | $45,894.10 |

# OPERATIONS PLAN

Waste Services, LLC | 5003 Dover Street, Tampa Hillsborough County, FL

FDEP ID No.:

**October 2023**

**Prepared for:**
American XVII LLC
960 E Dr. Martin Luther King Jr Blvd.
Seffner, FL 33584

**Prepared by:**
Verdantas LLC
15711 Mapledale Blvd., Suite B
Tampa, FL 33624


Project No. 1CV700101

# Contents

## Figures

# Appendices

A. Maximum Daily Waste Processing Estimates
B. Recent Site Survey
C. Facility Contingency Plan
D. Facility Stormwater Calculations
E. ERP General Construction (Culvert Pipe)
F. FDEP No Exposure Certification (Form 62-620.910 (17))
G. Warranty Deed

# 1.0 GENERAL STATEMENT OF COMPLIANCE

American XVII, LLC is the parent company that owns Waste Services LLC (Waste Services). Waste Services is the "Permittee" for the 5003 Dover Street Waste Processing Facility (Facility) and is responsible for operations in accordance with the terms of this *Operations Plan*, and in accordance with all federal, state, and local environmental rules and regulations, including Rule 62- 701.710, Florida Administrative Code (FAC) governing the operations of a waste processing facility with materials recovery. Rule 62-709 covers the criteria for organic (yard trash, land clearing debris, wood) processing and recycling operations.

# 2.0 GENERAL STATEMENT OF PURPOSE

The Facility's primary function will be the acceptance and transfer of Class III and C&D waste from the local community. As in-bound material is received, the materials will be processed and sorted, as economically feasible, for Recyclable and Recovered Materials, as defined in Rule 62-701 and 62-722, respectively. The sorted material will be removed from the incoming waste for recycling or resale. Yard trash, concrete crushing, and recycling of metals are the primary items for sorting, processing, and resale; however, other materials are processed during operations. The remainder of the in-bound waste, or bypass waste, will be transferred to appropriately permitted disposal facilities.

The following Operations/Maintenance Plan (O&M Plan) is intended to describe the facility's operation and processes to ensure compliance with Rule 62-701 Florida Administrative Code (F.A.C.). The O&M Plan is structured to specifically address the requirements outlined in 62-701 F.A.C. and for ease of review and utilization by the facility operator.

# 3.0 GENERAL FACILITY DESCRIPTION

## 3.1 Location and Size 701.710(2)(b)

The Facility is located on a 11.5 +/- acre parcel owned by American XVII, LLC (**Figure 1**). The entrance to the Facility is approximately 250 feet east of US41 (SR45), in Hillsborough County, Florida. The Facility mailing address is 5003 Dover Street, Tampa, FL 33619. The proposed facility layout is shown on **Figure 2**.

## 3.2 Types of Materials Received 701.710 (2)(a)1

The principal sources of material received will be Class III & C&D materials collected from the local communities within and surrounding Tampa and Hillsborough County. Material may be received from outside these areas, depending on market conditions.
The following is a list of waste materials that are *Acceptable Material* types that the Facility can accept. The Facility will accept materials defined in Rule 62-701.200 as *Class III Waste and Construction and Demolition Debris* (C&D).

Materials that are Recyclable, as defined in Rule 62-701, and Recovered materials, as defined in Rule 62-722, wood product/yard trash, or concrete will be removed from the waste stream and stored prior to resale. All materials that are not sorted out of the in-bound waste will be hauled to an appropriately permitted and approved C&D, Class III, or Class I disposal facility depending on the type of waste.

Listed below are select definitions taken from Rule 62-701.200, 62-709.201, and/or Rule 62-722.200 F.A.C. that apply to the materials accepted by the Facility and are described below:

A) *"Class III Waste":* means yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the Department, that are not expected to produce leachate that poses a threat to public health or the environment.

B) *"Construction and Demolition Debris":* means discarded materials generally considered to be not water soluble and non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site. The term includes rocks, soils, tree remains, trees, and other vegetative matter that normally results from land clearing or land development operations for a construction project; clean cardboard, paper, plastic, wood, and metal scraps from a construction project; except as provided in Section 403.707(9)(j), F.S., yard trash and unpainted, non-treated wood scraps from sources other than construction or demolition projects; scrap from manufacturing facilities that is the type of material generally used in construction projects and that would meet the definition of construction and demolition debris if it were generated as part of a construction or demolition project, including debris from the construction of manufactured homes and scrap shingles, wallboard, siding concrete, and similar materials from industrial or commercial facilities and de minimis amounts of other non-hazardous wastes

that are generated at construction or demolition projects, provided such amounts are consistent with best management practices of the construction and demolition industries. Mixing of construction and demolition debris with other types of solid waste will cause it to be classified as other than construction and demolition debris.

C) *"Clean debris":* means any solid waste that is virtually inert, is not a pollution threat to ground water or surface waters, is not a fire hazard, and is likely to retain its physical and chemical structure under expected conditions of disposal or use. The term includes brick, glass, ceramics, and uncontaminated concrete including embedded pipe or steel.

D) *"Clean wood":* means wood, including lumber, tree and shrub trunks, branches, and limbs, which is free of paint, glue, filler, penthachlorophenol, creosote, tar, asphalt, chromated copper arsenate, other wood preservatives or treatments.

E) *"Land clearing debris":* means rocks, soils, tree remains, trees, and other vegetative matter that normally results from land clearing or land development operations for a construction project. Land clearing debris does not include vegetative matter from lawn maintenance, commercial or residential landscape maintenance, right-of-way or easement maintenance, farming operations, nursery operations, or any other sources not related directly to a construction project.

F) *"Recovered materials":* means metal, paper, glass, plastic, textile, or rubber materials that have known recycling potential, can be feasibly recycled, and have been diverted and source separated or have been removed from the solid waste stream for sale, use, or reuse as raw materials, whether or not the materials require subsequent processing or separation from each other, but does not include materials destined for any use that constitutes disposal. Recovered materials as described above are not solid waste.

G) *"Recyclable material":* means those materials which are capable of being recycled and which would otherwise be processed or disposed of as solid waste.

H) *"Size-reduced":* means the material has been processed so that it will pass through a 6-inch sieve or has been cut for firewood in no greater than 24-inch lengths.

I) *"Yard trash":* means vegetative matter resulting from landscaping maintenance or land clearing operations and includes materials such as tree and shrub trimmings, grass clippings, palm fronds, trees and tree stumps, and associated rocks and soils. For purposes of complying with Rule 62-709 F.A.C., it also includes clean wood.

The Permittee shall also review Rule 62-701, 62-709, and 62-722, F.A.C. for other solid waste definitions applicable to the operations of the Facility.

The following *Unauthorized Materials* will not be knowingly accepted at the Facility:

- Hazardous waste
- Liquids containing a polychlorinated biphenyl (PCB), or non-liquid PCBs in the form of contaminated soil, rags, or other debris.

- Biomedical waste
- Lead acid batteries
- Oil, Used Oil, Oily products, Oily wastes, sorbents or other materials used for maintenance or to clean up or contain leaks, spills or accidental releases of used oil, and soils contaminated with used oil.
- Whole tires
- Municipal Solid Waste (MSW)
- Household Hazardous Waste (HHW)
- Containerized or non-containerized liquids
- Electronic waste
- CCA Treated Wood

Any unauthorized waste that is discovered, as listed above shall be hauled to an appropriately permitted disposal facility or removed from the site by a licensed hauler for proper disposal. Customers arriving at the Facility that are hauling either construction and demolition (C&D) debris or Class III wastes enter the scale, pay the appropriate charge, receive a scale ticket from the office and are directed to the construction and demolition debris material unloading area or the Class III unloading area. The attendant will explain the load rejection policy if the contents are suspect. The attendant/clerk will also question the hauler about any hazardous material/waste content within the load. If the load contains materials that are *Unauthorized Materials,* the load will be rejected, and the customer directed to another permitted facility for proper disposal.

**Figure 3** presents the waste-process flow for the proposed facility.

## 3.3 Maximum Capacity of Facility 701.710 (2)(a)7

For the purpose of calculating storage capacities, it is assumed that the unloading areas have a maximum processing rate of 250 tons per day. This is equivalent to 1,033 cubic yards using an assumed conversion factor of 484 pounds per cubic yard for construction and demolition debris waste.

**Appendix A** provides the calculations to derive the maximum daily capacity processed at the proposed facility.

### 3.3.1 Non-Reactive/Non-Putrescible Materials 701.710 (2) (4) (b)

All open storage areas will be utilized to accommodate clean debris including any recovered and clean concrete for approximately 7-days until loaded onto transfer trucks for offsite disposal.

## 3.4 Disposal of Waste 701.710 (2)(a)8

All Non-Recyclable/ Non-Recoverable materials will be loaded into transfer trucks and removed from the Facility. No permanent storage of materials will occur on-site.

Residual C&D materials will generally be sent to Desoto Recycling & Disposal, 13620 FL-70, Arcadia, FL 34266.

Residual Class III material will be sent to FDEP-approved Class III disposal facilities, including the Desoto Landfill (GFL Environmental Inc), 14662 FL-70, Arcadia, FL, the Ft. Meade Landfill (GFL Environmental Inc.), 3400 US Hwy 17 N, Ft. Meade, FL 33841, or to other Department-approved sites.

Unauthorized Material will be sent to properly permitted facilities that may include these facilities within 30 days of receipt.

## 3.5 Description of Facility 701-710 (2)(b)

Facility Layout and Design: The 11.0+/- acre site includes a scale, a temporary office trailer with detached maintenance area, and a partially enclosed metal building for materials processing/transfer. The interior of the materials processing building is a concrete floor, sloped to collect leachate. Leachate is collected in floor drains that are connected to a concrete collection tank. Leachate will either be discharged to the site sanitary sewer system (subject to approval by the local utility provider) or will be routinely extracted for offsite disposal by a licensed disposal contractor.

A site survey for the facility is included as Appendix B. A site plan and relevant features including surface water bodies, wetlands and, potable water wells within 500-ft from the facility. Figure 4 provides the location of relevant features within 500-ft of the proposed facility. Other activities at the Facility include outside storage and processing recyclable and recoverable material. Concrete storage and crushing and yard trash and wood storage are conducted in the East Storage Area of the property. Stormwater management is located on the southwestern area of the property. Onsite storage of empty roll-off containers and surplus equipment are on the west portion of the property.

The Proposed Facility **Site Plan** is provided in **Figures**.

## 3.6 Facility Zoning and Land Use 701.220 (5)

The entire site is located within Hillsborough County and is zoned "M – Manufacturing" and the Property Use Code is "4903 Scrap Metal/Materials Recycling". Prior land use is also consistent with general commercial/industrial operations (Figure 5). Additionally, zoning and land use coverages were obtained from the Florida Geographic Data Library (FGDL) and overlain onto a recent aerial photograph, a review of the zoning designations indicate that the proposed site operations are consistent with prior facility operations (**Figure 6**).

As with the zoning overlays, land-use/land-cover data was overlain onto the site aerial photograph with similar results. The land-use/land-cover overlays indicate that the proposed land use is consistent with prior facility and site operations.

# 4.0 FACILITY OPERATIONS

## 4.1 Access Control, Security and Public Safety 701.710(2)(4)(f)

### 4.1.1 Access Control

The Facility will be protected by a chain link boundary fence, with security gates located at the entrance and exit that will be locked during non-operating hours. Access control has been designed to prevent unauthorized nuisance dumping.

Vehicle entry to the site is from Dover Street, with the entrance gate controlling access to the site. All collection vehicles (CVs) entering the site and delivering waste to the Facility are first received at the scale and are properly examined and classified. Fees are determined by material and are charged by weight or yardage.

Incoming mixed C&D or Class III material is delivered to the Tipping Building for sorting and processing. Once unloaded, CVs exit the Facility through the exit gate. Please refer to the Proposed Facility Site Plan (**Figures**).

### 4.1.2 Security

During periods of low lighting, the Tipping Building shall have sufficient lighting to illuminate the incoming roadway, the traffic area outside of the building, and work areas north of the building (the concrete crushing and clean wood/yard trash processing areas). Interior lighting shall consist of high-bay 400-watt fixtures attached to the roof, providing illumination in the interior of the Tipping Building to allow operations in variable light conditions. As a safety pre- caution, no grinding or crushing of materials are allowed until full daylight hours. Work in these areas is limited to equipment maintenance, preparation and staging of the materials.

Illumination outside of the temporary office trailer, maintenance area, scale house and surrounding work areas shall be provided by 400-watt floodlights mounted to adequately illuminate these operations areas.

### 4.1.3 Public Safety

Safety of Waste Services employees and their customers is of the greatest importance to the facility operators. Waste Services employees will be required to wear high-visibility vests, protective shoes, and hard hats. Waste Services employees will guide customers to waste drop-off points and customers are not permitted to be un-attended while onsite.

## 4.2 Procedures for Start-Up Operations, and Scheduled and Unscheduled Shutdown of Operations 701.710(2)(c)2

The Facility is designed to accept Class III and C&D debris wastes. The Facility opens early for personnel to complete inspections and maintenance can be done before the Facility is open to the Public. Refer to **Section 4.11** for hours of operations. Startup inspections include inspection of equipment for fuel and leaks, general inspection of the facility building, making sure the leachate collection drains are open, and the general overall condition for items at the Facility

that could impact operations (such as debris in traffic lanes, signs knocked down, sprinkler not working, etc).

Outdoor lighting described in Section 4.1.2 shall be operational in the morning to provide enough illumination to allow for site operations in the early morning hours before sufficient natural light is present and shall remain operational up until 30 minutes following completion of after-hours activities, which are generally performed for a period of one hour past closing of the gate to allow for fueling and maintenance of equipment.

A sign will be located at the entrance advising users of the hours the Facility is open for the receipt of waste.

During scheduled and/or unscheduled shutdown of operations, either reserve or rental equipment will be brought in to assist with operations. During the shutdown, waste will only be received if it can be manually loaded into storage areas or within the Tipping Building; however, no waste will be allowed to be taken in unless Waste Services personnel are present to supervise the unloading of materials.

## 4.3 General Description of Waste Operations 701.710(2)(a)

Waste Services personnel will keep Class III and C&D material separated. Waste Services personnel will designate transfer trailers at either "C&D" or "Class III", so the correct waste materials are loaded and taken to the appropriate landfill type for offsite disposal. Material specific handling operations are as follows.

A) *Mixed Class III and C&D Wastes*: Customers with mixed loads of C&D or Class III wastes will proceed to the unloading area at the Tipping Building identified on the Proposed Facility (**Figure 2**) under the direction of the spotter. The mixed material is then sorted and segregated by wheel loader to remove large recyclables. Large or difficult to process materials are removed with heavy equipment. "Recyclable" and "Recoverable" materials are removed from the mixed load. Any Class III material is removed and stored in the Class III area in the south end of the Tipping Building until a full transfer trailer load can be made. Clean concrete and wood are separated from the mixed loads under the direction of a trained spotter. Clean cardboard, carpet or carpet padding, is also separated and placed in the cardboard/carpet padding stockpile area north of the Tipping Building. As the load is dumped onto the unloading area for sorting, unacceptable materials may be reloaded, and the customer directed to other on-site facilities, or an acceptable disposal facility. The customer then exits the facility.

B) *Class III Waste:* Incoming loads of Class III waste are unloaded at the Class III unloading area at the Tipping Building. The material is kept separate from the C&D waste by concrete block separation wall within the Tipping Building or loaded onto a transfer trailer (if that trailer has only Class III materials). The recyclable/recoverable materials are separated from the Class III feed stock in the same manner as described for C&D loads. The Class III residuals are transported for disposal at a FDEP approved Class III landfill. After sorting Class III material, the area will be cleaned by scraping the areas with a rubber-lipped loader bucket and the residual placed in the Class III storage area or dumped into a "Class III" trailer.

C) *C&D Waste:* Incoming loads of C&D waste proceed to the unloading area at the

Tipping Building. The load is dumped into the unloading area for sorting. As the material is sorted into either C&D or Class III waste, the C&D is either loaded into a transfer trailer (if the trailer has only C&D material) or kept separate from the Class III waste by concrete block separation wall within Tipping Building. Clean concrete and wood wastes are separated out for recycling from the incoming waste. Unacceptable materials may be reloaded, and the customer directed to other on-site facilities, or an acceptable disposal facility. The customer then exits the facility. If the C&D waste becomes mixed with Class III waste, all residuals will be disposed at a Class III landfill.

D) *RSM (Recovered Screen Material):* NOT USED – Waste Services will not process RSM material. If Waste Services elects to begin processing this material, the FDEP will be notified, and the Operations Plan modified.

E) *Class I Waste:* Class I waste materials are "Unauthorized Waste"; however, if found in the waste loads are loaded into a dumpster equipped with a waterproof cover located north of the Tipping Building. The franchised hauler transports the Class I waste to a Class I landfill for disposal within seven days in accordance with Rule 62-701.710(4)(b). Putrescible waste is stored in a 20-yard container with a water-resistant lid. ZEP Dumpster Fair odor eliminating granules and monthly pest control (placement of bait boxes for rodent control) will be used to control odors and vectors. The Class I container lid will be closed during all non-operations hours. Immediate pickup will be requested for any odor/vector problems.

F) *Waste Tires:* Waste tires, if found in the waste loads, are to be loaded into a designated container bin. The tires will be taken offsite, be a registered waste tire hauler, when the container is full or in the time frames defined for temporary storage. Waste tires are to be taken to a permitted processing or disposal facility.

G) *Special Waste:* Electronic waste and miscellaneous hazardous waste, if found in the waste loads, will be stored in a plastic storage cabinet with spill protection. Hazardous waste will be stored in polyethylene trays within the storage cabinet. The storage cabinet is on the leachate containment concrete floor, under cover, of the Tipping Building roof. Car batteries will be stored on poly drip decks. Fluorescent bulbs will be collected and placed into a separate container, to minimize breakage, and the container placed adjacent to the plastic storage cabinet. White goods should not be accepted at this facility. Should white goods be found in the waste after unloading, the hauler will be attempted to be identified and contacted to remove the waste before close of business. If the hauler is not identified or the waste has not been picked up, the white goods will be temporary stored on-site, for no longer than 30- days, and then taken to the Hillsborough County South County Solid Waste Facility or other FDEP approved facility.

H) *Recyclable and Recovered Materials:* Recyclables and Recovered materials, using definitions for material types provided herein, will be removed from in-bound waste loads during the sorting process and will be stockpiled or placed in containers as shown on the Proposed Facility Site Plan. The mixed recyclable bin will be used to temporarily store miscellaneous metals (copper, aluminum, steel, brass, stainless steel, iron). Clean materials are defined as materials that contain only de minimis amounts of waste inadvertently included. The sorting/processing areas are within the Tipping Building on the C&D/Class III tipping floor and the storage is in roll-off containers, dumpsters, or stockpiles. Stockpiles and/or containers will be maintained in an orderly manner and placed in a manner so

as to be stable and accessible by firefighting equipment. The recyclable/recoverable materials are sorted from mixed waste loads under the supervision of a trained spotter.

I) *Cardboard:* Clean cardboard will be separated from the C&D and Class III waste streams and stockpiled temporally under the roof of Tipping Building until moved to the north side of the Tipping Building (also under cover). The cardboard will then be baled if market conditions require baling. Baled cardboard will be stored in the enclosed shipping containers on the north side of the Tipping Building. These materials will be transported via truck for market delivery. Material transported off-site is weighed at the scales enroute to market.

J) *Carpet Padding*: Clean carpet padding will be separated from the C&D and Class III waste streams and stockpiled temporally under the roof of Tipping Building until moved to the north side of the Tipping Building (also under cover). The carpet padding will then be baled if market conditions require baling. Baled carpet padding will be stored in the enclosed shipping containers on the north side of the Tipping Building These materials will be transported via truck for market delivery. Material transported off-site is weighed at the scales enroute to market.

K) *Re-usable Building Materials:* NOT USED - These materials are items such as electric motors, lumber, plumbing, electrical boxes, etc. Waste Services will not process RSM material. If Waste Services elects to resume processing this material, the FDEP will be notified and the Operations Plan modified.

L) *Metals:* Metals removed during the sorting process will be stored as shown in the area as depicted on the **Process Flow Map** (**Figures**). Small containers are shown as temporary storage for each type of clean metal to be stored. A single trailer for clean metals will be located on the north side of the Tipping Building to transfer metals removed during sorting to market. Metals will be transported via truck for market delivery. Material transported off- site is weighed at the scales enroute to market.

M) *Wood Products, Yard Trash, Land Clearing Debris*: The Facility will obtain a FDEP registration as a "Yard Trash Transfer Station/Solid Waste Organics Recycling Facility (FDEP Form 62-709.901(3)" for the sorting/processing operations, as described below.

   a) In-Bound waste loads may contain entire loads of clean wood, yard trash, and land clearing debris or these materials may be commingled (mixed) in with waste loads containing C&D/Class III waste materials. The materials will be unloaded on the tipping floor, spotted, and then loaded directly in the transfer trucks, along with other waste materials, for offsite disposal if contaminated with C&D/Class III/other waste materials. Only clean, debris free, clean wood, yard waste, or land clearing debris may be separate and moved to the respective storage areas.

   b) Large volumes of clean wood/yard trash/land clearing brought to the Facility, will be brought directly to storage locations. The Facility will then include additional handling, spotting, and storing clean wood/yard trash/land clearing debris materials.

   c) Customers with loads of clean wood or yard trash are directed to the clean wood and yard trash staging area for unloading. Customers with loads of Land Clearing Debris will be directed to the land clearing staging area for

unloading. The loads shall be inspected by a trained spotter during unloading. All storage and processed material areas will be kept a minimum of 50 feet from water bodies. The customer then exits the Facility.

d) *Clean wood* is defined as loads which contain only untreated and unpainted wood and *de minimis* amounts of soil or waste. CCA wood will not be accepted at the Facility - please refer to **Section 4.6** for the CCA treated wood management plan. Recoverable cut trees and stumps from the yard trash area may be moved to the Yard Trash pile. Clean wood removed from mixed waste loads is added to the clean wood stockpile and processed.

N) *Concrete:* In-bound waste loads may contain entire loads of clean concrete or small quantities of concrete commingled (mixed) in with waste loads containing C&D/Class III waste materials. The materials will be unloaded on the Tipping Building floor, spotted, and then loaded directly in the transfer trucks, along with other waste materials, for offsite disposal or may be placed into the concrete storage area. Large volumes of clean concrete or bulk loads of concrete brought to the Facility, will be brought directly to the appropriate storage area and unloaded as shown on the Proposed Facility Site Plan shown in **Figures**. Customers with full loads of clean concrete will be directed to the clean concrete processing, storage and loading area. The load shall be inspected by a trained spotter during tipping. Clean concrete is defined as loads which contain only concrete (free of oils, greases, etc) and *de minimis* amounts of soil.

O) *Non-C&D or Class III Wastes*: Debris that are not C&D or Class III wastes will be manually removed. These materials are considered Class I wastes and are loaded into an on-site 20 cubic yard rolloff container located underneath a covered unloading area. These materials are then transported to the Class I landfill for disposal.

P) *Unauthorized Wastes:* If small quantities of unacceptable materials are encountered (e.g., car batteries, thermostats, paint, etc.) a chemicals storage cabinet will be used for temporary storage of household hazardous wastes found within the inspected loads.

Q) *Open burning*: Open burning of solid waste is prohibited at this Facility.

## 4.4 Load Rejection Policy

If loads are inspected and found to contain more than 10 percent Class I waste, the hauler will be directed to the County's Class I landfill. If household hazardous waste or commercial hazardous wastes are detected in the load, the load will be rejected and the hauler directed to the nearest appropriate facility.

If mixed C&D loads are found to contain more than 10 percent Class III wastes, the load will be managed as a Class III load.

If a load is found to contain more than 10 percent of special waste (such as used oil, fluorescent bulbs, electronic devices, tires, paint, and batteries) the load will be rejected.

## 4.5 Acceptable and Unauthorized Waste Storage 701.710(2)(4)(b)

Temporary storage of non-recyclable materials is performed in accordance with Rule 62-701.710 F.A.C

A) *"Acceptable" Waste Storage:* Temporary storage of unsorted C&D and Class III waste will not be stored for longer than 30 days. Temporary storage of Recyclable I Recoverable materials will not be longer than up to 6 months OR when the container(s) is full.

B) *"Unauthorized" Waste Storage:* Putrescible waste will not be stored for more than seven (7) days. Non-putrescible waste will not be stored for longer than 30 days.

C) *"Clean Wood/ Yard Trash" Storage:* Any yard trash, including clean wood, received at the facility shall be size-reduced or removed within 6 months, or within the period required to receive 3,000 tons or 12,000 cubic yards, whichever is greater. However, logs with a diameter of 6 inches or greater may be stored for up to 12 months before they are size-reduced or removed, provided the logs are separated and stored apart from other materials on site.

## 4.6 CCA-Treated Wood Management Plan 701.730 (20)

The following serves as the CCA (chromate-copper arsenate) treated wood management plan required by 62-701.730(20), F.A.C. Employees will be trained in the proper management of treated wood. CCA treated wood must be stored in temporary storage containers for off-site disposal at a lined facility. Local lined facility Republic Services of Florida, L.P. (dba Cedar Trail Landfill) 2500 State Road 60, Bartow, FL 33830, or to other Department-approved sites.

The following is strictly prohibited by FDEP regulations:

- Disposal of CCA-treated wood in any unlined landfill or disposal facility.
- Burning of CCA-treated wood in an open burn or in an air curtain incinerator.
- CCA treated wood shall not be incorporated into compost or made into mulch, decorative landscape chips or any other wood product that is applied as a ground cover, soil, or soil amendment.

### 4.6.1 Identifying Treated Wood

There are generally three ways to identify CCA-treated wood:

- Determine the place of origin - marine or outdoor (decks, fencing, etc) construction uses.
- Identify by shape - typically large, dimensioned pieces of wood.
- Identify by color - light to dark green or silver color (if aged).

CCA-treated wood has been used in a variety of applications including fencing, docks, outdoor decks and stairs, playground equipment, and landscaping. The wood is typically large - dimensioned 4 inches or larger.

The most common method for visually identifying treated wood among lumber, timber, and plywood is to look at the color of the wood. Untreated wood and borate-treated wood typically have a light-yellow color. Wood treated with copper varies in color from a very light green to an intense green color depending on the degree of treatment. A higher degree of treatment is typical for marine applications and for structures with a high load-bearing support. Once the wood treated with copper has been in-service and has weathered, the green color is generally converted to a silver color. It still may be difficult to visually distinguish weathered treated wood from weathered untreated wood. The Site Supervisor may, if deemed necessary, employ additional procedures to identify CCA-treated wood like chemical staining and arsenic test kits similar to drinking water test kits. In general, however, visual inspection is the most effective method of detection and will be the primary method of identifying suspected CCA treated wood products.

### 4.6.2 Handling Treated Wood

Facility staff handling wood preserved with CCA should be sure to wash their hands before eating or smoking. CCA-treated wood splinters in the hands and fingers of workers are reported to be very problematic and should be removed as soon as possible. It is important to make sure that the entire splinter is removed. Removal may require medical attention.

### 4.6.3 Minimizing Disposal of Treated Wood

Methods to minimize CCA-treated wood processing at the Facility include:

- Interview customers at the scale house for the source of the material.
- Post a sign at the entrance of the Facility indicating that treated wood is not accepted at the SWMF.
- Provide customers with information and alternatives for disposal of the CCA-treated wood.
- Incorporate inspection for treated wood into the waste spotting program.
- Provide temporary storage containers at the working face for treated wood to be placed when removed from waste loads.
- Provide training to spotters to identify treated wood.

At the Scale House, or at the Facility prior to unloading, staff will question transporters on the type of wood contained within the customer's waste load, especially for customers with loads originating from construction/demolition of fences or decking. If customers have CCA treated wood, then staff will direct customers to dispose CCA-treated wood at a lined disposal facility, such as Republic Services of Florida, L.P. (dba Cedar Trail Landfill) 2500 State Road 60, Bartow, FL 33830, or to other Department-approved sites.

A Spotter will visually inspect and determine if any dimensioned wood is in the load, such as railroad ties and fence posts or building materials. If a substantial quantity of treated wood is found (i.e. greater than 50% of the load), the load will be diverted away from the Facility for proper disposal at another facility. If no "unacceptable" wood is seen, the load is then spread and inspected by the spotter again for any treated wood. Any treated wood found in the waste load will be removed and placed in a separate temporary waste storage container.

## 4.7 Staffing 701.710 (2) (4) (c)

The following staff will be provided at the site at a minimum:

A. *Waste Processing Facility operator* - responsible for overall site management and day-to-day operations.

B. *Site manager* - responsible for completing and submitting scale and yardage tickets, unacceptable waste screening, completing unacceptable screening forms, maintaining a daily log of activity and observations of C&D debris and Class III wastes accepted, maintaining and securing necessary records on site, and directing vehicles to the appropriate processing area.

C. *Trained waste spotter(s)* - inspect the load at the unloading area and ensure that unacceptable material is placed in proper containers for removal from the property.

D. *Equipment operator(s)* - responsible for moving and sorting residual materials, loading trucks, and maintaining road and driving access on the site for safety and expedience, maintaining the site to promote drainage and making minor repairs and adjustments to equipment.

The following definitions for Operators and Spotters apply to this Operation Plan in accordance with 62-701.320(15) as follows:

A. *Operator*, 62-701.320(15)(e) - means any person, including the owner, who is principally engaged in, and is in charge of, the actual operation, supervision, and maintenance of a solid waste management facility and includes the on-site person in charge of a shift or period of operation during any part of the day, such as facility managers, supervisors and equipment operators. It does not include office personnel, laborers, equipment operators not in a supervisory capacity, transporters, corporate directors, elected officials, or other persons in managerial roles unless such persons are directly involved in on-site supervision or operation of a solid waste management facility. A trained Operator may perform the duties of a trained Spotter.

B. *Interim Operator*, 62-701.320(15)(f) - means a person who has, in the opinion of the facility manager, shown competency in their chosen occupation through a combination of work experience, education and training and who has at least one year of experience at that facility or a similar facility. An interim operator must become a trained Operator within one year of employment as an interim Operator.

C. *Spotter*, 62-701.320(15)(g) - means a person employed at a solid waste management facility whose job it is to inspect incoming waste and to identify and properly manage any "unacceptable" waste that is received at the Facility.

D. *Interim Spotter*, 62-701.320(15)(h) - means a person who has, in the opinion of the General and Site Manager, shown competency in their chosen occupation through a combination of work experience, education and training. An interim Spotter must become a trained Spotter or trained Operator within three months of employment as an interim Spotter.

To be considered a trained *Operator* or *Spotter*, personnel must have completed the minimum training established in this Operations Plan.

The operator and spotter(s) of the Facility will be trained in accordance with the requirements of Rule 62-701.320(15) of the F.A.C. The operators shall be properly trained to operate the Facility and the spotters shall be trained to identify and properly manage any hazardous or "UNAUTHORIZED" waste materials that are received at the Facility. The operator of the Facility shall complete 24 hours of initial training and shall pass an examination as part of that training. Within three years after passing the examination and every three years thereafter, operators shall complete an additional 16 hours of continued training. The spotter(s) at the Facility shall complete 8 hours of initial training. Within three years after attending the initial training and every three years thereafter, spotters shall complete an additional 4 hours of continued training.

All personnel are to be competent and skilled in the performance of the work to which they are assigned:

A. There shall be at least one trained Operator, or Interim Operator (for no more than 3 months), at the Facility during operating hours. The Operator of the Facility has experience and knowledge in the design, construction, and operation of materials recycling/recovered facilities.

B. At least one trained spotter shall be always on duty that waste is received at the site to inspect the incoming waste.

### 4.7.1 Potential Safety Hazards and Control Methods

Facility operators, spotters and site laborers will be trained as it relates to specific operations at the site and is intended to mitigate risk by minimizing the potential for workplace accidents. Specific site controls include the following;

- All in-bound vehicles will be directed by facility personnel to appropriate 'drop-locations' and the drivers are required to stay in their vehicles if the discharge and dumping mechanisms allow them to be operated from the transport cab. These requirements are intended to minimize potential safety hazards relative to truck traffic and equipment movement. The scale house operators will maintain communications with other site employees as part of routine safe operations protocols.

- Local area residents that may utilize the facility will be directed by site personnel to the appropriate tipping bay and/or container. Residents (i.e., individual residential users) are required to remain in their vehicles until the site spotter directs them to an appropriate area.

- The spotter will assist trucks back into the building and onto the tipping floor when the driver needs assistance when site conditions require. Additionally, the spotter will identify floor space to place materials as such, the spotter will direct the driver to 'tip' as necessary.

- Loader operators are required to maintain situational awareness as it relates to truck drivers, facility employees within the tipping floor building and will maintain a minimum of 5-feet of separation between people, loader and waste movement and placement. The loader operator and any site wheeled equipment will not operate in the 'private' residential disposal area while citizens are unloading waste.

- All employees will wear appropriate safety gear during facility operation and cleaning.

- Site fire procedures:

- The Fire Department will not be notified in the event of minor fires that can be readily extinguished by site personnel;
- Facility employees will put out the fire by smothering or other means and will remove the fire waste and any other effected materials and will be handled and disposed of as a Class I waste;
- For larger fires the Fire Department is called to respond to, employees will attempt to contain the firefighting water by constructing soil berms or isolating the site's stormwater management facilities. These efforts are intended to contain all firefighting water. Subsequent to extinguishing the fire, facility personnel will contact the contracted leachate removal company to clean-up and dispose of the firefighting water. In addition, all effected waste will be removed and disposed of as a Class I waste.

**Appendix C** provides a detailed Contingency Plan as required under 701.710(4)(a)3.

## 4.8 Inspection 701.710 (2) (8) (a)

Operations will be visually inspecting on a daily basis for compliance with applicable rules and regulations. Regulatory authorities, including the FDEP, shall have the right to review the records in the files and conduct inspections of the site at any time during normal business hours.

At all times, at least one trained spotter will be onsite whose job is to inspect all loads that are delivered to the Facility. At least one spotter will be positioned at the unloading area when wastes are received. Spotters must be positioned where they can view incoming waste and remain safe from vehicle and equipment movements. Materials removed from the waste stream will be handled as described in **Section 4.3**.

## 4.9 Equipment 701.710(2)(a)5

Machinery (and its usage) at the Facility will consist of:

- Payloader(s)
- Excavator(s)
- Leachate collection pump(s)
- Gas powered generator(s)

The Facility shall retain manufacturer's specification sheets and maintenance manuals on-site for its operations equipment. Due to the nature of the work being performed, the equipment will have scheduled and unscheduled down time for service and repairs. In the event of unscheduled maintenance that would cause a disruption of facility operations, replacement equipment will be provided from a different facility or the required equipment will be rented. Material may also be refused until the capacity to process and load materials are restored.

## 4.10 Equipment Servicing and Maintenance

The Facility will have the ability to provide complete maintenance onsite including preventative maintenance, normal wear, unscheduled downtime and major overhaul. A maintenance area,

immediately adjacent to the temporary office trailer, will be present on-site for this purpose. All equipment will be company owned and is maintained in job-ready condition at all times. Mechanics will be employed with mobile and stationary capability to maintain and repair equipment.

# 4.11 Hours of Operation 701.710 (2) (4) (c) 1

# 4.12 Regular Hours of Operation

*Facilities open to Personnel*
Days
Monday through Saturday
Hours
Monday through Friday
6:30 am to 5:30 pm
Saturday
6:30 am to 5:30 pm

*Facility open to the Public*
Days
Monday through Saturday
Hours
Monday through Friday
7:00 am to 5:00 pm
Saturday
7:00 am to 5:00 pm

Recycling from 8:00 am to 4:30 pm
Recycling from 8:00 am to 4:30 pm

*Holidays*

The Facility will be open Monday through Saturday with the probable exception of the following holidays:

- New Year's Day
- Fourth of July
- Memorial Day
- Labor Day
- Thanksgiving Day
- Christmas Day

The Facility may find it necessary to remain open during these holidays, depending on business conditions.

# 4.13 Scales and Tipping Fees

## 4.13.1 Scales

The Florida Department of Agriculture and Consumer Services, Division of Standards Bureau of Weights and Measures is charged with the protection of buyers and sellers by assuring that equity prevails in commercial transactions involving measurement. To achieve equity, inspections are conducted under the authority of Chapter 531, Florida Statutes, and the Florida Administrative Code. To comply with the State regulations, as well as protecting the Facility's owners and costumers, incoming waste is weighed at the scales located at the entrance to the Facility.

### 4.13.2 Tipping Fees

Tipping fees are determined by Waste Services. The majority of the customers will pay by the ton and all customers will be weighed, regardless of the method of calculating their tipping fee.

## 4.14 Signage

Signage indicates that indicates the types of materials accepted and the hours of operation. The Facility will have traffic directional signs and interior signs installed on-site to notify all haulers about the site operation. A general information sign will be erected at the entrance to the facility to notify all haulers about the acceptable and non-acceptable materials. The load rejection policy is included on this sign.

# 5.0 FACILITY CLOSURE

## 5.1 Steps To Close Facility 701.710(6)(a)

Subsequent to the closure of the facility, all waste, clean debris and any remaining recyclables will be transported to and disposed of at an appropriate facility. The walls and area adjacent to the tipping floor, sorting area and material storage bays will be pressure washed along with the tipping floor. All water generated as part of facility cleaning operations will be captured within the existing facility floor drain system. In addition, remaining leachate within the collection system tank will be properly disposed as part of the final site cleaning tasks. It is likely that a portion of the leachate generated will be from any rinse water utilized to clean the drains and tank as such, all cleaning fluids will be handled and disposed as leachate.

## 5.2 Notification of Closure 701.710(6)(b)

Appropriate notifications of closure will be sent to both the FDEP and Hillsborough County with a specified closing date. Upon the closing date, all facility disposal operations will cease and no additional materials will be received on-site.

## 5.3 Final Solid Waste Shipment 701.710(6)(c)

The owner/facility operator will remove and properly dispose of all solid waste, residues, and leachate within thirty (30) days after receiving all solid waste shipments and materials. Any stored putrescible waste will be handled and removed within 48 hours of the closure date.

Closure as proposed above will occur within 180 days after receiving the final waste shipment except putrescible waste as described above. All recovered materials will be removed in 30 days, and the FDEP will be notified in writing so that final inspection by FDEP and closure status can be determined, at which time the owner will satisfy all requirements set forth by the FDEP for facility closure.

# 6.0 DESIGN REQUIREMENTS

## 6.1 Leachate Control 701.710(3)(b)

### 6.1.1 Leachate Control Systems

The MRF unloading and processing area is a leachate containment area designed to collect the leachate that may be within a waste load or generated by a rain event. The entire leachate containment area is comprised of formed and placed concrete, and is sloped to drain towards a central floor drain located within the MRF processing building. The drains collect and convey leachate toward either a concrete separator/pump station box located on the north side of the building to discharge to the site sanitary sewer system (subject to approval by the local utility provider) or to a storage tank for offsite disposal by a licensed disposal contractor.

The facility has been designed to minimize the mixing of stormwater with leachate. Exterior grading is intended to direct stormwater flows away from the building and 'curbed' tipping floor and will capture outside stormwater flows to be directed to the stormwater systems. All leachate generated at the site will either be disposed of using local utilities using a point of use system and disposed of using Hillsborough County's wastewater treatment or removed by a qualified third-party contractor. The facility may retain the services of Aqua Clean Environmental or an equivalent and qualified sub-contractor to provide leachate removal services. Site leachate removal will be initiated when the system storage capacity exceeds approximately 75%.

The facility layout internal drainage structures and leachate collection and control systems are shown in **Appendix C**.

### 6.1.2 Cleaning and Maintenance

Leachate will flow by gravity to the floor trench drains that will be covered with a heavy-duty traffic bearing (TB) grate, and will then be covered by a rubber mat during operating hours in order to keep material from falling into the pipe system. During a rain event, or if liquid is generated during processing, or during non-operational hours, and for cleaning, the rubber mats will be removed manually in order to allow the drain system to collect liquid on the leachate containment area. The drains inlets will be inspected at least daily for material that could block flow or impede the operations of the system. If the materials are observed, then the material will be removed to restore proper operations of the system. The unloading, sorting, storage, and loading areas will be cleared of waste, recyclables, and residue on a weekly basis. The processing floor will also be washed down on a weekly basis. Any washdown water from these areas will be contained within the leachate collection system.

At the end of the work week, the leachate collection vessel will be inspected for accumulated debris and sediment that could impede operations of the system and if observed then the materials will be removed. Any sediment or solids removed from any portion of the leachate collection system (drains, drop inlets, pipes, or collection vessel) will be placed into a waste container for the disposal.

### 6.1.3 Leachate Tank

Leachate storage and containment tanks is made of high-density polyethylene (HDPE) plastic and is compatible with the entrained moisture within in-bound materials and fluid captured within the tipping floor drains. The tanks are above-ground and supported on a concrete

foundation that is surrounded by a concrete containment wall. The secondary containment was designed to provide 110% of the volume of the tanks specified in the Appendix C. Additionally, the secondary containment structure will have a drainpipe that allows for stormwater to be directed to the facility's stormwater treatment pond. The accumulated water within the secondary containment will be drained routinely, and or removed within 24-hours when the accumulated precipitation is equivalent to 10% of the storage capacity of the containment system. Visual inspections are required as part of routine facility operations; however; there are no record keeping requirements.

## 6.2 Stormwater Control 701.710(3)(b)

The Facility shall have a permitted stormwater management system for managing of onsite runoff and offsite discharge.

Runoff from the Facility is collected via overland flow toward drop inlets in the interior of the property. All runoff from the interior of the property is collected and discharged into a stormwater management basin located southwest area of the property. The stormwater management basin will have one overflow weir that will discharge water into the stormwater management system along US Hwy 41. Stormwater and any accumulated runoff that is collected within the tipping floor and building will be routed into the drain inlets and disposed of as leachate.

Site stormwater calculations and an engineering report intended to quantify facility runoff is included in **Appendix D**.

## 6.3 Evaluating Waste Quantities 701.710(3)(c)

Waste quantities will be evaluated based on type(s) and definitions noted in Section 4.3 with weight per ton recorded for each load received. Proposed site scale operations will include an initial inbound weight and subsequent to tipping within the main waste processing building the outbound weight will be recoded as the tare weight to determine the total tonnage received. All waste quantities will be recorded and monitored as noted in Section xx.1 for archival and record keeping. The proposed storage areas have been designed to temporarily store the anticipated volume of materials prior to sorting, re-loading and transport to an appropriate disposal facility.

# 7.0 RECORD KEEPING

## 7.1 Record Keeping/Archival and Regulatory Requirements 701.710(9)

Records will be maintained and submitted in compliance with FDEP requirements. Operational records shall include a daily log of:

- Quantities and types of solid waste received;
- Quantity of solid waste processed;
- Quantity of solid waste stored;
- Quantity of solid waste removed from the site for recycling and disposal; and
- County of origin, if known.

Daily log will also include leachate collection, storage inspections, and maintenance information. Waste quantities will be recorded as tons. Types and quantities of unauthorized waste received will also be recorded; however, we note that the scale is inaccurate under 500 pounds and smaller weights will be estimated. These records/logs will be compiled monthly and maintained onsite for three years (see **Attachment C**).

The reporting requirements include submitting a report annually (by April 1) which summarizes the amounts and types of waste received and the amounts and types of wastes disposed of or recycled. The annual report will be submitted on the FDEP Form 62-701.900(7), per F.A.C. 62-701.710(9). Operational records will also be submitted to FDEP on a quarterly basis, as required by the Department.

## 7.2 Special Requirement 701.710(10)

The proposed facility is intended to accept waste materials as defined in Section 4.3. As noted in prior sections of this document, in the event that unacceptable or un-authorized is found in in-bound loads, the facility will place these materials into appropriate storage containers until proper disposal.

### 7.2.1 Financial Assurance Exemption 701.710(10)(a)

The proposed facility will accept household waste (Class I), yard trash, Class III waste, C&D and clean debris, and will manage the waste on a first in-first out basis and will not store the waste for more than 7 days. Financial assurance (Section 1.5) includes disposal cost estimates for Class I/III wastes.

Management of special wastes at the facility will at times result in the storage of these wastes until storage bins are at capacity (this may exceed seven [7] days). For this reason, closure costs for special wastes have been included in the closure cost estimate for the facility.

# Figures


N
W E
S

0 50 100
Feet
1 inch = 100 feet

## Legend

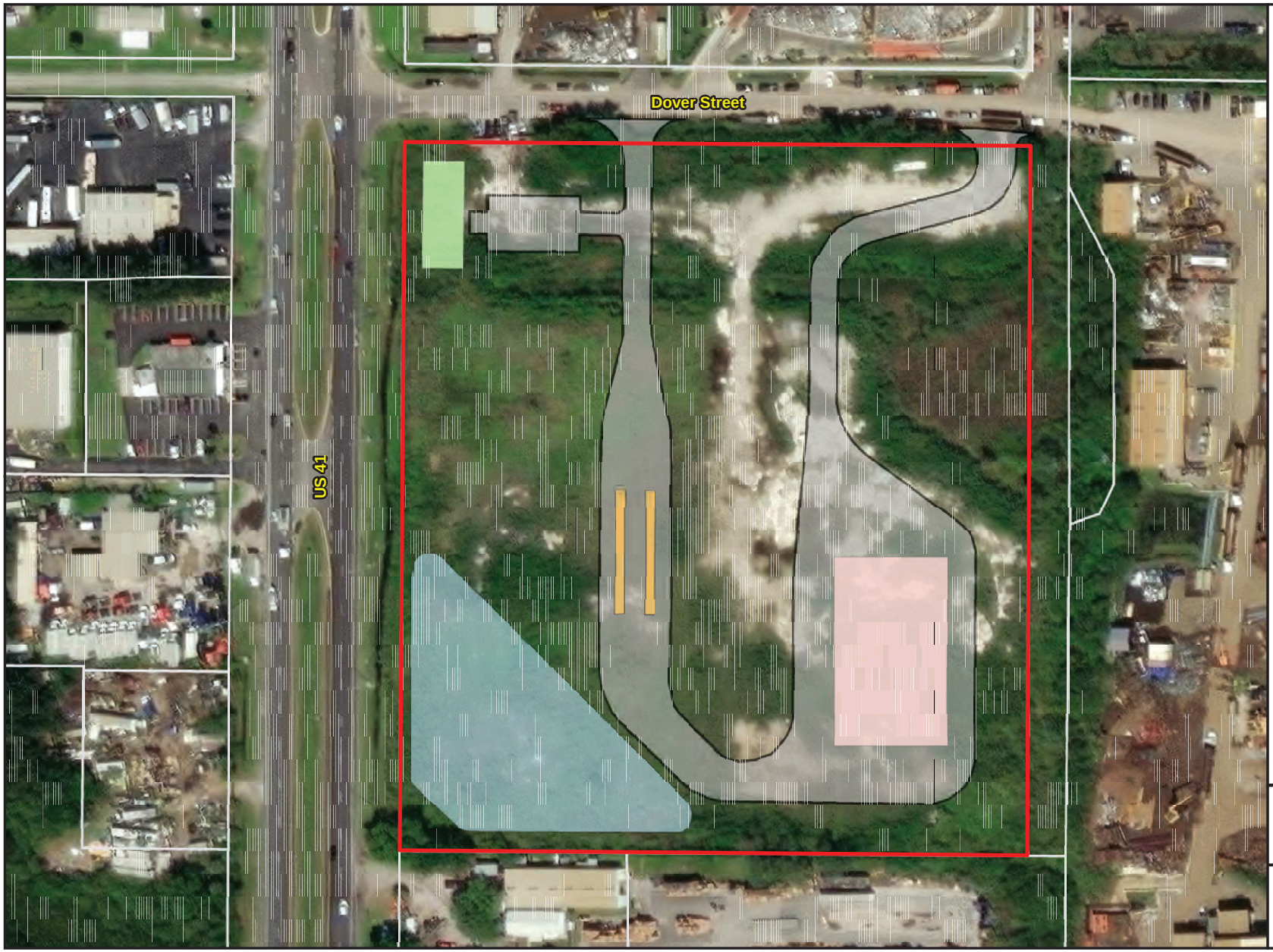
- Drainage Ditch
- Property Boundary
- Parcel

**FIGURE 1**
PROPOSED SITE LOCATION

DOVER STREET
5003 DOVER STREET
TAMPA, FL

verdantas
PEOPLE FOCUSED FUTURE

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Finals\Figure 1 Site Location.mxd |User: jbolich | Date:9/21/2023




N
W E
S

0 45 90
Feet
1 inch = 100 feet

## Legend

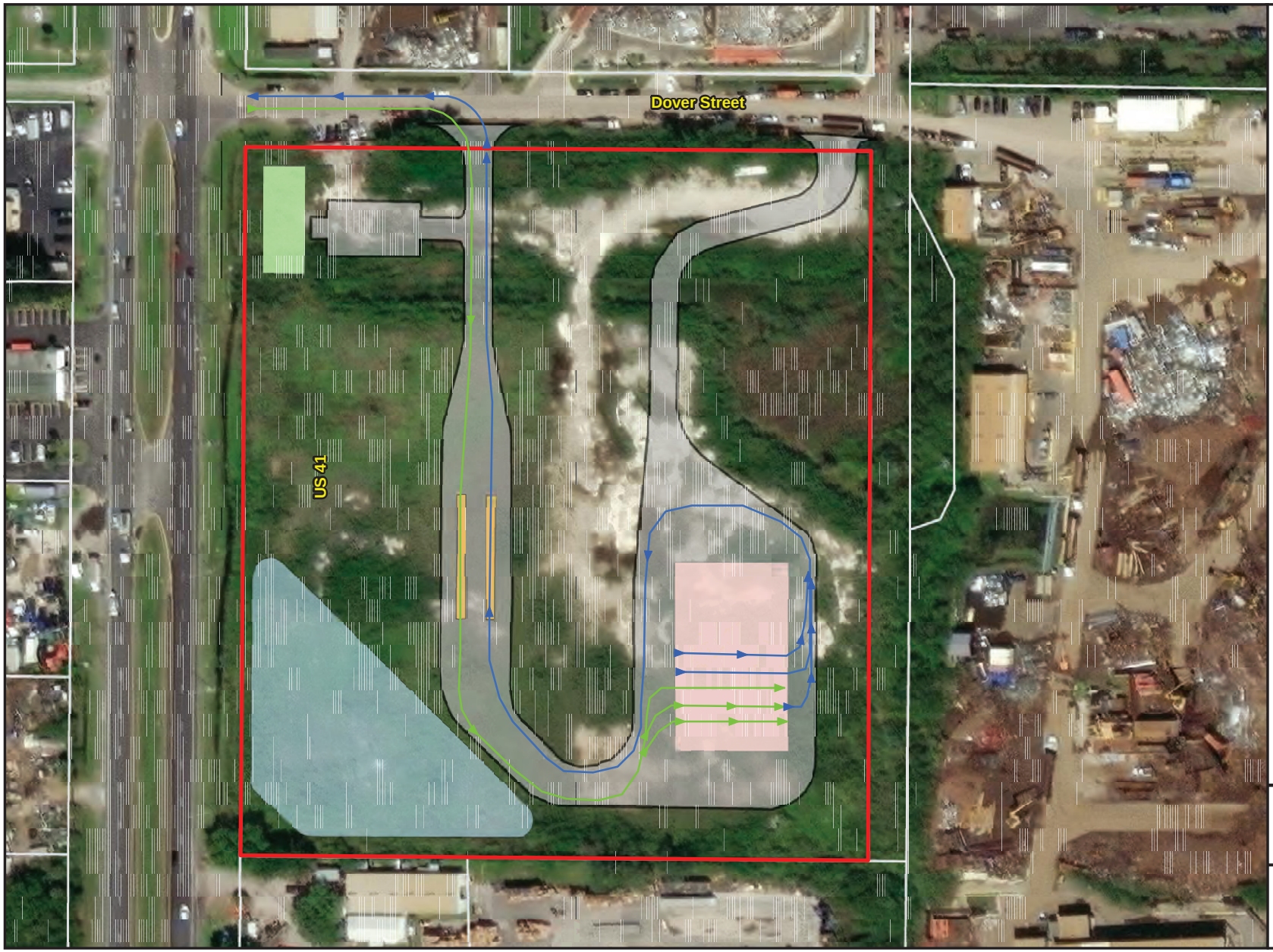
- Property Boundary
- Stormwater Pond
- Administrative Building
- Covered Tipping Floor
- Scales
- Edge of Pavement
- Hillsborough County Parcels

**FIGURE 2**
PROPOSED SITE LAYOUT

DOVER STREET
5003 DOVER STREET
TAMPA, FL

verdantas
PEOPLE. FOCUSED. FUTURE

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Figure 2 Site Layout_rev1.mxd |User: jbolich | Date:9/29/2023




N
W E
S

0 45 90
Feet
1 inch = 100 feet

## Legend

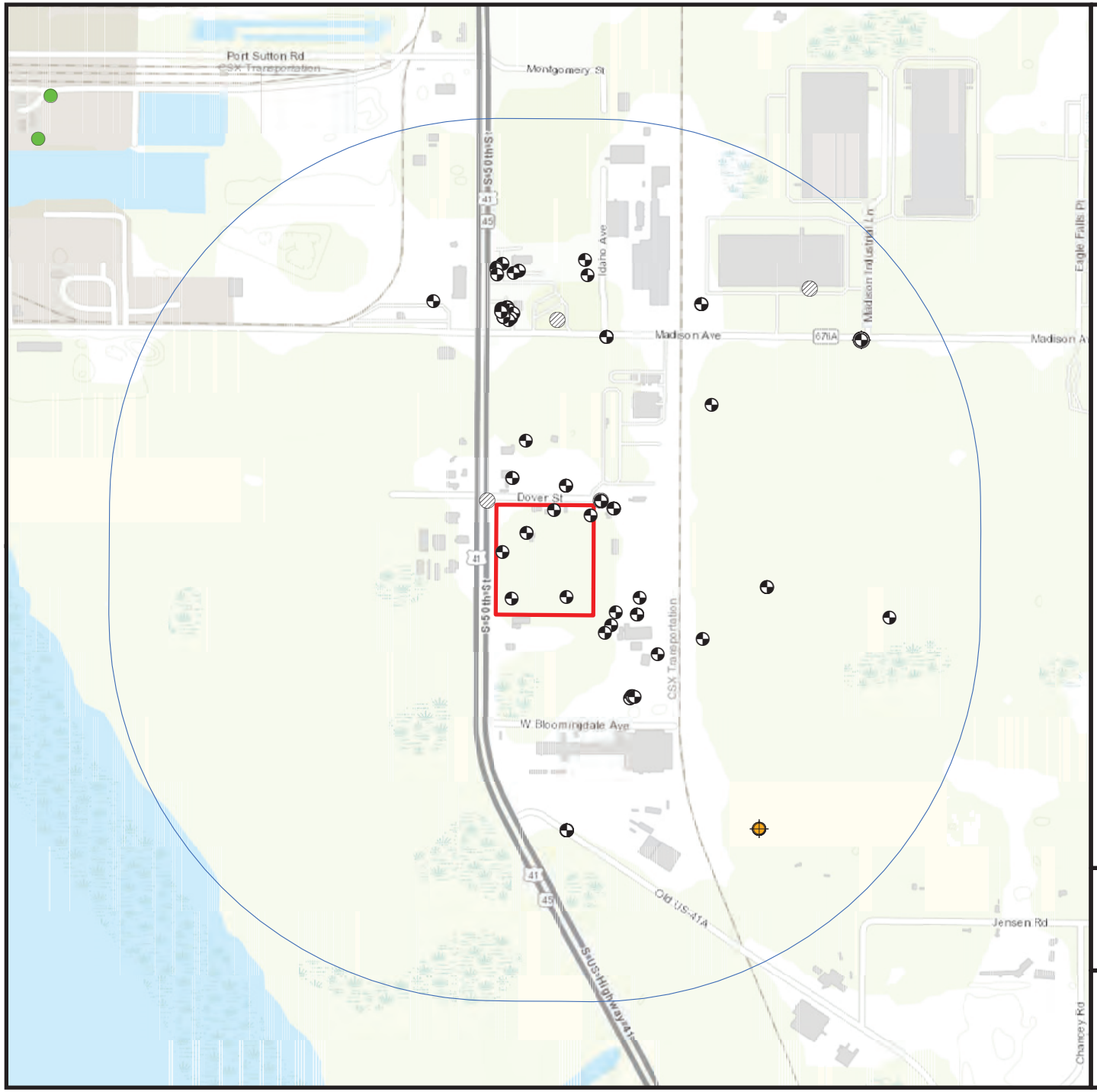
- Property Boundary
- Stormwater Pond
- Administrative Building
- Covered Tipping Floor
- Scales
- Edge of Pavement
- Hillsborough County Parcels
- Inbound
- Outbound

**FIGURE 3**
WASTE PROCESS FLOW

DOVER STREET
5003 DOVER STREET
TAMPA, FL

verdantas
PEOPLE. PLANET. FUTURE

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Figure 3a waste_process flow.mxd |User: jbolich | Date:9/29/2023




N
W E
S

0 500 1,000
Scale in Feet
1 inch = 1,000 feet

## Legend

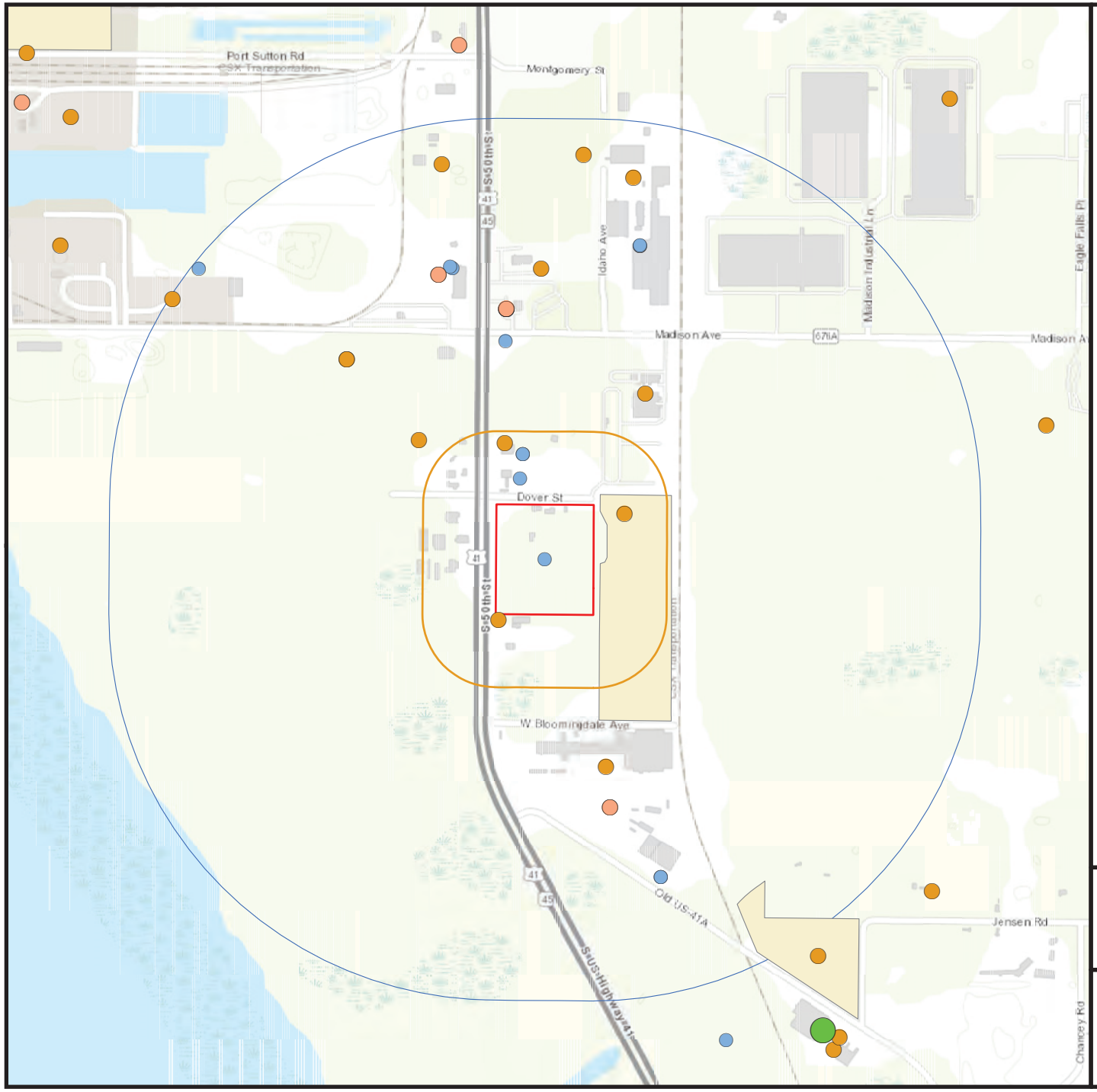
- POTABLE/INDUSTRIAL SUPPLY WUP WITHDRAWAL LOCATIONS
- DOMESTIC SUPPLY (LIMITED USE)
- IRRIGATION
- MONITOR
- 1/2-MILE BUFFER (PARCEL LIMITS)
- PARCEL BOUNDARY

**Figure 4**
Permitted/Constructed Wells
Within 0.5-Miles

Dover Street Brownfield Site
5003 Dover St.
Tampa, FL.

verdantas
PEOPLE FOCUSED FUTURE

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Finals\Figure 4 well locs_rev.mxd | User: dthompson | Date: 9/21/2023




N
W E
S

0 500 1,000
Scale in Feet
1 inch = 1,000 feet

## Legend

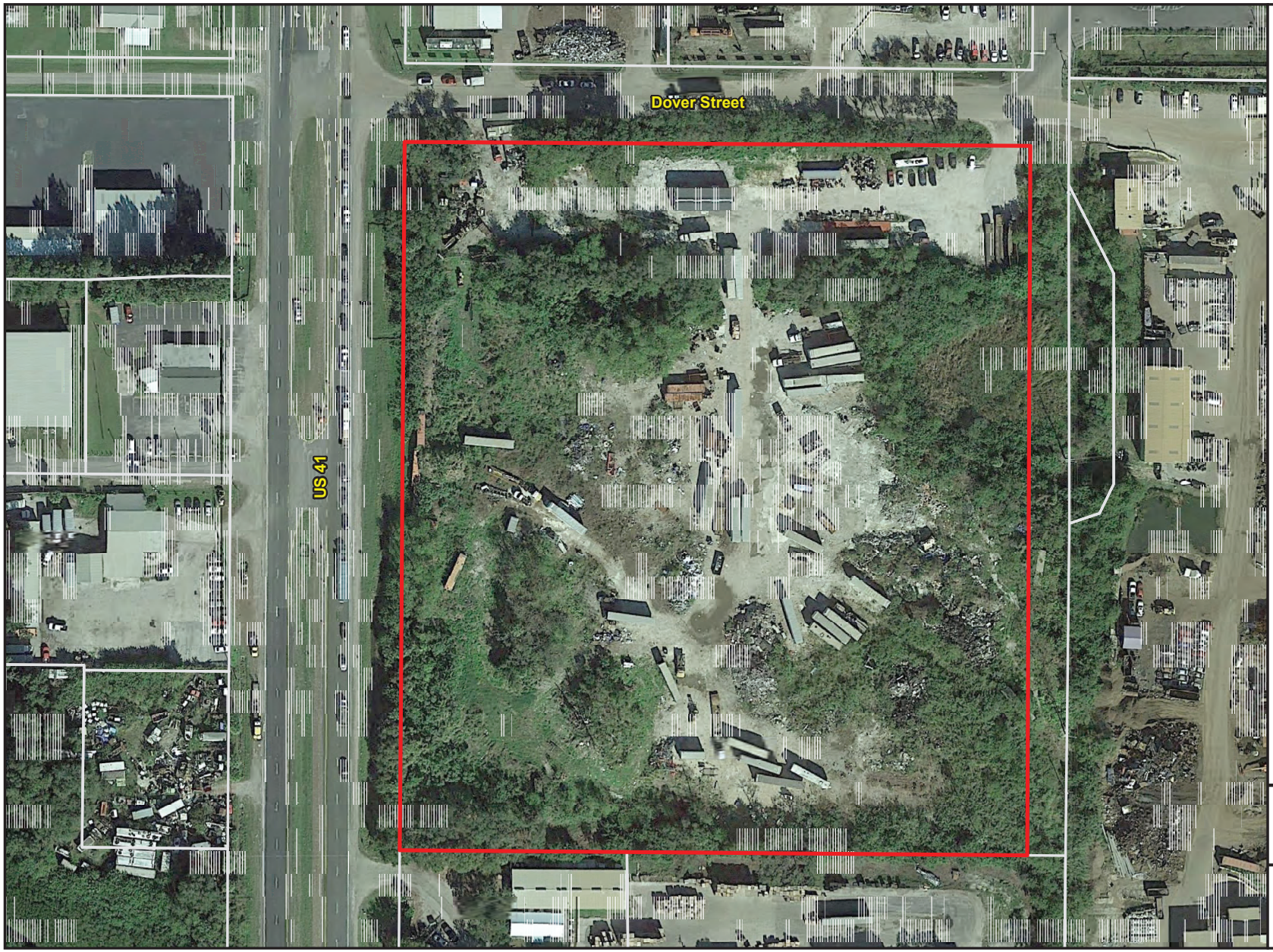
- HAZARDOUS WASTE TRANSFER FACILITIES
- ERIC WASTE CLEANUP SITES
- REGISTERED TANKS FROM STORAGE TANK CONTAMINATION MONITORING (STCM)
- 500-FOOT BUFFER
- FLORIDA INSTITUTIONAL CONTROLS REGISTRY
- 1/2-MILE BUFFER (PARCEL LIMITS)
- PARCEL BOUNDARY

**Figure 5**
Relevant Features Within 500-ft of the Proposed Facility

Dover Street Brownfield Site
5003 Dover St.
Tampa, FL.

verdantas
PEOPLE FOCUSED FUTURE

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Finals\Figure 5C relevant features.mxd | User: dthompson | Date: 9/21/2023




N
W E
S

0 45 90
Feet
1 inch = 100 feet

## Legend

- Property Boundary
- Hillsborough County Parcels

**FIGURE 6**
PRIOR LAND USE (2019)

DOVER STREET
5003 DOVER STREET
TAMPA, FL

verdantas
PEOPLE FOCUSED FUTURE

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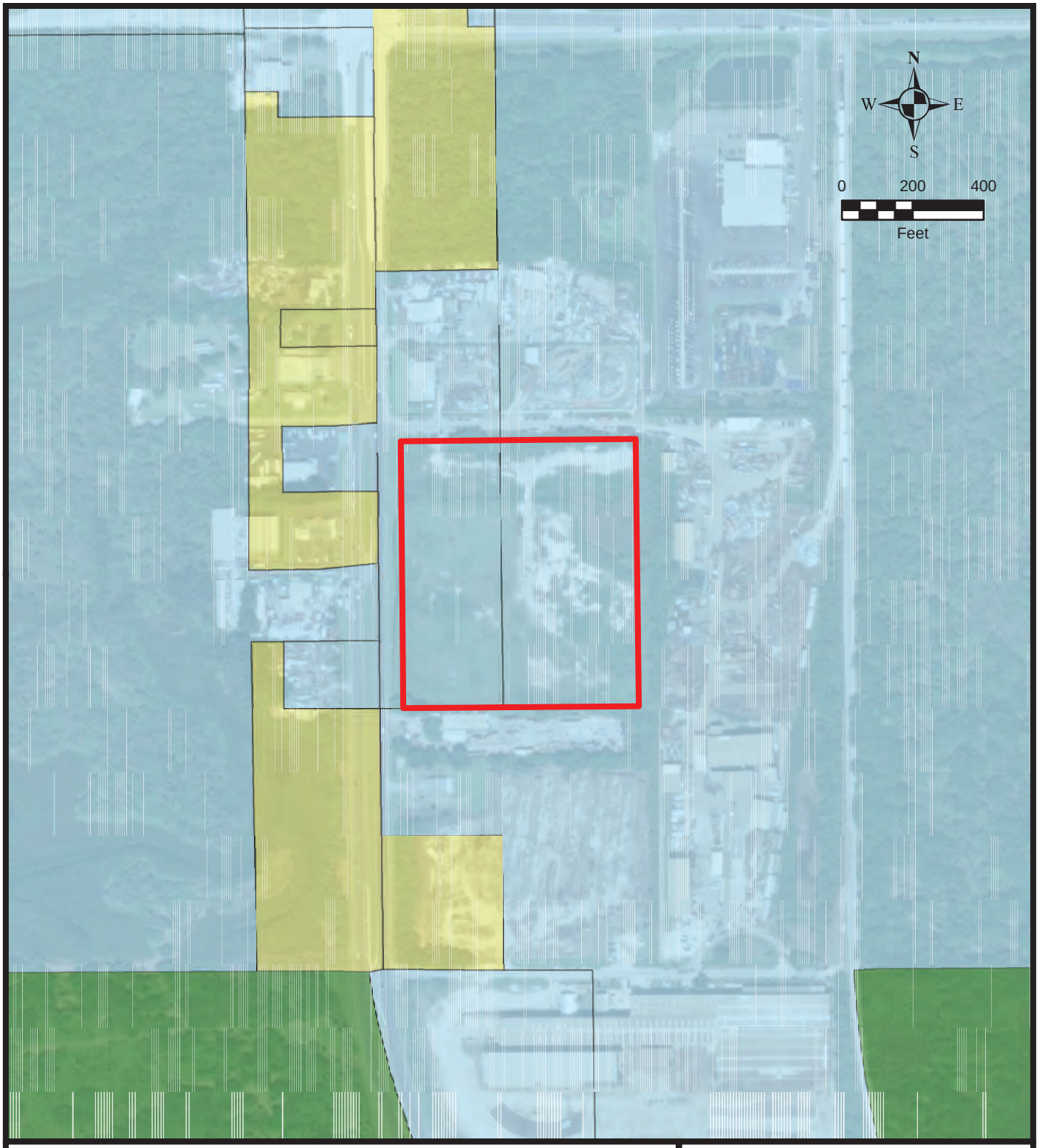


## Legend

- Parcel Boundary *(Florida Department of Revenue)*
- Agricultural - Industrial
- Commercial - Intensive
- Manufacturing

FIGURE 7
HILLSBOROUGH COUNTY
CURRENT ZONING

5003 DOVER STREET
TAMPA, FL 33619
HILLSBOROUGH COUNTY
PARCEL ID: U-03-30-19-1Q3-000113-00006.0

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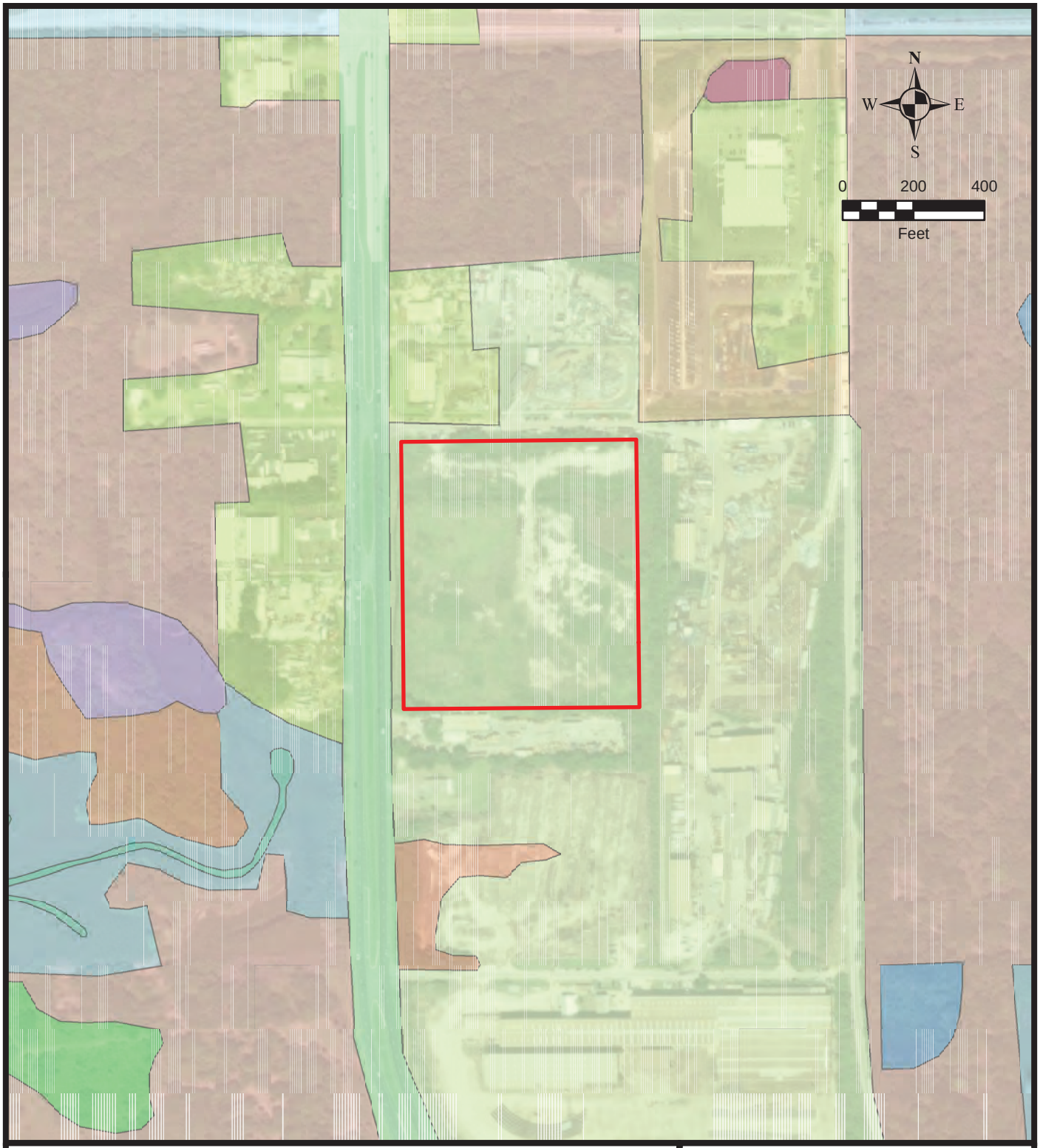
verdantas
PEOPLE FOCUSED FUTURE




## Legend

- Parcel Boundary
- BAYS AND ESTUARIES
- COMMERCIAL AND SERVICES
- CROPLAND AND PASTURELAND
- FRESHWATER MARSHES
- HARDWOOD CONIFER MIXED
- INDUSTRIAL
- OPEN LAND
- SALTWATER MARSHES
- SHRUB AND BRUSHLAND
- STREAMS AND WATERWAYS
- TRANSPORTATION
- WETLAND FORESTED MIXED

FIGURE 8
HILLSBOROUGH COUNTY
CURRENT LAND USE/COVER

5003 DOVER STREET
TAMPA, FL 33619
HILLSBOROUGH COUNTY
PARCEL ID: U-03-30-19-1Q3-000113-00006.0

O:\Projects\1CV700101 Dover Street\Map\Solid Waste Application\Finals\Figure 8_land cover.mxd|User: jbolich

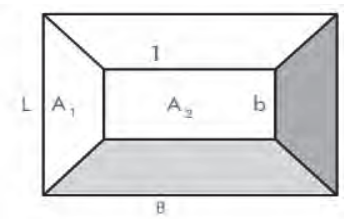
verdantas
PEOPLE FOCUSED FUTURE

# Appendix A

Maximum Daily Waste Processing Estimates

# Solver for Calculating Volume of a Trapezoidal Element (Waste Volumes in the Sorting/Tipping Area)

$$Volume = H/3\,(A1+A2+(\sqrt{A1}\times A2)$$




where;

V = Volume

$A_1$ = area of pile on tipping floor ($ft^2$)

$A_2$= area of the top of the pile ($ft^2$)

H= assumed height of the trapezoidal portion (ft)

Assumptions

1. Approximately 2:1 side-slopes on the waste pile
2. Waste pile is consolidated into a single mass post-tipping and in preparation for sorting
3. Target volume noted in Section 3.3 of the Site Operations Plan (1,033 $yd^3$/250-tons)
4. b for the top of the pile = 20-ft

Knowns

Base of Trapezoid

| | | | | | |
|---|---|---|---|---|---|
| L= | 70 | ft | $V_{start}$= | 17866.66667 | $ft^3$ |
| B= | 70 | ft | $Yd^3_{start}$= | 661.73 | $yd^3$ |
| l= | 20 | ft | Waste Weight= | 484 | #/yd3 |
| b= | 20 | ft | | | |

$$A_1 = L * B$$

$A_1$= 4,900 $ft^3$

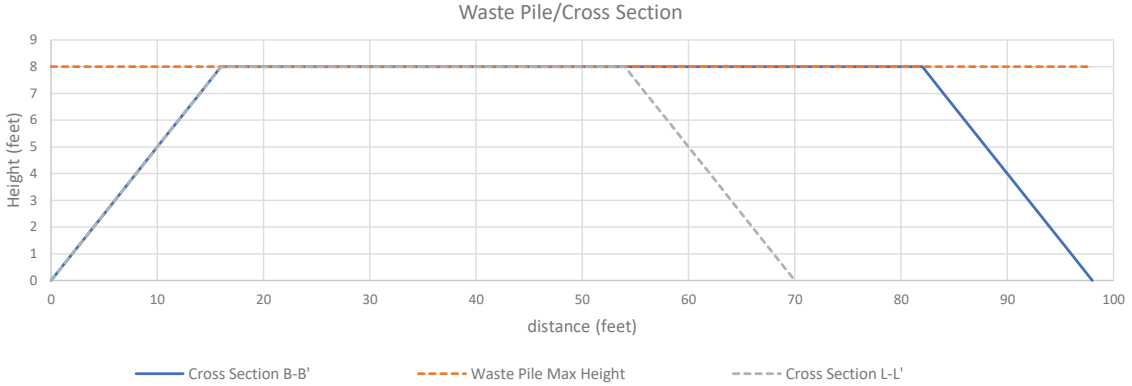
$$A_2 = l * b$$

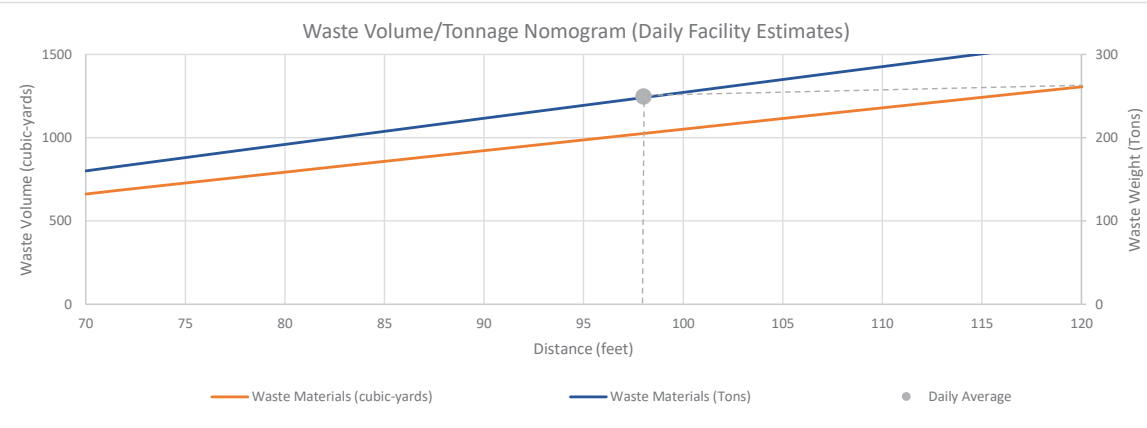
$A_2$= 400 $ft^3$

H= 8 ft

## Solver Block 1

| L | B | l | b | Volume | | Weight |
|---|---|---|---|---|---|---|
| | (ft) | | | ($ft^3$) | ($yd^3$) | Tons |
| 70 | 70 | 20 | 20 | 17867 | 662 | 160 |
| 70 | 72 | 20 | 22 | 18584 | 688 | 167 |
| 70 | 74 | 20 | 24 | 19298 | 715 | 173 |
| 70 | 76 | 20 | 26 | 20009 | 741 | 179 |
| 70 | 78 | 20 | 28 | 20716 | 767 | 186 |
| 70 | 80 | 20 | 30 | 21421 | 793 | 192 |
| 70 | 82 | 20 | 32 | 22124 | 819 | 198 |
| 70 | 84 | 20 | 34 | 22826 | 845 | 205 |
| 70 | 86 | 20 | 36 | 23525 | 871 | 211 |
| 70 | 88 | 20 | 38 | 24223 | 897 | 217 |
| 70 | 90 | 20 | 40 | 24920 | 923 | 223 |
| 70 | 92 | 20 | 42 | 25616 | 949 | 230 |
| 70 | 94 | 20 | 44 | 26310 | 974 | 236 |
| 70 | 96 | 20 | 46 | 27004 | 1000 | 242 |
| 70 | 98 | 20 | 48 | 27697 | 1026 | 248 |
| 70 | 100 | 20 | 50 | 28389 | 1051 | 254 |
| 70 | 102 | 20 | 52 | 29080 | 1077 | 261 |
| 70 | 104 | 20 | 54 | 29771 | 1103 | 267 |
| 70 | 106 | 20 | 56 | 30461 | 1128 | 273 |
| 70 | 108 | 20 | 58 | 31150 | 1154 | 279 |
| 70 | 110 | 20 | 60 | 31839 | 1179 | 285 |
| 70 | 112 | 20 | 62 | 32528 | 1205 | 292 |
| 70 | 114 | 20 | 64 | 33216 | 1230 | 298 |
| 70 | 116 | 20 | 66 | 33904 | 1256 | 304 |
| 70 | 118 | 20 | 68 | 34591 | 1281 | 310 |
| 70 | 120 | 20 | 70 | 35278 | 1307 | 316 |
| 70 | 122 | 20 | 72 | 35965 | 1332 | 322 |



# Appendix B

Recent Site Survey

# Boundary, Topographic & Wetland Survey
# American XVII LLC
# Blocks 113 & 120, SOUTH TAMPA VILLA SITES SUBDIVISION
# Hillsborough County, Florida

## Legend of Symbols & Abbreviations

| | | | |
|---|---|---|---|
| ⊕ | Found Iron Rod or Pipe | | Power Pole |
| (F) | Field Measurement | | Electric Meter |
| (D) | Deed Reference | | Guy Wire |
| (P) | Plat Reference | | Electric Pull Box |
| PSM | Professional Surveyor and Mapper | | Electric Vault |
| Id. | Identification | | Light Pole |
| LB | Licensed Business | | Fire Hydrant |
| OR | Official Records | | Water Valve |
| TBM | Temporary Benchmark | | Irrigation Control Valve |
| PVC | Polyvinyl Chloride Pipe | | Miscellaneous Feature |
| CONC. | Concrete | | Mitered End Section |
| FDOT | Florida Department of Transportation | | Drainage Pipe Continues |
| DIP | Ductile Iron Pipe | | Square Post |
| RCP | Reinforced Concrete Pipe | | Round Post |
| MW | Monitoring Well | | Sign |
| No. | Number | | Drainage Pipe |
| EPC | Environmental Protection Commission | | Fence |
| | EPC Wetland Point | | Gate |
| | Temporary Benchmark | | Overhead Utility Lines |
| | Monitoring Well | | |

**Benchmark Information: NAVD 1988**

**TBM #1**
Elevation = 5.42'
Set PK nail & disk labeled "SurvTech Trav. Pt" in asphalt / broken concrete area; ±22 feet South of the South edge of an asphalt apron; ±62 feet Southwest of a power pole.

**TBM #2**
Elevation = 7.21'
Set PK nail & disk labeled "SurvTech Trav. Pt" in asphalt/ broken concrete area; ±21 feet North of a top of bank; ±51 feet West of a monitoring well.

**TBM #3**
Elevation = 3.99'
Box cut in center of concrete headwall on East side of South 50th Street, ±196 feet South of the centerline of Dover Street.

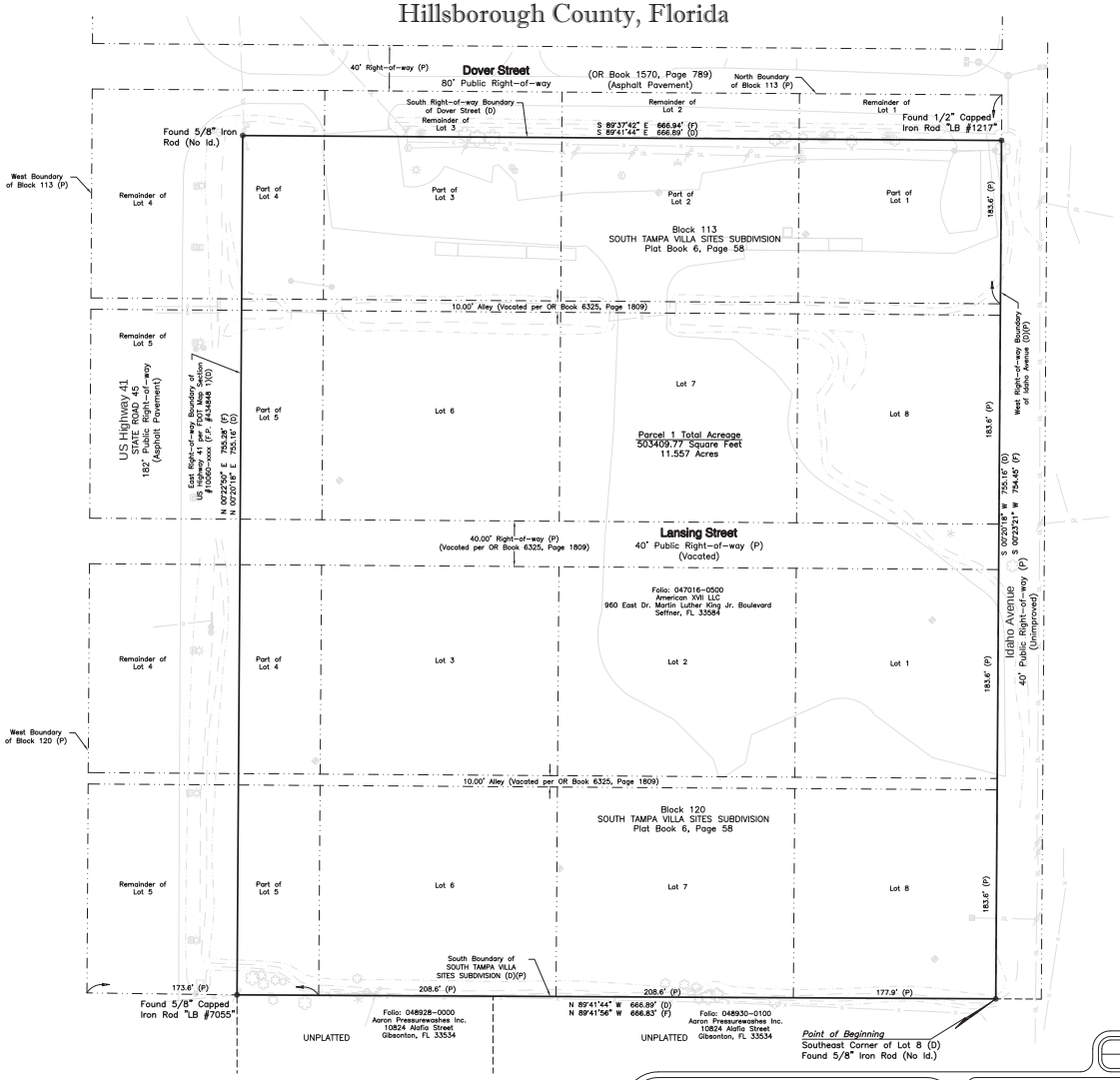
**Flood Zone Information:**
Subject property is located in Flood Zone "AE"
Flood Insurance Rate Map: 12057C
Panel No.: 0369 H
Community Name/No.: Hillsborough County/120112
Effective Date: August 28, 2008

**Certifications:**
HSW Consulting

## Surveyor's Notes

1.) Paper copies of this survey are not valid without the original signature and raised seal of a Florida Licensed Surveyor and Mapper. Digital copies are not valid without the digital signature of a Florida Licensed Surveyor and Mapper.
2.) The bearing structure for this survey is based on a NAD 1983 Florida State Plane West Zone, bearing of N 00°22'50" E for the East Right-of-way Boundary of US Highway 41, also being the West Boundary of Subject Property.
3.) The horizontal datum utilized for this project is NAD 1983 Florida West Zone, 2011 Adjustment, U.S. Survey Feet. Said datum was established by utilizing the Florida Permanent Reference Network (FPRN).
4.) The vertical datum utilized for this project is NAVD 1988, U.S. Survey Feet. The benchmark utilized was Hillsborough County Benchmark "VD-210" with an elevation of 5.59 feet.
5.) All utilities depicted hereon are from visible evidence only. Surveyor did not contact subsurface utility locator service.
6.) No underground foundations or footers were excavated or located for this survey.
7.) SurvTech makes no guarantees or warranties as to fence ownership.
8.) This Survey has been performed without benefit of title policy or abstract. Therefore surveyor can make no guarantees to ownership or encumbrances. There may be additional easements and restrictions that can be found within the Public Records of Hillsborough County.
9.) Subject property falls within Section 3, Township 30 South, Range 19 East.
10.) Wetland delineation markers depicted hereon were placed in the field by a qualified specialist and located by SurvTech.
11.) The approximate center of subject property DMS (Degrees, Minutes, Seconds): Latitude: 27°53'48.5271 & Longitude: 82°24'01.8598"

Date Plotted: 7/27/2022 10:05:07 AM By: Stacy Brown




0' 50' 100' 150'
Scale: 1" = 50'

**Description: (A portion of lands per Per Instrument#: 2020229914)**

PARCEL 1:
A parcel of land being all of Lots 6, 7 and 8, inclusive, and part of Lots 1, 2, 3, 4 and 5, inclusive, Block 113; together with all of Lots 1, 2, 3, 6, 7 and 8, and a part of Lots 4 and 5, Block 120, lying East of the existing right of way line of U.S. Route 41 (State Road No. 45); and West of the West right of way line of Idaho Avenue, all lying and being in SOUTH TAMPA VILLA SITES SUBDIVISION, as per the map or plat thereof, recorded in Plat Book 6, Pages 58 and 59, of the Public Records of Hillsborough County, Florida, being more particularly described as follows:

Commence at the Southeast corner of Lot 8, Block 120, said point being the POINT OF BEGINNING; thence from the Point of Beginning North 89°41'44" West along the South boundary of said SOUTH TAMPA VILLA SITES SUBDIVISION, a distance of 666.89 feet to the intersection with the East right of way line of U.S. Route 41 (State Road No. 45); thence North 00°20'18" East along said East right of way line, a distance of 755.16 feet to the intersection with the South right of way line of Dover Street; thence South 89°41'44" East along said South right of way line of Dover Street, a distance of 666.89 feet to the intersection with the West right of way line of Idaho Street; thence South 00°20'18" West along said West right of way line of Idaho Avenue, a distance of 755.16 feet to the POINT OF BEGINNING.

## Statement of Potential Encroachments

See Sheet 2 for extents

(A) Apparent physical use of drainage swales or ditches, fencing or vehicular drive without benefit of known easement.
(B) Open & Notorious evidence of overhead utility line without benefit of known easement.
(C) Open & Notorious evidence of utility appurtenance without benefit of known easement.

STACY L. BROWN — License Number 6516 — STATE OF FLORIDA — Professional Surveyor and Mapper

Digitally signed by Stacy L Brown
Date: 2022.07.27 10:08:21 -04'00'

Stacy L. Brown PSM No. 6516
SurvTech Solutions, Inc. LB No. 7340

| | | | |
|---|---|---|---|
| **Project Name: American XVII LLC Survey** | | **Project No.: 20210133** | |
| **Address: 4902 South 50th Street** | **City: Tampa** | | **State: Florida** |

| | REVISION | DATE | INITIALS |
|---|---|---|---|
| 1 | Wetlands and additional drainage structure details | 2/25/22 | C.C. |
| 2 | Revised wetland labels to include other surface waters | 7/27/22 | S.B. |

SURVEYING TODAY WITH TOMORROW'S TECHNOLOGY

**Drafted By: T. Cress, B. Stinson** — **Drawing Name: 20210133_2B**
**Date Drafted: 05/28/21** — **Phase: 2**
**Approved By: S. Brown** — **Last Field Date: 05/25/21**
**Date Approved: 06/09/21** — **Field Book/Page: 21-11/16**


SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
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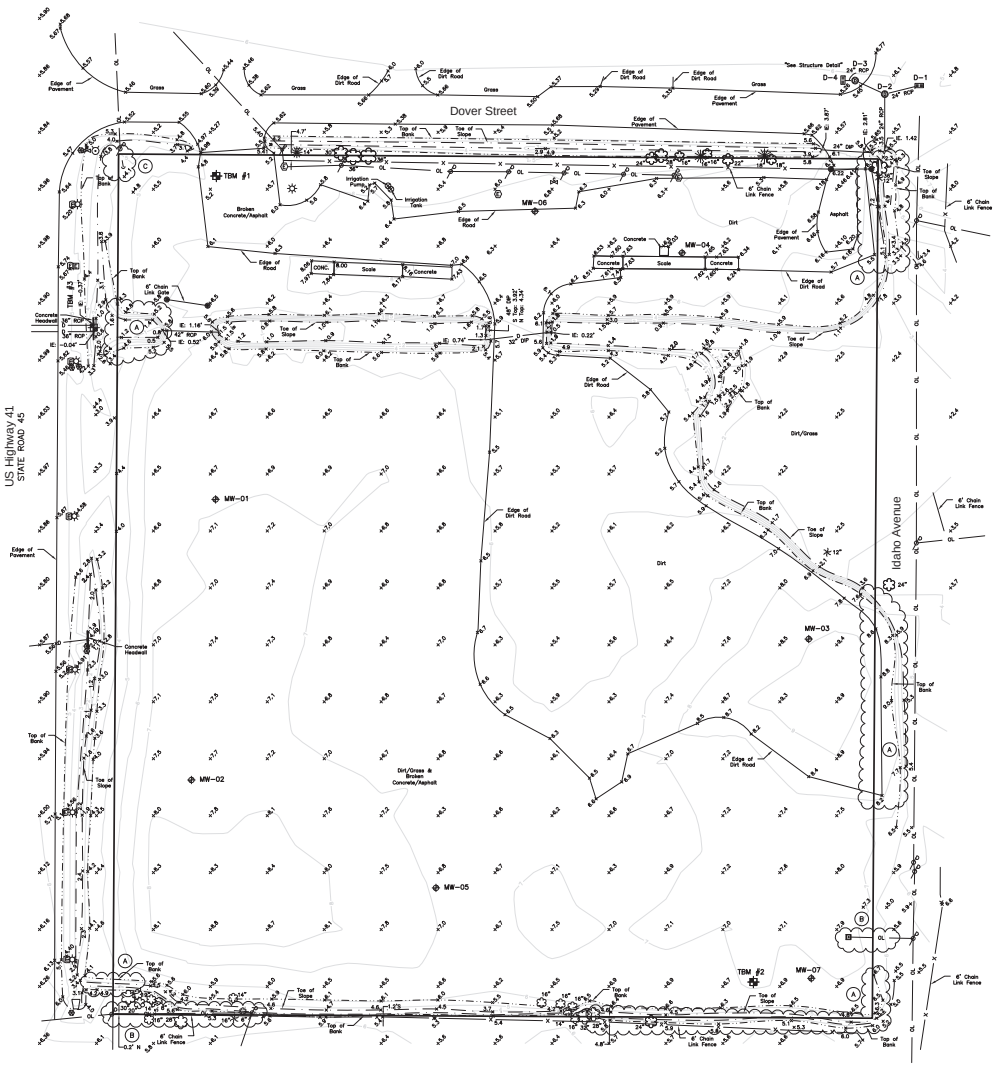
phone: (813)-621-4929
fax: (813)-621-7194
Licensed Business #7340
email: sbrown@survtechsolutions.com
http://www.survtechsolutions.com

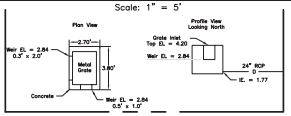
# Topographic Detail





## Structure Detail: D-4

Scale: 1" = 5'




**Drainage Information:**

| Structure | Structure Type | Top EL. (ft.) | Pipe Size, Material | IE. (ft.) | Direction |
|---|---|---|---|---|---|
| D-1 | Catch Basin | 4.70 | 24" RCP | 1.40 | Southwest |
| D-2 | Storm Manhole | 5.46 | 24" RCP | 0.86 | South |
| | | | See Note | See Note | Northeast |
| | | | See Note | See Note | Northwest |
| D-3 | Storm Manhole | 5.64 | 24" RCP | 1.09 | West |
| | | | See Note | See Note | Southeast |
| D-4 | Catch Basin | 4.20 | 24" RCP | 1.77 | East |

Note: Unable to attain pipe material, size, and invert due to recessed pipe and water filled structure.

**Monitoring Well Information:**

| Designation | Northing | Easting | Ground Elevation | Rim Elevation |
|---|---|---|---|---|
| | Florida West | Florida West | NAVD 1988 | NAVD 1988 |
| | NAD 1983 | NAD 1983 | US Survey Feet | US Survey Feet |
| | US Survey Feet | US Survey Feet | | |
| MW-01 | 1295477.7 | 526554.5 | 6.9 | 9.77 |
| MW-02 | 1295231.3 | 526533.3 | 8.1 | 10.89 |
| MW-03 | 1295355.1 | 527075.3 | 9.2 | 12.41 |
| MW-04 | 1295594.1 | 526964.1 | 6.4 | 8.89 |
| MW-05 | 1295136.5 | 526748.0 | 7.1 | 9.61 |
| MW-06 | 1295730.7 | 526835.0 | 6.3 | 9.30 |
| MW-07 | 1295057.2 | 527077.6 | 6.9 | 9.85 |

NOTE: The rim elevation hereon refers to the North rim of the pvc pipe inside the well casing.

Note: The topographic data depicted hereon was collected in April, 2021 and may not represent current site conditions.

***Boundary, Topographic & Wetland Survey***
***American XVII LLC***


SURVTECH SOLUTIONS, INC.
10220 U.S. Highway 92 East
Tampa, FL 33610
Licensed Business #7340
phone: (813)-621-4929
fax: (813)-621-7194
email: rbrown@survtechsolutions.com
http://www.survtechsolutions.com

# Appendix C

Facility Contingency Plan

# CONTINGENCY PLAN

Waste Services, LLC | 5003 Dover Street, Tampa, Hillsborough County, FL

FDEP ID No.:

**October 2023**

**Prepared for:**
American XVII LLC
960 E Dr Martin Luther King Jr Blvd.
Seffner, FL 33584

**Prepared by:**
Verdantas LLC
15711 Mapledale Blvd., Suite B
Tampa, FL 33624


Project No. 1CV700101

# Contents

# 1.0 FACILITY CONTINGENCY PLANS

## 1.1 Contingency Plan

In the event of an emergency, or if the Waste Services, LLC (Waste Services) facility is rendered inoperable, waste collection vehicles will be routed directly to appropriately permitted disposal sites, and the FDEP will be notified within 24 hours. Other contingency policies to be practiced at the Facility are outlined below. Should the Facility need to be evacuated, evacuation plans will be available in site work areas.

### 1.1.1 Response Procedures to Liquid Spills or Leaks

Upon the discovery of a leaking piece of equipment, the employee will take the following steps to minimize the incident:

1. Apply absorbent material to the spill,
2. Clean and dry the area where the spill occurred, and
3. Lock-out, tag-out the equipment until proper corrections can be made.

In the event of an emergency that threatens human health or the environment, the Site Supervisor will immediately assess the severity and potential consequences of the incident. Should the incident involve a spill or release that requires notification, the Site Supervisor will notify the appropriate federal or state agency affected by the release and report the following information:

1. Caller's name and telephone number,
2. Name and address of the Facility,
3. Time and type of release,
4. Name and quantity of material(s) involved, to the extent known,
5. The extent of injuries, if any, and
6. The possible hazards to human health or the environment outside the Facility,
7. Take appropriate measures to prevent spreading or worsening of the situation,
8. Make arrangements to collect, store, treat, or dispose of all recovered waste and cleanup residue,
9. Investigate possible methods of preventing recurrence of the incident; and
10. Within one week of a spill or release, notify the FDEP South District Office in writing as to the nature and extent of the release.

### 1.1.2 Emergency Response to Fire

***General***

Fire hydrants will be located at the Facility, at a minimum near the main office trailer and near the materials recovery building. Additional hydrants may be installed based on county building code requirements.

The materials recovery building will also be equipped with overhead sprinklers that cover the sorting floor in case of fire or "hot loads". In addition, there will be mobile sprinklers used for dust control that can be connected to the onsite potable water system.
Continual efforts will be made during the operating life of the Facility to prevent fires. Should a fire occur, prompt and effective action will be taken to bring the fire under control as quickly as possible. The following steps will be taken regularly by designated Facility personnel to prevent fires:

1. Incoming hot loads"(i.e., smoking or smoldering wastes) will not be dumped in the active area of the Facility. When a "hot load" enters the Facility, Waste Services personnel will direct it to a location away from container/piles that contain flammable materials. Fire extinguishers onsite can be used to "assist" with putting out small fires but in all cases, the Fire Department should be called to properly control the "hot load" and/or fire at the Facility. The "No Smoking" rule will apply universally to Facility patrons, personnel, and visitors. All personnel will rigidly abide by this rule. Smoking will be confined to designated areas only, away from active areas, fuel stations, and other fire-sensitive areas.
2. Motorized equipment will not be parked near fuel stations longer than necessary for refueling.
3. Fuel spills will be cleaned up immediately.
4. The Fire Department will be invited to perform a periodic fire prevention survey of the Facility.

***Fire Control***
The Site Supervisor will be responsible for the control and/or extinguishing of all types of fires that may occur at the site, including the immediate reporting of all fires to local fire-fighting offices and the FDEP.
General Fire Protection Guidelines:

- Regularly check firefighting equipment (extinguishers, fire hoses, etc) for make sure they operate.
- Keep debris piles, litter, and other flammable materials cleanup and placed into the proper area or cleaned up to minimize accumulation of material and potential fire hazards.
- Keep flammable liquids in proper container and in centralized locations.
- Keep chemicals separate and properly containerized.
- Keep flammable materials, such as paper, textiles, rubber, etc, in the material storage areas together, to the extent possible, to contain the potential fire area within reach of the onsite fire hose. In general, all storage areas should be all weather accessible and capable of being access by fire equipment.
- Waste "hot loads" should be directed to the "Hot Load" area to contain the potential fire area.
- The on-site dust control system can be use for water to contain/extinguish fire. Hoses are available to hook-up to the quick disconnect values. Inside the MRF Building, the overhead dust control sprinkler nozzles can be turned on to cover the floor with water.

- In the event of a fire, all placement of combustible material in the immediate area of the fire will be suspended. Placement of combustible material in the area of the fire will only resume after a thorough inspection by the operator.
- Materials within the building should be kept in an orderly manner, to the extent possible, and observed for smoke, "hot" materials, or other indicators of fire. Use equipment and fire hoses to extinguish fires immediately.
- For the Clean Wood and Yard Waste storage, all storage stockpiles and processed materials areas shall have 20-foot wide, all weather access roads (the Facility is paved or has compacted gravel) allowing access to the area by firefighting equipment. All stockpiles or material storage containers will be placed so these areas are no more than 50 feet from access by firefighting equipment.

The following emergency procedures will be followed for fires that may occur at the Facility:

1. The Fire Department will be contacted to request help, if necessary.
2. Employees will not attempt to fight a fire alone; the buddy system will be maintained throughout all phases of the response action.
3. Employees will not attempt to fight fire without the direction of the Emergency Coordinator, or alternate, or without adequate personal protective equipment.
4. Employees will be familiar with the use and limitations of fire-fighting equipment.
5. Employees endangered by the fire will be evacuated from the area, Facility operations discontinued, and potential users kept out of the Facility.
6. The FDEP South District Office will be notified during normal business hours or the State's 24-hour emergency group outside of normal business hours, as to the nature and extent of the fire.

***Vehicular or Equipment Fires***

Occasionally, a collection truck may arrive at the Facility with its contents on fire ("hot load"). Such vehicles will be directed to a point pre-designated by the Site Supervisor, outside the building.

The following steps will be taken in response to vehicle or equipment fires:

1. Direct the vehicle or equipment to the hot load area, unload the waste (if this can be accomplished safely), shut off the engine, and engage brake or use any other method to prevent subsequent movement of the vehicle.
2. Immediately call the Fire Department or assign someone to call, regardless of the apparent extent of the fire.
3. Smother the unloaded "hot load" with soil.
4. Alert other Facility personnel.
5. Assess the extent of the fire and the possibility for the fire to spread dangerously.
6. If it appears that the fire can be safely fought with available fire- fighting devices until the Fire Department arrives, attempt to contain or extinguish the fire.
7. Upon arrival of Fire Department personnel, direct them to the fire and render any assistance requested.

8. Notify the Emergency Coordinator or alternate.

### 1.1.3 Vehicular Accidents

The following emergency procedures will be followed for vehicular accidents that may occur at the Facility:

1. Determine the nature and extent of the injuries.
2. Administer common emergency first-aid techniques, as necessary.
3. Call for outside emergency assistance, such as an ambulance, if injuries appear to require professional medical attention or emergency transportation to medical facilities.
4. Determine if the vehicle(s) can be safely moved under its own power. If so, move the vehicle(s) out of the way of normal traffic flow.
5. If the vehicle(s) cannot move under its own power and is interrupting traffic flow, push the vehicle(s) out of the way using site equipment.
6. Notify the Site Supervisor of the details of the accident.
7. Arrange to have any disabled vehicles towed from the site in accordance with specific instructions from the Foreman.

### 1.1.4 Natural Disasters

If a tropical storm or hurricane is approaching, the operator will secure loose objects and containers before evacuating the site. In the event of a natural disaster such as a hurricane or tornado, operations at the Facility shall cease until the operator has deemed the area safe for contingency operations. Operations may be maintained on a limited basis, and dependent upon the operator's determination.

In the aftermath of a natural disaster at the Facility (e.g., flood, tornado, hurricane), the following steps will be taken to ensure that any damages that occur at the Facility are repaired in a timely and environmentally sound manner:

1. Upon assessment of the damage, the Site Supervisor will immediately contact the FDEP Southwest District Office to report the incident and the nature and extent of damage.
2. A Florida Registered Professional Engineer will visit the site to assess any damage to the Facility, and upon this assessment, make recommendations for repairs and restoration.
3. Once these recommendations for restoration are approved by the FDEP, the repairs will be made to the Facility. During reconstruction, all incoming waste will be directed to an area facility or to a temporary site that was not adversely affected by the disaster.
4. Once reconstruction and repairs are complete, the Facility is to be inspected by a Florida Registered Professional Engineer and a representative of the FDEP to ensure completeness of all repairs to the station.

### 1.1.5 Arrangements with Emergency Authorities

Both the local police and fire departments will be briefed as to the nature of the operations at this Facility.

### 1.1.6 Emergency Response Equipment

The emergency response equipment readily available on site includes:

1. Fire hydrants and hoses,
2. Absorbent materials, and
3. Personal protection equipment.

The abundance of rental companies in the Tampa area makes it easy to obtain various pieces of equipment as deemed necessary in an emergency.

### 1.1.7 Evacuation Plan

In the event of an evacuation, an announcement will be made at the Facility and employees are to immediately evacuate through the nearest unobstructed exit. Evacuation plans will be posted at the temporary office trailer, MRF building, and other facility work areas for easy reference by employees.

### 1.1.8 Unauthorized or Hazardous Materials

Incoming wastes will be controlled in ways so that the Facility does not inadvertently receive waste materials that would violate its permits or management policies. Procedures for inspection and contingency policies associated with unauthorized or hazardous materials are covered in the **Operations Plan**.

### 1.1.9 Emergency Coordinators

The nature of the operation enables the Site Supervisor or his designee to be on location at all times. These individuals have access to a telephone and are in charge of the emergency situations.

Additionally, the FDEP Solid Waste District shall be notified. The address and phone numbers are as follows:

FDEP
Southwest District office
13051 N Telecom Parkway
Temple Terrace, FL 33637-0926
813-470-5700

### 1.1.10 Responsibilities of the Emergency Coordinator

1. The emergency coordinator will be available at all times, either at the Facility or on call.
2. Upon notification or discovery of an emergency condition, the coordinator will evaluate the situation and notify the appropriate agencies to minimize the incident.
3. In order to properly notify Waste Services staff: the coordinator should gather the following information (after the immediate hazard has been brought under control):

a. Name and phone number of the coordinator,
b. Name and address of the Facility,
c. Date and time of the accident,
d. Type of accident,
e. Extent of injuries, if any,
f. Possible hazards to health or environment outside the Facility, and
g. Agencies and names of individuals contacted

1. After the emergency condition has been controlled, the coordinator is responsible for investigating the incident to assess the damages, determine the cause, and what steps need to be taken to prevent a recurrence of the incident.
2. After the incident, the coordinator is required to file follow-up reports for review by Waste Services management staff and appropriate agencies as required by policy, permit, or law.
3. Clean-up operations will commence as soon as possible to reduce the exposure to employees and properly dispose of all waste in as expedient a manner as possible.
4. After the cleanup is complete, the coordinator must notify the appropriate State agencies prior to starting operations.
5. Prior to resuming operations, all emergency equipment will be checked to ensure it is clean and ready for use.
6. After the investigation is complete and corrective action has been identified, the safety manager shall hold a meeting with the employees to train them on proper operating procedures to reduce the possibility of a reoccurring accident.

## 1.1.11 Agencies to be Notified

In the event of an emergency such as fire, large spills, sudden release of contaminated materials, or explosion, the following shall be notified immediately, if applicable:
**IMMEDIATE EMERGENCY SERVICE**

**(Police, Fire, HazMat Team)**

**9-1-1**

Hillsborough County Sheriff Department, District 5 (Non-Emergency) (813) 247-8200 / (813) 635-8040 / (813) 318-5400

Hillsborough County Fire/Hazmat Department (Non-Emergency) #1 (Progress Village Fire Rescue), 3210 S 78th Street Tampa, FL 33619 (813) 744-5727 / #15 (Palm River Fire Rescue) 715 S 58th Street Tampa, FL 33619 (813) 744-5787

These locations will be notified only by the primary coordinator, or with his/her permission.

### 1.1.12 Organization Structure for Implementation of the Operation and Contingency Policies

Implementation of the provisions of the Facility's operations and contingency plans is the responsibility of the Site Supervisor.

This plan will be reviewed at least annually by the Site Supervisor. Any necessary revisions will be made then. The plan must be revised when:

1. Regulations are revised which affect the plan,
2. The plan fails in an emergency,
3. The Facility undergoes physical changes,
4. The list of emergency coordinator(s) changes, or
5. The list of emergency equipment changes.

## 1.2 Nuisances

### 1.2.1 Nuisance Recordkeeping

Any neighborhood complaints about nuisance conditions will be recorded. The name, address, time, specific complaints, and specific corrective actions will be included in the record. These reports will be made available, if requested, to the Department.

### 1.2.2 Odor Control

The Facility shall be operated in a manner to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C. - "No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor."

The Facility will receive non-putrescible C&D and Class III waste, which is not anticipated to cause odor problems. Class I waste that is removed from the waste stream and stored temporarily will be stored in a roll-off container located underneath a covered unloading area and within the leachate collection area, and covered with a water repellant cover. ZEP ® Dumpster Fair odor-eliminating will be used to control odors.

Should odors be detected, the source of the odor will be identified and the materials either processed (turned to aerate, dried, unauthorized materials removed, etc.) to reduce odor emissions or the source removed from the Facility. Odor neutralizing/ masking agents may be used on an as needed basis.

### 1.2.3 Litter Control

Most commercial vehicles are tarped when entering the Facility to minimize litter from being blown out of the vehicles. Residential vehicles generally are not tarped.

CD & Class III waste from the in-bound vehicles is unloaded inside of the Materials Recovery Facility thereby minimizing litter from being blown around the Facility.

The entire Facility will be fenced which will provide containment of blowing litter. The potential problems with wind-blown material will be minimized at the waste processing facility as a result

of the type of material to be handled at the waste processing facility (large, heavy material). Litter collection and removal at the waste processing facility will occur on a daily basis as a component of the site maintenance program.

The site staff will monitor the site and surrounding area for litter daily. In addition, notes will be placed in the operating record when incidents of litter do occur. Any litter observed during monitoring will be picked up and removed.

The materials storage areas and yard trash piles will be monitored for plastic bags, paper, and other materials that can be windblown or a source of litter. Sources of litter will be covered, or the litter material removed and disposed.

Concentrations of paper and other debris on-site will be cleaned up at least once daily using manual labor. Should litter from the Facility's operations be found outside of the perimeter fence, this litter will be collected and disposed.

### 1.2.4 Dust Control

Per Rule 62-701.300(15) F.A.C., "The owner or operator of a solid waste management facility shall not allow the unconfined emissions of particulate matter in violation of paragraph 62-296.320(4)(c), F.A.C.

Rule 62-296.320(4)(c) 2, F.A.C. "Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter."

Reasonable Precautions for dust control for this Facility are:

1. Regular wash downs or sweeping of the material storage areas, especially in lanes of traffic.
2. High traffic areas are paved to reduce dust emissions due to unpaved traffic travel path.
3. The Facility's operations will be monitored for dust emissions. In the event excessive dust is observed on the haul roads, processing areas, or stockpile areas, water will be sprayed over the areas generating dust utilizing water hoses and/or sprinklers.
4. During hot, dry days, storage areas that are more likely to generate dust (i.e. the crushed concrete and the mulched yard trash piles) will be sprayed with water in the morning and as-needed during the day and sprinkler maybe left on overnight if dust emissions continue after Operational hours.

### 1.2.5 Noise Control

Waste Services will comply with Hillsborough County's noise ordinance. During normal business hours, noise from trucks unloading materials and equipment moving and stockpiling materials is common.

Concrete is reduced in size with heavy equipment prior to being placed into a concrete crusher. The processed concrete from the concrete crusher is stockpiled and sold as recycled crushed concrete.

Generally, concrete is processed from 8:00 am to 4:30 pm.

Maintenance on vehicles is conducted generally during normal business hours.

### 1.2.6 Vector Control

The Facility will receive non-putrescible C&D and Class III waste, which limits the food sources available for vectors. Odor neutralizing / masking agents may be used on an as needed basis. Routine sweeping and wash downs of the facility provide for vector control. Waste Services shall utilize, as necessary, an extermination service to effectively control flies, rats, or other vectors.

Any Class I waste removed from the waste stream and temporarily stored at the Facility will be stored in covered roll-off containers to control vectors. Monthly pest control (placement of bait boxes for rodent control) will be performed to control vectors.

### 1.2.7 Traffic Control

Vehicle traffic enters and exits the Facility from and onto the two-lane westbound lanes of Dover Street. Vehicles from the North have a dedicated turn lane from US Hwy 41 to turn left onto Waste Services. Vehicles from the South enter the Facility from the right lane on US Hwy 41, leaving the left lane open for traffic to continue.

### 1.2.8 Leachate Collection System Management

Leachate drains will be examined during wash downs and cleaned by removing the trench drain cover and removing any accumulated debris with shovels. Additionally, if leachate does not flow freely, the pipe connecting the inlets and the storage tank will be pressure washed to remove accumulated debris.

If the collection system cannot be cleared or any system components are inoperable, then Waste Services will temporarily collect liquids from the sorting area with diversion berms and remove liquids with a vacuum truck. FDEP will be notified of the issue within 24 hours. At no time will leachate be allowed to flow past the leachate collection system and outside the sorting floor.

# Appendix D

Facility Stormwater Calculations

**JN: 2220079**
08/16/2023

# SURFACE WATER MANAGEMENT SYSTEM CALCULATIONS

**FOR**

## DOVER STREET TRANSFER STATION

**East of US 41, south of Dover Street**
**Hillsborough County, Florida**

**PREPARED FOR**

## AMERICAN XVII, LLC

**PO Box 25653**
**Sarasota, Florida 34277**

**PREPARED BY**


LANDMARK
Engineering & Surveying Corporation

**8515 Palm River Road**
**Tampa, Florida 33619**

**Todd C. Amaden P.E.**
**Florida Registration No. 53967**

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## 1. Introduction

The proposed "**Dover Street Transfer Station**" is a 11.6-acre ± commercial project with associated buildings, paving, utilities & stormwater management system.

The property is located on the east side of US 41, south of Dover Street, in section 03 township 30 south, range 19 east in Hillsborough County. Folio numbers listed below:

047016-0500

Water Quantity: The site falls under Hillsborough County Large Site criterion.

## 2 Existing Conditions

The site is currently used for storage of materials, equipment and truck trailers. There is one ditch/pipe system that crosses the site. Bypass will be provided via a pipe that meets or exceeds the existing system capacity.

## 3 Existing Groundwater Conditions and Soils Analysis

Project Site Area: The NRCS classifies the site soils as Fort Meade Loamy fine sand. This is a type-A well-drained sand. The CN for open space in the pre-/post-developed open space conditions will be considered 39.

The ultimate discharge from the site is Delaney/Archie Creek (WBID 1637), which is not listed as an impaired waterbody. The WBID 1637 does appear on the "Delist" list which lists it as "not impaired."

## 4 Existing Floodplain Considerations

The entirety of the project site lies within Flood Zone "AE 13" according to FEMA panel 12057C0369J. The center portion of the site is node 201080 from the Hillsborough County Delaney/Archie Creek model with a 100-year elevation of 5.14. The center-eastern portion of the site is node 201070 of the same model with a 100-year elevation of 4.89. The only floodplain impact associated with the construction of this site occurs within the ditch that transverses the northern quarter of the project. Compensation for these two floodplain impacts will be provided onsite via cup-for-cup compensation.

## 5 Proposed Water Quality Treatment/Attenuation

The site will attenuate the 25-year post-developed outfall to the 25-year pre-developed rate. The 100-year event will not exceed the top of bank or low EOP so as to not cause any adverse impacts offsite.

The offsite bypass pipe will be sized by others.

## 6 Summary

The proposed Stormwater Management System has been designed to provide water quality and attenuation in accordance with SWFWMD, and Hillsborough County regulations without adversely impacting the neighboring and downstream properties.


Map Scale: 1:2,370 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 35 70 140 210

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hillsborough County, Florida
Survey Area Data: Version 22, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 27, 2020—Feb 4, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 17 | Floridana fine sand, 0 to 2 percent slopes | 5.9 | 28.2% |
| 29 | Myakka fine sand, 0 to 2 percent slopes | 0.1 | 0.3% |
| 38 | Pinellas fine sand, 0 to 2 percent slopes | 14.9 | 71.5% |
| **Totals for Area of Interest** | | **20.8** | **100.0%** |

# Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

# Hillsborough County, Florida

## 17—Floridana fine sand, 0 to 2 percent slopes

### Map Unit Setting

*National map unit symbol:* 2sm50
*Elevation:* 0 to 100 feet
*Mean annual precipitation:* 44 to 60 inches
*Mean annual air temperature:* 70 to 77 degrees F
*Frost-free period:* 350 to 365 days
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Floridana and similar soils:* 92 percent
*Minor components:* 8 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Floridana

#### Setting

*Landform:* Drainageways on marine terraces, depressions on marine terraces, flats on marine terraces
*Landform position (three-dimensional):* Tread, dip, talf
*Down-slope shape:* Linear, concave
*Across-slope shape:* Concave, linear
*Parent material:* Sandy and loamy marine deposits

#### Typical profile

*A - 0 to 15 inches:* fine sand
*E - 15 to 32 inches:* fine sand
*Btg - 32 to 65 inches:* fine sandy loam
*Cg - 65 to 80 inches:* fine sand

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Very poorly drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)
*Depth to water table:* About 0 inches
*Frequency of flooding:* None
*Frequency of ponding:* Frequent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 4.0
*Available water supply, 0 to 60 inches:* Moderate (about 6.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* C/D
*Forage suitability group:* Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Other vegetative classification:* Freshwater Marshes and Ponds (R155XY010FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)

*Hydric soil rating:* Yes

**Minor Components**

**Felda**

*Percent of map unit:* 4 percent
*Landform:* Flatwoods on marine terraces, drainageways on marine terraces
*Landform position (three-dimensional):* Tread, talf, dip
*Down-slope shape:* Linear
*Across-slope shape:* Linear, concave
*Other vegetative classification:* Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Hydric soil rating:* Yes

**Wabasso**

*Percent of map unit:* 2 percent
*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear, convex
*Across-slope shape:* Linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* No

**Samsula**

*Percent of map unit:* 2 percent
*Landform:* Depressions on marine terraces
*Landform position (three-dimensional):* Tread, dip
*Down-slope shape:* Concave
*Across-slope shape:* Concave
*Other vegetative classification:* Freshwater Marshes and Ponds (R155XY010FL), Organic soils in depressions and on flood plains (G155XB645FL)
*Hydric soil rating:* Yes

## 29—Myakka fine sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 2s3lg
*Elevation:* 0 to 130 feet
*Mean annual precipitation:* 42 to 56 inches
*Mean annual air temperature:* 68 to 77 degrees F
*Frost-free period:* 350 to 365 days
*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Myakka and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Myakka

### Setting

*Landform:* Drainageways on flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf, dip
*Down-slope shape:* Linear
*Across-slope shape:* Linear, concave
*Parent material:* Sandy marine deposits

### Typical profile

*A - 0 to 6 inches:* fine sand
*E - 6 to 20 inches:* fine sand
*Bh - 20 to 36 inches:* fine sand
*C - 36 to 80 inches:* fine sand

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Very high
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)
*Depth to water table:* About 6 to 18 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 4.0
*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 4w
*Hydrologic Soil Group:* A/D
*Forage suitability group:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* No

## Minor Components

### Basinger

*Percent of map unit:* 5 percent
*Landform:* Depressions on marine terraces
*Landform position (three-dimensional):* Tread, dip
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Other vegetative classification:* Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* Yes

### Wabasso

*Percent of map unit:* 4 percent
*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* No

**Cassia**

*Percent of map unit:* 3 percent
*Landform:* Flatwoods on marine terraces, rises on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Convex
*Across-slope shape:* Linear
*Other vegetative classification:* Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
*Hydric soil rating:* No

**Immokalee**

*Percent of map unit:* 2 percent
*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Riser, talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* No

**Satellite**

*Percent of map unit:* 1 percent
*Landform:* Rises on marine terraces, flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, rise, talf
*Down-slope shape:* Linear, convex
*Across-slope shape:* Linear
*Other vegetative classification:* Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
*Hydric soil rating:* No

## 38—Pinellas fine sand, 0 to 2 percent slopes

**Map Unit Setting**

*National map unit symbol:* 2tzw0
*Elevation:* 0 to 80 feet
*Mean annual precipitation:* 45 to 64 inches
*Mean annual air temperature:* 70 to 77 degrees F
*Frost-free period:* 350 to 365 days
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Pinellas and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Pinellas

### Setting

*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Sandy and loamy marine deposits

### Typical profile

*A - 0 to 5 inches:* fine sand
*E - 5 to 18 inches:* fine sand
*Bk - 18 to 34 inches:* fine sand
*Btkg - 34 to 46 inches:* fine sandy loam
*2Ckg - 46 to 80 inches:* paragravelly fine sand

### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Poorly drained
*Runoff class:* Very high
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
*Depth to water table:* About 6 to 18 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 4 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Sodium adsorption ratio, maximum:* 4.0
*Available water supply, 0 to 60 inches:* Low (about 5.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 3w
*Hydrologic Soil Group:* B/D
*Forage suitability group:* Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Other vegetative classification:* Cabbage Palm Flatwoods (R155XY005FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Hydric soil rating:* No

## Minor Components

### Riviera

*Percent of map unit:* 6 percent
*Landform:* Flats on marine terraces, drainageways on marine terraces
*Landform position (three-dimensional):* Tread, talf, dip
*Down-slope shape:* Linear
*Across-slope shape:* Linear, concave
*Other vegetative classification:* Slough (R155XY011FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Hydric soil rating:* Yes

### Cypress lake

*Percent of map unit:* 3 percent
*Landform:* Drainageways on marine terraces, flats on marine terraces

*Landform position (three-dimensional):* Tread, dip, talf
*Down-slope shape:* Linear, convex
*Across-slope shape:* Concave, linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
*Hydric soil rating:* Yes

**Brynwood**

*Percent of map unit:* 3 percent
*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* Yes

**Holopaw**

*Percent of map unit:* 2 percent
*Landform:* Flats on marine terraces, drainageways on marine terraces
*Landform position (three-dimensional):* Tread, talf, dip
*Down-slope shape:* Linear
*Across-slope shape:* Concave, linear
*Other vegetative classification:* Slough (R155XY011FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* Yes

**Wabasso**

*Percent of map unit:* 1 percent
*Landform:* Flatwoods on marine terraces
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Other vegetative classification:* South Florida Flatwoods (R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
*Hydric soil rating:* No

# APPENDIX A

POND STAGE – STORAGE & TREATMENT CALCULATIONS

# POND STAGE-STORAGE

| Stage (ft) | | Pond 1 SF | Volume ($Ft^3$) Incremental | Total |
|---|---|---|---|---|
| Wet Pool | -5.00 | 12,583 | 192,020 | **192,020** |
| Normal Pool | 3.00 | 35,422 | 0 | **0** |
| | 4.00 | 38,993 | 37,208 | **37,208** |
| | 5.00 | 42,665 | 40,829 | **78,037** |
| | 6.00 | 46,438 | 44,552 | **122,588** |

| Drainage Basin Area | |
|---|---|
| 439478 | (sf) |
| 10.09 | (ac) |

| Permanent Pool | | Treatment Height | |
|---|---|---|---|
| 4.41 | (ac-ft) | Treatment Elevation (ft) | **3.51** |
| Treatment Depth | | | |
| 0.50 | (in) | (SF) | **37,243** |
| Required Volume | | Provided Volume | |
| 18312 | ($ft^3$) | **18,530** | ($ft^3$) |

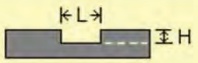
| | | |
|---|---|---|
| Contributing Area | 10.09 | Acres |
| Littoral Shelf Required (Area * (0.5in/12) * 0.35)/0.833 | 0.18 | Acres |
| Littoral Shelf Provided (from NP to 3.5' deep @ 4:1 slopes) | 0.26 | Acres |
| Treatment volume Required = Area * (0.5in/12) | 0.42 | Ac-ft |
| Treatment volume Provided | 0.43 | Ac-ft |

# TREATMENT CALCULATIONS

The pond will treat the first one-half inch of runoff via permanent wet pool.

| | | 1/2" Recovery Volume ($ft^3$) | |
|---|---|---|---|
| **Pond 1 Area** | **Drainage Area (Ac)** | **Required** | **Provided** |
| **Total** | **10.09** | **18,312** | **18,530** |

## Weir Notch Bleed Down Calculations




| | | |
|---|---|---|
| Pond surface area at SHW = | 35,422 | square feet |
| Pond surface area at NWL = | 35,422 | square feet |
| Notch height (H) = | 0.51 | feet |
| Notch width (L) = | 2.25 | feet |

Horizontal Broad Crested Weir Equation
$Q = C\ L\ H^{3/2}$

Coefficient of discharge is calculated from table 5-3 on page 5-40 in the sixth edition of Brater and King's Handbook of Hydraulics and is based on a 6" weir crest width.

| | | |
|---|---|---|
| ½ volume time = | 1.75 | hours |
| Total time = | 25.26 | hours |

| Total H (ft) | Increm. H (ft) | Flow Q (cfs) | Average Q (cfs) | Delta Volume (cf) | Cum. Volume (cf) | Delta Hours | Cum. Hours | Coeff.of Discharge | Surface Area (sf) |
|---|---|---|---|---|---|---|---|---|---|
| 0.51 | | 2.46 | | | | | | 3.00 | 35,422 |
| | 0.01 | | 2.419 | 361 | 361 | 0.0 | | | |
| 0.50 | | 2.38 | | | | | 0.0 | 2.99 | 35,422 |
| | 0.01 | | 2.339 | 361 | 723 | 0.0 | | | |
| 0.49 | | 2.30 | | | | | 0.1 | 2.98 | 35,422 |
| | 0.01 | | 2.261 | 361 | 1,084 | 0.0 | | | |
| 0.48 | | 2.22 | | | | | 0.1 | 2.98 | 35,422 |
| | 0.01 | | 2.184 | 361 | 1,445 | 0.0 | | | |
| 0.47 | | 2.15 | | | | | 0.2 | 2.97 | 35,422 |
| | 0.01 | | 2.109 | 361 | 1,807 | 0.0 | | | |
| 0.46 | | 2.07 | | | | | 0.2 | 2.96 | 35,422 |
| | 0.01 | | 2.034 | 361 | 2,168 | 0.0 | | | |
| 0.45 | | 2.00 | | | | | 0.3 | 2.95 | 35,422 |
| | 0.01 | | 1.961 | 361 | 2,529 | 0.1 | | | |
| 0.44 | | 1.92 | | | | | 0.3 | 2.94 | 35,422 |
| | 0.01 | | 1.888 | 361 | 2,890 | 0.1 | | | |
| 0.43 | | 1.85 | | | | | 0.4 | 2.94 | 35,422 |
| | 0.01 | | 1.817 | 361 | 3,252 | 0.1 | | | |
| 0.42 | | 1.78 | | | | | 0.4 | 2.93 | 35,422 |
| | 0.01 | | 1.747 | 361 | 3,613 | 0.1 | | | |
| 0.41 | | 1.71 | | | | | 0.5 | 2.92 | 35,422 |
| | 0.01 | | 1.679 | 361 | 3,974 | 0.1 | | | |
| 0.40 | | 1.65 | | | | | 0.5 | 2.91 | 35,422 |
| | 0.01 | | 1.612 | 361 | 4,336 | 0.1 | | | |
| 0.39 | | 1.58 | | | | | 0.6 | 2.91 | 35,422 |
| | 0.01 | | 1.546 | 361 | 4,697 | 0.1 | | | |
| 0.38 | | 1.51 | | | | | 0.7 | 2.90 | 35,422 |
| | 0.01 | | 1.482 | 361 | 5,058 | 0.1 | | | |
| 0.37 | | 1.45 | | | | | 0.7 | 2.90 | 35,422 |
| | 0.01 | | 1.418 | 361 | 5,420 | 0.1 | | | |
| 0.36 | | 1.39 | | | | | 0.8 | 2.89 | 35,422 |
| | 0.01 | | 1.356 | 361 | 5,781 | 0.1 | | | |
| 0.35 | | 1.33 | | | | | 0.9 | 2.88 | 35,422 |
| | 0.01 | | 1.295 | 361 | 6,142 | 0.1 | | | |
| 0.34 | | 1.26 | | | | | 1.0 | 2.88 | 35,422 |
| | 0.01 | | 1.235 | 361 | 6,503 | 0.1 | | | |
| 0.33 | | 1.21 | | | | | 1.0 | 2.87 | 35,422 |
| | 0.01 | | 1.176 | 361 | 6,865 | 0.1 | | | |
| 0.32 | | 1.15 | | | | | 1.1 | 2.87 | 35,422 |
| | 0.01 | | 1.118 | 361 | 7,226 | 0.1 | | | |
| 0.31 | | 1.09 | | | | | 1.2 | 2.86 | 35,422 |
| | 0.01 | | 1.061 | 361 | 7,587 | 0.1 | | | |
| 0.30 | | 1.03 | | | | | 1.3 | 2.85 | 35,422 |
| | 0.01 | | 1.006 | 361 | 7,949 | 0.1 | | | |
| 0.29 | | 0.98 | | | | | 1.4 | 2.85 | 35,422 |
| | 0.01 | | 0.951 | 361 | 8,310 | 0.1 | | | |
| 0.28 | | 0.92 | | | | | 1.5 | 2.84 | 35,422 |
| | 0.01 | | 0.898 | 361 | 8,671 | 0.1 | | | |
| 0.27 | | 0.87 | | | | | 1.6 | 2.84 | 35,422 |
| | 0.01 | | 0.846 | 361 | 9,033 | 0.1 | | | |
| 0.26 | | 0.82 | | | | | 1.8 | 2.83 | 35,422 |
| | 0.01 | | 0.795 | 361 | 9,394 | 0.1 | | | |
| 0.24 | | 0.77 | | | | | 1.9 | 2.82 | 35,422 |
| | 0.01 | | 0.745 | 361 | 9,755 | 0.1 | | | |
| 0.23 | | 0.72 | | | | | 2.0 | 2.82 | 35,422 |
| | 0.01 | | 0.697 | 361 | 10,117 | 0.1 | | | |
| 0.22 | | 0.67 | | | | | 2.2 | 2.81 | 35,422 |
| | 0.01 | | 0.649 | 361 | 10,478 | 0.2 | | | |

| Increm. Area | |
|---|---|
| 0 | square feet |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0.21 | | 0.63 | | | | | 2.3 | 2.81 | 35,422 |
| | 0.01 | | 0.603 | 361 | 10,839 | 0.2 | | | |
| 0.20 | | 0.58 | | | | | 2.5 | 2.80 | 35,422 |
| | 0.01 | | 0.559 | 361 | 11,200 | 0.2 | | | |
| 0.19 | | 0.54 | | | | | 2.7 | 2.80 | 35,422 |
| | 0.01 | | 0.517 | 361 | 11,562 | 0.2 | | | |
| 0.18 | | 0.50 | | | | | 2.9 | 2.80 | 35,422 |
| | 0.01 | | 0.475 | 361 | 11,923 | 0.2 | | | |
| 0.17 | | 0.45 | | | | | 3.1 | 2.80 | 35,422 |
| | 0.01 | | 0.435 | 361 | 12,284 | 0.2 | | | |
| 0.16 | | 0.42 | | | | | 3.3 | 2.80 | 35,422 |
| | 0.01 | | 0.396 | 361 | 12,646 | 0.3 | | | |
| 0.15 | | 0.38 | | | | | 3.5 | 2.80 | 35,422 |
| | 0.01 | | 0.358 | 361 | 13,007 | 0.3 | | | |
| 0.14 | | 0.34 | | | | | 3.8 | 2.80 | 35,422 |
| | 0.01 | | 0.322 | 361 | 13,368 | 0.3 | | | |
| 0.13 | | 0.30 | | | | | 4.1 | 2.80 | 35,422 |
| | 0.01 | | 0.287 | 361 | 13,730 | 0.3 | | | |
| 0.12 | | 0.27 | | | | | 4.5 | 2.80 | 35,422 |
| | 0.01 | | 0.253 | 361 | 14,091 | 0.4 | | | |
| 0.11 | | 0.24 | | | | | 4.9 | 2.80 | 35,422 |
| | 0.01 | | 0.221 | 361 | 14,452 | 0.5 | | | |
| 0.10 | | 0.21 | | | | | 5.3 | 2.80 | 35,422 |
| | 0.01 | | 0.190 | 361 | 14,813 | 0.5 | | | |
| 0.09 | | 0.18 | | | | | 5.9 | 2.80 | 35,422 |
| | 0.01 | | 0.161 | 361 | 15,175 | 0.6 | | | |
| 0.08 | | 0.15 | | | | | 6.5 | 2.80 | 35,422 |
| | 0.01 | | 0.134 | 361 | 15,536 | 0.8 | | | |
| 0.07 | | 0.12 | | | | | 7.2 | 2.80 | 35,422 |
| | 0.01 | | 0.108 | 361 | 15,897 | 0.9 | | | |
| 0.06 | | 0.10 | | | | | 8.2 | 2.80 | 35,422 |
| | 0.01 | | 0.084 | 361 | 16,259 | 1.2 | | | |
| 0.05 | | 0.07 | | | | | 9.4 | 2.80 | 35,422 |
| | 0.01 | | 0.062 | 361 | 16,620 | 1.6 | | | |
| 0.04 | | 0.05 | | | | | 11.0 | 2.80 | 35,422 |
| | 0.01 | | 0.043 | 361 | 16,981 | 2.3 | | | |
| 0.03 | | 0.03 | | | | | 13.3 | 2.80 | 35,422 |
| | 0.01 | | 0.026 | 361 | 17,343 | 3.9 | | | |
| 0.02 | | 0.02 | | | | | 17.2 | 2.80 | 35,422 |
| | 0.01 | | 0.012 | 361 | 17,704 | 8.1 | | | |
| 0.01 | | 0.01 | | | | | 25.3 | 2.80 | 35,422 |
| | 0.01 | | 0.003 | 361 | 18,065 | 30.9 | | | |
| 0.00 | | 0.00 | | | | | 56.2 | 2.80 | 35,422 |

# APPENDIX B

CURVE NUMBER & TIME OF CONCENTRATION CALCULATIONS

# CURVE NUMBER

Pre-Development Basin

| Description | Area (AC) | Curve Number | C |
|---|---|---|---|
| Pond | 0.00 | 100.00 | 1.00 |
| Impervious | 0.00 | 98.00 | 0.95 |
| Open | 10.09 | 80.00 | 0.20 |
| Total | 10.09 | **80.00** | **0.20** |

Post-Development Basin

| Description | Area (AC) | Curve Number | C |
|---|---|---|---|
| Pond | 1.07 | 100.00 | 1.00 |
| Impervious | 6.00 | 98.00 | 0.95 |
| Open | 3.02 | 80.00 | 0.20 |
| Total | 10.09 | **92.82** | **0.73** |

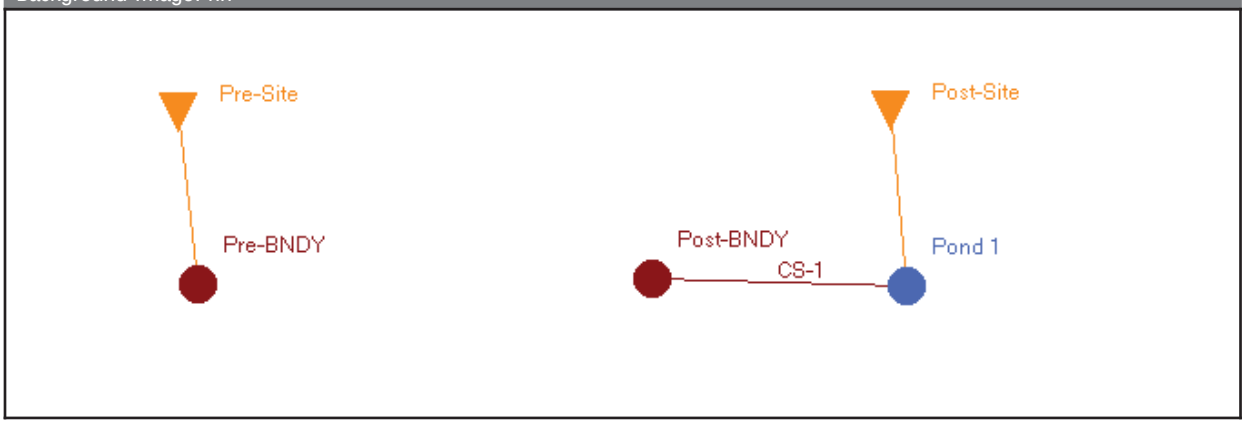
# TIME OF CONCENTRATION

A post-developed Tc of 15-minutes has been assumed for the site basin to be conservative. The offsite south basin has been assigned a Tc of 15-minutes as it is small. Both of the "Northeast" basins would need to generate enough overland flow to "pop-off" over Little Road in order to drain to the proposed site. As such, the offsite Northeast-1 basin is larger and utilized the County Model Tc of 39.6-minutes for design. The Northeast-2 basin is also larger, but utilizes a Tc of 20 in order to be conservative.

# APPENDIX C

ICPR INPUT AND OUTPUT

## Background Image: nn




## Simple Basin: Post-Site

| | |
|---|---|
| Scenario: | Scenario1 |
| Node: | Pond 1 |
| Hydrograph Method: | NRCS Unit Hydrograph |
| Infiltration Method: | Curve Number |
| Time of Concentration: | 15.0000 min |
| Max Allowable Q: | 0.00 cfs |
| Time Shift: | 0.0000 hr |
| Unit Hydrograph: | UH256 |
| Peaking Factor: | 256.0 |
| Area: | 10.0900 ac |
| Curve Number: | 93.0 |
| % Impervious: | 0.00 |
| % DCIA: | 0.00 |
| % Direct: | 0.00 |
| Rainfall Name: | |

Comment:

## Simple Basin: Pre-Site

| | |
|---|---|
| Scenario: | Scenario1 |
| Node: | Pre-BNDY |
| Hydrograph Method: | NRCS Unit Hydrograph |
| Infiltration Method: | Curve Number |
| Time of Concentration: | 35.7500 min |
| Max Allowable Q: | 0.00 cfs |
| Time Shift: | 0.0000 hr |
| Unit Hydrograph: | UH256 |
| Peaking Factor: | 256.0 |
| Area: | 10.0900 ac |

Curve Number: 80.0
% Impervious: 0.00
% DCIA: 0.00
% Direct: 0.00
Rainfall Name:

Comment:

## Node: Pond 1

Scenario: Scenario1
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.00 ft
Warning Stage: 5.50 ft

| Stage [ft] | Area [ac] | Area [ft2] |
|---|---|---|
| 3.00 | 0.8132 | 35423 |
| 4.00 | 0.8952 | 38995 |
| 5.00 | 0.9795 | 42667 |
| 6.00 | 1.0661 | 46439 |

Comment:

## Node: Post-BNDY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 1.62 ft
Warning Stage: 4.89 ft
Boundary Stage: 100-yr

| Year | Month | Day | Hour | Stage [ft] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 1.62 |
| 0 | 0 | 0 | 12.5000 | 4.42 |
| 0 | 0 | 0 | 72.0000 | 1.62 |

Comment: 201070 - Deley/Archie Creek Model

## Node: Pre-BNDY

Scenario: Scenario1
Type: Time/Stage
Base Flow: 0.00 cfs

| | |
|---|---|
| Initial Stage: | 0.00 ft |
| Warning Stage: | 0.00 ft |
| Boundary Stage: | |

Comment: Dummy

| Drop Structure Link: CS-1 | | Upstream Pipe | | Downstream Pipe | |
|---|---|---|---|---|---|
| Scenario: | Scenario1 | Invert: | 1.00 ft | Invert: | 0.80 ft |
| From Node: | Pond 1 | Manning's N: | 0.0120 | Manning's N: | 0.0120 |
| To Node: | Post-BNDY | Geometry: Circular | | Geometry: Circular | |
| Link Count: | 1 | Max Depth: | 2.00 ft | Max Depth: | 2.00 ft |
| Flow Direction: | Both | Bottom Clip | | | |
| Solution: | Combine | Default: | 0.00 ft | Default: | 0.00 ft |
| Increments: | 0 | Op Table: | | Op Table: | |
| Pipe Count: | 1 | Ref Node: | | Ref Node: | |
| Damping: | 0.0000 ft | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Length: | 50.00 ft | Top Clip | | | |
| FHWA Code: | 1 | Default: | 0.00 ft | Default: | 0.00 ft |
| Entr Loss Coef: | 0.50 | Op Table: | | Op Table: | |
| Exit Loss Coef: | 0.50 | Ref Node: | | Ref Node: | |
| Bend Loss Coef: | 0.00 | Manning's N: | 0.0000 | Manning's N: | 0.0000 |
| Bend Location: | 0.00 dec | | | | |
| Energy Switch: | Energy | | | | |

Pipe Comment:

| Weir Component | | Bottom Clip | |
|---|---|---|---|
| Weir: | 1 | Default: | 0.00 ft |
| Weir Count: | 1 | Op Table: | |
| Weir Flow Direction: | Both | Ref Node: | |
| Damping: | 0.0000 ft | Top Clip | |
| Weir Type: | Sharp Crested Vertical | Default: | 0.00 ft |
| Geometry Type: | Rectangular | Op Table: | |
| Invert: | 3.00 ft | Ref Node: | |
| Control Elevation: | 3.00 ft | Discharge Coefficients | |
| Max Depth: | 0.51 ft | Weir Default: | 3.200 |
| Max Width: | 2.25 ft | Weir Table: | |
| Fillet: | 0.00 ft | Orifice Default: | 0.600 |
| | | Orifice Table: | |

Weir Comment:

| Weir Component | | Bottom Clip | |
|---|---|---|---|
| Weir: | 2 | Default: | 0.00 ft |
| Weir Count: | 1 | Op Table: | |
| Weir Flow Direction: | Both | Ref Node: | |
| Damping: | 0.0000 ft | | |

| | |
|---|---|
| Weir Type: | Sharp Crested Vertical |
| Geometry Type: | Rectangular |
| Invert: | 3.51 ft |
| Control Elevation: | 3.51 ft |
| Max Depth: | 1.49 ft |
| Max Width: | 10.00 ft |
| Fillet: | 0.00 ft |

**Top Clip**

| | |
|---|---|
| Default: | 0.00 ft |
| Op Table: | |
| Ref Node: | |

**Discharge Coefficients**

| | |
|---|---|
| Weir Default: | 3.200 |
| Weir Table: | |
| Orifice Default: | 0.600 |
| Orifice Table: | |

Weir Comment:

**Weir Component**

| | |
|---|---|
| Weir: | 3 |
| Weir Count: | 1 |
| Weir Flow Direction: | Both |
| Damping: | 0.0000 ft |
| Weir Type: | Horizontal |
| Geometry Type: | Rectangular |
| Invert: | 5.49 ft |
| Control Elevation: | 5.49 ft |
| Max Depth: | 3.00 ft |
| Max Width: | 8.75 ft |
| Fillet: | 0.00 ft |

**Bottom Clip**

| | |
|---|---|
| Default: | 0.00 ft |
| Op Table: | |
| Ref Node: | |

**Top Clip**

| | |
|---|---|
| Default: | 0.00 ft |
| Op Table: | |
| Ref Node: | |

**Discharge Coefficients**

| | |
|---|---|
| Weir Default: | 3.200 |
| Weir Table: | |
| Orifice Default: | 0.600 |
| Orifice Table: | |

Weir Comment:

Drop Structure Comment:

**Simulation: 100-yr**

| | |
|---|---|
| Scenario: | Scenario1 |
| Run Date/Time: | 5/17/2023 6:02:57 PM |
| Program Version: | ICPR4 4.07.08 |

**General**

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|---|---|---|---|---|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 96.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] |
|---|---|---|
| Min Calculation Time: | 60.0000 | 0.1000 |
| Max Calculation Time: | | 30.0000 |

## Output Time Increments

### Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

### Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

### Restart File

Save Restart: False

## Resources & Lookup Tables

### Resources

Rainfall Folder:

Unit Hydrograph Folder:

### Lookup Tables

Boundary Stage Set: 201070
Extern Hydrograph Set:
Curve Number Set:
Green-Ampt Set:
Vertical Layers Set:
Impervious Set:

## Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0001 ft
Edge Length Option: Automatic

IA Recovery Time: 24.0000 hr
Smp/Man Basin Rain Opt: Global
Rainfall Name: ~FLMOD
Rainfall Amount: 11.00 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

## Simulation: 25-yr

Scenario: Scenario1
Run Date/Time: N/A
Program Version: N/A

## General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|---|---|---|---|---|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 36.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] |
|---|---|---|
| Min Calculation Time: | 60.0000 | 0.1000 |
| Max Calculation Time: | | 30.0000 |

## Output Time Increments

### Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

### Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

### Restart File

Save Restart: False

## Resources & Lookup Tables

### Resources

Rainfall Folder:

Unit Hydrograph Folder:

### Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: 1

Green-Ampt Set:
Vertical Layers Set:
Impervious Set: 1

## Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0010 ft

IA Recovery Time: 24.0000 hr

Smp/Man Basin Rain Opt: Global

| | | | |
|---|---|---|---|
| Max dZ: | 1.0000 ft | | |
| Link Optimizer Tol: | 0.0001 ft | Rainfall Name: | ~FLMOD |
| | | Rainfall Amount: | 8.00 in |
| Edge Length Option: | Automatic | Storm Duration: | 24.0000 hr |
| | | Dflt Damping (1D): | 0.0050 ft |
| | | Min Node Srf Area (1D): | 100 ft2 |
| | | Energy Switch (1D): | Energy |

Comment:

## Simulation: Recovery

Scenario: Scenario1
Run Date/Time: 12/10/2022 12:35:15 PM
Program Version: ICPR4 4.07.08

### General

Run Mode: Normal

| | Year | Month | Day | Hour [hr] |
|---|---|---|---|---|
| Start Time: | 0 | 0 | 0 | 0.0000 |
| End Time: | 0 | 0 | 0 | 36.0000 |

| | Hydrology [sec] | Surface Hydraulics [sec] |
|---|---|---|
| Min Calculation Time: | 60.0000 | 0.1000 |
| Max Calculation Time: | | 30.0000 |

### Output Time Increments

#### Hydrology

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

#### Surface Hydraulics

| Year | Month | Day | Hour [hr] | Time Increment [min] |
|---|---|---|---|---|
| 0 | 0 | 0 | 0.0000 | 15.0000 |

#### Restart File

Save Restart: False

### Resources & Lookup Tables

#### Resources

#### Lookup Tables

| | | | |
|---|---|---|---|
| Rainfall Folder: | | Boundary Stage Set: | |
| | | Extern Hydrograph Set: | |
| Unit Hydrograph Folder: | | Curve Number Set: | 1 |
| | | Green-Ampt Set: | |
| | | Vertical Layers Set: | |
| | | Impervious Set: | 1 |

## Tolerances & Options

| | | | |
|---|---|---|---|
| Time Marching: | SAOR | IA Recovery Time: | 24.0000 hr |
| Max Iterations: | 6 | | |
| Over-Relax Weight Fact: | 0.5 dec | | |
| dZ Tolerance: | 0.0010 ft | Smp/Man Basin Rain Opt: | Global |
| Max dZ: | 1.0000 ft | | |
| Link Optimizer Tol: | 0.0001 ft | Rainfall Name: | ~FLMOD |
| | | Rainfall Amount: | 0.00 in |
| Edge Length Option: | Automatic | Storm Duration: | 24.0000 hr |
| | | Dflt Damping (1D): | 0.0050 ft |
| | | Min Node Srf Area (1D): | 100 ft2 |
| | | Energy Switch (1D): | Energy |

Comment:

Simple Basin Runoff Summary [Scenario1]

| Basin Name | Sim Name | Max Flow [cfs] | Time to Max Flow [hrs] | Total Rainfall [in] | Total Runoff [in] | Area [ac] | Equivalent Curve Number | % Imperv | % DCIA |
|---|---|---|---|---|---|---|---|---|---|
| Post-Site | 100-yr | 55.86 | 12.0833 | 11.00 | 10.14 | 10.0900 | 93.0 | 0.00 | 0.00 |
| Pre-Site | 100-yr | 31.99 | 12.3500 | 11.00 | 8.48 | 10.0900 | 80.0 | 0.00 | 0.00 |
| Post-Site | 25-yr | 40.08 | 12.1000 | 8.00 | 7.16 | 10.0900 | 93.0 | 0.00 | 0.00 |
| Pre-Site | 25-yr | 21.42 | 12.3667 | 8.00 | 5.62 | 10.0900 | 80.0 | 0.00 | 0.00 |

Link Min/Max Conditions with Times [Scenario1]

| Link Name | Sim Name | Max Flow [cfs] | Min Flow [cfs] | Min/Max Delta Flow [cfs] | Max Us Velocity [fps] | Max Ds Velocity [fps] | Time to Max Flow [hrs] | Time to Min Flow [hrs] | Time to Min/Max Delta Flow [hrs] | Time to Max Us Velocity [hrs] | Time to Max Ds Velocity [hrs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CS-1 - Pipe | 100-yr | 25.60 | -1.11 | -0.37 | 0.00 | 0.00 | 12.7007 | 7.5139 | 14.5932 | 0.0000 | 0.0000 |
| CS-1 - Weir: 1 | 100-yr | 1.34 | -0.88 | -0.53 | 1.44 | 1.44 | 11.8281 | 7.3380 | 11.8286 | 5.2944 | 5.2944 |
| CS-1 - Weir: 2 | 100-yr | 15.62 | -0.46 | 1.26 | 1.05 | 1.05 | 12.0208 | 7.6208 | 11.8286 | 12.0208 | 12.0208 |
| CS-1 - Weir: 3 | 100-yr | 12.33 | 0.00 | 0.02 | 0.84 | 0.84 | 12.6933 | 0.0000 | 12.0332 | 12.0772 | 12.0772 |
| CS-1 - Pipe | 25-yr | 20.25 | -1.08 | -0.36 | 0.00 | 0.00 | 12.6466 | 8.6899 | 13.3126 | 0.0000 | 0.0000 |
| CS-1 - Weir: 1 | 25-yr | 1.80 | -0.90 | -0.58 | 1.57 | 1.57 | 12.1561 | 8.5748 | 12.1566 | 12.1561 | 12.1561 |
| CS-1 - Weir: 2 | 25-yr | 18.80 | -0.39 | -1.29 | 1.26 | 1.26 | 12.6426 | 8.8281 | 13.3126 | 12.6426 | 12.6426 |
| CS-1 - Weir: 3 | 25-yr | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

Node Max Conditions w/ Times [Scenario1]

| Node Name | Sim Name | Warning Stage [ft] | Max Stage [ft] | Min/Max Delta Stage [ft] | Max Total Inflow [cfs] | Max Total Outflow [cfs] | Max Surface Area [ft2] | Time to Max Stage [hr] | Time to Min/Max Delta Stage [hr] | Time to Max Total Inflow [hr] | Time to Max Total Outflow [hr] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pond 1 | 100-yr | 5.50 | 6.49 | -0.0010 | 55.86 | 25.60 | 46439 | 12.6830 | 13.1307 | 12.0834 | 12.7007 |
| Post-BNDY | 100-yr | 4.89 | 4.89 | 0.0022 | 25.60 | 1.11 | 0 | 12.5004 | 4.1444 | 12.7007 | 7.5139 |
| Pre-BNDY | 100-yr | 0.00 | 0.00 | 0.0000 | 31.99 | 0.00 | 0 | 0.0000 | 0.0000 | 12.3501 | 0.0000 |
| Pond 1 | 25-yr | 5.50 | 5.47 | 0.0010 | 40.08 | 20.25 | 44439 | 12.6227 | 11.5542 | 12.0999 | 12.6426 |
| Post-BNDY | 25-yr | 4.89 | 4.42 | 0.0019 | 20.25 | 1.08 | 0 | 12.5016 | 4.9527 | 12.6466 | 8.6899 |
| Pre-BNDY | 25-yr | 0.00 | 0.00 | 0.0000 | 21.42 | 0.00 | 0 | 0.0000 | 0.0000 | 12.3668 | 0.0000 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 0.0000 | 3.00 |
| 100-yr | Pond 1 | 0.2511 | 3.00 |
| 100-yr | Pond 1 | 0.5050 | 3.00 |
| 100-yr | Pond 1 | 0.7527 | 3.00 |
| 100-yr | Pond 1 | 1.0027 | 3.00 |
| 100-yr | Pond 1 | 1.2527 | 3.00 |
| 100-yr | Pond 1 | 1.5027 | 3.00 |
| 100-yr | Pond 1 | 1.7527 | 3.00 |
| 100-yr | Pond 1 | 2.0027 | 3.01 |
| 100-yr | Pond 1 | 2.2527 | 3.01 |
| 100-yr | Pond 1 | 2.5027 | 3.02 |
| 100-yr | Pond 1 | 2.7527 | 3.04 |
| 100-yr | Pond 1 | 3.0027 | 3.05 |
| 100-yr | Pond 1 | 3.2527 | 3.06 |
| 100-yr | Pond 1 | 3.5027 | 3.08 |
| 100-yr | Pond 1 | 3.7527 | 3.09 |
| 100-yr | Pond 1 | 4.0027 | 3.11 |
| 100-yr | Pond 1 | 4.2527 | 3.13 |
| 100-yr | Pond 1 | 4.5027 | 3.15 |
| 100-yr | Pond 1 | 4.7527 | 3.16 |
| 100-yr | Pond 1 | 5.0027 | 3.18 |
| 100-yr | Pond 1 | 5.2527 | 3.20 |
| 100-yr | Pond 1 | 5.5027 | 3.22 |
| 100-yr | Pond 1 | 5.7527 | 3.24 |
| 100-yr | Pond 1 | 6.0027 | 3.26 |
| 100-yr | Pond 1 | 6.2511 | 3.28 |
| 100-yr | Pond 1 | 6.5029 | 3.32 |
| 100-yr | Pond 1 | 6.7535 | 3.37 |
| 100-yr | Pond 1 | 7.0012 | 3.43 |
| 100-yr | Pond 1 | 7.2509 | 3.49 |
| 100-yr | Pond 1 | 7.5025 | 3.56 |
| 100-yr | Pond 1 | 7.7502 | 3.64 |
| 100-yr | Pond 1 | 8.0003 | 3.71 |
| 100-yr | Pond 1 | 8.2533 | 3.77 |
| 100-yr | Pond 1 | 8.5029 | 3.84 |
| 100-yr | Pond 1 | 8.7513 | 3.91 |
| 100-yr | Pond 1 | 9.0034 | 3.98 |
| 100-yr | Pond 1 | 9.2508 | 4.04 |
| 100-yr | Pond 1 | 9.5005 | 4.11 |
| 100-yr | Pond 1 | 9.7506 | 4.18 |
| 100-yr | Pond 1 | 10.0009 | 4.24 |
| 100-yr | Pond 1 | 10.2521 | 4.31 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 10.5004 | 4.38 |
| 100-yr | Pond 1 | 10.7525 | 4.45 |
| 100-yr | Pond 1 | 11.0029 | 4.53 |
| 100-yr | Pond 1 | 11.2529 | 4.60 |
| 100-yr | Pond 1 | 11.5004 | 4.69 |
| 100-yr | Pond 1 | 11.7503 | 4.91 |
| 100-yr | Pond 1 | 12.0001 | 5.44 |
| 100-yr | Pond 1 | 12.2502 | 6.10 |
| 100-yr | Pond 1 | 12.5004 | 6.43 |
| 100-yr | Pond 1 | 12.7519 | 6.48 |
| 100-yr | Pond 1 | 13.0005 | 6.36 |
| 100-yr | Pond 1 | 13.2508 | 6.14 |
| 100-yr | Pond 1 | 13.5005 | 5.88 |
| 100-yr | Pond 1 | 13.7508 | 5.63 |
| 100-yr | Pond 1 | 14.0003 | 5.41 |
| 100-yr | Pond 1 | 14.2502 | 5.23 |
| 100-yr | Pond 1 | 14.5017 | 5.08 |
| 100-yr | Pond 1 | 14.7503 | 4.97 |
| 100-yr | Pond 1 | 15.0006 | 4.89 |
| 100-yr | Pond 1 | 15.2506 | 4.84 |
| 100-yr | Pond 1 | 15.5059 | 4.80 |
| 100-yr | Pond 1 | 15.7516 | 4.77 |
| 100-yr | Pond 1 | 16.0016 | 4.75 |
| 100-yr | Pond 1 | 16.2516 | 4.73 |
| 100-yr | Pond 1 | 16.5016 | 4.71 |
| 100-yr | Pond 1 | 16.7516 | 4.70 |
| 100-yr | Pond 1 | 17.0016 | 4.68 |
| 100-yr | Pond 1 | 17.2516 | 4.67 |
| 100-yr | Pond 1 | 17.5016 | 4.65 |
| 100-yr | Pond 1 | 17.7516 | 4.64 |
| 100-yr | Pond 1 | 18.0016 | 4.62 |
| 100-yr | Pond 1 | 18.2516 | 4.60 |
| 100-yr | Pond 1 | 18.5016 | 4.59 |
| 100-yr | Pond 1 | 18.7516 | 4.58 |
| 100-yr | Pond 1 | 19.0016 | 4.56 |
| 100-yr | Pond 1 | 19.2516 | 4.54 |
| 100-yr | Pond 1 | 19.5016 | 4.53 |
| 100-yr | Pond 1 | 19.7516 | 4.52 |
| 100-yr | Pond 1 | 20.0016 | 4.50 |
| 100-yr | Pond 1 | 20.2516 | 4.49 |
| 100-yr | Pond 1 | 20.5016 | 4.47 |
| 100-yr | Pond 1 | 20.7516 | 4.46 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 21.0016 | 4.44 |
| 100-yr | Pond 1 | 21.2516 | 4.43 |
| 100-yr | Pond 1 | 21.5016 | 4.42 |
| 100-yr | Pond 1 | 21.7516 | 4.40 |
| 100-yr | Pond 1 | 22.0016 | 4.39 |
| 100-yr | Pond 1 | 22.2516 | 4.37 |
| 100-yr | Pond 1 | 22.5016 | 4.36 |
| 100-yr | Pond 1 | 22.7516 | 4.35 |
| 100-yr | Pond 1 | 23.0016 | 4.33 |
| 100-yr | Pond 1 | 23.2516 | 4.32 |
| 100-yr | Pond 1 | 23.5016 | 4.30 |
| 100-yr | Pond 1 | 23.7516 | 4.29 |
| 100-yr | Pond 1 | 24.0016 | 4.27 |
| 100-yr | Pond 1 | 24.2516 | 4.26 |
| 100-yr | Pond 1 | 24.5016 | 4.24 |
| 100-yr | Pond 1 | 24.7516 | 4.22 |
| 100-yr | Pond 1 | 25.0016 | 4.21 |
| 100-yr | Pond 1 | 25.2516 | 4.20 |
| 100-yr | Pond 1 | 25.5016 | 4.18 |
| 100-yr | Pond 1 | 25.7516 | 4.17 |
| 100-yr | Pond 1 | 26.0016 | 4.15 |
| 100-yr | Pond 1 | 26.2516 | 4.14 |
| 100-yr | Pond 1 | 26.5016 | 4.13 |
| 100-yr | Pond 1 | 26.7516 | 4.11 |
| 100-yr | Pond 1 | 27.0016 | 4.10 |
| 100-yr | Pond 1 | 27.2516 | 4.09 |
| 100-yr | Pond 1 | 27.5016 | 4.07 |
| 100-yr | Pond 1 | 27.7516 | 4.06 |
| 100-yr | Pond 1 | 28.0016 | 4.04 |
| 100-yr | Pond 1 | 28.2516 | 4.03 |
| 100-yr | Pond 1 | 28.5016 | 4.02 |
| 100-yr | Pond 1 | 28.7516 | 4.00 |
| 100-yr | Pond 1 | 29.0016 | 3.99 |
| 100-yr | Pond 1 | 29.2516 | 3.98 |
| 100-yr | Pond 1 | 29.5016 | 3.96 |
| 100-yr | Pond 1 | 29.7516 | 3.95 |
| 100-yr | Pond 1 | 30.0016 | 3.93 |
| 100-yr | Pond 1 | 30.2516 | 3.92 |
| 100-yr | Pond 1 | 30.5016 | 3.91 |
| 100-yr | Pond 1 | 30.7516 | 3.89 |
| 100-yr | Pond 1 | 31.0016 | 3.88 |
| 100-yr | Pond 1 | 31.2516 | 3.87 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 31.5016 | 3.85 |
| 100-yr | Pond 1 | 31.7516 | 3.84 |
| 100-yr | Pond 1 | 32.0016 | 3.82 |
| 100-yr | Pond 1 | 32.2516 | 3.81 |
| 100-yr | Pond 1 | 32.5016 | 3.80 |
| 100-yr | Pond 1 | 32.7516 | 3.78 |
| 100-yr | Pond 1 | 33.0016 | 3.77 |
| 100-yr | Pond 1 | 33.2516 | 3.76 |
| 100-yr | Pond 1 | 33.5016 | 3.74 |
| 100-yr | Pond 1 | 33.7516 | 3.73 |
| 100-yr | Pond 1 | 34.0016 | 3.71 |
| 100-yr | Pond 1 | 34.2516 | 3.70 |
| 100-yr | Pond 1 | 34.5016 | 3.69 |
| 100-yr | Pond 1 | 34.7516 | 3.67 |
| 100-yr | Pond 1 | 35.0016 | 3.66 |
| 100-yr | Pond 1 | 35.2516 | 3.65 |
| 100-yr | Pond 1 | 35.5016 | 3.63 |
| 100-yr | Pond 1 | 35.7516 | 3.62 |
| 100-yr | Pond 1 | 36.0016 | 3.61 |
| 100-yr | Pond 1 | 36.2516 | 3.59 |
| 100-yr | Pond 1 | 36.5016 | 3.58 |
| 100-yr | Pond 1 | 36.7516 | 3.56 |
| 100-yr | Pond 1 | 37.0016 | 3.55 |
| 100-yr | Pond 1 | 37.2516 | 3.54 |
| 100-yr | Pond 1 | 37.5016 | 3.53 |
| 100-yr | Pond 1 | 37.7516 | 3.52 |
| 100-yr | Pond 1 | 38.0016 | 3.51 |
| 100-yr | Pond 1 | 38.2516 | 3.50 |
| 100-yr | Pond 1 | 38.5016 | 3.48 |
| 100-yr | Pond 1 | 38.7516 | 3.47 |
| 100-yr | Pond 1 | 39.0016 | 3.46 |
| 100-yr | Pond 1 | 39.2516 | 3.44 |
| 100-yr | Pond 1 | 39.5016 | 3.43 |
| 100-yr | Pond 1 | 39.7516 | 3.42 |
| 100-yr | Pond 1 | 40.0016 | 3.41 |
| 100-yr | Pond 1 | 40.2516 | 3.39 |
| 100-yr | Pond 1 | 40.5016 | 3.38 |
| 100-yr | Pond 1 | 40.7516 | 3.37 |
| 100-yr | Pond 1 | 41.0016 | 3.35 |
| 100-yr | Pond 1 | 41.2516 | 3.34 |
| 100-yr | Pond 1 | 41.5016 | 3.33 |
| 100-yr | Pond 1 | 41.7516 | 3.31 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 42.0016 | 3.30 |
| 100-yr | Pond 1 | 42.2516 | 3.29 |
| 100-yr | Pond 1 | 42.5016 | 3.28 |
| 100-yr | Pond 1 | 42.7516 | 3.27 |
| 100-yr | Pond 1 | 43.0016 | 3.25 |
| 100-yr | Pond 1 | 43.2516 | 3.24 |
| 100-yr | Pond 1 | 43.5016 | 3.23 |
| 100-yr | Pond 1 | 43.7516 | 3.22 |
| 100-yr | Pond 1 | 44.0016 | 3.21 |
| 100-yr | Pond 1 | 44.2516 | 3.20 |
| 100-yr | Pond 1 | 44.5016 | 3.19 |
| 100-yr | Pond 1 | 44.7516 | 3.18 |
| 100-yr | Pond 1 | 45.0016 | 3.17 |
| 100-yr | Pond 1 | 45.2516 | 3.16 |
| 100-yr | Pond 1 | 45.5016 | 3.15 |
| 100-yr | Pond 1 | 45.7516 | 3.14 |
| 100-yr | Pond 1 | 46.0016 | 3.13 |
| 100-yr | Pond 1 | 46.2516 | 3.13 |
| 100-yr | Pond 1 | 46.5016 | 3.12 |
| 100-yr | Pond 1 | 46.7516 | 3.11 |
| 100-yr | Pond 1 | 47.0016 | 3.11 |
| 100-yr | Pond 1 | 47.2516 | 3.10 |
| 100-yr | Pond 1 | 47.5016 | 3.09 |
| 100-yr | Pond 1 | 47.7516 | 3.09 |
| 100-yr | Pond 1 | 48.0016 | 3.08 |
| 100-yr | Pond 1 | 48.2516 | 3.08 |
| 100-yr | Pond 1 | 48.5016 | 3.08 |
| 100-yr | Pond 1 | 48.7516 | 3.07 |
| 100-yr | Pond 1 | 49.0016 | 3.07 |
| 100-yr | Pond 1 | 49.2516 | 3.07 |
| 100-yr | Pond 1 | 49.5016 | 3.06 |
| 100-yr | Pond 1 | 49.7516 | 3.06 |
| 100-yr | Pond 1 | 50.0016 | 3.06 |
| 100-yr | Pond 1 | 50.2516 | 3.05 |
| 100-yr | Pond 1 | 50.5016 | 3.05 |
| 100-yr | Pond 1 | 50.7516 | 3.05 |
| 100-yr | Pond 1 | 51.0016 | 3.05 |
| 100-yr | Pond 1 | 51.2516 | 3.05 |
| 100-yr | Pond 1 | 51.5016 | 3.04 |
| 100-yr | Pond 1 | 51.7516 | 3.04 |
| 100-yr | Pond 1 | 52.0016 | 3.04 |
| 100-yr | Pond 1 | 52.2516 | 3.04 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 52.5016 | 3.04 |
| 100-yr | Pond 1 | 52.7516 | 3.04 |
| 100-yr | Pond 1 | 53.0016 | 3.04 |
| 100-yr | Pond 1 | 53.2516 | 3.03 |
| 100-yr | Pond 1 | 53.5016 | 3.03 |
| 100-yr | Pond 1 | 53.7516 | 3.03 |
| 100-yr | Pond 1 | 54.0016 | 3.03 |
| 100-yr | Pond 1 | 54.2516 | 3.03 |
| 100-yr | Pond 1 | 54.5016 | 3.03 |
| 100-yr | Pond 1 | 54.7516 | 3.03 |
| 100-yr | Pond 1 | 55.0016 | 3.03 |
| 100-yr | Pond 1 | 55.2516 | 3.03 |
| 100-yr | Pond 1 | 55.5016 | 3.03 |
| 100-yr | Pond 1 | 55.7516 | 3.03 |
| 100-yr | Pond 1 | 56.0016 | 3.02 |
| 100-yr | Pond 1 | 56.2516 | 3.02 |
| 100-yr | Pond 1 | 56.5016 | 3.02 |
| 100-yr | Pond 1 | 56.7516 | 3.02 |
| 100-yr | Pond 1 | 57.0016 | 3.02 |
| 100-yr | Pond 1 | 57.2516 | 3.02 |
| 100-yr | Pond 1 | 57.5016 | 3.02 |
| 100-yr | Pond 1 | 57.7516 | 3.02 |
| 100-yr | Pond 1 | 58.0016 | 3.02 |
| 100-yr | Pond 1 | 58.2516 | 3.02 |
| 100-yr | Pond 1 | 58.5016 | 3.02 |
| 100-yr | Pond 1 | 58.7516 | 3.02 |
| 100-yr | Pond 1 | 59.0016 | 3.02 |
| 100-yr | Pond 1 | 59.2516 | 3.02 |
| 100-yr | Pond 1 | 59.5016 | 3.02 |
| 100-yr | Pond 1 | 59.7516 | 3.02 |
| 100-yr | Pond 1 | 60.0016 | 3.02 |
| 100-yr | Pond 1 | 60.2516 | 3.02 |
| 100-yr | Pond 1 | 60.5016 | 3.02 |
| 100-yr | Pond 1 | 60.7516 | 3.02 |
| 100-yr | Pond 1 | 61.0016 | 3.01 |
| 100-yr | Pond 1 | 61.2516 | 3.01 |
| 100-yr | Pond 1 | 61.5016 | 3.01 |
| 100-yr | Pond 1 | 61.7516 | 3.01 |
| 100-yr | Pond 1 | 62.0016 | 3.01 |
| 100-yr | Pond 1 | 62.2516 | 3.01 |
| 100-yr | Pond 1 | 62.5016 | 3.01 |
| 100-yr | Pond 1 | 62.7516 | 3.01 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 63.0016 | 3.01 |
| 100-yr | Pond 1 | 63.2516 | 3.01 |
| 100-yr | Pond 1 | 63.5016 | 3.01 |
| 100-yr | Pond 1 | 63.7516 | 3.01 |
| 100-yr | Pond 1 | 64.0016 | 3.01 |
| 100-yr | Pond 1 | 64.2516 | 3.01 |
| 100-yr | Pond 1 | 64.5016 | 3.01 |
| 100-yr | Pond 1 | 64.7516 | 3.01 |
| 100-yr | Pond 1 | 65.0016 | 3.01 |
| 100-yr | Pond 1 | 65.2516 | 3.01 |
| 100-yr | Pond 1 | 65.5016 | 3.01 |
| 100-yr | Pond 1 | 65.7516 | 3.01 |
| 100-yr | Pond 1 | 66.0016 | 3.01 |
| 100-yr | Pond 1 | 66.2516 | 3.01 |
| 100-yr | Pond 1 | 66.5016 | 3.01 |
| 100-yr | Pond 1 | 66.7516 | 3.01 |
| 100-yr | Pond 1 | 67.0016 | 3.01 |
| 100-yr | Pond 1 | 67.2516 | 3.01 |
| 100-yr | Pond 1 | 67.5016 | 3.01 |
| 100-yr | Pond 1 | 67.7516 | 3.01 |
| 100-yr | Pond 1 | 68.0016 | 3.01 |
| 100-yr | Pond 1 | 68.2516 | 3.01 |
| 100-yr | Pond 1 | 68.5016 | 3.01 |
| 100-yr | Pond 1 | 68.7516 | 3.01 |
| 100-yr | Pond 1 | 69.0016 | 3.01 |
| 100-yr | Pond 1 | 69.2516 | 3.01 |
| 100-yr | Pond 1 | 69.5016 | 3.01 |
| 100-yr | Pond 1 | 69.7516 | 3.01 |
| 100-yr | Pond 1 | 70.0016 | 3.01 |
| 100-yr | Pond 1 | 70.2516 | 3.01 |
| 100-yr | Pond 1 | 70.5016 | 3.01 |
| 100-yr | Pond 1 | 70.7516 | 3.01 |
| 100-yr | Pond 1 | 71.0016 | 3.01 |
| 100-yr | Pond 1 | 71.2516 | 3.01 |
| 100-yr | Pond 1 | 71.5016 | 3.01 |
| 100-yr | Pond 1 | 71.7516 | 3.01 |
| 100-yr | Pond 1 | 72.0016 | 3.01 |
| 100-yr | Pond 1 | 72.2516 | 3.01 |
| 100-yr | Pond 1 | 72.5016 | 3.01 |
| 100-yr | Pond 1 | 72.7516 | 3.01 |
| 100-yr | Pond 1 | 73.0016 | 3.01 |
| 100-yr | Pond 1 | 73.2516 | 3.01 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 73.5016 | 3.01 |
| 100-yr | Pond 1 | 73.7516 | 3.01 |
| 100-yr | Pond 1 | 74.0016 | 3.01 |
| 100-yr | Pond 1 | 74.2516 | 3.01 |
| 100-yr | Pond 1 | 74.5016 | 3.01 |
| 100-yr | Pond 1 | 74.7516 | 3.01 |
| 100-yr | Pond 1 | 75.0016 | 3.01 |
| 100-yr | Pond 1 | 75.2516 | 3.01 |
| 100-yr | Pond 1 | 75.5016 | 3.01 |
| 100-yr | Pond 1 | 75.7516 | 3.01 |
| 100-yr | Pond 1 | 76.0016 | 3.01 |
| 100-yr | Pond 1 | 76.2516 | 3.01 |
| 100-yr | Pond 1 | 76.5016 | 3.01 |
| 100-yr | Pond 1 | 76.7516 | 3.01 |
| 100-yr | Pond 1 | 77.0016 | 3.01 |
| 100-yr | Pond 1 | 77.2516 | 3.00 |
| 100-yr | Pond 1 | 77.5016 | 3.00 |
| 100-yr | Pond 1 | 77.7516 | 3.00 |
| 100-yr | Pond 1 | 78.0016 | 3.00 |
| 100-yr | Pond 1 | 78.2516 | 3.00 |
| 100-yr | Pond 1 | 78.5016 | 3.00 |
| 100-yr | Pond 1 | 78.7516 | 3.00 |
| 100-yr | Pond 1 | 79.0016 | 3.00 |
| 100-yr | Pond 1 | 79.2516 | 3.00 |
| 100-yr | Pond 1 | 79.5016 | 3.00 |
| 100-yr | Pond 1 | 79.7516 | 3.00 |
| 100-yr | Pond 1 | 80.0016 | 3.00 |
| 100-yr | Pond 1 | 80.2516 | 3.00 |
| 100-yr | Pond 1 | 80.5016 | 3.00 |
| 100-yr | Pond 1 | 80.7516 | 3.00 |
| 100-yr | Pond 1 | 81.0016 | 3.00 |
| 100-yr | Pond 1 | 81.2516 | 3.00 |
| 100-yr | Pond 1 | 81.5016 | 3.00 |
| 100-yr | Pond 1 | 81.7516 | 3.00 |
| 100-yr | Pond 1 | 82.0016 | 3.00 |
| 100-yr | Pond 1 | 82.2516 | 3.00 |
| 100-yr | Pond 1 | 82.5016 | 3.00 |
| 100-yr | Pond 1 | 82.7516 | 3.00 |
| 100-yr | Pond 1 | 83.0016 | 3.00 |
| 100-yr | Pond 1 | 83.2516 | 3.00 |
| 100-yr | Pond 1 | 83.5016 | 3.00 |
| 100-yr | Pond 1 | 83.7516 | 3.00 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 84.0016 | 3.00 |
| 100-yr | Pond 1 | 84.2516 | 3.00 |
| 100-yr | Pond 1 | 84.5016 | 3.00 |
| 100-yr | Pond 1 | 84.7516 | 3.00 |
| 100-yr | Pond 1 | 85.0016 | 3.00 |
| 100-yr | Pond 1 | 85.2516 | 3.00 |
| 100-yr | Pond 1 | 85.5016 | 3.00 |
| 100-yr | Pond 1 | 85.7516 | 3.00 |
| 100-yr | Pond 1 | 86.0016 | 3.00 |
| 100-yr | Pond 1 | 86.2516 | 3.00 |
| 100-yr | Pond 1 | 86.5016 | 3.00 |
| 100-yr | Pond 1 | 86.7516 | 3.00 |
| 100-yr | Pond 1 | 87.0016 | 3.00 |
| 100-yr | Pond 1 | 87.2516 | 3.00 |
| 100-yr | Pond 1 | 87.5016 | 3.00 |
| 100-yr | Pond 1 | 87.7516 | 3.00 |
| 100-yr | Pond 1 | 88.0016 | 3.00 |
| 100-yr | Pond 1 | 88.2516 | 3.00 |
| 100-yr | Pond 1 | 88.5016 | 3.00 |
| 100-yr | Pond 1 | 88.7516 | 3.00 |
| 100-yr | Pond 1 | 89.0016 | 3.00 |
| 100-yr | Pond 1 | 89.2516 | 3.00 |
| 100-yr | Pond 1 | 89.5016 | 3.00 |
| 100-yr | Pond 1 | 89.7516 | 3.00 |
| 100-yr | Pond 1 | 90.0016 | 3.00 |
| 100-yr | Pond 1 | 90.2516 | 3.00 |
| 100-yr | Pond 1 | 90.5016 | 3.00 |
| 100-yr | Pond 1 | 90.7516 | 3.00 |
| 100-yr | Pond 1 | 91.0016 | 3.00 |
| 100-yr | Pond 1 | 91.2516 | 3.00 |
| 100-yr | Pond 1 | 91.5016 | 3.00 |
| 100-yr | Pond 1 | 91.7516 | 3.00 |
| 100-yr | Pond 1 | 92.0016 | 3.00 |
| 100-yr | Pond 1 | 92.2516 | 3.00 |
| 100-yr | Pond 1 | 92.5016 | 3.00 |
| 100-yr | Pond 1 | 92.7516 | 3.00 |
| 100-yr | Pond 1 | 93.0016 | 3.00 |
| 100-yr | Pond 1 | 93.2516 | 3.00 |
| 100-yr | Pond 1 | 93.5016 | 3.00 |
| 100-yr | Pond 1 | 93.7516 | 3.00 |
| 100-yr | Pond 1 | 94.0016 | 3.00 |
| 100-yr | Pond 1 | 94.2516 | 3.00 |

| Sim | Node Name | Relative Time [hrs] | Stage [ft] |
|---|---|---|---|
| 100-yr | Pond 1 | 94.5016 | 3.00 |
| 100-yr | Pond 1 | 94.7516 | 3.00 |
| 100-yr | Pond 1 | 95.0016 | 3.00 |
| 100-yr | Pond 1 | 95.2516 | 3.00 |
| 100-yr | Pond 1 | 95.5016 | 3.00 |
| 100-yr | Pond 1 | 95.7516 | 3.00 |
| 100-yr | Pond 1 | 96.0016 | 3.00 |

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**SURFACE WATER MEMO**

This memorandum describes the surface drainage design criteria and summarizes the results of the computations associated with the surface water drainage aspects and developments of the proposed 5003 Dover Street (Facility). The drainage design includes determination of the culvert size, outlet protection dimensions, and equivalent compensatory storage analysis. The design methodology and calculations obtained were developed to meet the requirements set forth in the Hillsborough County Stormwater Management Technical Manual. The preliminary engineering drawings show the locations and details of these drainage system components. Appendix A includes supporting information used to design the components.

The watershed draining to the culvert was broken into four drainage areas: run-off from the Facility and run-on from three adjacent properties. Curve numbers were assigned based on 2021 Google Earth Aerial Imagery. Hydrologic Soil Group was determined via the National Resources Conservation Service (NRCS) Web Soil Survey web application.

The run-off from the Facility, referred to as Drainage Area 1, is approximately 4.65 acres with a time of concentration of 15.1 minutes. The drainage area and time of concentration were determined based on an 06/02/2020 ALTA /NSPS Land Title Survey and Boundary Survey by Hutchinson Surveying and Mapping, LLC.

The run-on from 5020 Dover Street, Drainage Area 2, is located just north of the Facility and is captured by a storm sewer network and enters the Facility via a 24" pipe from Manhole D-2 in the northeast corner. Drainage Area 2 is approximately 4.92 acres with a time of concentration of 15.3 minutes. The drainage area and time of concentration were determined based on LIDAR data obtained on 07/16/2021.

The run-on from 5135 Madison Avenue, Drainage Area 3, is located just northeast of the Facility and is captured by the same storm sewer network as Drainage Area 2. Drainage Area 3 is approximately 0.33 acres with a time of concentration of 22.2 minutes. The drainage area and time of concentration were determined based on LIDAR data obtained on 07/16/2021.

The run-on from 5220 Dover Street, Drainage Area 4, is located just east of the Facility and enters along the eastern perimeter of the Facility. Drainage Area 4 is approximately 43.59 acres with a time of concentration of 162.0 minutes. This drainage area is primarily composed of an approximate 35.87-acre wooded area that drains onto the 5220 Dover Street property in the east via culverts under the existing railroad tracks. The drainage area and time of concentration were determined based on LIDAR data obtained on 07/16/2021.

The design storm selected is the 25-year, 24-hour storm for a bridge/culvert under low use or non-essential highway, or local highway per Table 6-1 in the Hillsborough County Stormwater Management Technical Manual. Peak flow rates for the culvert were estimated using the HydroCAD v.9.0 software program. Precipitation values were

provided by National Oceanic and Atmospheric administration (NOAA) point precipitation frequency estimates database from a point location near the Project Area. Verdantas used the Type II Florida 24-hr rainfall distribution to characterize the rainfall.

There will be no increase to the 25-yr, 24-hr storm as a result of this Project. No changes will be made to the existing watershed or curve numbers, except for the addition of a compensatory storage excavation to offset the culvert and fill being placed in the existing ditch. Therefore, the pre-construction and post-construction flow rates are the same.

The beginning of the culvert was selected to avoid impacts to the existing wetland along the eastern side of the Facility. The culvert will flow to the west and discharge to an existing ditch along US Highway 41. The total length of the culvert is 456 feet. The existing wetland area was modeled as a pond in HydroCAD to reflect the storage based upon the 2020 ALTA survey and 2021 LIDAR.

The upstream invert of the culvert, based on the 2020 ALTA survey, is 1.5'. The downstream invert is 1.0'. The slope of the pipe is 0.11%. The culvert size was determined based on its ability to convey the peak flows calculated from the 25-year, 24-hour storm event without overtopping the existing wetland area. Based on the 2020 ALTA survey, the overtopping elevation is 5.5 feet. In addition, the culvert size was selected to ensure there was enough cover between the crest of pipe and the surrounding existing grade, which can be seen on the Culvert Profile preliminary engineering drawings. Through several iterations, a 38-inch by 60-inch elliptical reinforced concrete pipe (RCP) was selected. This is the equivalent to a circular 48-inch pipe. An elliptical pipe was selected over a circular pipe to meet the cover requirements. The maximum length of 42" and larger culvert to be used without an access structure is 500 feet per Table 8-3 in the Hillsborough County Stormwater Management Technical Manual. Since this proposed culvert is a 48" circular pipe equivalent and 456 feet long, an access structure is not necessary.

From the HydroCAD analysis, the peak flow from the proposed culvert for the 25-year, 24-hour storm is 56.65 cubic feet per second (cfs) with a maximum water surface elevation of 4.83 feet. The minimum physical slope of the pipe is based on Section 8.2.7 in the Hillsborough County Stormwater Management Technical Manual which states that the culvert must produce a velocity of at least 2.5 feet per second (fps) when the culvert flowing full and the hydraulic gradient is equal to the bottom slope of the culvert. From the HydroCAD analysis, the velocity of the culvert is 5.38 fps, which is greater than the 2.5 fps minimum. The proposed culvert will discharge on the western side of the Facility to an existing ditch along US Highway 41 (S. 50$^{th}$ Street). This ditch drains under US Highway 41 via two 36-inch Reinforced Concrete Pipes (RCP).

An endwall will be installed at the beginning and end of the culvert to prevent the culvert from potential floatation. Florida Department of Transportation (FDOT) "Detail Straight Concrete Endwalls Single and Multiple Pipe" (Index No. 250) was used for the design. Based on the detail, the elevation of the top of the upstream endwall is approximately 5.9' and the elevation of the downstream endwall is approximately 5.4' based on 2020 ALTA Survey data. Section 8.2.10.2 in the Hillsborough County Stormwater Management Technical Manual states the allowable headwater shall not exceed the top of the

endwall at the entrance. The headwater elevation, from the HydroCAD analysis, is 4.83', which is lower than the top of the endwall.

Outlet protection is proposed at the outlet on the western side. A 38-inch by 60-inch elliptical pipe is equivalent to a 48-inch round pipe. Using the "Design of Outlet Protection From A Round Pipe Flowing Full, Minimum Tailwater Condition" from the USDA-SCS, the minimum length of apron is determined to be 26-feet. The minimum $d_{50}$ riprap size is 0.85-feet. The outlet protection shall be two layers thick, for a minimum depth of 1.7-feet (22-inches).

The drainage design shows that the proposed 456 feet 38-inch by 60-inch elliptical RCP culvert will successfully convey the 25-year, 24-hour storm event without causing overtopping of the adjacent grades above it. In total, approximately 1,641 cubic yards of fill is anticipated to be installed over top and adjacent to the proposed culvert. Since the existing ditch, surrounding area, and entire parcel is located within the 100-year floodplain, compensatory storage will need provided to meet local floodplain regulations. As such, an equivalent compensatory storage area of 1,646 cubic yards is proposed in the southwest corner of the parcel as shown within Attachment 6.

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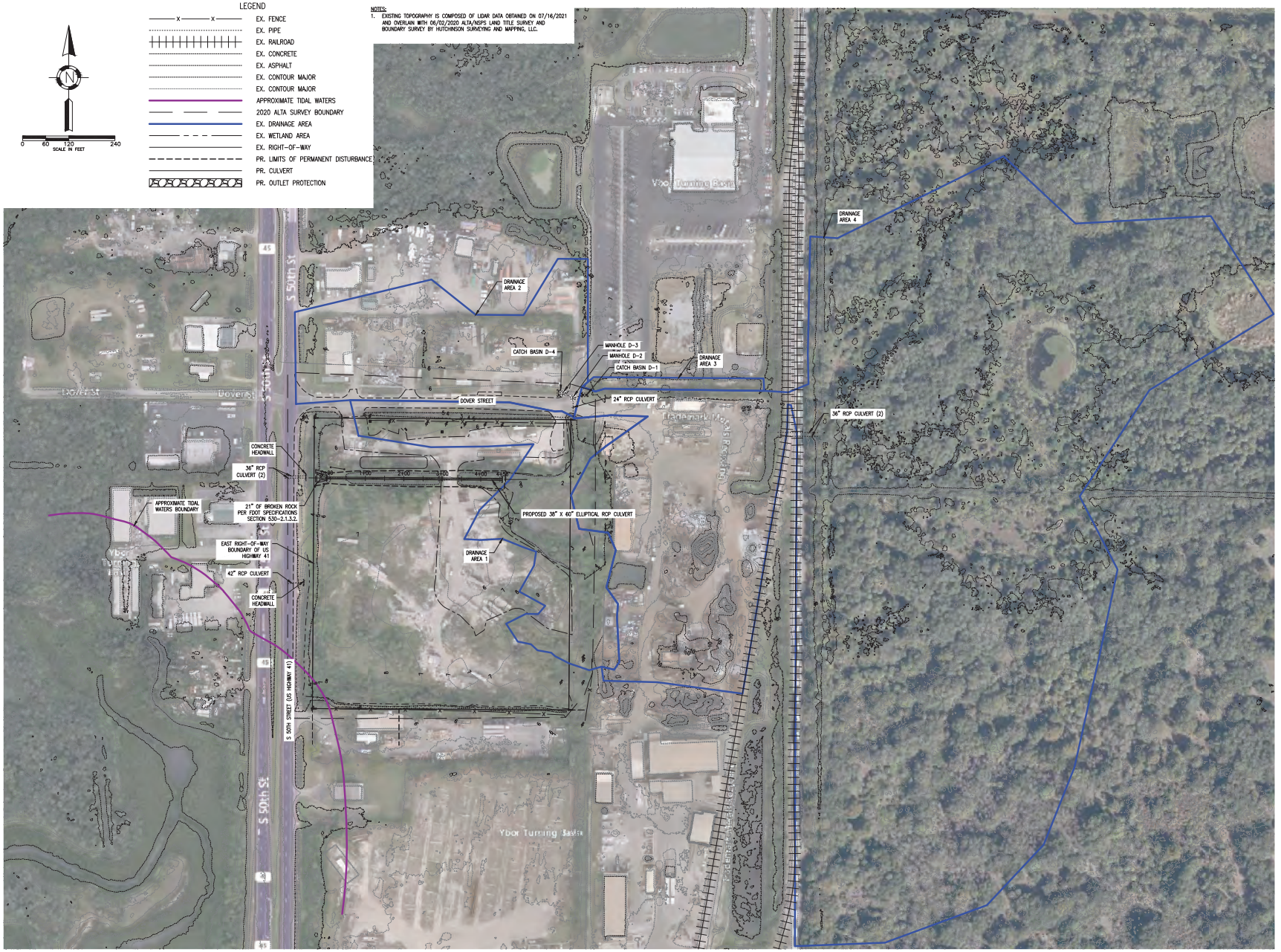
# ATTACHMENT A

**Site Map, Drawings, and Supporting Documents**

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Project Title:

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



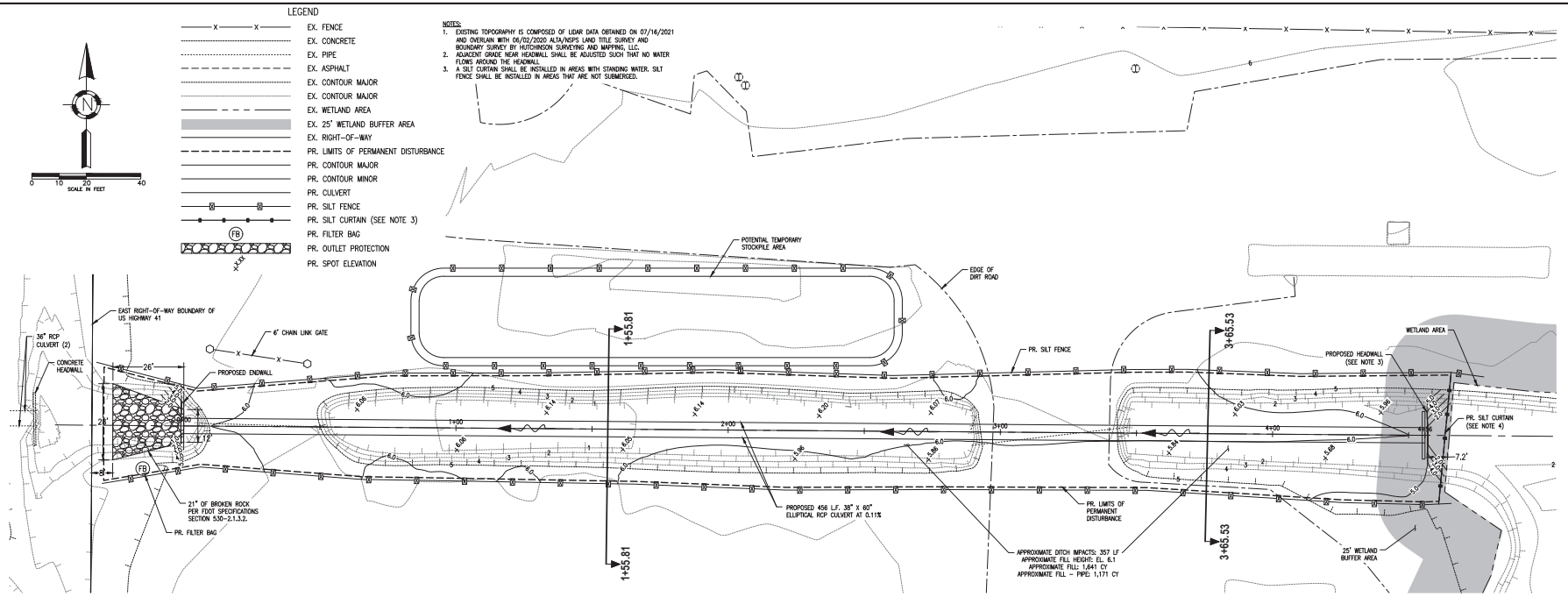
| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 11/18/2022 |

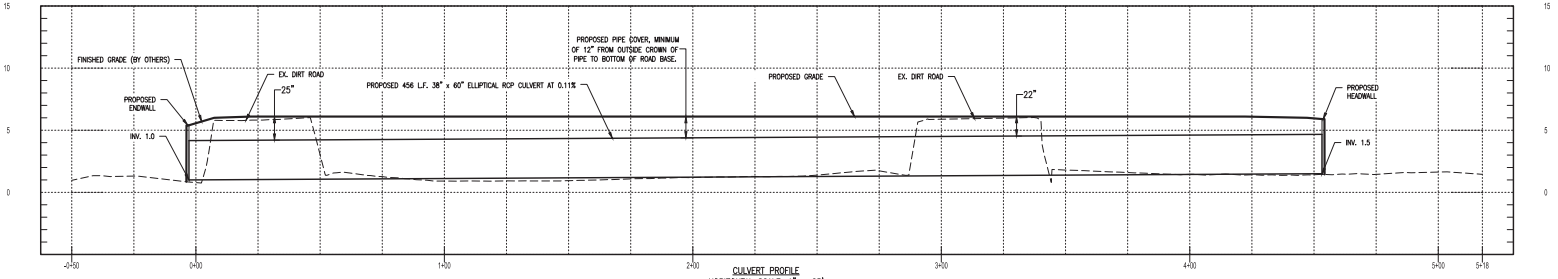
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 11/18/22 |
| Layout By: | LMS |
| Drawn By: | LMS |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DRAINAGE AREA MAP**

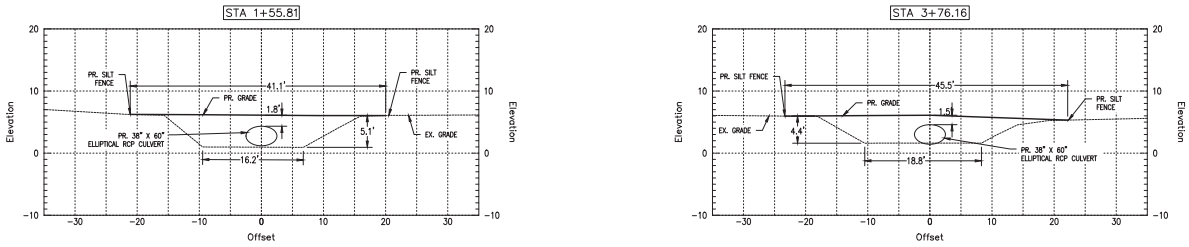
Sheet Number: 01 OF 03

**C1.0**




CULVERT PROFILE
HORIZONTAL SCALE: 1" = 25'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

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|---|---|---|
| | FOR PERMIT | 01/05/2023 |

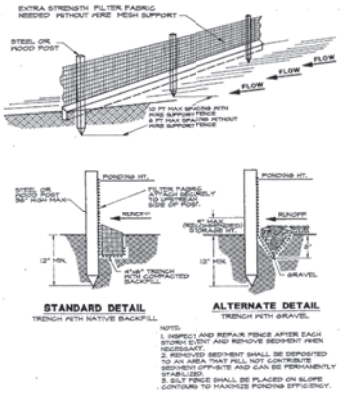
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 01/05/23 |
| Layout By: | LMS |
| Drawn By: | LMS |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |

Sheet Title:

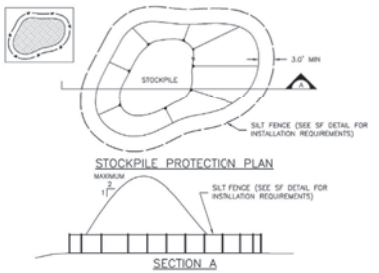
**SITE PLAN, PROFILE, AND CROSS SECTIONS**

Sheet Number: 02 OF 03

**C2.0**

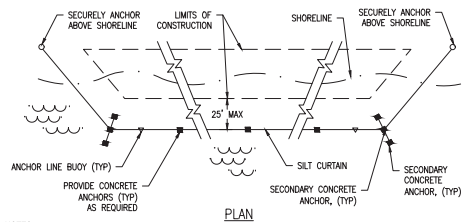



1 **TYPICAL SILT FENCE DETAIL**
Scale: N.T.S.

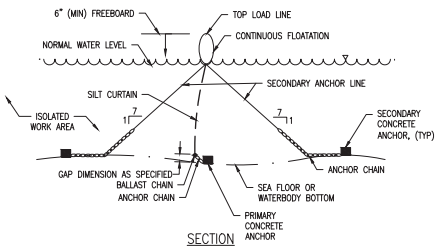



NOTES:
1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES
   –TYPE OF STOCKPILE PROTECTION
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BOIL DINERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

3 **TEMPORARY STOCKPILE PROTECTION DETAIL**
Scale: N.T.S.




NOTES:
1. ALL EXPOSED AND DISTURBED SHORELINES SHALL BE ENCLOSED WITH SILT CURTAIN.
2. SECONDARY ANCHORS SHALL BE PLACED ON ALL CORNERS AS REQUIRED TO SECRURE SILT CURTAIN IN PLACE.




SILT CURTAIN NOTES:

MATERIALS

FLOTATION SILT CURTAIN:
1. PROVIDE COMMERCIAL MANUFACTURED SILT CURTAIN, WITH DEMONSTRATED ABILITY TO TRAP AND HOLD SEDIMENT AND DEBRIS WITHIN THE DEFINED WORK AREA, AND WITH ANCHOR LINES, BALLAST, AND FLOATS THAT ARE ATTACHED TO THE SILT CURTAIN AT REINFORCED ATTACHMENT POINTS PROVI LED BY THE MANUFACTURER.
2. OBTAIN APPROVAL OF PROPOSED FLOTATION SILT CURTAIN PRIOR TO SHIPMENT TO THE PROJECT SITE. PROVIDE SUBMITTALS THAT INCLUDE CERTIFICATES OF MATERIALS TESTING, MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR SHOP DRAWINGS, AND PROPOSED INSTALLATION/REMOVAL PROCEDURES.
3. CURTAIN FABRIC SHALL BE PERVIOUS GEOTEXTILE MEETING AASHTO M 288 FOR TEMPORARY SILT FENCE OR IMPERVIOUS COATED FABRIC SUCH AS NYLON REINFORCED POLYVINYL CHLORIDE, TREATED POLYPROPYLENE/POLYESTER FABRIC, OR APPROVED EQUAL, SEE CONTRACT.
4. PROVIDE A CURTAIN TALL ENOUGH TO EXTEND FROM THE BOTTOM OF THE WATER COLUMN TO THE WATER SURFACE, LESS THE GAP DIMENSION SPECIFIED IN THE PLANS. CONSIDER THE PREDICTED TIDE FLUCTUATIONS OR RIVER FLOWS WHEN DETERMINING THE HEIGHT OF THE CURTAIN.

FLOTATION:
1. PROVIDE FLOTATION CONSISTING OF RIGID, CLOSED CELL EXPANDED POLYSTYRENE, ETHAFOAM, OR POLYETHYLENE FLOATS ATTACHED TO THE TOP OF THE SILT CURTAIN ALONG ITS ENTIRE LENGTH. PROVIDE FLOTATION MATERIAL WITH PROTECTION FROM MECHANICAL DAMAGE AND DETERIORATION THAT WOULD CAUSE POLLUTION.
2. EMPLOY FLOTATION THAT PROVIDES THE CURTAIN WITH A MINIMUM OF FREEBOARD WITHOUT GAPS. ENSURE THAT THE BUOYANCY RATIO (WEIGHT OF DISPLACED FLUID TO BARRIER WEIGHT) IS GREATER THAN 3:1.
3. PROVIDE HIGH VISIBILITY COLOR MARKING FOR THE FLOTATION DEVICES.
4. PROVIDE MANUFACTURER–INSTALLED GROMMETS OR EQUIVALENT TO REINFORCE STRESS POINTS AND PROVIDE ATTACHMENT POINTS TO ENSURE PROPER ANCHORING.

LINES:
PROVIDE ANCHOR LINES AND TOP AND BOTTOM LOAD LINES, AS REQUIRED, THAT ARE MINIMUM 1/2–INCH DIAMETER NYLON ROPE.

ANCHORS:
PROVIDE CONCRETE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.

BALLAST:
PROVIDE BALLAST CHAIN OF MINIMUM 1/2–INCH DIAMETER GALVANIZED STEEL WITH BALLAST CHAIN SEWN INTO A HEM AT THE BOTTOM OF THE CURTAIN AND SECURED TO THE MATERIAL OF THE HEM TO PREVENT SHIFTING OR ACCIDENTAL REMOVAL.

HANDLING AND INSTALLATION

1. SILT CURTAIN PLAN:
   a. SUBMIT A SILT CURTAIN PLAN FOR DEPARTMENT REVIEW AND APPROVAL.
   b. THE SILT CURTAIN PLAN MUST USE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
   c. THE SILT CURTAIN MUST BE ANCHORED AND SECURED SUFFICIENTLY TO WITHSTAND WIND, WAVES,
   d. PROPELLER WASH, RIVERINE FLOW, AND TIDAL FORCES REASONABLY EXPECTED AT THE SITE.
2. JOINING PANELS/SECTIONS:
   a. CONNECT OR SEW INDIVIDUAL PANELS/SECTIONS OR SEW TOGETHER IN THE FIELD, FOR EASE OF HANDLING AND TRANSPORTATION.
   b. DO NOT USE HEAT WELDING METHODS TO JOIN PANELS.
   c. JOIN THE PANELS IN A MANNER THAT WILL PREVENT SILT, SEDIMENT, DEBRIS, OR TURBIDITY TO MIGRATE FROM THE WORK AREA.
   d. IF JOINTS ARE SEWN TOGETHER, USE POLYESTER TWINE THREAD HAVING A TENSILE STRENGTH OF 350 LBS, AS DETERMINED BY ASTM 4268, TO MAKE DOUBLE ROW OF STITCHES THAT WILL NOT UNRAVEL IF BROKEN.
3. INSTALL SILT CURTAIN PRIOR TO STARTING IN–WATER WORK AS SPECIFIED IN THE ENVIRONMENTAL PERMITS.
4. ENSURE THAT THE FLOTATION IS SECURED TO THE BOOM TO PREVENT SHIFTING OR SLIPPING OF THE CURTAIN.
5. WEIGHT THE BASE OF THE CURTAIN WITH BALLAST SO THAT IT WILL REMAIN IN A VERTICAL POSITION.
6. PROVIDE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.
7. ATTACH ANCHOR CHAINS BETWEEN THE ANCHOR LINE AND ANCHOR TO PREVENT LINE FOULING, TO LOWER THE ANGLE OF LOAD PULLING ON THE ANCHOR, AND TO ACT AS A SHOCK ABSORBER.
8. EMPLOY ANCHOR LINE BUOYS TO HELP PREVENT LINE ENTANGLEMENT AND STRESS ON THE BOOM, IF NEEDED.

INSPECTION

1. INSPECT FOR VISIBILITY ABOVE THE WATER SURFACE ALONG THE ENTIRE LENGTH OF THE SILT CURTAIN.
2. INSPECT FOR 0.5 FEET OF FREEBOARD ABOVE THE WATER SURFACE DURING CALM CONDITIONS.

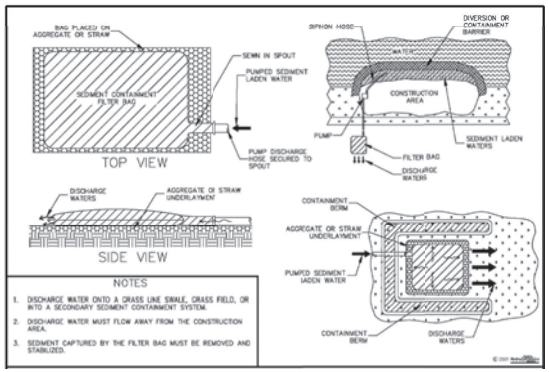
MAINTENANCE

1. MAINTAIN THE SILT CURTAIN AS REQUIRED IN THE INSTALLATION NOTES.
2. ADJUST FLOTATION TO MAINTAIN VISIBILITY AND FREEBOARD ABOVE WATER SURFACE.

REMOVAL

3. THE ENGINEER MUST APPROVE REMOVAL.
4. PREVENT RE–SUSPENSION OF SEDIMENT INTO THE WATER WHEN REMOVING THE CURTAIN. CONDUCT THE REMOVAL DURING PERIODS OF CALM WEATHER. REMOVE THE CURTAIN CAREFULLY TO MINIMIZE THE RELEASE OF TRAPPED SEDIMENT AND DEBRIS. DO NOT DRAG THE CURTAIN WHILE IN CONTACT WITH THE SEA FLOOR OR WATERBODY BOTTOM.

2 **TYPICAL SILT CURTAIN DETAIL**
Scale: NTS




4 **FILTER BAG DETAIL**
Scale: N.T.S.

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Project Title:

**5003 DOVER STREET**
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**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

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TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 11/18/2022 |

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|---|---|
| Project No.: | HSW004 |
| Plot Date: | 11/18/22 |
| Layout By: | GJC |
| Drawn By: | GJC |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DETAILS**

Sheet Number: 03 OF 03

**C3.0**

# Boundary, Topographic & Wetland Survey
# American XVII LLC
# Blocks 113 & 120, SOUTH TAMPA VILLA SITES SUBDIVISION
# Hillsborough County, Florida

## Legend of Symbols & Abbreviations

| | | | |
|---|---|---|---|
| ● | Found Iron Rod or Pipe | | Power Pole |
| (F) | Field Measurement | | Electric Meter |
| (D) | Deed Reference | | Guy Wire |
| (P) | Plat Reference | | Electric Pull Box |
| PSM | Professional Surveyor and Mapper | | Electric Vault |
| Id. | Identification | | Light Pole |
| LB | Licensed Business | | Fire Hydrant |
| OR | Official Records | | Water Valve |
| TBM | Temporary Benchmark | | Irrigation Control Valve |
| PVC | Polyvinyl Chloride Pipe | ⊗ | Miscellaneous Feature |
| CONC. | Concrete | | Mitered End Section |
| FDOT | Florida Department of Transportation | ? | Drainage Pipe Continues |
| DIP | Ductile Iron Pipe | | Square Post |
| RCP | Reinforced Concrete Pipe | | Round Post |
| MW | Monitoring Well | | Sign |
| No. | Number | —D—D— | Drainage Pipe |
| EPC | Environmental Protection Commission | —x—x— | Fence |
| | EPC Wetland Point | ⟷ | Gate |
| | Temporary Benchmark | —OL—OL— | Overhead Utility Lines |
| | Monitoring Well | | |

**Benchmark Information: NAVD 1988**

**TBM #1**
Elevation = 5.42'
Set PK nail & disk labeled "SurvTech Trav. Pt" in asphalt / broken concrete area; ±22 feet South of the South edge of an asphalt apron; ±62 feet Southwest of a power pole.

**TBM #2**
Elevation = 7.21'
Set PK nail & disk labeled "SurvTech Trav. Pt" in asphalt/ broken concrete area; ±21 feet North of a top of bank; ±51 feet West of a monitoring well.

**TBM #3**
Elevation = 3.99'
Box cut in center of concrete headwall on East side of South 50th Street, ±196 feet South of the centerline of Dover Street.

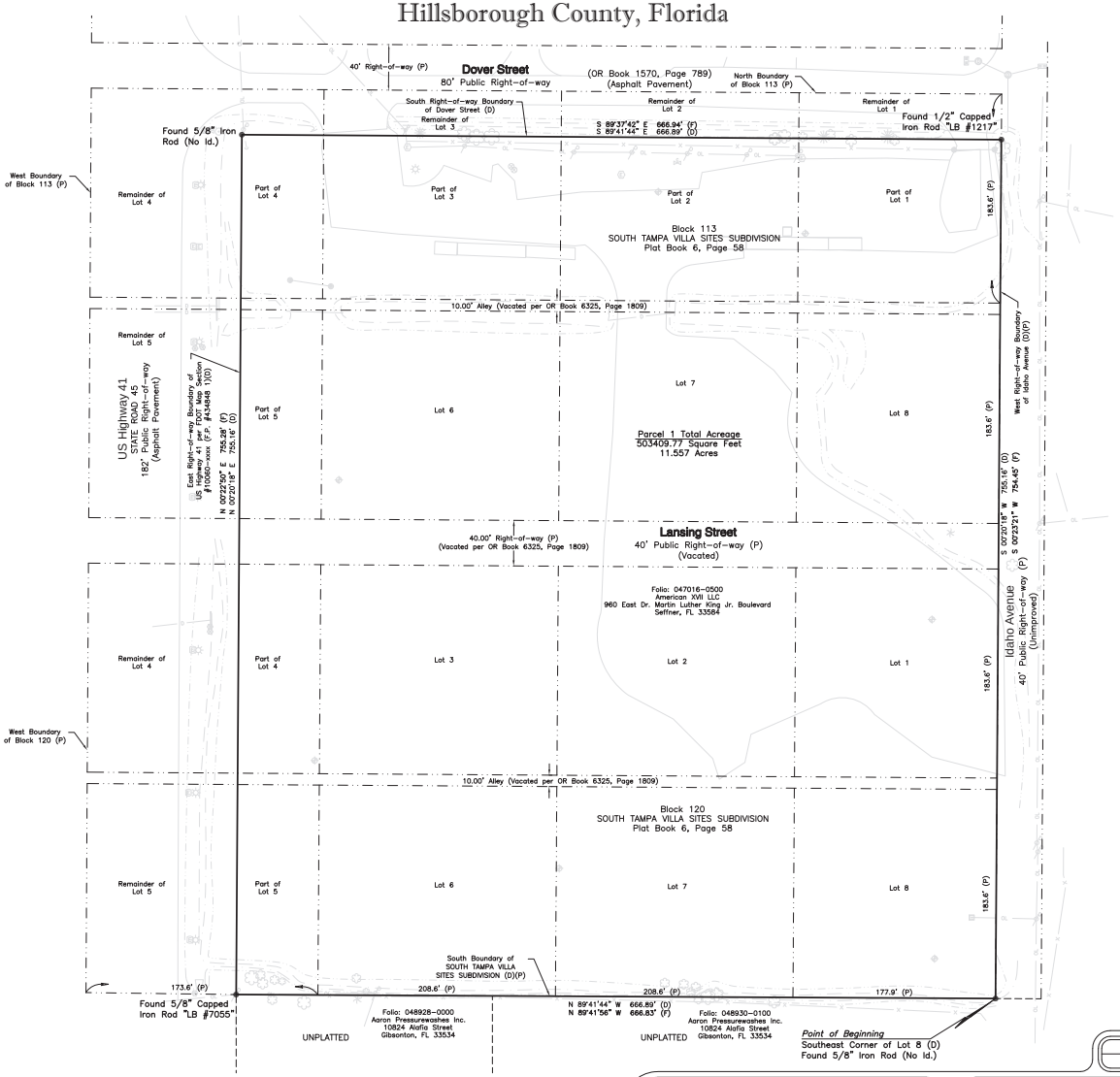
**Flood Zone Information:**
Subject property is located in Flood Zone "AE"
Flood Insurance Rate Map: 12057C
Panel No.: 0369 H
Community Name/No.: Hillsborough County/120112
Effective Date: August 28, 2008

**Certifications:**
HSW Consulting

## Surveyor's Notes

1.) Paper copies of this survey are not valid without the original signature and raised seal of a Florida Licensed Surveyor and Mapper. Digital copies are not valid without the digital signature of a Florida Licensed Surveyor and Mapper.
2.) The bearing structure for this survey is based on a NAD 1983 Florida State Plane West Zone, bearing of N 00°22'50" E for the East Right-of-way Boundary of US Highway 41, also being the West Boundary of Subject Property.
3.) The horizontal datum utilized for this project is NAD 1983 Florida West Zone, 2011 Adjustment, U.S. Survey Feet. Said datum was established by utilizing the Florida Permanent Reference Network (FPRN).
4.) The vertical datum utilized for this project is NAVD 1988, U.S. Survey Feet. The benchmark utilized was Hillsborough County Benchmark "VD-210" with an elevation of 5.59 feet.
5.) All utilities depicted hereon are from visible evidence only. Surveyor did not contact subsurface utility locator service.
6.) No underground foundations or footers were excavated or located for this survey.
7.) SurvTech makes no guarantees or warranties as to fence ownership.
8.) This Survey has been performed without benefit of title policy or abstract. Therefore surveyor can make no guarantees to ownership or encumbrances. There may be additional easements and restrictions that can be found within the Public Records of Hillsborough County.
9.) Subject property falls within Section 3, Township 30 South, Range 19 East.
10.) Wetland delineation markers depicted hereon were placed in the field by a qualified specialist and located by SurvTech.
11.) The approximate center of subject property DMS (Degrees, Minutes, Seconds): Latitude: 27°53'48.5271 & Longitude: 82°24'01.8598"

Date Plotted: 7/27/2022 10:05:07 AM By: Stacy Brown




Grid North

0' 50' 100' 150'

Scale: 1" = 50'

**Description: (A portion of lands per Per Instrument#: 2020229914)**

PARCEL 1:
A parcel of land being all of Lots 6, 7 and 8, inclusive, and part of Lots 1, 2, 3, 4 and 5, inclusive, Block 113; together with all of Lots 1, 2, 3, 6, 7 and 8, and a part of Lots 4 and 5, Block 120, lying East of the existing right of way line of U.S. Route 41 (State Road No. 45); and West of the West right of way line of Idaho Avenue, all lying and being in SOUTH TAMPA VILLA SITES SUBDIVISION, as per the map or plat thereof, recorded in Plat Book 6, Pages 58 and 59, of the Public Records of Hillsborough County, Florida, being more particularly described as follows:

Commence at the Southeast corner of Lot 8, Block 120, said point being the POINT OF BEGINNING; thence from the Point of Beginning North 89°41'44" West along the South boundary of said SOUTH TAMPA VILLA SITES SUBDIVISION, a distance of 666.89 feet to the intersection with the East right of way line of U.S. Route 41 (State Road No. 45); thence North 00°20'18" East along said East right of way line, a distance of 755.16 feet to the intersection with the South right of way line of Dover Street; thence South 89°41'44" East along said South right of way line of Dover Street, a distance of 666.89 feet to the intersection with the West right of way line of Idaho Street; thence South 00°20'18" West along said West right of way line of Idaho Avenue, a distance of 755.16 feet to the POINT OF BEGINNING.

## Statement of Potential Encroachments

See Sheet 2 for extents

(A) Apparent physical use of drainage swales or ditches, fencing or vehicular drive without benefit of known easement.
(B) Open & Notorious evidence of overhead utility line without benefit of known easement.
(C) Open & Notorious evidence of utility appurtenance without benefit of known easement.

Stacy L. Brown PSM No. 6516
SurvTech Solutions, Inc. LB No. 7340

| REVISION | | DATE | INITIALS |
|---|---|---|---|
| 1 | Wetlands and additional drainage structure details | 2/25/22 | C.C. |
| 2 | Revised wetland labels to include other surface waters | 7/27/22 | S.B. |

Project Name: American XVII LLC Survey — Project No.: 20210133
Address: 4902 South 50th Street — City: Tampa — State: Florida

SURVEYING TODAY WITH TOMORROW'S TECHNOLOGY

Drafted By: T. Crews, B. Stinson — Drawing Name: 20210133_2B
Date Drafted: 05/28/21 — Phase: 2
Approved By: S. Brown — Last Field Date: 05/25/21
Date Approved: 06/09/21 — Field Book/Page: 21-11/16


SURVTECH SOLUTIONS, INC.
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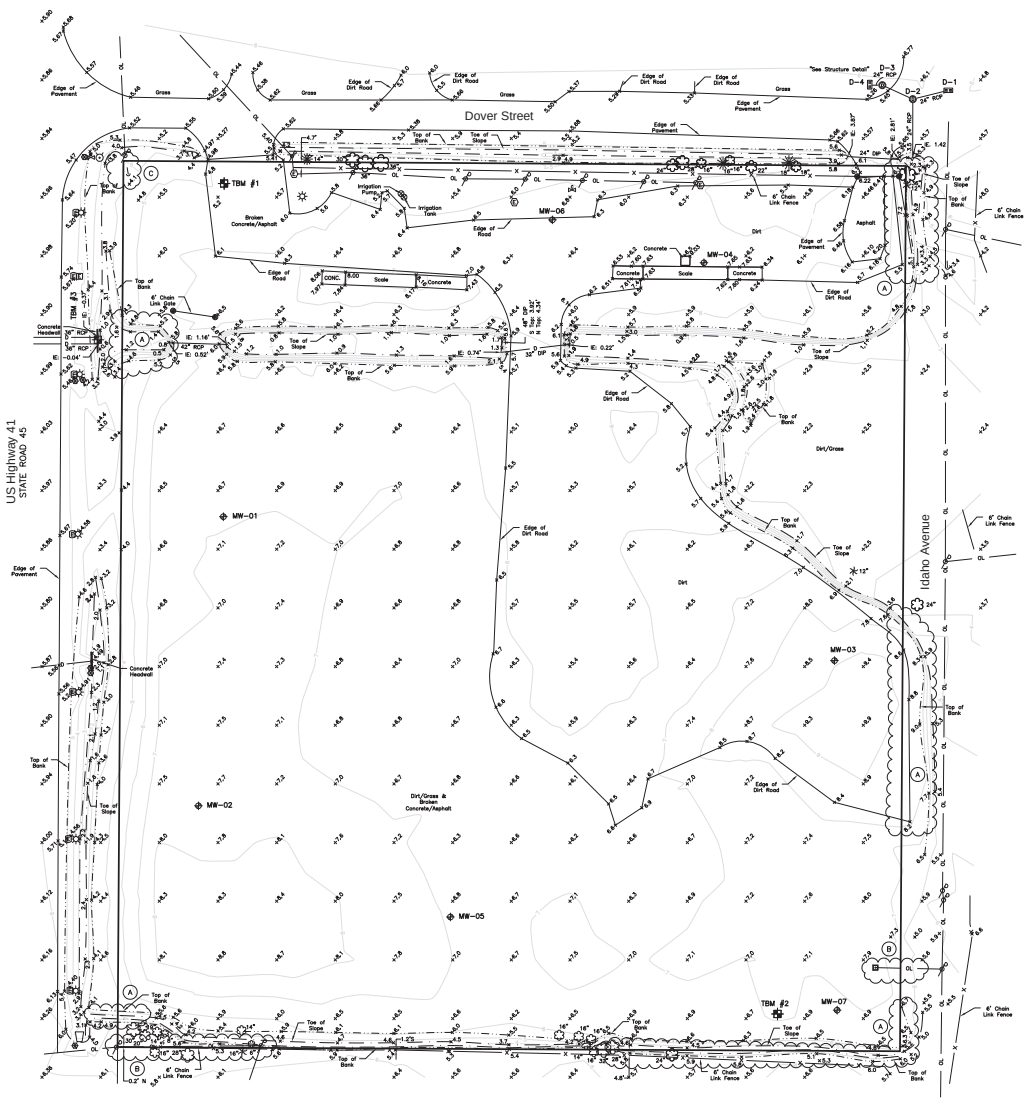
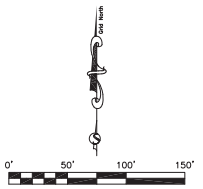
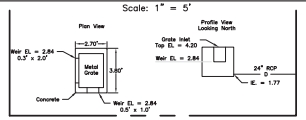
# Topographic Detail




## Structure Detail: D-4

Scale: 1" = 5'




Drainage Information:

| Structure | Structure Type | Top Elev. (ft.) | Pipe Size, Material | IE. (ft.) | Direction |
|---|---|---|---|---|---|
| D-1 | Catch Basin | 4.70 | 24" RCP | 1.40 | Southwest |
| D-2 | Storm Manhole | 5.48 | 24" RCP | 0.88 | South |
| | | | See Note | See Note | Northeast |
| | | | See Note | See Note | Northwest |
| D-3 | Storm Manhole | 5.64 | 24" RCP | 1.01 | West |
| | | | See Note | See Note | Southeast |
| D-4 | Catch Basin | 4.20 | 24" RCP | 1.77 | East |

Note: Unable to attain pipe material, size, and invert due to recessed pipe and water filled structure.

Monitoring Well Information:

| Designation | Northing | Easting | Ground | Rim |
|---|---|---|---|---|
| | Florida West | Florida West | Elevation | Elevation |
| | NAD 1983 | NAD 1983 | NAVD 1988 | NAVD 1988 |
| | US Survey Feet | US Survey Feet | US Survey Feet | US Survey Feet |
| MW-01 | 1266477.7 | 526834.5 | 6.8 | 9.77 |
| MW-02 | 1266231.3 | 526833.3 | 6.1 | 10.59 |
| MW-03 | 1266356.1 | 527075.3 | 9.2 | 12.41 |
| MW-04 | 1266694.1 | 526964.1 | 6.4 | 8.89 |
| MW-05 | 1266198.5 | 526748.0 | 7.1 | 9.91 |
| MW-06 | 1266736.7 | 526835.0 | 6.3 | 9.30 |
| MW-07 | 1266967.2 | 527077.6 | 6.9 | 9.96 |

NOTE: The rim elevation hereon refers to the North rim of the pvc pipe inside the well casing.

Note: The topographic data depicted hereon was collected in April, 2021 and may not represent current site conditions.

***Boundary, Topographic & Wetland Survey***
***American XVII LLC***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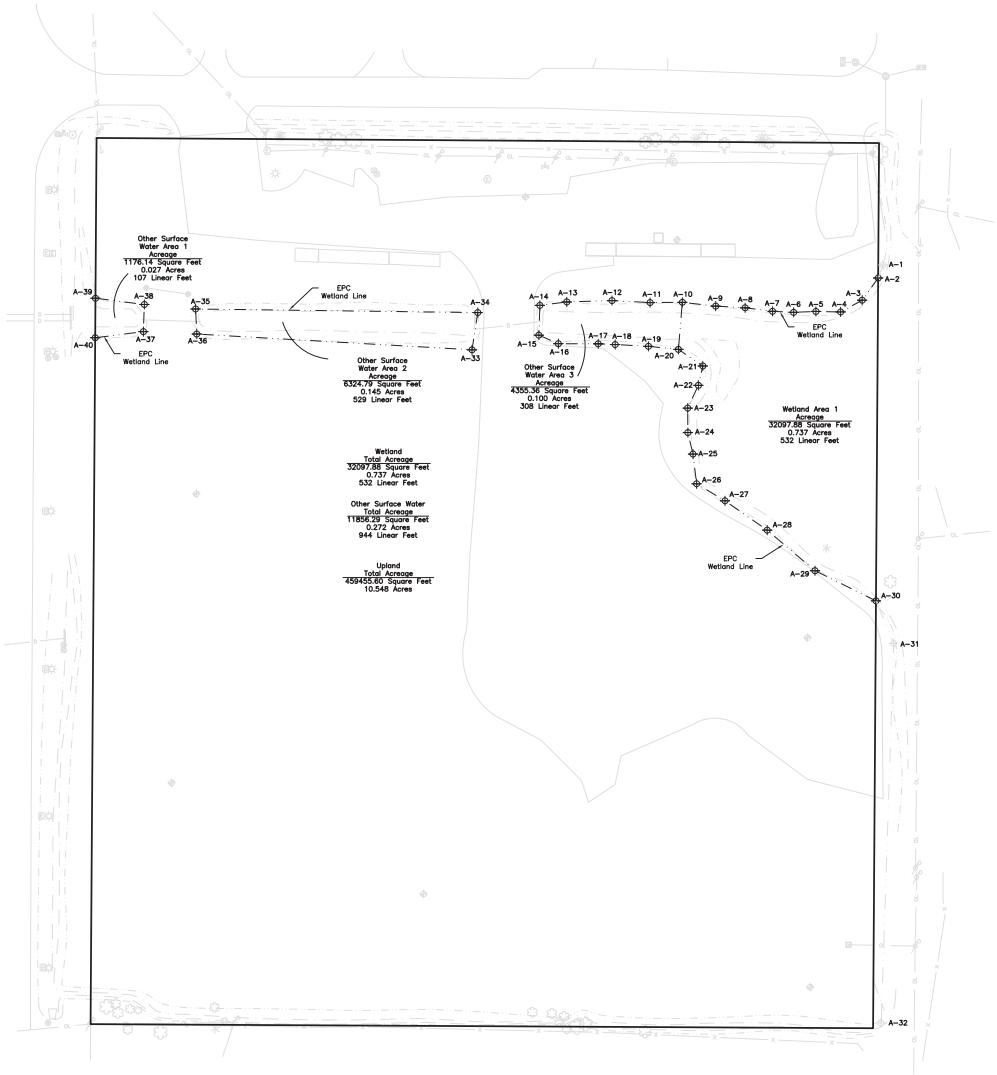
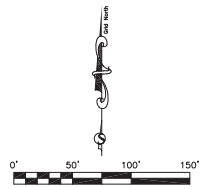
http://www.survtechsolutions.com

# Wetland Detail

Wetland Point Information:

| Designation | Northing, Florida West, US Survey Feet NAD 1983 | Easting, Florida West US Survey Feet NAD 1983 |
|---|---|---|
| A-1 | 1295872.2 | 527184.8 |
| A-2 | 1295891.8 | 527185.7 |
| A-3 | 1295942.8 | 527127.9 |
| A-4 | 1295852.8 | 527168.4 |
| A-5 | 1295832.1 | 527262.5 |
| A-6 | 1295832.3 | 527351.5 |
| A-7 | 1295833.2 | 527345.5 |
| A-8 | 1295836.2 | 527022.1 |
| A-9 | 1295837.6 | 526907.1 |
| A-10 | 1295840.8 | 526866.7 |
| A-11 | 1295840.6 | 526841.3 |
| A-12 | 1295842.3 | 526808.7 |
| A-13 | 1295841.2 | 526870.2 |
| A-14 | 1295838.3 | 526847.2 |
| A-15 | 1295812.8 | 526846.3 |
| A-16 | 1295805.5 | 526863.0 |
| A-17 | 1295805.5 | 526896.9 |
| A-18 | 1295804.8 | 526911.8 |
| A-19 | 1295803.4 | 526939.7 |
| A-20 | 1295800.7 | 526965.2 |
| A-21 | 1295588.8 | 526986.1 |
| A-22 | 1295570.1 | 526980.3 |
| A-23 | 1295555.7 | 526973.2 |
| A-24 | 1295529.8 | 526973.3 |
| A-25 | 1295511.5 | 526977.7 |
| A-26 | 1295486.2 | 526980.8 |
| A-27 | 1295471.7 | 527006.0 |
| A-28 | 1295440.8 | 527040.0 |
| A-29 | 1295413.1 | 527061.7 |
| A-30 | 1295388.1 | 527134.3 |
| A-31 | 1295380.0 | 527145.8 |
| A-32 | 1295326.7 | 527138.1 |
| A-33 | 1295200.4 | 526783.4 |
| A-34 | 1295202.1 | 526794.5 |
| A-35 | 1295235.3 | 526853.8 |
| A-36 | 1295213.8 | 526854.8 |
| A-37 | 1295215.8 | 526859.4 |
| A-38 | 1295239.0 | 526810.1 |
| A-39 | 1295245.8 | 526863.0 |
| A-40 | 1295270.0 | 526862.8 |




**Boundary, Topographic & Wetland Survey**
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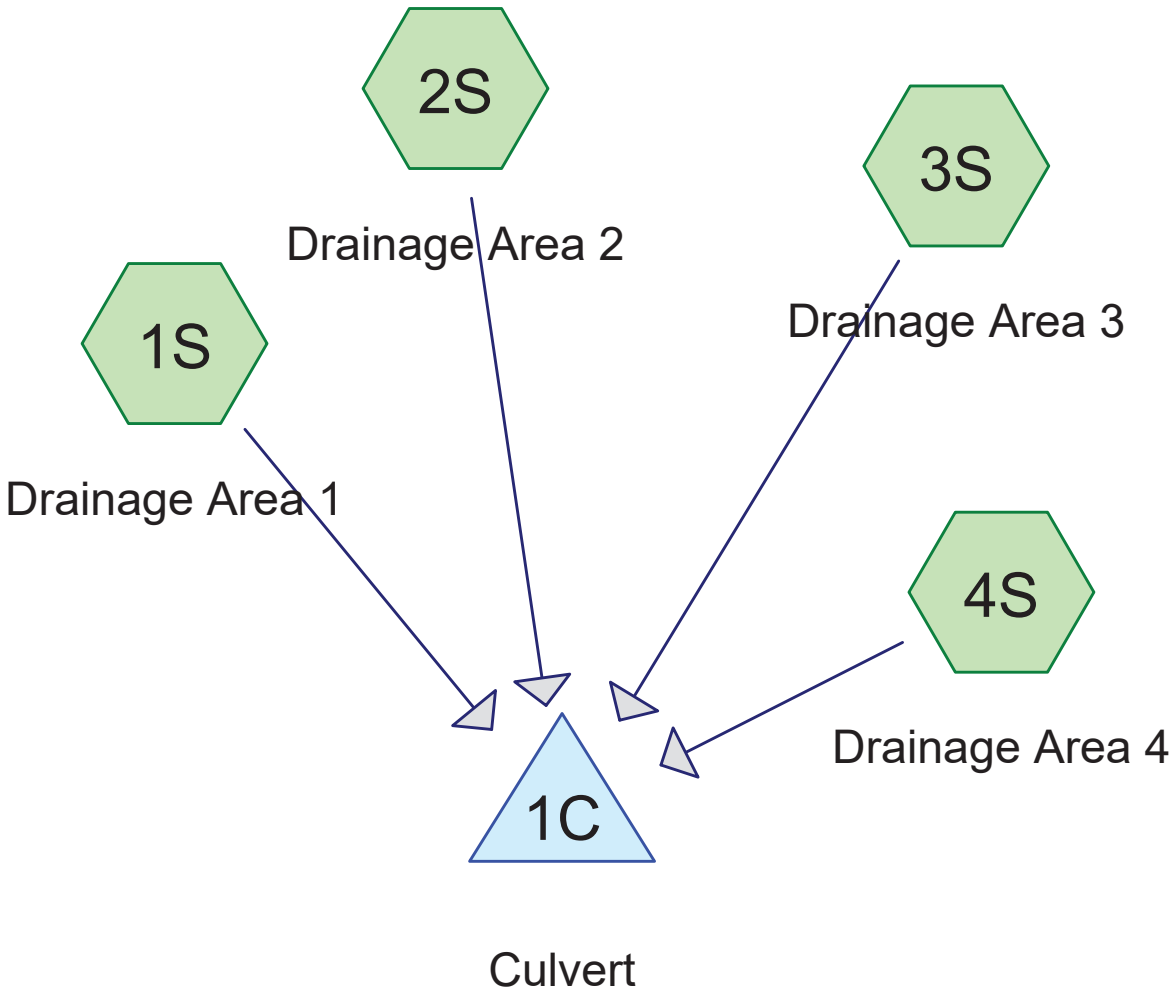



Subcat Reach Pond Link

**Routing Diagram for HSW004_Drainage Areas**
Prepared by Verdantas LLC, Printed 11/7/2022

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 25-YR | Type II FL 24-hr | | Default | 24.00 | 1 | 8.00 | 2 |

## Area Listing (selected nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 0.331 | 94 | Fallow, bare soil, HSG D (3S) |
| 12.849 | 95 | Urban commercial, 85% imp, HSG D (1S, 2S, 4S) |
| 35.870 | 79 | Woods, Fair, HSG D (4S) |
| 4.438 | 82 | Woods/grass comb., Fair, HSG D (1S, 2S, 4S) |
| **53.488** | **83** | **TOTAL AREA** |

## Soil Listing (selected nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 0.000 | HSG A | |
| 0.000 | HSG B | |
| 0.000 | HSG C | |
| 53.488 | HSG D | 1S, 2S, 3S, 4S |
| 0.000 | Other | |
| **53.488** | | **TOTAL AREA** |

## Pipe Listing (selected nodes)

| Line# | Node Number | In-Invert (feet) | Out-Invert (feet) | Length (feet) | Slope (ft/ft) | n | Width (inches) | Diam/Height (inches) | Inside-Fill (inches) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2S | 0.00 | 0.00 | 50.0 | 0.0200 | 0.013 | 0.0 | 24.0 | 0.0 |
| 2 | 4S | 0.00 | 0.00 | 104.0 | 0.0010 | 0.013 | 0.0 | 36.0 | 0.0 |
| 3 | 4S | 0.00 | 0.00 | 436.0 | 0.0420 | 0.013 | 60.0 | 38.0 | 0.0 |
| 4 | 1C | 1.50 | 1.00 | 456.0 | 0.0011 | 0.012 | 60.0 | 38.0 | 0.0 |

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

**Subcatchment 1S: Drainage Area 1** Runoff Area=4.647 ac 35.83% Impervious Runoff Depth=6.45"
Flow Length=755' Tc=15.1 min CN=87 Runoff=17.86 cfs 2.498 af

**Subcatchment 2S: Drainage Area 2** Runoff Area=4.924 ac 73.38% Impervious Runoff Depth=7.16"
Flow Length=785' Tc=15.3 min CN=93 Runoff=20.19 cfs 2.939 af

**Subcatchment 3S: Drainage Area 3** Runoff Area=0.331 ac 0.00% Impervious Runoff Depth=7.28"
Flow Length=456' Slope=0.0010 '/' Tc=22.2 min CN=94 Runoff=1.28 cfs 0.201 af

**Subcatchment 4S: Drainage Area 4** Runoff Area=43.586 ac 12.95% Impervious Runoff Depth=5.86"
Flow Length=2,282' Tc=162.0 min CN=82 Runoff=59.22 cfs 21.284 af

**Pond 1C: Culvert** Peak Elev=4.83' Storage=2.836 af Inflow=62.73 cfs 26.921 af
60.0" x 38.0", R=42.0" Elliptical Culvert n=0.012 L=456.0' S=0.0011 '/' Outflow=56.65 cfs 26.921 af

**Total Runoff Area = 53.488 ac Runoff Volume = 26.921 af Average Runoff Depth = 6.04"**
**79.58% Pervious = 42.566 ac 20.42% Impervious = 10.922 ac**

## Summary for Subcatchment 1S: Drainage Area 1

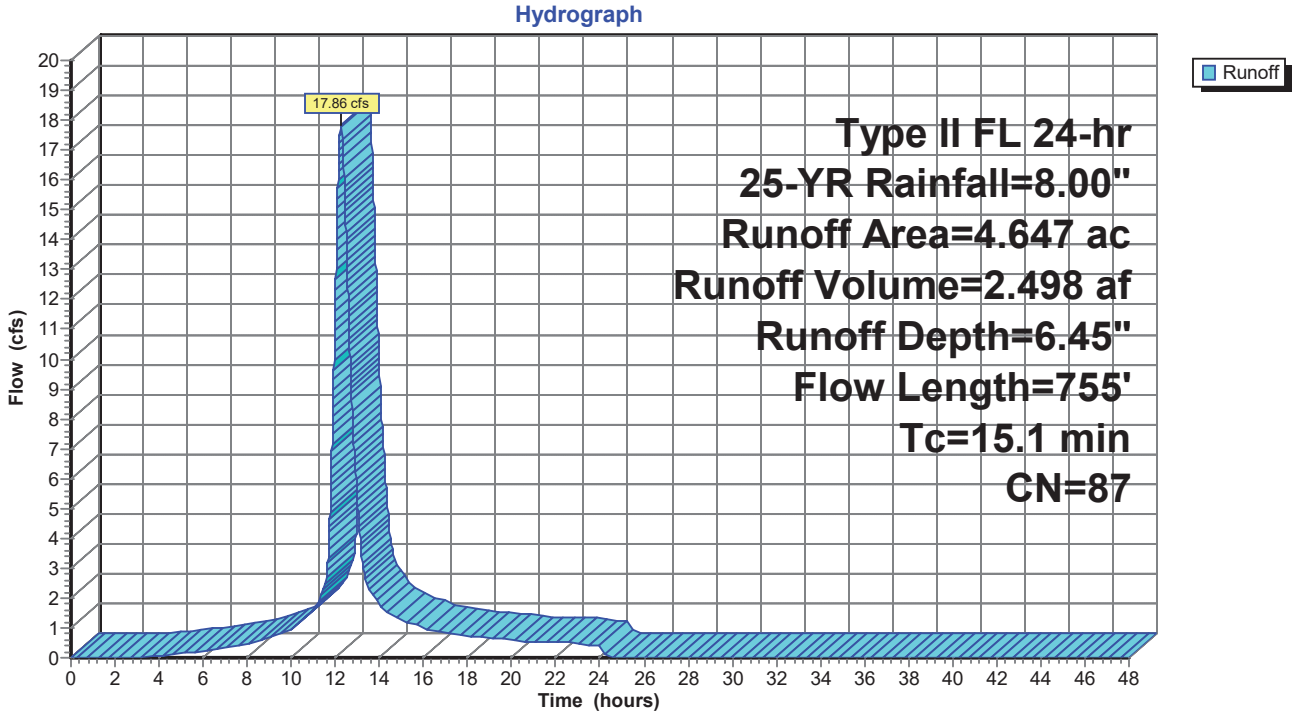
Runoff = 17.86 cfs @ 12.24 hrs, Volume= 2.498 af, Depth= 6.45"
Routed to Pond 1C : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II FL 24-hr 25-YR Rainfall=8.00"

| Area (ac) | CN | Description |
|---|---|---|
| 2.688 | 82 | Woods/grass comb., Fair, HSG D |
| 1.959 | 95 | Urban commercial, 85% imp, HSG D |
| 4.647 | 87 | Weighted Average |
| 2.982 | | 64.17% Pervious Area |
| 1.665 | | 35.83% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.1 | 100 | 0.0100 | 0.15 | | **Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 4.36" |
| 3.0 | 127 | 0.0100 | 0.70 | | **Shallow Concentrated Flow, Shallow** Short Grass Pasture Kv= 7.0 fps |
| 1.0 | 528 | 0.0080 | 8.51 | 1,122.91 | **Channel Flow, Channel** Area= 132.0 sf Perim= 79.0' r= 1.67' n= 0.022 Earth, clean & straight |
| 15.1 | 755 | Total | | | |

## Subcatchment 1S: Drainage Area 1



## Hydrograph for Subcatchment 1S: Drainage Area 1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.02 | 0.00 | 0.00 |
| 1.00 | 0.07 | 0.00 | 0.00 |
| 1.50 | 0.12 | 0.00 | 0.00 |
| 2.00 | 0.18 | 0.00 | 0.00 |
| 2.50 | 0.23 | 0.00 | 0.00 |
| 3.00 | 0.28 | 0.00 | 0.00 |
| 3.50 | 0.34 | 0.00 | 0.01 |
| 4.00 | 0.41 | 0.01 | 0.05 |
| 4.50 | 0.47 | 0.02 | 0.09 |
| 5.00 | 0.53 | 0.03 | 0.14 |
| 5.50 | 0.61 | 0.05 | 0.19 |
| 6.00 | 0.68 | 0.08 | 0.23 |
| 6.50 | 0.75 | 0.11 | 0.28 |
| 7.00 | 0.84 | 0.14 | 0.35 |
| 7.50 | 0.93 | 0.19 | 0.42 |
| 8.00 | 1.03 | 0.24 | 0.48 |
| 8.50 | 1.13 | 0.30 | 0.56 |
| 9.00 | 1.25 | 0.37 | 0.69 |
| 9.50 | 1.38 | 0.46 | 0.80 |
| 10.00 | 1.53 | 0.56 | 0.96 |
| 10.50 | 1.71 | 0.69 | 1.23 |
| 11.00 | 1.94 | 0.86 | 1.63 |
| 11.50 | 2.27 | 1.12 | 2.49 |
| 12.00 | 3.67 | 2.34 | **11.97** |
| 12.50 | 5.32 | 3.87 | **13.82** |
| 13.00 | 5.92 | 4.44 | 5.24 |
| 13.50 | 6.18 | 4.69 | 2.38 |
| 14.00 | 6.38 | 4.89 | 1.79 |
| 14.50 | 6.55 | 5.04 | 1.48 |
| 15.00 | 6.69 | 5.18 | 1.26 |
| 15.50 | 6.81 | 5.30 | 1.12 |
| 16.00 | 6.93 | 5.41 | 1.01 |
| 16.50 | 7.03 | 5.50 | 0.91 |
| 17.00 | 7.12 | 5.59 | 0.83 |
| 17.50 | 7.21 | 5.68 | 0.80 |
| 18.00 | 7.29 | 5.76 | 0.72 |
| 18.50 | 7.36 | 5.83 | 0.70 |
| 19.00 | 7.43 | 5.90 | 0.65 |
| 19.50 | 7.50 | 5.97 | 0.62 |
| 20.00 | 7.57 | 6.03 | 0.62 |
| 20.50 | 7.63 | 6.09 | 0.54 |
| 21.00 | 7.69 | 6.15 | 0.51 |
| 21.50 | 7.74 | 6.20 | 0.51 |
| 22.00 | 7.80 | 6.25 | 0.51 |
| 22.50 | 7.86 | 6.31 | 0.51 |
| 23.00 | 7.91 | 6.36 | 0.47 |
| 23.50 | 7.96 | 6.41 | 0.44 |
| 24.00 | **8.00** | **6.45** | 0.40 |
| 24.50 | 8.00 | 6.45 | 0.01 |
| 25.00 | 8.00 | 6.45 | 0.00 |
| 25.50 | 8.00 | 6.45 | 0.00 |
| 26.00 | 8.00 | 6.45 | 0.00 |
| 26.50 | 8.00 | 6.45 | 0.00 |
| 27.00 | 8.00 | 6.45 | 0.00 |
| 27.50 | 8.00 | 6.45 | 0.00 |
| 28.00 | 8.00 | 6.45 | 0.00 |
| 28.50 | 8.00 | 6.45 | 0.00 |
| 29.00 | 8.00 | 6.45 | 0.00 |
| 29.50 | 8.00 | 6.45 | 0.00 |
| 30.00 | 8.00 | 6.45 | 0.00 |
| 30.50 | 8.00 | 6.45 | 0.00 |
| 31.00 | 8.00 | 6.45 | 0.00 |
| 31.50 | 8.00 | 6.45 | 0.00 |
| 32.00 | 8.00 | 6.45 | 0.00 |
| 32.50 | 8.00 | 6.45 | 0.00 |
| 33.00 | 8.00 | 6.45 | 0.00 |
| 33.50 | 8.00 | 6.45 | 0.00 |
| 34.00 | 8.00 | 6.45 | 0.00 |
| 34.50 | 8.00 | 6.45 | 0.00 |
| 35.00 | 8.00 | 6.45 | 0.00 |
| 35.50 | 8.00 | 6.45 | 0.00 |
| 36.00 | 8.00 | 6.45 | 0.00 |
| 36.50 | 8.00 | 6.45 | 0.00 |
| 37.00 | 8.00 | 6.45 | 0.00 |
| 37.50 | 8.00 | 6.45 | 0.00 |
| 38.00 | 8.00 | 6.45 | 0.00 |
| 38.50 | 8.00 | 6.45 | 0.00 |
| 39.00 | 8.00 | 6.45 | 0.00 |
| 39.50 | 8.00 | 6.45 | 0.00 |
| 40.00 | 8.00 | 6.45 | 0.00 |
| 40.50 | 8.00 | 6.45 | 0.00 |
| 41.00 | 8.00 | 6.45 | 0.00 |
| 41.50 | 8.00 | 6.45 | 0.00 |
| 42.00 | 8.00 | 6.45 | 0.00 |
| 42.50 | 8.00 | 6.45 | 0.00 |
| 43.00 | 8.00 | 6.45 | 0.00 |
| 43.50 | 8.00 | 6.45 | 0.00 |
| 44.00 | 8.00 | 6.45 | 0.00 |
| 44.50 | 8.00 | 6.45 | 0.00 |
| 45.00 | 8.00 | 6.45 | 0.00 |
| 45.50 | 8.00 | 6.45 | 0.00 |
| 46.00 | 8.00 | 6.45 | 0.00 |
| 46.50 | 8.00 | 6.45 | 0.00 |
| 47.00 | 8.00 | 6.45 | 0.00 |
| 47.50 | 8.00 | 6.45 | 0.00 |
| 48.00 | 8.00 | 6.45 | 0.00 |

## Summary for Subcatchment 2S: Drainage Area 2

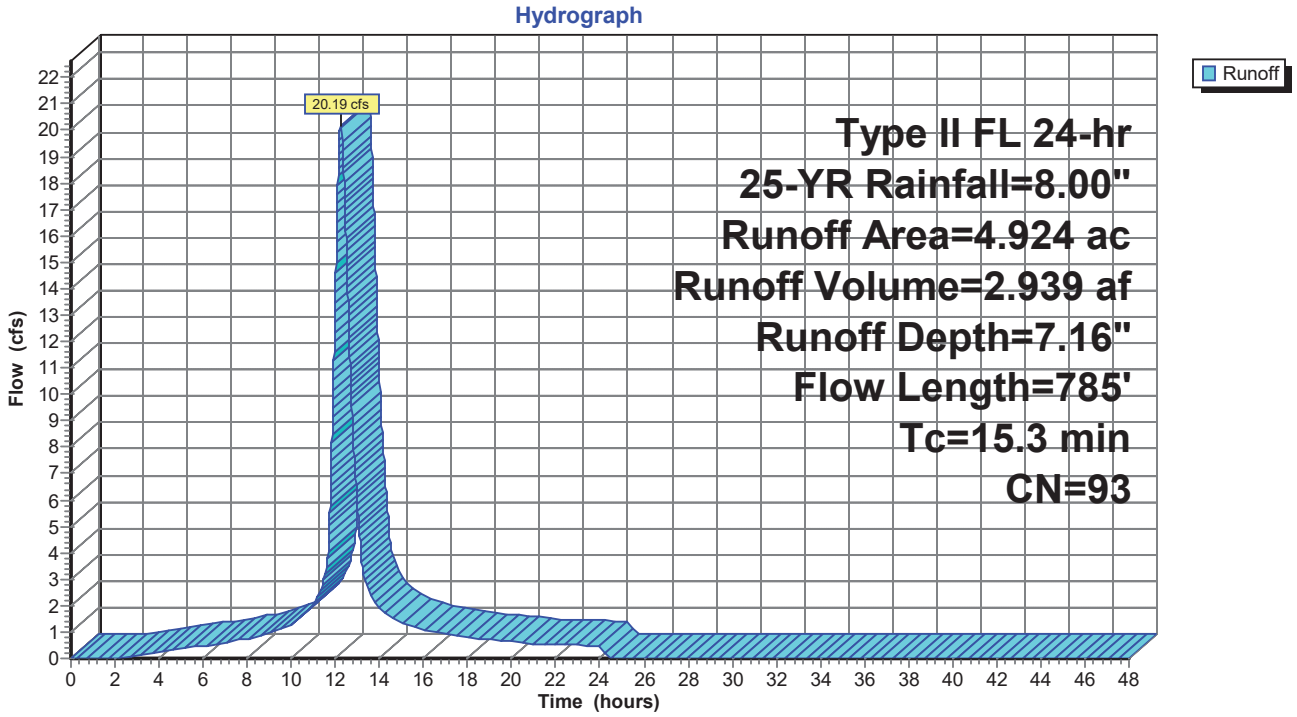
Runoff = 20.19 cfs @ 12.23 hrs, Volume= 2.939 af, Depth= 7.16"
Routed to Pond 1C : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II FL 24-hr 25-YR Rainfall=8.00"

| Area (ac) | CN | Description |
|---|---|---|
| 0.673 | 82 | Woods/grass comb., Fair, HSG D |
| 4.251 | 95 | Urban commercial, 85% imp, HSG D |
| 4.924 | 93 | Weighted Average |
| 1.311 | | 26.62% Pervious Area |
| 3.613 | | 73.38% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.8 | 100 | 0.0020 | 0.19 | | **Sheet Flow, Sheet Flow**<br>Fallow n= 0.050 P2= 4.36" |
| 4.0 | 153 | 0.0010 | 0.64 | | **Shallow Concentrated Flow, Shallow**<br>Paved Kv= 20.3 fps |
| 2.4 | 482 | 0.0020 | 3.35 | 70.30 | **Channel Flow, Channel**<br>Area= 21.0 sf Perim= 18.0' r= 1.17'<br>n= 0.022 Earth, clean & straight |
| 0.1 | 50 | 0.0200 | 10.18 | 31.99 | **Pipe Channel, Pipe**<br>24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'<br>n= 0.013 Concrete pipe, bends & connections |
| 15.3 | 785 | Total | | | |

## Subcatchment 2S: Drainage Area 2



## Hydrograph for Subcatchment 2S: Drainage Area 2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.02 | 0.00 | 0.00 |
| 1.00 | 0.07 | 0.00 | 0.00 |
| 1.50 | 0.12 | 0.00 | 0.00 |
| 2.00 | 0.18 | 0.00 | 0.01 |
| 2.50 | 0.23 | 0.01 | 0.07 |
| 3.00 | 0.28 | 0.02 | 0.13 |
| 3.50 | 0.34 | 0.04 | 0.20 |
| 4.00 | 0.41 | 0.06 | 0.24 |
| 4.50 | 0.47 | 0.09 | 0.28 |
| 5.00 | 0.53 | 0.13 | 0.36 |
| 5.50 | 0.61 | 0.17 | 0.42 |
| 6.00 | 0.68 | 0.22 | 0.46 |
| 6.50 | 0.75 | 0.27 | 0.51 |
| 7.00 | 0.84 | 0.33 | 0.60 |
| 7.50 | 0.93 | 0.40 | 0.68 |
| 8.00 | 1.03 | 0.47 | 0.74 |
| 8.50 | 1.13 | 0.55 | 0.83 |
| 9.00 | 1.25 | 0.65 | 0.99 |
| 9.50 | 1.38 | 0.77 | 1.11 |
| 10.00 | 1.53 | 0.89 | 1.28 |
| 10.50 | 1.71 | 1.05 | 1.60 |
| 11.00 | 1.94 | 1.26 | 2.07 |
| 11.50 | 2.27 | 1.56 | 3.05 |
| 12.00 | 3.67 | 2.90 | **13.85** |
| 12.50 | 5.32 | 4.51 | **15.43** |
| 13.00 | 5.92 | 5.10 | 5.78 |
| 13.50 | 6.18 | 5.36 | 2.60 |
| 14.00 | 6.38 | 5.56 | 1.96 |
| 14.50 | 6.55 | 5.72 | 1.61 |
| 15.00 | 6.69 | 5.86 | 1.37 |
| 15.50 | 6.81 | 5.99 | 1.22 |
| 16.00 | 6.93 | 6.10 | 1.10 |
| 16.50 | 7.03 | 6.20 | 0.98 |
| 17.00 | 7.12 | 6.29 | 0.90 |
| 17.50 | 7.21 | 6.38 | 0.87 |
| 18.00 | 7.29 | 6.45 | 0.78 |
| 18.50 | 7.36 | 6.53 | 0.75 |
| 19.00 | 7.43 | 6.60 | 0.70 |
| 19.50 | 7.50 | 6.67 | 0.67 |
| 20.00 | 7.57 | 6.74 | 0.67 |
| 20.50 | 7.63 | 6.80 | 0.59 |
| 21.00 | 7.69 | 6.85 | 0.55 |
| 21.50 | 7.74 | 6.91 | 0.55 |
| 22.00 | 7.80 | 6.96 | 0.55 |
| 22.50 | 7.86 | 7.02 | 0.55 |
| 23.00 | 7.91 | 7.07 | 0.51 |
| 23.50 | 7.96 | 7.12 | 0.47 |
| 24.00 | **8.00** | **7.16** | 0.43 |
| 24.50 | 8.00 | 7.16 | 0.01 |
| 25.00 | 8.00 | 7.16 | 0.00 |
| 25.50 | 8.00 | 7.16 | 0.00 |
| 26.00 | 8.00 | 7.16 | 0.00 |
| 26.50 | 8.00 | 7.16 | 0.00 |
| 27.00 | 8.00 | 7.16 | 0.00 |
| 27.50 | 8.00 | 7.16 | 0.00 |
| 28.00 | 8.00 | 7.16 | 0.00 |
| 28.50 | 8.00 | 7.16 | 0.00 |
| 29.00 | 8.00 | 7.16 | 0.00 |
| 29.50 | 8.00 | 7.16 | 0.00 |
| 30.00 | 8.00 | 7.16 | 0.00 |
| 30.50 | 8.00 | 7.16 | 0.00 |
| 31.00 | 8.00 | 7.16 | 0.00 |
| 31.50 | 8.00 | 7.16 | 0.00 |
| 32.00 | 8.00 | 7.16 | 0.00 |
| 32.50 | 8.00 | 7.16 | 0.00 |
| 33.00 | 8.00 | 7.16 | 0.00 |
| 33.50 | 8.00 | 7.16 | 0.00 |
| 34.00 | 8.00 | 7.16 | 0.00 |
| 34.50 | 8.00 | 7.16 | 0.00 |
| 35.00 | 8.00 | 7.16 | 0.00 |
| 35.50 | 8.00 | 7.16 | 0.00 |
| 36.00 | 8.00 | 7.16 | 0.00 |
| 36.50 | 8.00 | 7.16 | 0.00 |
| 37.00 | 8.00 | 7.16 | 0.00 |
| 37.50 | 8.00 | 7.16 | 0.00 |
| 38.00 | 8.00 | 7.16 | 0.00 |
| 38.50 | 8.00 | 7.16 | 0.00 |
| 39.00 | 8.00 | 7.16 | 0.00 |
| 39.50 | 8.00 | 7.16 | 0.00 |
| 40.00 | 8.00 | 7.16 | 0.00 |
| 40.50 | 8.00 | 7.16 | 0.00 |
| 41.00 | 8.00 | 7.16 | 0.00 |
| 41.50 | 8.00 | 7.16 | 0.00 |
| 42.00 | 8.00 | 7.16 | 0.00 |
| 42.50 | 8.00 | 7.16 | 0.00 |
| 43.00 | 8.00 | 7.16 | 0.00 |
| 43.50 | 8.00 | 7.16 | 0.00 |
| 44.00 | 8.00 | 7.16 | 0.00 |
| 44.50 | 8.00 | 7.16 | 0.00 |
| 45.00 | 8.00 | 7.16 | 0.00 |
| 45.50 | 8.00 | 7.16 | 0.00 |
| 46.00 | 8.00 | 7.16 | 0.00 |
| 46.50 | 8.00 | 7.16 | 0.00 |
| 47.00 | 8.00 | 7.16 | 0.00 |
| 47.50 | 8.00 | 7.16 | 0.00 |
| 48.00 | 8.00 | 7.16 | 0.00 |

## Summary for Subcatchment 3S: Drainage Area 3

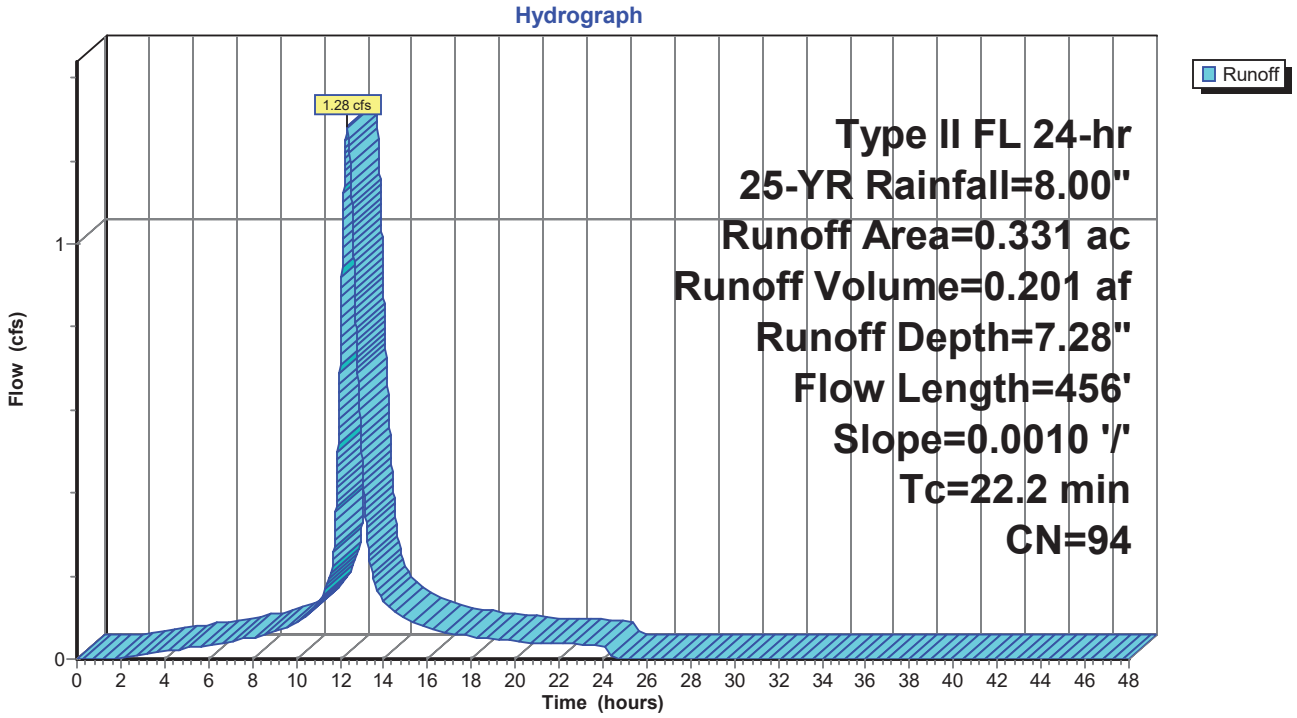
Runoff = 1.28 cfs @ 12.35 hrs, Volume= 0.201 af, Depth= 7.28"
Routed to Pond 1C : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II FL 24-hr 25-YR Rainfall=8.00"

| Area (ac) | CN | Description |
|---|---|---|
| 0.331 | 94 | Fallow, bare soil, HSG D |
| 0.331 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 3.4 | 100 | 0.0010 | 0.48 | | **Sheet Flow, Sheet Flow** Smooth surfaces n= 0.011 P2= 4.36" |
| 18.8 | 356 | 0.0010 | 0.32 | | **Shallow Concentrated Flow, Shallow** Nearly Bare & Untilled Kv= 10.0 fps |
| 22.2 | 456 | Total | | | |

## Subcatchment 3S: Drainage Area 3



## Hydrograph for Subcatchment 3S: Drainage Area 3

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.02 | 0.00 | 0.00 |
| 1.00 | 0.07 | 0.00 | 0.00 |
| 1.50 | 0.12 | 0.00 | 0.00 |
| 2.00 | 0.18 | 0.00 | 0.00 |
| 2.50 | 0.23 | 0.01 | 0.01 |
| 3.00 | 0.28 | 0.03 | 0.01 |
| 3.50 | 0.34 | 0.06 | 0.02 |
| 4.00 | 0.41 | 0.08 | 0.02 |
| 4.50 | 0.47 | 0.12 | 0.02 |
| 5.00 | 0.53 | 0.16 | 0.03 |
| 5.50 | 0.61 | 0.20 | 0.03 |
| 6.00 | 0.68 | 0.25 | 0.03 |
| 6.50 | 0.75 | 0.31 | 0.04 |
| 7.00 | 0.84 | 0.37 | 0.04 |
| 7.50 | 0.93 | 0.45 | 0.05 |
| 8.00 | 1.03 | 0.53 | 0.05 |
| 8.50 | 1.13 | 0.61 | 0.06 |
| 9.00 | 1.25 | 0.72 | 0.07 |
| 9.50 | 1.38 | 0.83 | 0.08 |
| 10.00 | 1.53 | 0.97 | 0.09 |
| 10.50 | 1.71 | 1.13 | 0.11 |
| 11.00 | 1.94 | 1.34 | 0.13 |
| 11.50 | 2.27 | 1.65 | 0.19 |
| 12.00 | 3.67 | 3.00 | **0.71** |
| 12.50 | 5.32 | 4.62 | **1.17** |
| 13.00 | 5.92 | 5.22 | 0.49 |
| 13.50 | 6.18 | 5.48 | 0.20 |
| 14.00 | 6.38 | 5.68 | 0.14 |
| 14.50 | 6.55 | 5.84 | 0.11 |
| 15.00 | 6.69 | 5.98 | 0.10 |
| 15.50 | 6.81 | 6.10 | 0.08 |
| 16.00 | 6.93 | 6.21 | 0.08 |
| 16.50 | 7.03 | 6.31 | 0.07 |
| 17.00 | 7.12 | 6.41 | 0.06 |
| 17.50 | 7.21 | 6.49 | 0.06 |
| 18.00 | 7.29 | 6.57 | 0.05 |
| 18.50 | 7.36 | 6.65 | 0.05 |
| 19.00 | 7.43 | 6.72 | 0.05 |
| 19.50 | 7.50 | 6.79 | 0.04 |
| 20.00 | 7.57 | 6.86 | 0.05 |
| 20.50 | 7.63 | 6.92 | 0.04 |
| 21.00 | 7.69 | 6.97 | 0.04 |
| 21.50 | 7.74 | 7.03 | 0.04 |
| 22.00 | 7.80 | 7.08 | 0.04 |
| 22.50 | 7.86 | 7.14 | 0.04 |
| 23.00 | 7.91 | 7.19 | 0.04 |
| 23.50 | 7.96 | 7.24 | 0.03 |
| 24.00 | **8.00** | **7.28** | 0.03 |
| 24.50 | 8.00 | 7.28 | 0.00 |
| 25.00 | 8.00 | 7.28 | 0.00 |
| 25.50 | 8.00 | 7.28 | 0.00 |
| 26.00 | 8.00 | 7.28 | 0.00 |
| 26.50 | 8.00 | 7.28 | 0.00 |
| 27.00 | 8.00 | 7.28 | 0.00 |
| 27.50 | 8.00 | 7.28 | 0.00 |
| 28.00 | 8.00 | 7.28 | 0.00 |
| 28.50 | 8.00 | 7.28 | 0.00 |
| 29.00 | 8.00 | 7.28 | 0.00 |
| 29.50 | 8.00 | 7.28 | 0.00 |
| 30.00 | 8.00 | 7.28 | 0.00 |
| 30.50 | 8.00 | 7.28 | 0.00 |
| 31.00 | 8.00 | 7.28 | 0.00 |
| 31.50 | 8.00 | 7.28 | 0.00 |
| 32.00 | 8.00 | 7.28 | 0.00 |
| 32.50 | 8.00 | 7.28 | 0.00 |
| 33.00 | 8.00 | 7.28 | 0.00 |
| 33.50 | 8.00 | 7.28 | 0.00 |
| 34.00 | 8.00 | 7.28 | 0.00 |
| 34.50 | 8.00 | 7.28 | 0.00 |
| 35.00 | 8.00 | 7.28 | 0.00 |
| 35.50 | 8.00 | 7.28 | 0.00 |
| 36.00 | 8.00 | 7.28 | 0.00 |
| 36.50 | 8.00 | 7.28 | 0.00 |
| 37.00 | 8.00 | 7.28 | 0.00 |
| 37.50 | 8.00 | 7.28 | 0.00 |
| 38.00 | 8.00 | 7.28 | 0.00 |
| 38.50 | 8.00 | 7.28 | 0.00 |
| 39.00 | 8.00 | 7.28 | 0.00 |
| 39.50 | 8.00 | 7.28 | 0.00 |
| 40.00 | 8.00 | 7.28 | 0.00 |
| 40.50 | 8.00 | 7.28 | 0.00 |
| 41.00 | 8.00 | 7.28 | 0.00 |
| 41.50 | 8.00 | 7.28 | 0.00 |
| 42.00 | 8.00 | 7.28 | 0.00 |
| 42.50 | 8.00 | 7.28 | 0.00 |
| 43.00 | 8.00 | 7.28 | 0.00 |
| 43.50 | 8.00 | 7.28 | 0.00 |
| 44.00 | 8.00 | 7.28 | 0.00 |
| 44.50 | 8.00 | 7.28 | 0.00 |
| 45.00 | 8.00 | 7.28 | 0.00 |
| 45.50 | 8.00 | 7.28 | 0.00 |
| 46.00 | 8.00 | 7.28 | 0.00 |
| 46.50 | 8.00 | 7.28 | 0.00 |
| 47.00 | 8.00 | 7.28 | 0.00 |
| 47.50 | 8.00 | 7.28 | 0.00 |
| 48.00 | 8.00 | 7.28 | 0.00 |

## Summary for Subcatchment 4S: Drainage Area 4

[47] Hint: Peak is 281% of capacity of segment #4

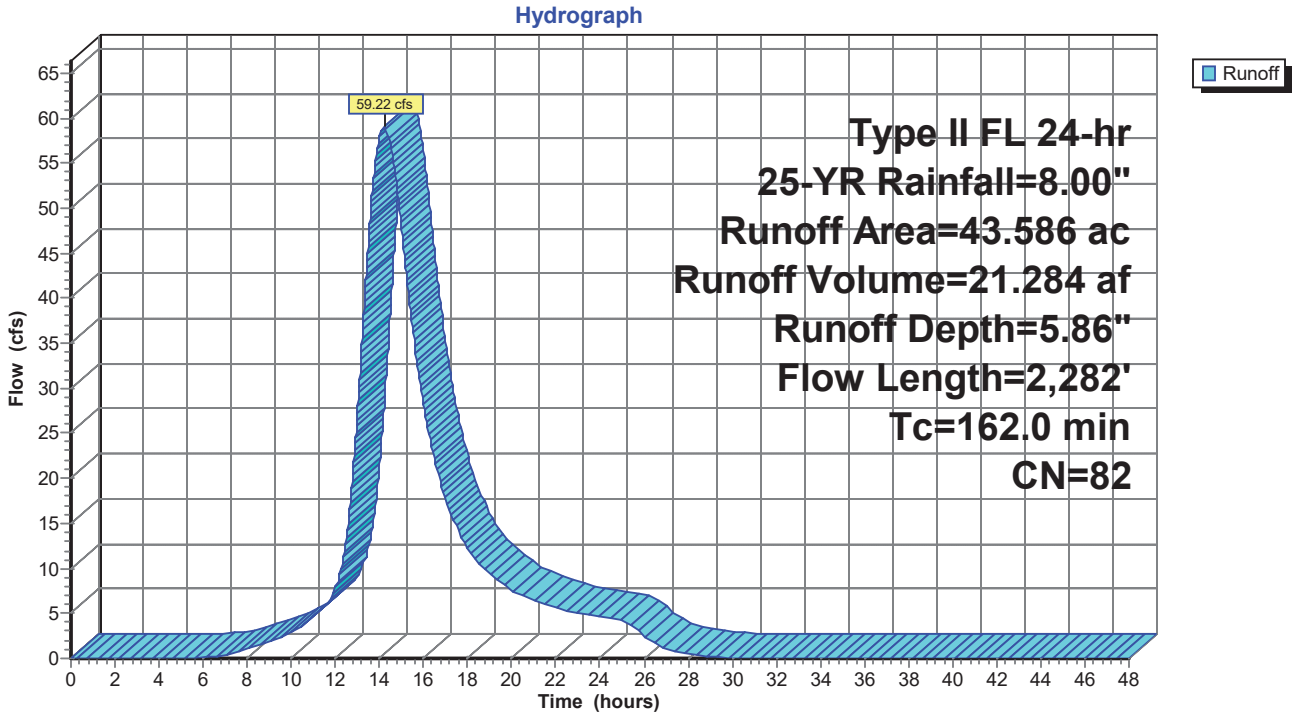
Runoff = 59.22 cfs @ 14.22 hrs, Volume= 21.284 af, Depth= 5.86"
Routed to Pond 1C : Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II FL 24-hr 25-YR Rainfall=8.00"

| Area (ac) | CN | Description |
|---|---|---|
| 35.870 | 79 | Woods, Fair, HSG D |
| 1.077 | 82 | Woods/grass comb., Fair, HSG D |
| 6.639 | 95 | Urban commercial, 85% imp, HSG D |
| 43.586 | 82 | Weighted Average |
| 37.943 | | 87.05% Pervious Area |
| 5.643 | | 12.95% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 61.0 | 100 | 0.0010 | 0.03 | | **Sheet Flow, Sheet flow**<br>Woods: Light underbrush n= 0.400 P2= 4.36" |
| 96.4 | 915 | 0.0010 | 0.16 | | **Shallow Concentrated Flow, Woods**<br>Woodland Kv= 5.0 fps |
| 2.6 | 494 | 0.0020 | 3.14 | 119.38 | **Channel Flow, Woods channel**<br>Area= 38.0 sf Perim= 22.5' r= 1.69'<br>n= 0.030 Stream, clean & straight |
| 0.6 | 104 | 0.0010 | 2.98 | 21.09 | **Pipe Channel, Culvert under RR**<br>36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75'<br>n= 0.013 |
| 1.1 | 233 | 0.0010 | 3.54 | 247.70 | **Channel Flow, Cross Section B**<br>Area= 70.0 sf Perim= 27.1' r= 2.58'<br>n= 0.025 Earth, clean & winding |
| 0.3 | 436 | 0.0420 | 22.89 | 290.84 | **Pipe Channel, 48" ERCP**<br>60.0" x 38.0", R=48.0" Elliptical Area= 12.7 sf Perim= 13.1' r= 0.97<br>n= 0.013 |
| 162.0 | 2,282 | Total | | | |

## Subcatchment 4S: Drainage Area 4



## Hydrograph for Subcatchment 4S: Drainage Area 4

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.02 | 0.00 | 0.00 |
| 1.00 | 0.07 | 0.00 | 0.00 |
| 1.50 | 0.12 | 0.00 | 0.00 |
| 2.00 | 0.18 | 0.00 | 0.00 |
| 2.50 | 0.23 | 0.00 | 0.00 |
| 3.00 | 0.28 | 0.00 | 0.00 |
| 3.50 | 0.34 | 0.00 | 0.00 |
| 4.00 | 0.41 | 0.00 | 0.00 |
| 4.50 | 0.47 | 0.00 | 0.00 |
| 5.00 | 0.53 | 0.00 | 0.00 |
| 5.50 | 0.61 | 0.01 | 0.02 |
| 6.00 | 0.68 | 0.02 | 0.08 |
| 6.50 | 0.75 | 0.04 | 0.21 |
| 7.00 | 0.84 | 0.06 | 0.41 |
| 7.50 | 0.93 | 0.09 | 0.68 |
| 8.00 | 1.03 | 0.12 | 1.01 |
| 8.50 | 1.13 | 0.17 | 1.39 |
| 9.00 | 1.25 | 0.22 | 1.84 |
| 9.50 | 1.38 | 0.28 | 2.35 |
| 10.00 | 1.53 | 0.36 | 2.96 |
| 10.50 | 1.71 | 0.47 | 3.69 |
| 11.00 | 1.94 | 0.61 | 4.60 |
| 11.50 | 2.27 | 0.83 | 5.81 |
| 12.00 | 3.67 | 1.92 | 7.79 |
| 12.50 | 5.32 | 3.36 | 13.54 |
| 13.00 | 5.92 | 3.91 | 27.45 |
| 13.50 | 6.18 | 4.16 | 46.57 |
| 14.00 | 6.38 | 4.34 | **57.85** |
| 14.50 | 6.55 | 4.49 | **57.11** |
| 15.00 | 6.69 | 4.63 | 47.91 |
| 15.50 | 6.81 | 4.74 | 36.64 |
| 16.00 | 6.93 | 4.85 | 28.12 |
| 16.50 | 7.03 | 4.94 | 22.09 |
| 17.00 | 7.12 | 5.03 | 17.75 |
| 17.50 | 7.21 | 5.11 | 14.59 |
| 18.00 | 7.29 | 5.18 | 12.25 |
| 18.50 | 7.36 | 5.26 | 10.59 |
| 19.00 | 7.43 | 5.32 | 9.32 |
| 19.50 | 7.50 | 5.39 | 8.34 |
| 20.00 | 7.57 | 5.45 | 7.59 |
| 20.50 | 7.63 | 5.51 | 6.96 |
| 21.00 | 7.69 | 5.56 | 6.45 |
| 21.50 | 7.74 | 5.62 | 6.01 |
| 22.00 | 7.80 | 5.67 | 5.63 |
| 22.50 | 7.86 | 5.72 | 5.33 |
| 23.00 | 7.91 | 5.77 | 5.08 |
| 23.50 | 7.96 | 5.82 | 4.92 |
| 24.00 | **8.00** | **5.86** | 4.76 |
| 24.50 | 8.00 | 5.86 | 4.55 |
| 25.00 | 8.00 | 5.86 | 4.17 |
| 25.50 | 8.00 | 5.86 | 3.46 |
| 26.00 | 8.00 | 5.86 | 2.57 |
| 26.50 | 8.00 | 5.86 | 1.74 |
| 27.00 | 8.00 | 5.86 | 1.09 |
| 27.50 | 8.00 | 5.86 | 0.69 |
| 28.00 | 8.00 | 5.86 | 0.44 |
| 28.50 | 8.00 | 5.86 | 0.28 |
| 29.00 | 8.00 | 5.86 | 0.17 |
| 29.50 | 8.00 | 5.86 | 0.11 |
| 30.00 | 8.00 | 5.86 | 0.07 |
| 30.50 | 8.00 | 5.86 | 0.04 |
| 31.00 | 8.00 | 5.86 | 0.02 |
| 31.50 | 8.00 | 5.86 | 0.01 |
| 32.00 | 8.00 | 5.86 | 0.01 |
| 32.50 | 8.00 | 5.86 | 0.00 |
| 33.00 | 8.00 | 5.86 | 0.00 |
| 33.50 | 8.00 | 5.86 | 0.00 |
| 34.00 | 8.00 | 5.86 | 0.00 |
| 34.50 | 8.00 | 5.86 | 0.00 |
| 35.00 | 8.00 | 5.86 | 0.00 |
| 35.50 | 8.00 | 5.86 | 0.00 |
| 36.00 | 8.00 | 5.86 | 0.00 |
| 36.50 | 8.00 | 5.86 | 0.00 |
| 37.00 | 8.00 | 5.86 | 0.00 |
| 37.50 | 8.00 | 5.86 | 0.00 |
| 38.00 | 8.00 | 5.86 | 0.00 |
| 38.50 | 8.00 | 5.86 | 0.00 |
| 39.00 | 8.00 | 5.86 | 0.00 |
| 39.50 | 8.00 | 5.86 | 0.00 |
| 40.00 | 8.00 | 5.86 | 0.00 |
| 40.50 | 8.00 | 5.86 | 0.00 |
| 41.00 | 8.00 | 5.86 | 0.00 |
| 41.50 | 8.00 | 5.86 | 0.00 |
| 42.00 | 8.00 | 5.86 | 0.00 |
| 42.50 | 8.00 | 5.86 | 0.00 |
| 43.00 | 8.00 | 5.86 | 0.00 |
| 43.50 | 8.00 | 5.86 | 0.00 |
| 44.00 | 8.00 | 5.86 | 0.00 |
| 44.50 | 8.00 | 5.86 | 0.00 |
| 45.00 | 8.00 | 5.86 | 0.00 |
| 45.50 | 8.00 | 5.86 | 0.00 |
| 46.00 | 8.00 | 5.86 | 0.00 |
| 46.50 | 8.00 | 5.86 | 0.00 |
| 47.00 | 8.00 | 5.86 | 0.00 |
| 47.50 | 8.00 | 5.86 | 0.00 |
| 48.00 | 8.00 | 5.86 | 0.00 |

## Summary for Pond 1C: Culvert

[44] Hint: Outlet device #1 is below defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=72)

Inflow Area = 53.488 ac, 20.42% Impervious, Inflow Depth = 6.04" for 25-YR event
Inflow = 62.73 cfs @ 14.22 hrs, Volume= 26.921 af
Outflow = 56.65 cfs @ 14.73 hrs, Volume= 26.921 af, Atten= 10%, Lag= 30.5 min
Primary = 56.65 cfs @ 14.73 hrs, Volume= 26.921 af
Routed to nonexistent node 2L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 4.83' @ 14.73 hrs Storage= 2.836 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 33.6 min ( 955.0 - 921.4 )

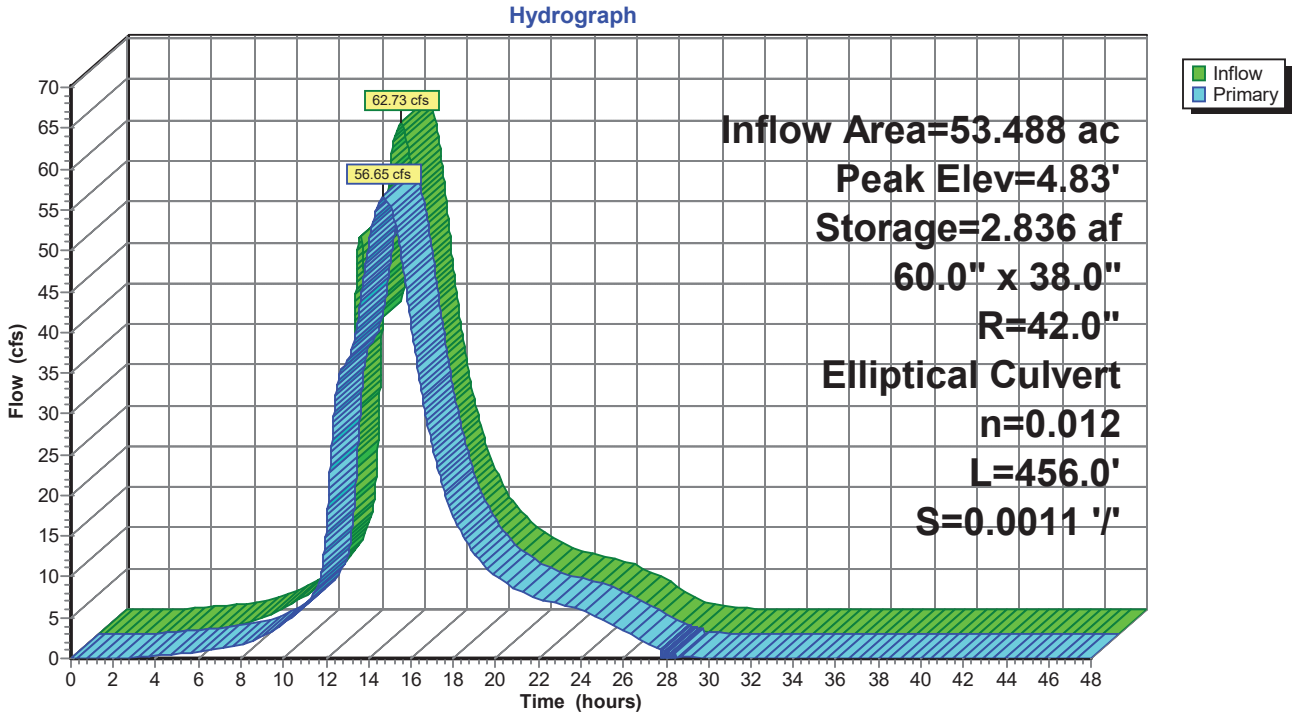
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 2.00' | 3.970 af | **Custom Stage Data** Listed below |

| Elevation (feet) | Cum.Store (acre-feet) |
|---|---|
| 2.00 | 0.000 |
| 2.50 | 0.237 |
| 3.00 | 0.654 |
| 3.50 | 1.148 |
| 4.00 | 1.712 |
| 4.50 | 2.346 |
| 5.00 | 3.081 |
| 5.50 | 3.970 |

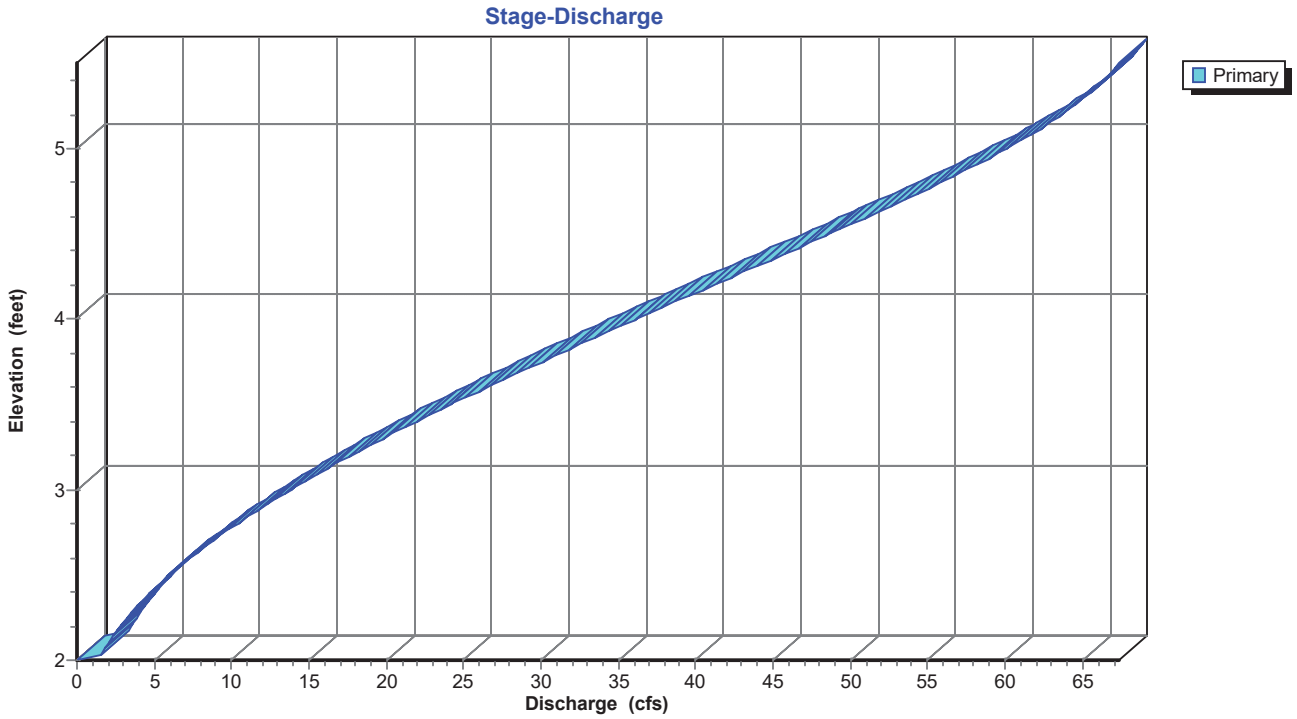
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 1.50' | **60.0" W x 38.0" H, R=42.0" Elliptical Culvert**<br>L= 456.0' RCP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 1.50' / 1.00' S= 0.0011 '/' Cc= 0.900<br>n= 0.012, Flow Area= 12.40 sf |

**Primary OutFlow** Max=56.65 cfs @ 14.73 hrs HW=4.83' (Free Discharge)
↑**1=Culvert** (Barrel Controls 56.65 cfs @ 5.38 fps)

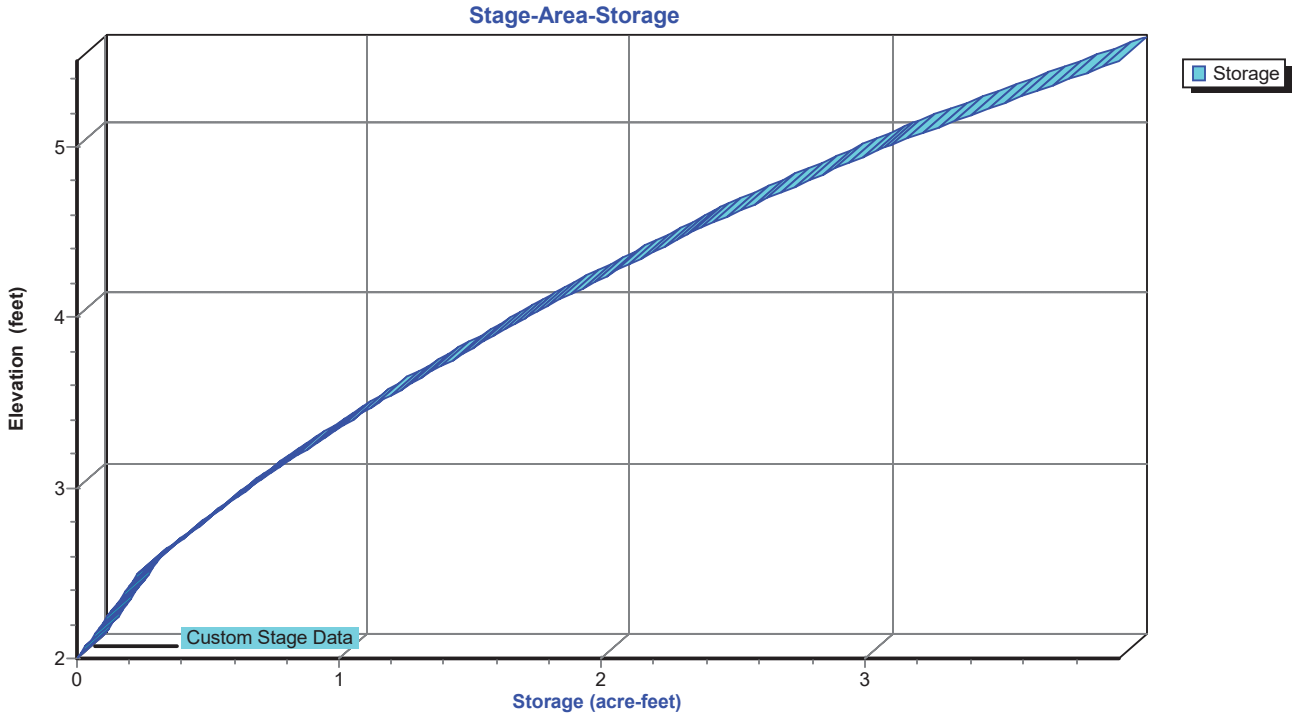
## Pond 1C: Culvert




## Pond 1C: Culvert



## Pond 1C: Culvert



## Hydrograph for Pond 1C: Culvert

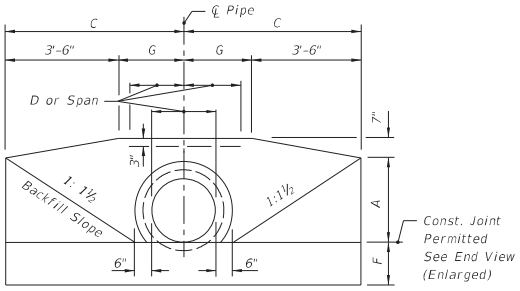
| Time (hours) | Inflow (cfs) | Storage (acre-feet) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|
| 0.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 1.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 2.00 | 0.01 | 0.000 | 2.00 | 0.01 |
| 3.00 | 0.14 | 0.000 | 2.00 | 0.14 |
| 4.00 | 0.32 | 0.000 | 2.00 | 0.32 |
| 5.00 | 0.53 | 0.000 | 2.00 | 0.53 |
| 6.00 | 0.80 | 0.000 | 2.00 | 0.80 |
| 7.00 | 1.39 | 0.000 | 2.00 | 1.35 |
| 8.00 | 2.27 | 0.029 | 2.06 | 1.72 |
| 9.00 | 3.58 | 0.089 | 2.19 | 2.68 |
| 10.00 | 5.29 | 0.168 | 2.35 | 4.25 |
| 11.00 | 8.44 | 0.275 | 2.55 | 6.57 |
| 12.00 | 34.32 | 0.732 | 3.08 | 15.36 |
| 13.00 | 38.96 | 1.726 | 4.01 | 36.48 |
| 14.00 | **61.74** | **2.454** | **4.57** | **50.56** |
| 15.00 | **50.64** | **2.777** | **4.79** | **55.76** |
| 16.00 | 30.30 | 1.960 | 4.20 | 41.10 |
| 17.00 | 19.55 | 1.241 | 3.58 | 26.11 |
| 18.00 | 13.82 | 0.837 | 3.18 | 17.45 |
| 19.00 | 10.72 | 0.606 | 2.94 | 12.81 |
| 20.00 | 8.92 | 0.475 | 2.79 | 10.12 |
| 21.00 | 7.55 | 0.387 | 2.68 | 8.46 |
| 22.00 | 6.73 | 0.324 | 2.60 | 7.37 |
| 23.00 | 6.10 | 0.279 | 2.55 | 6.62 |
| 24.00 | 5.62 | 0.242 | 2.51 | 6.04 |
| 25.00 | 4.17 | 0.187 | 2.40 | 4.71 |
| 26.00 | 2.57 | 0.130 | 2.27 | 3.46 |
| 27.00 | 1.09 | 0.051 | 2.11 | 2.05 |
| 28.00 | 0.44 | 0.000 | 2.00 | 0.00 |
| 29.00 | 0.17 | 0.000 | 2.00 | 0.00 |
| 30.00 | 0.07 | 0.000 | 2.00 | 0.00 |
| 31.00 | 0.02 | 0.000 | 2.00 | 0.00 |
| 32.00 | 0.01 | 0.000 | 2.00 | 0.00 |
| 33.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 34.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 35.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 36.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 37.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 38.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 39.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 40.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 41.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 42.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 43.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 44.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 45.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 46.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 47.00 | 0.00 | 0.000 | 2.00 | 0.00 |
| 48.00 | 0.00 | 0.000 | 2.00 | 0.00 |

## Stage-Discharge for Pond 1C: Culvert

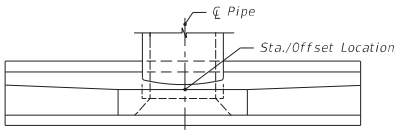
| Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 2.00 | 0.00 | 3.04 | 14.61 | 4.08 | 38.20 | 5.12 | 62.37 |
| 2.02 | 1.46 | 3.06 | 14.99 | 4.10 | 38.70 | 5.14 | 62.72 |
| 2.04 | 1.59 | 3.08 | 15.37 | 4.12 | 39.20 | 5.16 | 63.06 |
| 2.06 | 1.72 | 3.10 | 15.76 | 4.14 | 39.71 | 5.18 | 63.40 |
| 2.08 | 1.85 | 3.12 | 16.15 | 4.16 | 40.21 | 5.20 | 63.72 |
| 2.10 | 1.99 | 3.14 | 16.55 | 4.18 | 40.71 | 5.22 | 64.04 |
| 2.12 | 2.14 | 3.16 | 16.95 | 4.20 | 41.22 | 5.24 | 64.35 |
| 2.14 | 2.29 | 3.18 | 17.35 | 4.22 | 41.72 | 5.26 | 64.65 |
| 2.16 | 2.45 | 3.20 | 17.76 | 4.24 | 42.23 | 5.28 | 64.94 |
| 2.18 | 2.61 | 3.22 | 18.17 | 4.26 | 42.73 | 5.30 | 65.23 |
| 2.20 | 2.78 | 3.24 | 18.58 | 4.28 | 43.24 | 5.32 | 65.50 |
| 2.22 | 2.95 | 3.26 | 19.00 | 4.30 | 43.74 | 5.34 | 65.76 |
| 2.24 | 3.13 | 3.28 | 19.41 | 4.32 | 44.25 | 5.36 | 66.01 |
| 2.26 | 3.32 | 3.30 | 19.84 | 4.34 | 44.75 | 5.38 | 66.24 |
| 2.28 | 3.51 | 3.32 | 20.26 | 4.36 | 45.25 | 5.40 | 66.47 |
| 2.30 | 3.70 | 3.34 | 20.69 | 4.38 | 45.75 | 5.42 | 66.68 |
| 2.32 | 3.90 | 3.36 | 21.12 | 4.40 | 46.26 | 5.44 | 66.88 |
| 2.34 | 4.11 | 3.38 | 21.56 | 4.42 | 46.76 | 5.46 | 67.06 |
| 2.36 | 4.32 | 3.40 | 22.00 | 4.44 | 47.26 | 5.48 | 67.22 |
| 2.38 | 4.54 | 3.42 | 22.44 | 4.46 | 47.76 | 5.50 | **67.37** |
| 2.40 | 4.76 | 3.44 | 22.88 | 4.48 | 48.25 | | |
| 2.42 | 4.99 | 3.46 | 23.33 | 4.50 | 48.75 | | |
| 2.44 | 5.23 | 3.48 | 23.77 | 4.52 | 49.25 | | |
| 2.46 | 5.47 | 3.50 | 24.23 | 4.54 | 49.74 | | |
| 2.48 | 5.71 | 3.52 | 24.68 | 4.56 | 50.23 | | |
| 2.50 | 5.97 | 3.54 | 25.14 | 4.58 | 50.72 | | |
| 2.52 | 6.22 | 3.56 | 25.60 | 4.60 | 51.21 | | |
| 2.54 | 6.49 | 3.58 | 26.06 | 4.62 | 51.69 | | |
| 2.56 | 6.75 | 3.60 | 26.52 | 4.64 | 52.17 | | |
| 2.58 | 7.03 | 3.62 | 26.99 | 4.66 | 52.65 | | |
| 2.60 | 7.31 | 3.64 | 27.45 | 4.68 | 53.13 | | |
| 2.62 | 7.59 | 3.66 | 27.93 | 4.70 | 53.60 | | |
| 2.64 | 7.88 | 3.68 | 28.40 | 4.72 | 54.07 | | |
| 2.66 | 8.17 | 3.70 | 28.87 | 4.74 | 54.54 | | |
| 2.68 | 8.47 | 3.72 | 29.35 | 4.76 | 55.00 | | |
| 2.70 | 8.77 | 3.74 | 29.83 | 4.78 | 55.46 | | |
| 2.72 | 9.08 | 3.76 | 30.31 | 4.80 | 55.91 | | |
| 2.74 | 9.39 | 3.78 | 30.79 | 4.82 | 56.36 | | |
| 2.76 | 9.71 | 3.80 | 31.27 | 4.84 | 56.80 | | |
| 2.78 | 10.03 | 3.82 | 31.76 | 4.86 | 57.23 | | |
| 2.80 | 10.36 | 3.84 | 32.25 | 4.88 | 57.66 | | |
| 2.82 | 10.69 | 3.86 | 32.74 | 4.90 | 58.09 | | |
| 2.84 | 11.02 | 3.88 | 33.23 | 4.92 | 58.50 | | |
| 2.86 | 11.36 | 3.90 | 33.72 | 4.94 | 58.92 | | |
| 2.88 | 11.71 | 3.92 | 34.21 | 4.96 | 59.32 | | |
| 2.90 | 12.06 | 3.94 | 34.71 | 4.98 | 59.73 | | |
| 2.92 | 12.41 | 3.96 | 35.20 | 5.00 | 60.12 | | |
| 2.94 | 12.77 | 3.98 | 35.70 | 5.02 | 60.51 | | |
| 2.96 | 13.13 | 4.00 | 36.20 | 5.04 | 60.90 | | |
| 2.98 | 13.49 | 4.02 | 36.70 | 5.06 | 61.27 | | |
| 3.00 | 13.86 | 4.04 | 37.20 | 5.08 | 61.64 | | |
| 3.02 | 14.23 | 4.06 | 37.70 | 5.10 | 62.01 | | |

## Stage-Area-Storage for Pond 1C: Culvert

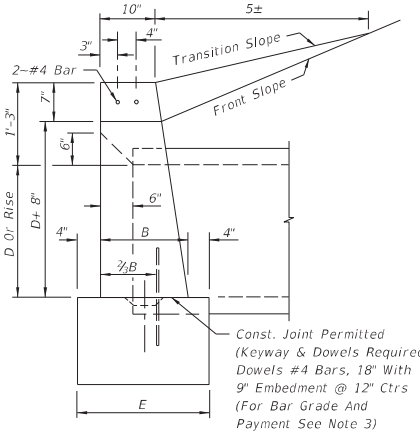
| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 2.00 | 0.000 |
| 2.05 | 0.024 |
| 2.10 | 0.047 |
| 2.15 | 0.071 |
| 2.20 | 0.095 |
| 2.25 | 0.119 |
| 2.30 | 0.142 |
| 2.35 | 0.166 |
| 2.40 | 0.190 |
| 2.45 | 0.213 |
| 2.50 | 0.237 |
| 2.55 | 0.279 |
| 2.60 | 0.320 |
| 2.65 | 0.362 |
| 2.70 | 0.404 |
| 2.75 | 0.446 |
| 2.80 | 0.487 |
| 2.85 | 0.529 |
| 2.90 | 0.571 |
| 2.95 | 0.612 |
| 3.00 | 0.654 |
| 3.05 | 0.703 |
| 3.10 | 0.753 |
| 3.15 | 0.802 |
| 3.20 | 0.852 |
| 3.25 | 0.901 |
| 3.30 | 0.950 |
| 3.35 | 1.000 |
| 3.40 | 1.049 |
| 3.45 | 1.099 |
| 3.50 | 1.148 |
| 3.55 | 1.204 |
| 3.60 | 1.261 |
| 3.65 | 1.317 |
| 3.70 | 1.374 |
| 3.75 | 1.430 |
| 3.80 | 1.486 |
| 3.85 | 1.543 |
| 3.90 | 1.599 |
| 3.95 | 1.656 |
| 4.00 | 1.712 |
| 4.05 | 1.775 |
| 4.10 | 1.839 |
| 4.15 | 1.902 |
| 4.20 | 1.966 |
| 4.25 | 2.029 |
| 4.30 | 2.092 |
| 4.35 | 2.156 |
| 4.40 | 2.219 |
| 4.45 | 2.283 |
| 4.50 | 2.346 |
| 4.55 | 2.419 |
| 4.60 | 2.493 |
| 4.65 | 2.567 |
| 4.70 | 2.640 |
| 4.75 | 2.714 |
| 4.80 | 2.787 |
| 4.85 | 2.860 |
| 4.90 | 2.934 |
| 4.95 | 3.008 |
| 5.00 | 3.081 |
| 5.05 | 3.170 |
| 5.10 | 3.259 |
| 5.15 | 3.348 |
| 5.20 | 3.437 |
| 5.25 | 3.526 |
| 5.30 | 3.614 |
| 5.35 | 3.703 |
| 5.40 | 3.792 |
| 5.45 | 3.881 |
| 5.50 | **3.970** |




FRONT VIEW

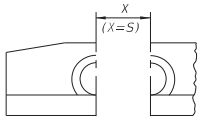



TOP VIEW

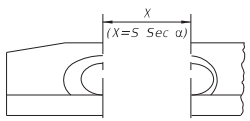



END VIEW (ENLARGED)

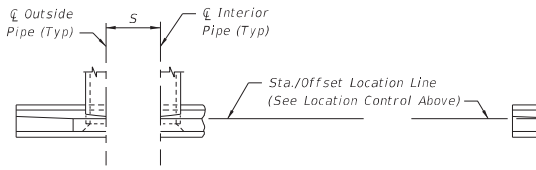
## ENDWALL DIMENSIONS (EXCLUSIVE OF MULTIPLE PIPE SPACING)




FRONT VIEW

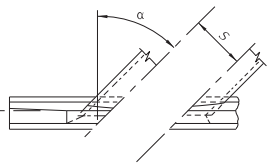



FRONT VIEW




TOP VIEW

NORMAL PIPE



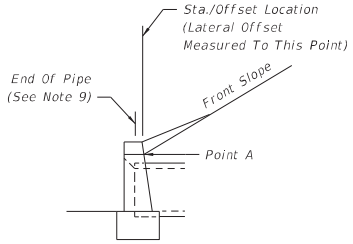

TOP VIEW

SKEWED PIPE

LEGEND

α Pipe Skew
S Center To Center Pipe Spacing
X Centerline To Centerline Dimension At Face Of Headwall

## PIPE AND SPACING FOR MULTIPLE PIPE ENDWALL POSITIONS FOR SINGLE AND MULTIPLE




END VIEW

1. Position is set by the intersection of the front slope and Point A where this intersection falls outside the clear zone.

2. Where the front slope and Point A intersects inside the clear zone, the endwall is positioned so the Station/Offset Location is at the clear zone limit. The front slope is transitioned to the endwall as shown in Index No. 280.

## STANDARD LOCATION CONTROL

### GENERAL NOTES

1. Endwall dimensions, locations and positions are for round and elliptical concrete pipe and for round and pipe-arch corrugated metal pipe. Round concrete pipe shown.

2. Front slope and ditch transitions shall be in accordance with Index No. 280.

3. Endwalls may be cast in place or precast concrete. Reinforcing steel shall be Grades 40 or 60. Additional reinforcement necessary for handling precast units shall be determined by the Contractor or the supplier. Cost of reinforcement shall be included in the contract unit price for Concrete, (Endwalls).

4. All exposed corners and edges of concrete are to be chamfered ¾".

5. Concrete shall be Class I, except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.

6. On outfall ditches with side slopes flatter than 1:1½ provide 20' transitions from the endwall to the flatter side slopes, right of way permitting.

7. For sodding around endwalls see Index No. 281.

8. Payment for concrete quantities for endwalls skewed to the pipe shall be made on the following basis:

| Endwall Skew to Pipe | Use Tabulated Value |
|---|---|
| 0° to 5° | 0° |
| 6° | 15° |
| 16° | 30° |
| 31° or over | 45° |

9. Pipe length plan quantities shall be based on the pipe end locations shown in the standard location control end view, or lengths based on special endwall locations called for in the plans.

10. Payment for pipe in pipe culverts shall be based on plan quantities, adjusted for endwall locations subsequently established by the Engineer.

11. Endwalls to be paid for under the contract unit price for Class I Concrete (Endwalls), CY.

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| LAST REVISION | REVISION | DESCRIPTION: | FDOT FY 2017-18 DESIGN STANDARDS | STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 11/01/16 | | | | | 250 | 1 of 2 |

# DATA AND ESTIMATED QUANTITIES FOR ONE ENDWALL

## ROUND CONCRETE AND CORRUGATED METAL PIPE

| D | Opening Area (SF) | | | | Dimensions | | | | | | | | | | | Class I Concrete (CY) | | | | | | | | | | | | | | | | | | | | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number Of Pipes | | | | | | | | | | | X | | | | Number And Type Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | Single | | Double | | | | | | Triple | | | | | | Quadruple | | | | | | | |
| | | | | | | | | | | | | | | | | | | Concrete | | | | Metal | | | | Concrete | | | | Metal | | | | Concrete | | | | Metal | | | | |
| | 1 | 2 | 3 | 4 | A | B | C | E | F | G | S | 0° | 15° | 30° | 45° | Conc | Metal | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | |
| 15" | 1.23 | 2.46 | 3.69 | 4.92 | 1'-11" | 1'-2" | 4'-0" | 1'-10" | 1'-2" | 0'-6" | 2'-7" | 2'-7" | 2'-8" | 3'-0" | 3'-8" | 1.23 | 1.24 | 1.59 | 1.60 | 1.65 | 1.74 | 1.62 | 1.63 | 1.68 | 1.78 | 1.94 | 1.96 | 2.05 | 2.23 | 1.99 | 2.02 | 2.11 | 2.30 | 2.30 | 2.34 | 2.47 | 2.74 | 2.37 | 2.41 | 2.75 | 2.84 | 15" |
| 18" | 1.77 | 3.54 | 5.31 | 7.08 | 2'-2" | 1'-3" | 4'-6" | 1'-11" | 1'-3" | 1'-0" | 2'-10" | 2'-10" | 2'-11" | 3'-3" | 4'-0" | 1.56 | 1.59 | 1.99 | 2.01 | 2.06 | 2.17 | 2.04 | 2.06 | 2.11 | 2.23 | 2.43 | 2.46 | 2.56 | 2.79 | 2.51 | 2.54 | 2.65 | 2.89 | 2.86 | 2.91 | 3.06 | 3.40 | 2.96 | 3.01 | 3.17 | 3.53 | 18" |
| 21" | 2.41 | 4.82 | 7.23 | 9.64 | 2'-5" | 1'-4" | 5'-0" | 2'-0" | 1'-4" | 1'-6" | 3'-2" | 3'-2" | 3'-3" | 3'-8" | 4'-6" | 1.97 | | | | | | | | | | | | | | | | | | | | | | | | | | 21" |
| 24" | 3.14 | 6.28 | 9.42 | 12.56 | 2'-8" | 1'-4" | 5'-6" | 2'-0" | 1'-4" | 2'-0" | 3'-5" | 3'-5" | 3'-6" | 3'-11" | 4'-10" | 2.24 | 2.29 | 2.82 | 2.84 | 2.91 | 3.06 | 2.91 | 2.93 | 3.01 | 3.17 | 3.39 | 3.43 | 3.57 | 3.87 | 3.52 | 3.56 | 3.71 | 4.03 | 3.97 | 4.03 | 4.24 | 4.69 | 4.14 | 4.20 | 4.43 | 4.91 | 24" |
| 27" | 3.98 | 7.96 | 11.94 | 15.92 | 2'-11" | 1'-5" | 6'-0" | 2'-1" | 1'-5" | 2'-6" | 3'-10" | 3'-10" | 4'-0" | 4'-5" | 5'-5" | 2.73 | | | | | | | | | | | | | | | | | | | | | | | | | | 27" |
| 30" | 4.91 | 9.82 | 14.73 | 19.64 | 3'-2" | 1'-6" | 6'-6" | 2'-2" | 1'-6" | 3'-0" | 4'-3" | 4'-3" | 4'-5" | 4'-11" | 6'-0" | 3.26 | 3.34 | 4.13 | 4.16 | 4.26 | 4.49 | 4.28 | 4.31 | 4.43 | 4.67 | 4.98 | 5.04 | 5.25 | 5.69 | 5.20 | 5.27 | 5.49 | 5.97 | 5.84 | 5.93 | 6.24 | 6.91 | 6.13 | 6.23 | 6.56 | 7.29 | 30" |
| 36" | 7.07 | 14.14 | 21.21 | 28.28 | 3'-8" | 1'-8" | 7'-6" | 2'-4" | 1'-8" | 4'-0" | 5'-1" | 5'-1" | 5'-3" | 5'-10" | 7'-2" | 4.53 | 4.64 | 5.73 | 5.77 | 5.92 | 6.23 | 5.95 | 6.00 | 6.15 | 6.49 | 6.92 | 7.00 | 7.29 | 7.91 | 7.25 | 7.34 | 7.65 | 8.33 | 8.13 | 8.26 | 8.69 | 9.62 | 8.57 | 8.71 | 9.18 | 10.20 | 36" |
| 42" | 9.62 | 19.24 | 28.86 | 38.48 | 4'-2" | 1'-10" | 8'-6" | 2'-6" | 2'-0" | 5'-0" | 6'-0" | 6'-0" | 6'-3" | 6'-11" | 8'-6" | 6.33 | 6.49 | 8.11 | 8.17 | 8.39 | 8.85 | 8.43 | 8.50 | 8.73 | 9.23 | 9.90 | 10.02 | 10.45 | 11.38 | 10.38 | 10.52 | 10.98 | 11.99 | 11.68 | 11.87 | 12.51 | 13.89 | 12.32 | 12.52 | 13.22 | 14.73 | 42" |
| 48" | 12.57 | 25.14 | 37.71 | 50.28 | 4'-8" | 2'-1" | 9'-6" | 2'-9" | 2'-0" | 6'-0" | 6'-9" | 6'-9" | 7'-0" | 7'-10" | 9'-7" | 8.15 | 8.38 | 10.40 | 10.48 | 10.75 | 11.33 | 10.85 | 10.94 | 11.23 | 11.87 | 12.64 | 12.80 | 13.34 | 14.50 | 13.34 | 13.51 | 14.11 | 15.39 | 14.89 | 15.13 | 15.93 | 17.68 | 15.82 | 16.08 | 16.97 | 18.90 | 48" |
| 54" | 15.90 | 31.80 | 47.70 | 63.60 | 5'-2" | 2'-6" | 10'-6" | 3'-2" | 2'-3" | 7'-0" | 7'-8" | 7'-8" | 7'-11" | 8'-10" | 10'-10" | 11.71 | 11.77 | 15.23 | 15.35 | 15.78 | 16.69 | 15.35 | 15.48 | 15.90 | 16.83 | 18.77 | 19.02 | 19.86 | 21.69 | 18.93 | 19.18 | 20.04 | 21.89 | 22.29 | 22.66 | 23.93 | 26.67 | 22.51 | 22.89 | 24.17 | 26.96 | 54" |

## CORRUGATED METAL PIPE ARCH

| Span | Rise | Opening Area (SF) | | | | Dimensions | | | | | | | | | | | | Class I Concrete (CY) | | | | | | | | | | | | | | | | Span | Rise | Approx. Equiv. Round Pipe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number Of Pipes | | | | | | | | | | | X | | | | | Number Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Single | Double | | | | Triple | | | | Quadruple | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | A | B | C | E | F | G | S | 0° | 15° | 30° | 45° | | 0° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | | | | | | |
| 17" | 13" | 1.1 | 2.2 | 3.3 | 4.4 | 1'-9" | 1'-2" | 3'-10" | 1'-10" | 1'-2" | 0'-4" | 2'-6" | 2'-6" | 2'-7" | 2'-11" | 3'-6" | | 1.16 | 1.47 | 1.48 | 1.52 | 1.60 | 1.78 | 1.80 | 1.88 | 2.04 | 2.09 | 2.12 | 2.23 | 2.48 | 17" | 13" | 15" |
| 21" | 15" | 1.6 | 3.2 | 4.8 | 6.4 | 1'-11" | 1'-2" | 4'-3" | 1'-10" | 1'-2" | 0'-9" | 2'-10" | 2'-10" | 2'-11" | 3'-3" | 4'-0" | | 1.33 | 1.69 | 1.70 | 1.75 | 1.84 | 2.04 | 2.06 | 2.15 | 2.33 | 2.40 | 2.44 | 2.57 | 2.84 | 21" | 15" | 18" |
| 28" | 20" | 2.8 | 5.6 | 8.4 | 11.2 | 2'-4" | 1'-3" | 5'-2" | 1'-11" | 1'-3" | 1'-8" | 3'-5" | 3'-5" | 3'-6" | 3'-11" | 4'-10" | | 1.78 | 2.31 | 2.33 | 2.39 | 2.53 | 2.83 | 2.87 | 2.99 | 3.26 | 3.36 | 3.42 | 3.60 | 4.01 | 28" | 20" | 24" |
| 35" | 24" | 4.3 | 8.6 | 12.9 | 17.2 | 2'-8" | 1'-4" | 5'-11½" | 2'-0" | 1'-4" | 2'-5½" | 4'-0" | 4'-0" | 4'-2" | 4'-7" | 5'-8" | | 2.34 | 3.03 | 3.05 | 3.14 | 3.32 | 3.72 | 3.77 | 3.93 | 4.29 | 4.40 | 4.47 | 4.72 | 5.25 | 35" | 24" | 30" |
| 42" | 29" | 5.9 | 11.8 | 17.7 | 23.6 | 3'-1" | 1'-5" | 6'-10½" | 2'-1" | 1'-5" | 3'-4½" | 4'-9" | 4'-9" | 4'-11" | 5'-6" | 6'-9" | | 3.13 | 4.06 | 4.09 | 4.20 | 4.45 | 4.99 | 5.06 | 5.28 | 5.76 | 5.93 | 6.03 | 6.36 | 7.09 | 42" | 29" | 36" |
| 49" | 33" | 8.4 | 16.8 | 25.2 | 33.6 | 3'-5" | 1'-6" | 7'-8" | 2'-2" | 1'-6" | 4'-2" | 5'-6" | 5'-6" | 5'-8" | 6'-4" | 7'-9" | | 3.83 | 5.00 | 5.04 | 5.18 | 5.48 | 6.16 | 6.24 | 6.52 | 7.12 | 7.32 | 7.44 | 7.86 | 8.76 | 49" | 33" | 42" |
| 57" | 38" | 10.6 | 21.2 | 31.8 | 42.4 | 3'-10" | 1'-7" | 8'-7½" | 2'-3" | 1'-7" | 5'-1½" | 6'-4" | 6'-4" | 6'-7" | 7'-4" | 8'-11" | | 4.87 | 6.31 | 6.36 | 6.53 | 6.91 | 7.74 | 7.84 | 8.18 | 8.93 | 9.18 | 9.33 | 9.85 | 10.96 | 57" | 38" | 48" |
| 64" | 43" | 13.2 | 26.4 | 39.6 | 52.8 | 4'-3" | 1'-8" | 9'-6½" | 2'-4" | 1'-8" | 6'-0½" | 7'-1" | 7'-1" | 7'-4" | 8'-2" | 10'-0" | | 5.88 | 7.64 | 7.70 | 7.91 | 8.37 | 9.40 | 9.52 | 9.94 | 10.86 | 11.15 | 11.33 | 11.97 | 13.33 | 64" | 43" | 54" |
| 71" | 47" | 16.9 | 33.8 | 50.7 | 67.6 | 4'-7" | 1'-10" | 10'-4" | 2'-6" | 2'-0" | 6'-10" | 7'-10" | 7'-10" | 8'-1" | 9'-1" | 11'-1" | | 7.80 | 10.15 | 10.23 | 10.51 | 11.12 | 12.49 | 12.65 | 13.22 | 14.43 | 14.85 | 15.10 | 15.94 | 17.77 | 71" | 47" | 60" |

Note: Use the guidelines of General Note No. 8 for selecting tabular quantities.

## CONCRETE ELLIPTICAL PIPE

| Rise | Span | Opening Area (SF) | | | | Dimensions | | | | | | | | | | | Class I Concrete (CY) | | | | | | | | | | | | | | | | Rise | Span | Approx. Equiv. Round Pipe |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number Of Pipes | | | | | | | | | | | X | | | | | Number Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | Single | Double | | | | Triple | | | | Quadruple | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | A | B | C | E | F | G | S | 0° | 15° | 30° | 45° | | 0° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | 0° | 15° | 30° | 45° | | | | | | |
| 12" | 18" | 1.3 | 2.6 | 3.9 | 5.2 | 1'-8" | 1'-2" | 3'-9" | 1'-10" | 1'-2" | 0'-3" | 2'-10" | 2'-10" | 2'-11" | 3'-3" | 4'-0" | | 1.09 | 1.45 | 1.46 | 1.51 | 1.60 | 1.80 | 1.82 | 1.91 | 2.09 | 2.16 | 2.20 | 2.33 | 2.60 | 12" | 18" | 15" |
| 14" | 23" | 1.8 | 3.6 | 5.4 | 7.2 | 1'-10" | 1'-3" | 4'-2½" | 1'-11" | 1'-3" | 8½" | 3'-5" | 3'-5" | 3'-6" | 3'-11" | 4'-10" | | 1.36 | 1.82 | 1.84 | 1.89 | 2.01 | 2.29 | 2.32 | 2.43 | 2.68 | 2.75 | 2.80 | 2.97 | 3.33 | 14" | 23" | 18" |
| 19" | 30" | 3.3 | 6.6 | 9.9 | 13.2 | 2'-3" | 1'-4" | 5'-1½" | 2'-0" | 1'-4" | 1'-7½" | 4'-2" | 4'-2" | 4'-4" | 4'-10" | 5'-11" | | 1.89 | 2.55 | 2.57 | 2.65 | 2.82 | 3.22 | 3.27 | 3.43 | 3.77 | 3.88 | 3.95 | 4.19 | 4.70 | 19" | 30" | 24" |
| 24" | 38" | 5.1 | 10.2 | 15.3 | 20.4 | 2'-8" | 1'-5" | 6'-3" | 2'-1" | 1'-5" | 2'-9" | 5'-2" | 5'-2" | 5'-4" | 6'-0" | 7'-4" | | 2.64 | 3.55 | 3.58 | 3.69 | 3.93 | 4.48 | 4.54 | 4.77 | 5.24 | 5.39 | 5.49 | 5.82 | 6.53 | 24" | 38" | 30" |
| 29" | 45" | 7.4 | 14.8 | 22.2 | 29.6 | 3'-1" | 1'-6" | 7'-0" | 2'-2" | 1'-6" | 3'-6" | 6'-0" | 6'-0" | 6'-3" | 6'-11" | 8'-6" | | 3.32 | 4.48 | 4.52 | 4.66 | 4.96 | 5.64 | 5.72 | 6.00 | 6.60 | 6.80 | 6.92 | 7.34 | 8.24 | 29" | 45" | 36" |
| 34" | 53" | 10.2 | 20.4 | 30.6 | 40.8 | 3'-6" | 1'-7" | 7'-11½" | 2'-3" | 1'-7" | 4'-5½" | 7'-1" | 7'-1" | 7'-4" | 8'-2" | 10'-0" | | 4.24 | 5.76 | 5.81 | 6.00 | 6.39 | 7.29 | 7.40 | 7.76 | 8.55 | 8.81 | 8.97 | 9.52 | 10.70 | 34" | 53" | 42" |
| 38" | 60" | 12.9 | 25.8 | 38.7 | 51.6 | 3'-10" | 1'-8" | 8'-9" | 2'-4" | 1'-8" | 5'-3" | 7'-11" | 7'-11" | 8'-2" | 9'-2" | 11'-2" | | 5.22 | 7.16 | 7.23 | 7.46 | 7.96 | 9.10 | 9.24 | 9.70 | 10.71 | 11.05 | 11.25 | 11.95 | 13.46 | 38" | 60" | 48" |
| 43" | 68" | 16.6 | 33.2 | 49.8 | 66.4 | 4'-3" | 1'-10" | 9'-8½" | 2'-6" | 1'-10" | 6'-2½" | 8'-10" | 8'-10" | 9'-2" | 10'-2" | 12'-6" | | 6.63 | 9.01 | 9.09 | 9.38 | 10.00 | 11.39 | 11.56 | 12.13 | 13.36 | 13.77 | 14.02 | 14.88 | 16.73 | 43" | 68" | 54" |
| 48" | 76" | 20.5 | 41.0 | 61.5 | 82.0 | 4'-8" | 2'-1" | 10'-8" | 2'-9" | 2'-0" | 7'-2" | 9'-9" | 9'-9" | 10'-1" | 11'-3" | 13'-9" | | 8.66 | 11.74 | 11.85 | 12.22 | 13.02 | 14.82 | 15.04 | 15.77 | 17.37 | 17.91 | 18.23 | 19.34 | 21.74 | 48" | 76" | 60" |
| 53" | 83" | 24.8 | 49.6 | 74.4 | 99.2 | 5'-1" | 2'-6" | 11'-7" | 3'-2" | 2'-6" | 8'-1" | 10'-7" | 10'-7" | 10'-11" | 12'-3" | 15'-0" | | 12.50 | 16.98 | 16.98 | 17.67 | 18.83 | 21.47 | 21.78 | 22.86 | 25.18 | 25.97 | 26.44 | 28.06 | 31.55 | 53" | 83" | 66" |
| 58" | 91" | 29.5 | 59.0 | 88.5 | 118.0 | 5'-6" | 2'-10" | 12'-6½" | 3'-6" | 2'-10" | 9'-0½" | 11'-4" | 11'-4" | 11'-9" | 13'-1" | 16'-0" | | 16.46 | 22.26 | 22.46 | 23.16 | 24.66 | 28.05 | 28.46 | 29.85 | 32.85 | 33.85 | 34.46 | 36.55 | 41.05 | 58" | 91" | 72" |

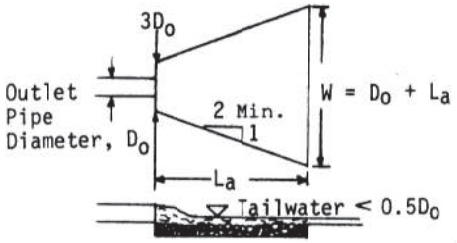
10/25/2016 8:16:28 AM

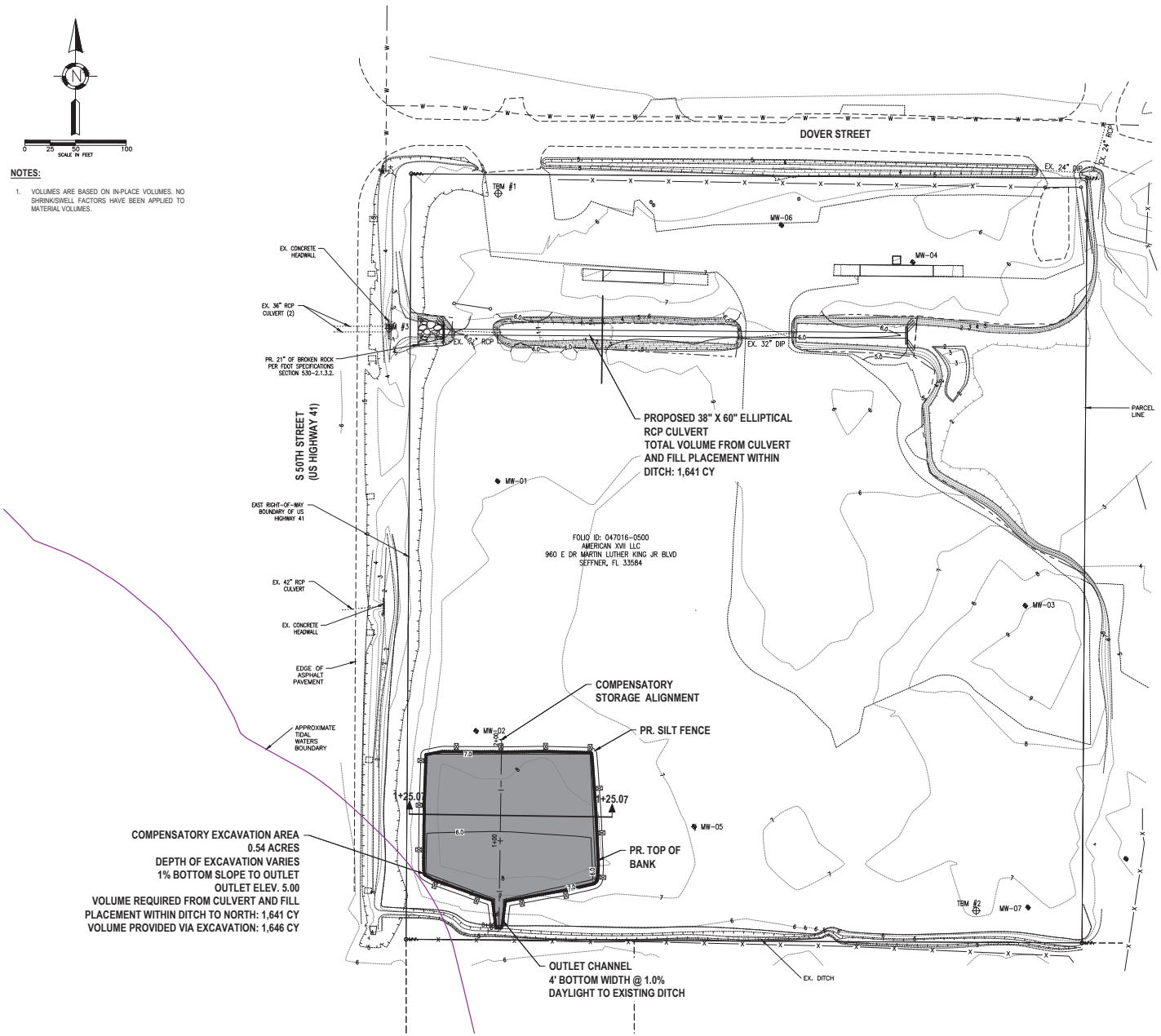
| LAST REVISION | REVISION | DESCRIPTION: | | | INDEX NO. | SHEET NO. |
|---|---|---|---|---|---|---|
| 07/01/01 | | | FDOT FY 2017-18 DESIGN STANDARDS | STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE | 250 | 2 of 2 |

DESIGN OF OUTLET PROTECTION FROM A ROUND PIPE FLOWING FULL
MINIMUM TAILWATER CONDITION ($T_w$ < 0.5 DIAMETER)

By: GJC Date: 7/27/22
Check: CJF Date:

**Note: 38" x 60" elliptical pipe is equivalent to 48" round pipe**






**NOTES:**

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.


verdantas
PEOPLE FOCUSED FUTURE

Verdantas LLC
15711 MAPLEDALE BLVD
Suite B
TAMPA, FL 33624

Phone: (813) 968-7732
Fax: (813) 962-0456
www.verdantas.com


Project Title:

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 12/05/2022 |

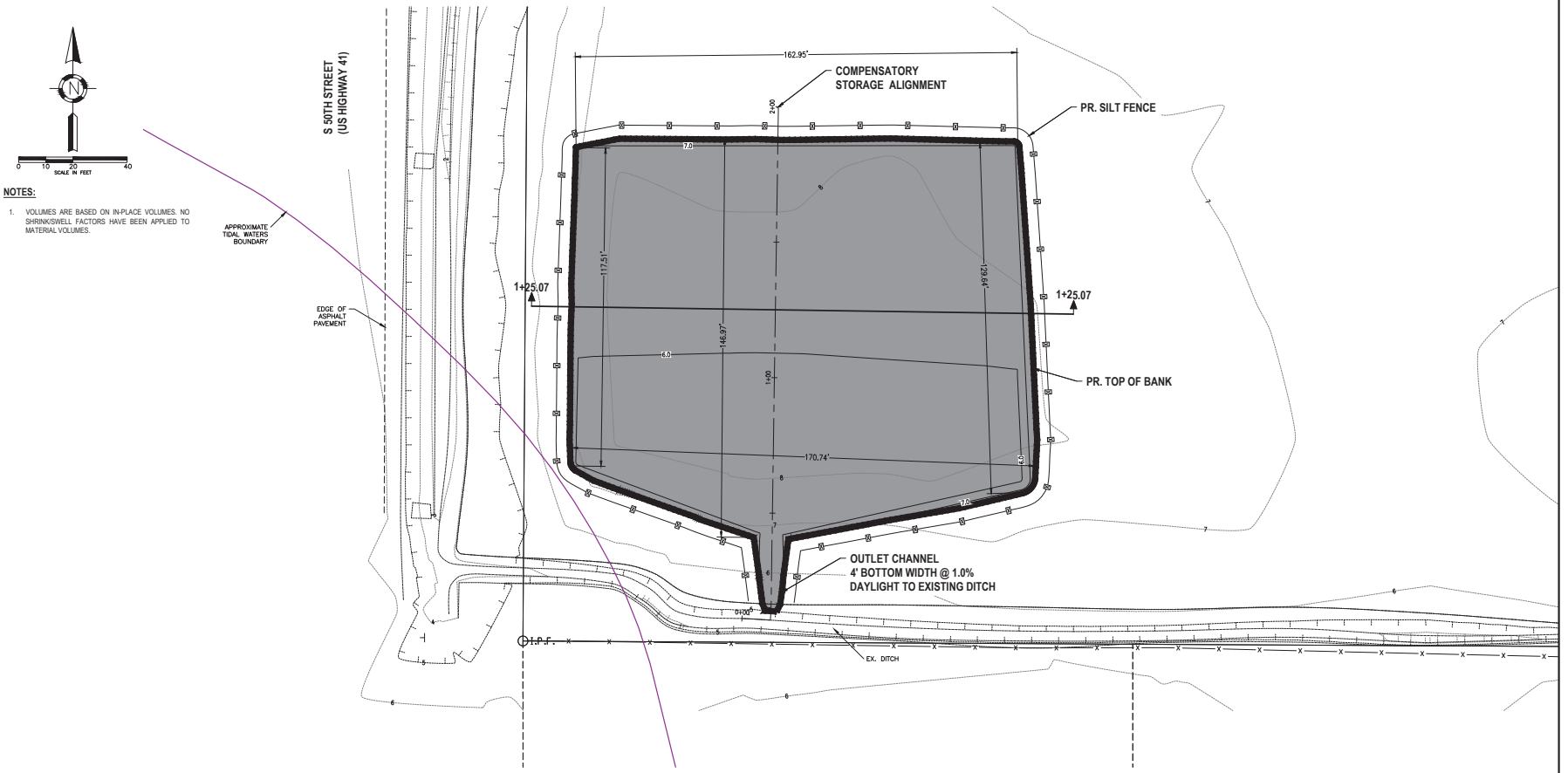
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 12/5/2022 |
| Layout By: | CJF |
| Drawn By: | CJF |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

**CONCEPTUAL COMPENSATORY STORAGE PLAN**

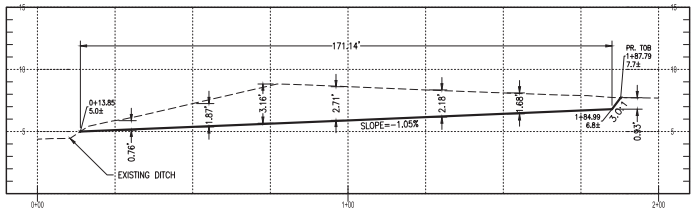
Sheet Number: 01 OF 02

**C1.0**

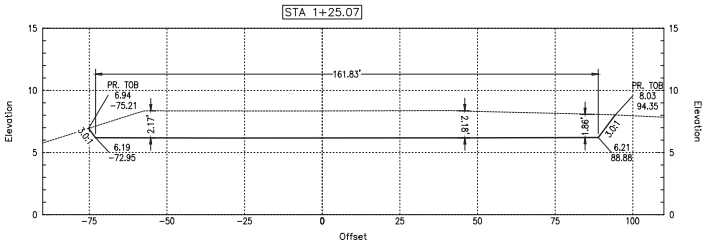



NOTES:

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.




COMPENSATORY STORAGE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'


verdantas
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5003 DOVER STREET
PRELIMINARY ENGINEERING
HILLSBOROUGH COUNTY, FLORIDA

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 12/05/2022 |

| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 12/5/2022 |
| Layout By: | CJF |
| Drawn By: | CJF |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

CONCEPTUAL
COMPENSATORY
STORAGE PLAN

Sheet Number: 02 OF 02

C2.0

# Appendix E

ERP General Construction (Culvert Pipe)

# FLORIDA DEPARTMENT OF Environmental Protection

Southwest District Office
13051 North Telecom Parkway #101
Temple Terrace, Florida 33637-0926

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary


01/10/2023

American XVII, LLC
c/o Mark Kara
5003 Dover Street
Tampa, FL 33619
Americanmk92@yahoo.com

Dear Mr. Kara:

Enclosed is the Environmental Resource Permit, DEP Project No. 29-0288580-002-EI, issued pursuant to Part IV of Chapter 373, Florida Statutes, and Title 62, Florida Administrative Code.

Appeal rights for you and for any affected third party are described in the text of the permit along with conditions that must be met when authorized activities are undertaken.

You, as the applicant, are responsible for all aspects of permit compliance. You should therefore review this permit document carefully to ensure compliance with the general conditions and specific conditions contained herein.

Please be aware of permit General Condition number 4, which states, "At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice"."

If you have any questions about this document, please contact me at Heather.McClurg@dep.state.fl.us or (813) 470-5739. Thank you for your participation in the permit process and in managing the natural resources of the State of Florida.

Sincerely,

Heather McClurg, C.W.E.
Environmental Specialist III
Permitting and Waste Cleanup Program

cc: Heather McClurg, Southwest District, Heather.McClurg@floridadep.gov
ERP Permitting, Southwest District, sw_erp@floridadep.gov
Shannon Herbon, Southwest District, Shannon.Herbon@floridadep.gov
Jackie Julien, Port Tampa Bay, jjulien@tampaport.com
Steven Folsom, HSW Consulting, LLC, sfolsom@hsweng.com
Cheryl Nichols, HSW Engineering, cnichols@verdantas.com

Enclosure: Environmental Resource Permit with Attachments (22 pages)

# FLORIDA DEPARTMENT OF
# Environmental Protection

Southwest District Office
13051 North Telecom Parkway #101
Temple Terrace, Florida 33637-0926

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary


**Permittee/Authorized Entity:**
American XVII, LLC
c/o Mark Kara
5003 Dover Street
Tampa, Florida, 33619

**Mark Kara**

**Authorized Agent:**
HSW Engineer
c/o Cheryl Nichols
15711 Mapledale Boulevard, Suite B
Tampa, Florida, 33624

**Individual Environmental Resource Permit**

**State-owned Submerged Lands Authorization –Not Applicable**

**U.S. Army Corps of Engineers Authorization –Separate Corps Authorization Not Required**

**Permit No.:** 29-0288580-002-EI

**Permit Issuance Date: 1/10/2023**
**Permit Construction Phase Expiration Date: 1/9/2028**

# FLORIDA DEPARTMENT OF Environmental Protection

Southwest District Office
13051 North Telecom Parkway #101
Temple Terrace, Florida 33637-0926

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary


## Environmental Resource Permit

**Permittee: American XVII, LLC**
**Permit No: 29-0288580-002-EI**

### PROJECT LOCATION

The activities authorized by this permit are located at 5003 Dover Street, Tampa, Florida 33619, in Section 4, Township 30 S, Range 19 E in Hillsborough County, at lat 27°53'51.1216"/long 82°24'2.0309".

### PROJECT DESCRIPTION

The permittee is authorized to fill approximately 0.34 acres of an upland-cut ditch (FLUCCS 514), that is contiguous to Black Point Channel, a Class III Florida waterbody that discharges into Tampa Bay. This project is for the replacement of an existing upland-cut ditch with an engineered drainage pipe to replace the stormwater capacity of the ditch. The area above the pipe can be filled to increase the useable area of the property. Authorized activities are depicted on the attached exhibits.

Impacts that will occur from filling 0.34 acres of an upland-cut ditch (FLUCCS 514), including associated temporary impacts and 0.0277 acres of secondary impacts of a basin marsh (FLUCCS 641) authorized by this permit, are considered to have minimal or insignificant individual or cumulative adverse impacts on the water resources of the basin, therefore have been determined to be de minimis in nature. No mitigation is required.

Floodplain
Per FEMA Flood Map, the site is located within a floodplain having a FEMA Flood Zone designation of Zone AE. The Flood Zone designation of AE that is being impacted will compensated for by the creation of a compensatory floodplain area at the Southwest corner of the site. Please see below table for the volume provided by the floodplain compensation area.

| Area | Volume Filled/Excavated (CY) |
|---|---|
| **Drainage Pipe Project** | -1,641 (filled) |
| **Compensation** | +1,646 (excavated) |
| **Change** | +5 (additional storage) |

### AUTHORIZATIONS

Environmental Resource Permit
The Department has determined that the activity qualifies for an Environmental Resource Permit. Therefore, the Environmental Resource Permit is hereby granted, pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), and Chapter 62-330, Florida Administrative Code (F.A.C.).

Sovereignty Submerged Lands Authorization
As staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the Department has determined the activity is not on submerged lands owned by the State of Florida. Therefore, your project is not subject to the requirements of Chapter 253, F.S., or Rule 18-21, F.A.C.

Federal Authorization
Based on a review of the information submitted, the Department has verified that the activity, as proposed does not involve discharge of dredged or fill material into the waters of the United States and therefore, does not require a State Programmatic General Permit (SPGP) or authorization pursuant to the State 404 Program, as described in Chapter 62-331, Florida Administrative Code (F.A.C.). The activities are not regulated under SPGP or the State 404 Program.

Coastal Zone Management
Issuance of this authorization also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

Water Quality Certification
This permit also constitutes a water quality certification under Section 401 of the Clean Water Act, 33 U.S.C. 1341

Other Authorizations
You are advised that authorizations or permits for this activity may be required by other federal, state, regional, or local entities including but not limited to local governments or municipalities. This permit does not relieve you from the requirements to obtain all other required permits or authorizations.

The activity described may be conducted only in accordance with the terms, conditions and attachments contained in this document. Issuance and granting of the permit and authorizations herein do not infer, nor guarantee, nor imply that future permits, authorizations, or modifications will be granted by the Department.

**PERMIT CONDITIONS**

The activities described must be conducted in accordance with:

- **The Specific Conditions**
- **The General Conditions**
- **The limits, conditions and locations of work shown in the attached drawings**
- **The term limits of this authorization**

You are advised to read and understand these conditions and drawings prior to beginning the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings herein. If you are using a contractor, the contractor also should read and understand these conditions and drawings prior to beginning any activity. Failure to comply with these conditions, including any mitigation requirements, shall be grounds for the Department to revoke the permit and authorization and to take appropriate enforcement action. Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and this permit authorization, as described.

**SPECIFIC CONDITIONS**

1. Submittals required herein (e.g., progress reports, as-built drawings, etc.) shall include the permittee's name and permit number 29-0288580-002-EI and shall be directed by e-mail to

SW_ERP_CAP@floridadep.gov with a subject line of "Compliance: permit number 29-0288580-002-EI", or by mail to:

Department of Environmental Protection
Southwest District
ATTN: ERP Compliance Assurance
13051 North Telecom Parkway, Suite 101
Temple Terrace, FL 33637-0926

2. The structure/work authorized by this permit shall not be placed/conducted on any property, other than that owned by the permittee, without the prior written approval of that property owner.

3. In the event the permittee files for bankruptcy prior to completion of work permitted and required by this permit, the permittee must notify the Department within 30 days of filing. The notification shall identify the bankruptcy court and case number and shall include a copy of the bankruptcy petition.

4. This permit does not authorize the permittee to cause any adverse impact to or "take" of state listed species and other regulated species of fish and wildlife. Compliance with state laws regulating the take of fish and wildlife is the responsibility of the owner or applicant associated with this project. Please refer to Chapter 68A-27 of the Florida Administrative Code for definitions of "take" and a list of fish and wildlife species. If listed species are observed onsite, FWC staff are available to provide decision support information or assist in obtaining the appropriate FWC permits. Most marine endangered and threatened species are statutorily protected and a "take" permit cannot be issued. Requests for further information or review can be sent to FWCConservationPlanningServices@MyFWC.com.

**SPECIFIC CONDITIONS – PRIOR TO ANY CONSTRUCTION**

5. Best management practices for erosion control shall be implemented prior to construction commencement and shall be maintained at all times during construction to prevent siltation and turbid discharges in excess of State water quality standards (>29 NTU's above background, pursuant to Rule 62-302, F.A.C. Methods may include, but are not limited to the use of staked hay bales, staked filter cloth, sodding, seeding, staged construction and the installation of turbidity screens around the immediate project site. Erosion control methods shall be implemented as depicted in Sheet C2.0 of the attached permit drawings.

**SPECIFIC CONDITIONS – CONSTRUCTION ACTIVITIES**

6. Wetland areas or waterbodies that are outside the specific limits of construction authorized by this permit, must be protected from erosion, sedimentation, siltation, scouring, excess turbidity, and/or dewatering. There shall be no discharge in violation of the water quality standards in Chapter 62-302, F.A.C. Turbidity/erosion controls shall be installed prior to clearing, excavation or placement of fill material, shall be maintained until construction is completed, disturbed areas are stabilized, and turbidity levels have fallen to less than 29 NTU's above background. The turbidity and erosion control devices shall be removed within 14 days once these conditions are met.

7. Areas of exposed soils shall be isolated from wetlands or other surface waters to prevent erosion and deposition of these soils into wetlands or other surface waters during construction and operation of permitted activities.

8. Grass seed, or sod shall be installed and maintained on exposed slopes and disturbed soil areas within 48 hours of completing final grade, and at other times as necessary, to prevent erosion, sedimentation or turbid discharges into waters of the state and/or adjacent wetlands.

9. The permittee shall be responsible for ensuring erosion control devices/procedures are inspected and maintained daily during all phases of construction authorized by this permit until areas disturbed during construction are sufficiently stabilized to prevent erosion, siltation, and turbid discharges.

10. Staked filter cloth shall be positioned at the edge of the permitted fill slopes adjacent to wetlands to prevent turbid run-off and erosion.

11. A floating turbidity apron/curtain shall be installed around the waterward boundary of the construction area prior to construction and shall remain in place until construction is complete and turbidity levels within the work area have returned to background levels.

12. This permit does not authorize the installation of water, sewer, cable or utility lines within wetlands or waterbodies.

13. Storage or stockpiling of tools and materials (i.e., lumber, pilings, debris) within wetlands or other surface waters is prohibited.

**SPECIFIC CONDITIONS – CONSTRUCTION COMPLETION**

The permittee shall comply with the following conditions prior to beneficial occupancy of the facility. All documentation required below shall be included with the permittee's request to transfer the project to the operation phase [Form No. 62-330.310(2), F.A.C.].

14. The permittee shall submit one set of signed, dated and sealed as-built drawings to the Department via email at SW_ERP_CAP@dep.state.fl.us for review and approval within 30 days of completion of construction. (Please contact the Department for files that are too large to email for alternative means of submitting electronically.) The as-built drawings shall be based on the Department permitted construction drawings and any pertinent specific conditions, which should be revised to reflect changes made during construction. Both the original design and constructed elevations must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. Surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered professional. *As-builts shall be submitted to the Department regardless of whether or not deviations are present. In addition, the permittee shall submit the "As-Built Certification and Request for Conversion to Operation Phase" form (Ch. 62-330.310(1), F.A.C.); as required in General Condition #6.*

    The following information shall be verified on the as-built drawings from the engineering drawings signed and sealed by Steven D. Folsom, License No. 59319, on 01/09/2023:

| Plan View/ Cross Section Name | Drawing Number |
|---|---|
| Site Plan, Profile. And Cross Sections | C2.0 |
| Conceptual Compensatory Storage Plan | C1.0, C2.0 |

**GENERAL CONDITIONS FOR INDIVIDUAL PERMITS**

The following general conditions are binding on all individual permits issued under chapter 62-330, F.A.C., except where the conditions are not applicable to the authorized activity, or where the conditions must be modified to accommodate project-specific conditions.

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.

2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.

3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007)*, and the *Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008)*, which are both incorporated by reference in subparagraph 62-330.050(9)(b)5., F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.

4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice," [October 1, 2013], which is incorporated by reference in paragraph 62-330.350(1)(d), F.A.C., indicating the expected start and completion dates. A copy of this form may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C. If available, an Agency website that fulfills this notification requirement may be used in lieu of the form.

5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.

6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:

    a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex – "Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or

    b. For all other activities – "As-Built Certification and Request for Conversion to Operational Phase" [Form 62-330.310(1)].

c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.

7. If the final operation and maintenance entity is a third party:

a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as- built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.3 of Volume I) as filed with the Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.

b. Within 30 days of submittal of the as- built certification, the permittee shall submit "Request for Transfer of Environmental Resource Permit to the Perpetual Operation Entity" [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.

8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.

9. This permit does not:

a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;

b. Convey to the permittee or create in the permittee any interest in real property;

c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or

d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.

10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.

11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.

12. The permittee shall notify the Agency in writing:

a. Immediately if any previously submitted information is discovered to be inaccurate; and

b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

14. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, work involving subsurface disturbance in the immediate vicinity of such discoveries shall cease. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section, at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Such subsurface work shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and notification shall be provided in accordance with Section 872.05, F.S.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

**NOTICE OF RIGHTS**

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Shannon Herbon
Permitting Program Administrator
Permitting and Waste Cleanup Program
Southwest District

**Attachments:**
Project Drawings and Design Specs., 5 pages
Construction Commencement Notice/Form 62-330.350(1), 1 page
As-Built Certification and Request for Conversion to Operation Phase/Form 62-330.310(1), 3 pages
Request for Transfer of Permit to the Perpetual Operation Entity/Form 62-330.310(2), 1 page
Request to Transfer Permit/Form 62-330.340(1), 2 pages

**Copies furnished to:**
Heather McClurg, Southwest District, Heather.McClurg@floridadep.gov
ERP Permitting, Southwest District, sw_erp@floridadep.gov
Shannon Herbon, Southwest District, Shannon.Herbon@floridadep.gov
Jackie Julien, Port Tampa Bay, jjulien@tampaport.com
Steven Folsom, HSW Consulting, LLC, sfolsom@hsweng.com
Cheryl Nichols, HSW Engineering, cnichols@verdantas.com

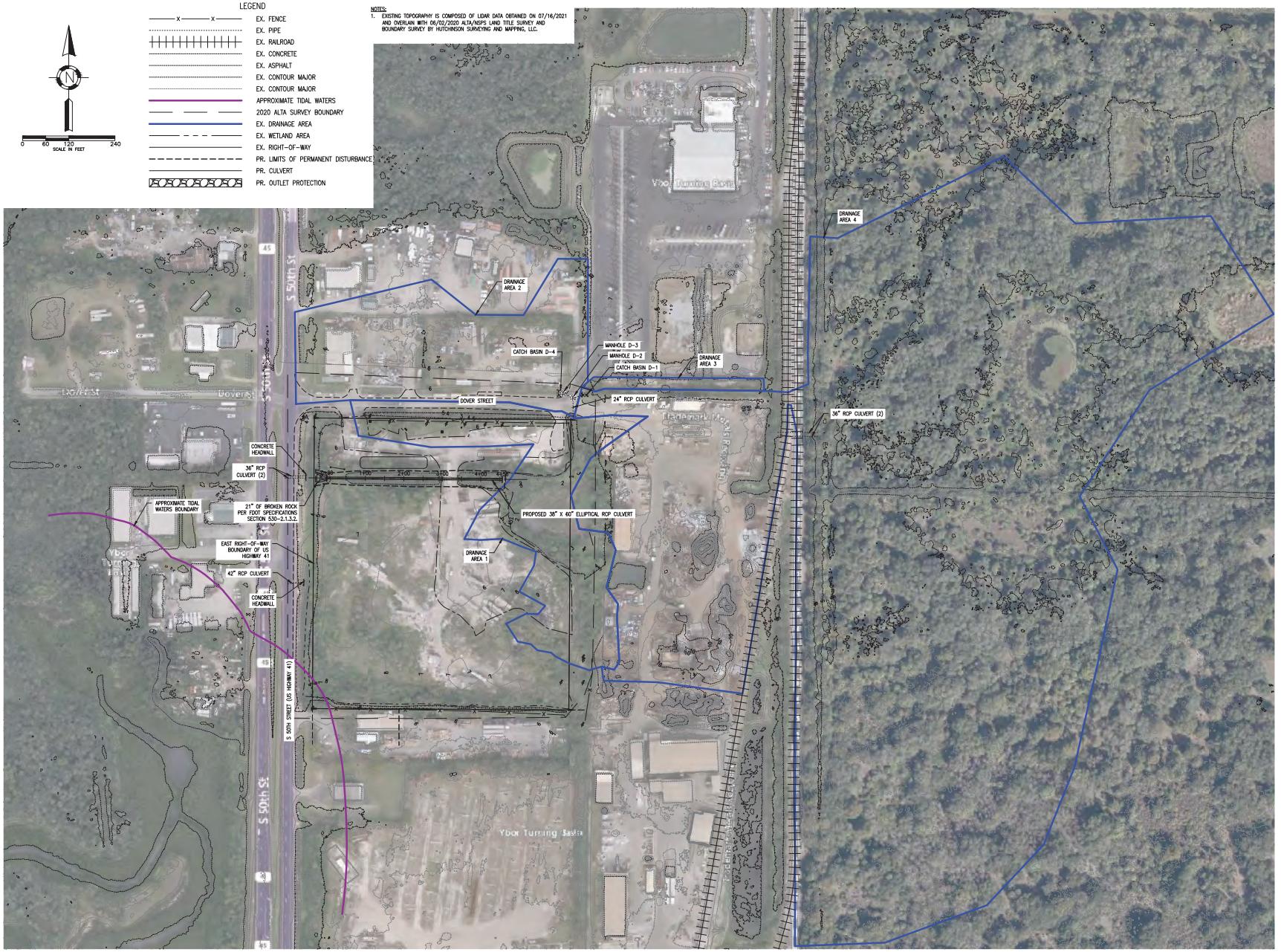
CERTIFICATE OF SERVICE

The undersigned hereby certifies that this permit, including all copies, were mailed before the close of business on January 10, 2023, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under 120.52(7) of the
Florida Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

_____ January 10, 2023
Clerk Date




verdantas
PEOPLE FOCUSED FUTURE

VERDANTAS LLC
15711 MAPLEDALE BLVD
SUITE B
TAMPA, FL 33624-3112
PHONE: 813.988.7722
FAX: 813.962.2406
WWW.VERDANTAS.COM

Project Title:

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



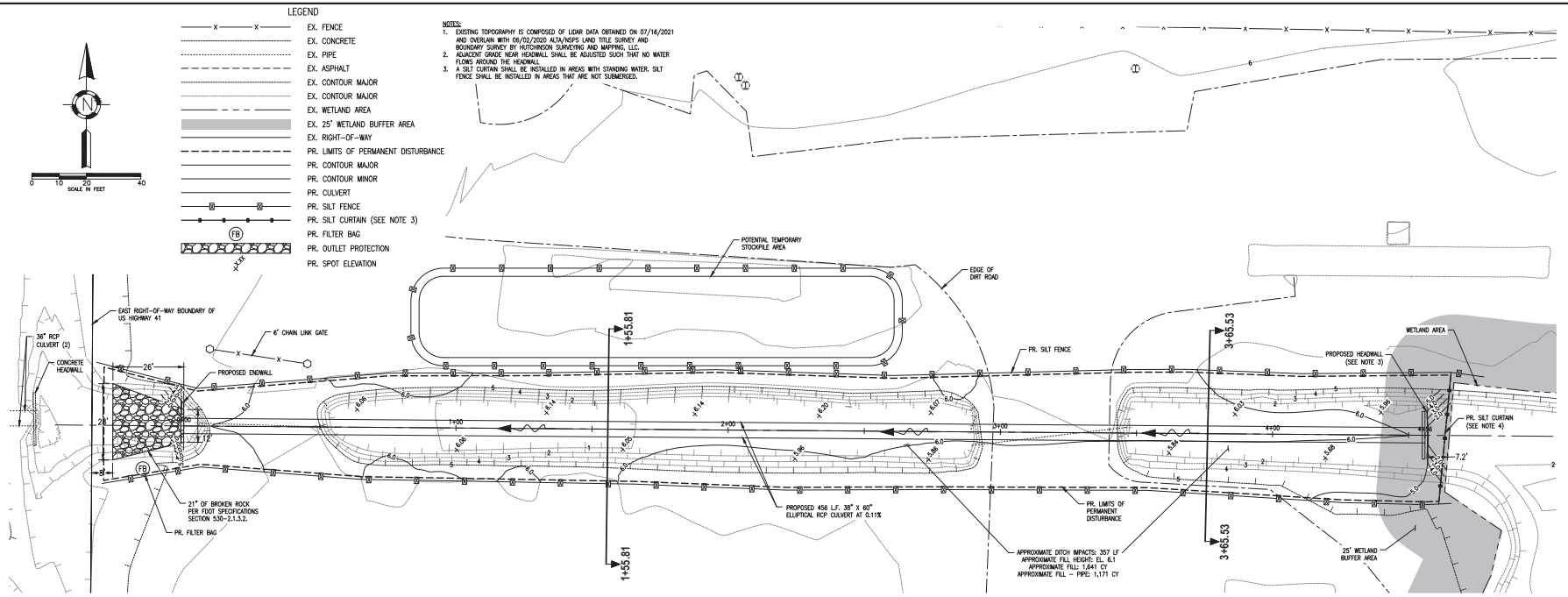
| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 11/18/2022 |

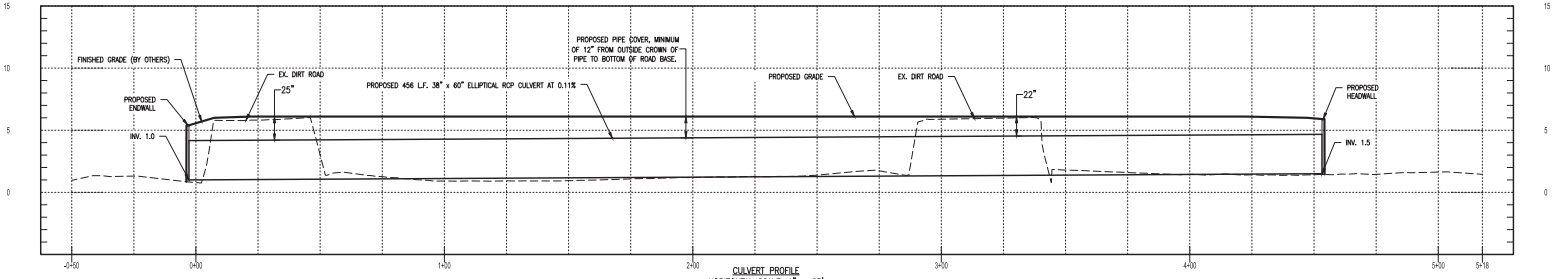
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 11/18/22 |
| Layout By: | LMS |
| Drawn By: | LMS |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DRAINAGE AREA MAP**

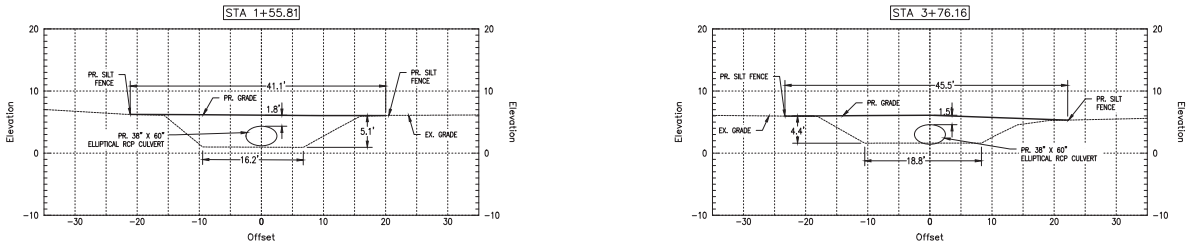
Sheet Number: 01 OF 03

**C1.0**




CULVERT PROFILE
HORIZONTAL SCALE: 1" = 25'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

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Project Title:

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**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 01/05/2023 |

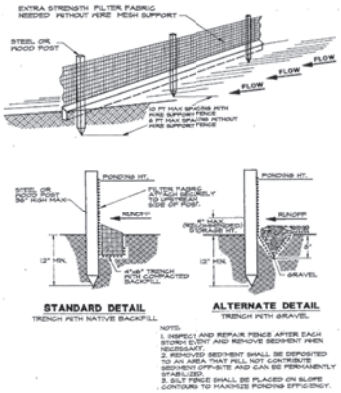
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 01/05/23 |
| Layout By: | LMS |
| Drawn By: | LMS |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |

Sheet Title:

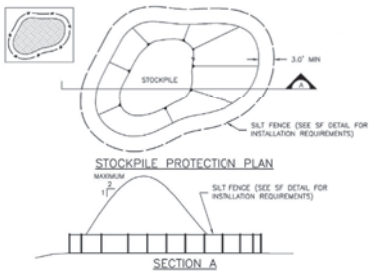
**SITE PLAN, PROFILE, AND CROSS SECTIONS**

Sheet Number: 02 OF 03

**C2.0**

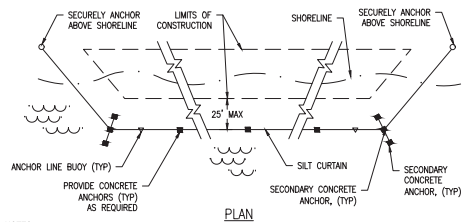



1 **TYPICAL SILT FENCE DETAIL**
Scale: N.T.S.

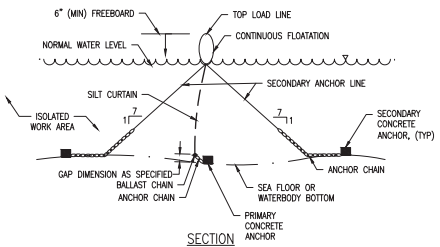



NOTES:
1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES
   –TYPE OF STOCKPILE PROTECTION
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BOIL DINERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

3 **TEMPORARY STOCKPILE PROTECTION DETAIL**
Scale: N.T.S.




NOTES:
1. ALL EXPOSED AND DISTURBED SHORELINES SHALL BE ENCLOSED WITH SILT CURTAIN.
2. SECONDARY ANCHORS SHALL BE PLACED ON ALL CORNERS AS REQUIRED TO SECRURE SILT CURTAIN IN PLACE.




SILT CURTAIN NOTES:

MATERIALS

FLOTATION SILT CURTAIN:
1. PROVIDE COMMERCIAL MANUFACTURED SILT CURTAIN, WITH DEMONSTRATED ABILITY TO TRAP AND HOLD SEDIMENT AND DEBRIS WITHIN THE DEFINED WORK AREA, AND WITH ANCHOR LINES, BALLAST, AND FLOATS THAT ARE ATTACHED TO THE SILT CURTAIN AT REINFORCED ATTACHMENT POINTS PROVI LED BY THE MANUFACTURER.
2. OBTAIN APPROVAL OF PROPOSED FLOTATION SILT CURTAIN PRIOR TO SHIPMENT TO THE PROJECT SITE. PROVIDE SUBMITTALS THAT INCLUDE CERTIFICATES OF MATERIALS TESTING, MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR SHOP DRAWINGS, AND PROPOSED INSTALLATION/REMOVAL PROCEDURES.
3. CURTAIN FABRIC SHALL BE PERVIOUS GEOTEXTILE MEETING AASHTO M 288 FOR TEMPORARY SILT FENCE OR IMPERVIOUS COATED FABRIC SUCH AS NYLON REINFORCED POLYVINYL CHLORIDE, TREATED POLYPROPYLENE/POLYESTER FABRIC, OR APPROVED EQUAL, SEE CONTRACT.
4. PROVIDE A CURTAIN TALL ENOUGH TO EXTEND FROM THE BOTTOM OF THE WATER COLUMN TO THE WATER SURFACE, LESS THE GAP DIMENSION SPECIFIED IN THE PLANS. CONSIDER THE PREDICTED TIDE FLUCTUATIONS OR RIVER FLOWS WHEN DETERMINING THE HEIGHT OF THE CURTAIN.

FLOTATION:
1. PROVIDE FLOTATION CONSISTING OF RIGID, CLOSED CELL EXPANDED POLYSTYRENE, ETHAFOAM, OR POLYETHYLENE FLOATS ATTACHED TO THE TOP OF THE SILT CURTAIN ALONG ITS ENTIRE LENGTH. PROVIDE FLOTATION MATERIAL WITH PROTECTION FROM MECHANICAL DAMAGE AND DETERIORATION THAT WOULD CAUSE POLLUTION.
2. EMPLOY FLOTATION THAT PROVIDES THE CURTAIN WITH A MINIMUM OF FREEBOARD WITHOUT GAPS. ENSURE THAT THE BUOYANCY RATIO (WEIGHT OF DISPLACED FLUID TO BARRIER WEIGHT) IS GREATER THAN 3:1.
3. PROVIDE HIGH VISIBILITY COLOR MARKING FOR THE FLOTATION DEVICES.
4. PROVIDE MANUFACTURER–INSTALLED GROMMETS OR EQUIVALENT TO REINFORCE STRESS POINTS AND PROVIDE ATTACHMENT POINTS TO ENSURE PROPER ANCHORING.

LINES:
PROVIDE ANCHOR LINES AND TOP AND BOTTOM LOAD LINES, AS REQUIRED, THAT ARE MINIMUM 1/2–INCH DIAMETER NYLON ROPE.

ANCHORS:
PROVIDE CONCRETE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.

BALLAST:
PROVIDE BALLAST CHAIN OF MINIMUM 1/2–INCH DIAMETER GALVANIZED STEEL WITH BALLAST CHAIN SEWN INTO A HEM AT THE BOTTOM OF THE CURTAIN AND SECURED TO THE MATERIAL OF THE HEM TO PREVENT SHIFTING OR ACCIDENTAL REMOVAL.

HANDLING AND INSTALLATION

1. SILT CURTAIN PLAN:
   a. SUBMIT A SILT CURTAIN PLAN FOR DEPARTMENT REVIEW AND APPROVAL.
   b. THE SILT CURTAIN PLAN MUST USE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
   c. THE SILT CURTAIN MUST BE ANCHORED AND SECURED SUFFICIENTLY TO WITHSTAND WIND, WAVES,
   d. PROPELLER WASH, RIVERINE FLOW, AND TIDAL FORCES REASONABLY EXPECTED AT THE SITE.
2. JOINING PANELS/SECTIONS:
   a. CONNECT OR SEW INDIVIDUAL PANELS/SECTIONS OR SEW TOGETHER IN THE FIELD, FOR EASE OF HANDLING AND TRANSPORTATION.
   b. DO NOT USE HEAT WELDING METHODS TO JOIN PANELS.
   c. JOIN THE PANELS IN A MANNER THAT WILL PREVENT SILT, SEDIMENT, DEBRIS, OR TURBIDITY TO MIGRATE FROM THE WORK AREA.
   d. IF JOINTS ARE SEWN TOGETHER, USE POLYESTER TWINE THREAD HAVING A TENSILE STRENGTH OF 350 LBS, AS DETERMINED BY ASTM 4268, TO MAKE DOUBLE ROW OF STITCHES THAT WILL NOT UNRAVEL IF BROKEN.
3. INSTALL SILT CURTAIN PRIOR TO STARTING IN–WATER WORK AS SPECIFIED IN THE ENVIRONMENTAL PERMITS.
4. ENSURE THAT THE FLOTATION IS SECURED TO THE BOOM TO PREVENT SHIFTING OR SLIPPING OF THE CURTAIN.
5. WEIGHT THE BASE OF THE CURTAIN WITH BALLAST SO THAT IT WILL REMAIN IN A VERTICAL POSITION.
6. PROVIDE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.
7. ATTACH ANCHOR CHAINS BETWEEN THE ANCHOR LINE AND ANCHOR TO PREVENT LINE FOULING, TO LOWER THE ANGLE OF LOAD PULLING ON THE ANCHOR, AND TO ACT AS A SHOCK ABSORBER.
8. EMPLOY ANCHOR LINE BUOYS TO HELP PREVENT LINE ENTANGLEMENT AND STRESS ON THE BOOM, IF NEEDED.

INSPECTION

1. INSPECT FOR VISIBILITY ABOVE THE WATER SURFACE ALONG THE ENTIRE LENGTH OF THE SILT CURTAIN.
2. INSPECT FOR 0.5 FEET OF FREEBOARD ABOVE THE WATER SURFACE DURING CALM CONDITIONS.

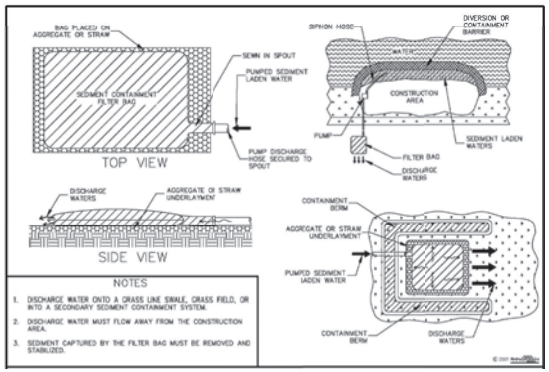
MAINTENANCE

1. MAINTAIN THE SILT CURTAIN AS REQUIRED IN THE INSTALLATION NOTES.
2. ADJUST FLOTATION TO MAINTAIN VISIBILITY AND FREEBOARD ABOVE WATER SURFACE.

REMOVAL

3. THE ENGINEER MUST APPROVE REMOVAL.
4. PREVENT RE–SUSPENSION OF SEDIMENT INTO THE WATER WHEN REMOVING THE CURTAIN. CONDUCT THE REMOVAL DURING PERIODS OF CALM WEATHER. REMOVE THE CURTAIN CAREFULLY TO MINIMIZE THE RELEASE OF TRAPPED SEDIMENT AND DEBRIS. DO NOT DRAG THE CURTAIN WHILE IN CONTACT WITH THE SEA FLOOR OR WATERBODY BOTTOM.

2 **TYPICAL SILT CURTAIN DETAIL**
Scale: NTS




4 **FILTER BAG DETAIL**
Scale: N.T.S.

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PEOPLE FOCUSED FUTURE

VERDANTAS LLC
15711 MAPLEDALE BLVD
SUITE B
TAMPA, FL 33624-3112
PHONE: 813.988.7722
FAX: 813.962.2496
WWW.VERDANTAS.COM

Project Title:

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



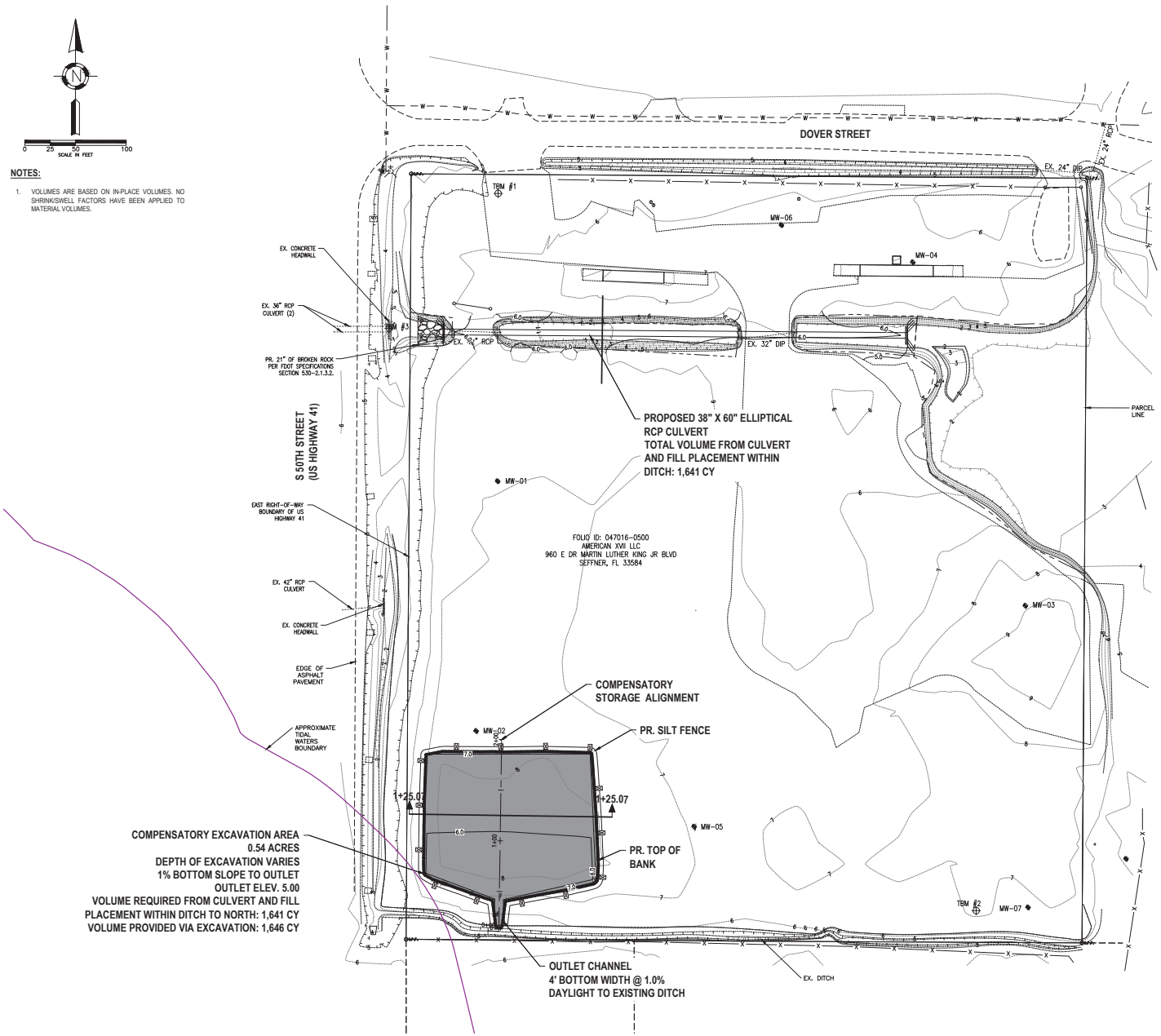
| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 11/18/2022 |

| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 11/18/22 |
| Layout By: | GJC |
| Drawn By: | GJC |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DETAILS**

Sheet Number: 03 OF 03

**C3.0**




**NOTES:**

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.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**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

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TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 12/05/2022 |

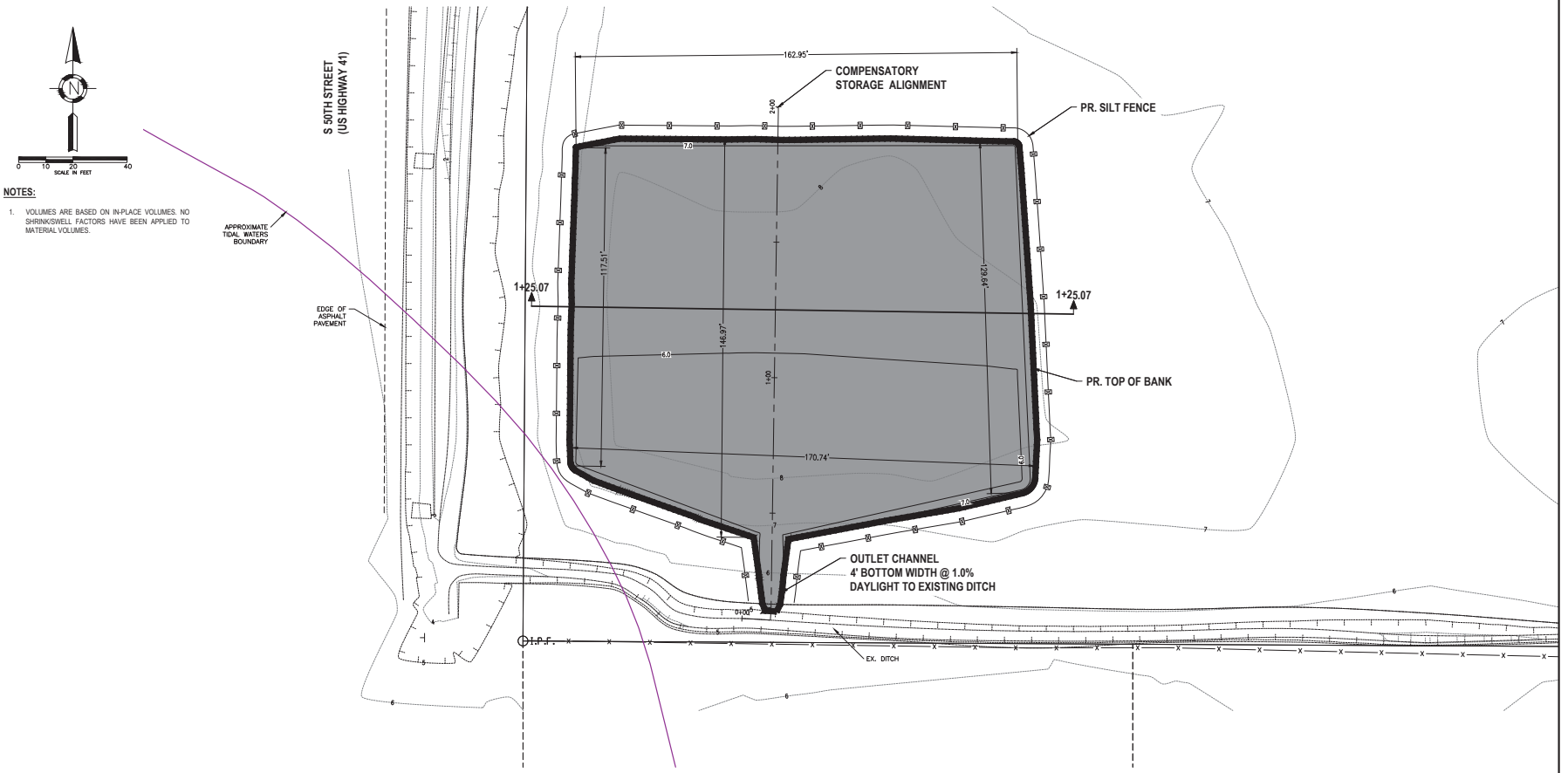
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 12/5/2022 |
| Layout By: | CJF |
| Drawn By: | CJF |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

**CONCEPTUAL COMPENSATORY STORAGE PLAN**

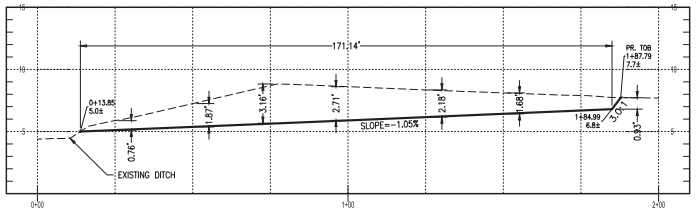
Sheet Number: 01 OF 02

**C1.0**

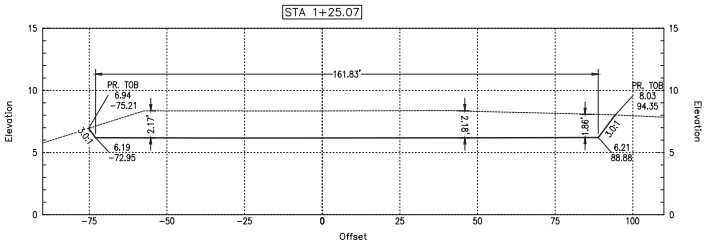



NOTES:

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.




COMPENSATORY STORAGE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'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| Layout By: | CJF |
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| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

CONCEPTUAL
COMPENSATORY
STORAGE PLAN

Sheet Number: 02 OF 02

C2.0

# CONSTRUCTION COMMENCEMENT NOTICE

**Instructions**: In accordance with Chapter 62-330.350(1)(d), F.A.C., complete and submit this form at least 48 hours prior to commencement of activity authorized by permit.

Permit No. _____ Application No. _____

Project Name _____ Phase _____

Construction of the system authorized by the above referenced Environmental Resource Permit and Application, is expected to commence on _____ , 20 _____ and will have an estimated completion date of _____ , 20 _____

**PLEASE NOTE:** If the actual construction commencement date is not known within 30 days of issuance of the permit, District staff should be so notified in writing. As soon as a construction commencement date is known, the permittee shall submit a completed construction commencement notice form.

Permittee's or Authorized Agent's Signature _____ Company _____

Print Name _____ Title _____ Date _____

E-mail _____ Phone Number _____

# As-Built Certification
# And Request for Conversion to Operation Phase

Instructions: Complete and submit this page within 30 days of completion of the entire project, or any independent portion of the project, as required by the permit conditions. The operation phase of the permit is effective when the construction certification for the entire permit/application is approved by the Agency. If the final operation and maintenance entity is not the permittee, the permittee shall operate the project, system, works, or other activities temporarily until such time as the transfer to the operation entity is finalized (use Form 62-330.310(2)).

Permit No: Application No: Permittee:

Project Name: Phase or Independent Portion (if applicable):

I HEREBY CERTIFY THAT (please check only one box):

☐ To the best of my knowledge, information, and belief, construction of the project has been completed in substantial conformance with the plans specifications and conditions permitted by the Agency. Any minor deviations will not prevent the project from functioning in compliance with the requirements of Chapter 62-330, F.A.C. Attached are documents to demonstrate satisfaction of the outstanding permit conditions, other than long term monitoring and inspection requirements.

☐ Construction of the project was NOT completed in substantial conformance with the plans and specifications permitted by the Agency. Any deviations or independent phasing will not prevent the project from functioning in compliance with the requirements of Chapter 62-330, F.A.C. (Contact the permitting agency to determine whether a modification of the permit will be required in accordance with Rule 62-330.315, F.A.C.) Attached is a description of substantial deviations, a set of as-built drawings, and documents to demonstrate satisfaction of the outstanding permit conditions, other than long term monitoring and inspection requirements.

☐ Construction of the project was NOT completed in substantial conformance with the plans and specifications permitted by the Agency. There are substantial deviations that prevent the project from functioning in compliance with the requirements of Chapter 62-330, F.A.C. I acknowledge that corrections to the project and/or a modification of the permit will likely be required, and that conversion to the operation phase cannot be approved at this time. As-built or record drawings reflecting the substantial deviations are attached.

**For activities that require certification by a registered professional:**

By: _____ (Print Name) (Fla. Lic. or Reg. No.)
Signature

(Company Name) (Company Address)

(Telephone Number) (Email Address)

AFFIX SEAL

(Date)

**For activities that do not require certification by a registered professional:**

By: _____ (Print Name)
Signature

(Company Name) (Company Address)

(Telephone Number) (Email Address) (Date)

## Drawings and Information Checklist

**Following is a list of information that is to be verified and/or submitted by the Registered Professional or Permittee:**

1. All surveyed dimensions and elevations shall be certified by a registered Surveyor or Mapper under Chapter 472, F.S.

2. The registered professional's certification shall be based upon on-site observation of construction (scheduled and conducted by the registered professional of record or by a project representative under direct supervision) and review of as-built drawings, with field measurements and verification as needed, for the purpose of determining if the work was completed in accordance with original permitted construction plans, specifications, and conditions.

3. If submitted, the as-built drawings are to be based on the permitted construction drawings revised to reflect any substantial deviations made during construction. Both the original design and constructed condition must be clearly shown. The plans need to be clearly labeled as "as-built" or "record" drawings that clearly highlight (such as through "red lines" or "clouds") any substantial deviations made during construction. As required by law, all surveyed dimensions and elevations required shall be verified and signed, dated, and sealed by an appropriate registered professional. The following information, at a minimum, shall be verified on the as-built drawings, and supplemental documents if needed:

    a. Discharge structures - Locations, dimensions and elevations of all, including weirs, orifices, gates, pumps, pipes, and oil and grease skimmers;
    b. Detention/Retention Area(s) – Identification number, size in acres, side slopes (h:v), dimensions, elevations, contours, or cross-sections of all, sufficient to determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems,
    c. Side bank and underdrain filters, or exfiltration trenches - locations, dimensions, and elevations of all, including clean-outs, pipes, connections to control structures, and points of discharge to receiving waters;
    d. System grading - dimensions, elevations, contours, final grades, or cross-sections to determine contributing drainage areas, flow directions, and conveyance of runoff to the system discharge point(s);
    e. Conveyance - dimensions, elevations, contours, final grades, or cross-sections of systems utilized to divert off-site runoff around or through the new system;
    f. Benchmark(s) - location and description (minimum of one per major water control structure);
    g. Datum- All elevations should be referenced to a vertical datum clearly identified on the plans, preferably the same datum used in the permit plans.

4. Wetland mitigation or restoration areas - Show the plan view of all areas, depicting a spatial distribution of plantings conducted by zone (if plantings are required by permit), with a list showing all species planted in each zone, numbers of each species, sizes, date(s) planted, and identification of source of material; also provide the dimensions, elevations, contours, and representative cross-sections depicting the construction.

5. A map depicting the phase or independent portion of the project being certified, if all components of the project authorized in the permit are not being certified at this time.

6. Any additional information or outstanding submittals required by permit conditions or to document permit compliance, other than long-term monitoring or inspection requirements.

# REQUEST FOR TRANSFER OF ENVIRONMENTAL RESOURCE PERMIT TO THE PERPETUAL OPERATION ENTITY

Instructions: Complete this form to transfer to the permit to the operation and maintenance entity. This form can be completed concurrently with, or within 30 days of approval of the As-Built Certification and Request for Conversion to Operation Phase (Form 62-330.310(1)). Please include all documentation required under Section 12.2.1(b) of Applicant's Handbook Volume 1. (see checklist below). **Failure to submit the appropriate final documents will result in the permittee remaining liable for operation and maintenance of the permitted activities.**

| Permit No.: | Application No(s). |
|---|---|
| Project Name: | Phase (if applicable): |

A. REQUEST TO TRANSFER: The permittee requests that the permit be transferred to the legal entity responsible for operation and maintenance (O&M).

By: _____

| Signature of Permittee | Name and Title |
|---|---|
| Company | Company Address |
| Phone | City, State, Zip |

B. AGREEMENT FOR SYSTEM OPERATION AND MAINTENANCE RESPONSIBILITY: The below-named legal entity agrees to operate and maintain the works or activities in compliance with all permit conditions and provisions of Chapter 62-330, Florida Administrative Code (F.A.C.) and Applicant's Handbook Volumes I and II in perpetuity. Authorization for any proposed modification to the permitted activities shall be applied for and obtained prior to conducting such modification.

By: _____

| Signature of Representative of O&M Entity | Name of Entity for O&M |
|---|---|
| Name and Title | Address |
| Email Address | City, State, Zip |
| Phone | Date |

Enclosed are the following documents, as applicable:

- ☐ Copy of recorded transfer of title to the operating entity for the common areas on which the stormwater management system is located (unless dedicated by plat)
- ☐ Copy of all recorded plats
- ☐ Copy of recorded declaration of covenants and restrictions, amendments, and associated exhibits
- ☐ Copy of filed articles of incorporation and documentary evidence of active corporate status with the Department of State, Division of Corporations (for corporations)
- ☐ A completed, signed, and notarized affidavit attesting that the operating entity meets the requirements of Section 12.3 of Environmental Resource Permit Applicant's Handbook Volume I.(Note- this is optional, but aids in processing of this request)

# Request to Transfer
# Environmental Resource Permit

Instructions: To be completed, executed, and submitted by the new owner to the Agency within 30 days after any transfer of ownership or control of the real property where the permitted activity is located.

Use of this form is not required when a valid permit is in the operation and maintenance phase. In such case, the owner must notify the Agency in writing within 30 days of a change in ownership or control of the entire real property, project, or activity covered by the permit. The notification may be by letter or e-mail, or through use of this form, and must be sent to the office that issued the permit. A processing fee is not required for this notice. The permit shall automatically transfer to the new owner or person in control, except in cases of abandonment, revocation, or modification of a permit as provided in Sections 373.426 and 373.429, F.S. (2013). If a permittee fails to provide written notice to the Agency within 30 days of the change in ownership or control, or if the change does not include the entire real property or activity covered by the permit, then the transfer must be requested using this form.

Permit No: Application No(s).: Acres to be Transferred:

Permitted Project:

Proposed Project Name (if different):

Phase of Project (if applicable):

I hereby notify the Agency that I have acquired ownership or control of the land on which the permitted system is located through the sale or other legal transfer of the land. By signing below, I hereby certify that I have sufficient real property interest or control in the land in accordance with subsection 4.2.3(d) of Applicant's Handbook Volume I; attached is a copy of my title, easement, or other demonstration of ownership or control in the land, including any revised plats, as recorded in the Public Records. I request that the permit be modified to reflect that I agree to be the new permittee. By so doing, I acknowledge that I have examined the permit terms, conditions, and drawings, and agree to accept all rights and obligations as permittee, including agreeing to be liable for compliance with all of the permit terms and conditions, and to be liable for any corrective actions required as a result of any violations of the permit after approval of this modification by the Permitting Agency. Also attached are copies of any recorded restrictive covenants, articles of incorporation, and certificate of incorporation that may have been changed as a result of my assuming ownership or control of the lands. As necessary, I agree to furnish the Agency with demonstration that I have the ability to provide for the operation and maintenance of the system for the duration of the permit in accordance with subsection 12.3 of Applicant's Handbook Volume I.

Name of Proposed Permittee:

Mailing Address:

City: State: Zip:

Telephone: E-mail:

_____ _____

Signature of Proposed Permittee Date:

_____

Name and Title

Enclosures:

☐ Copy of title, easement, or other demonstration of ownership or control in the land, as recorded in the Public Records

☐ Copy of current plat(s) (if any), as recorded in the Public Records

☐ Copy of current recorded restrictive covenants and articles of incorporation (if any)

☐ Other

# FLORIDA DEPARTMENT OF Environmental Protection

Southwest District Office
13051 North Telecom Parkway #101
Temple Terrace, Florida 33637-0926




January 11, 2023

American XVII, LLC
c/o Mark Kara
5003 Dover Street
Tampa, FL 33619
Americanmk92@yahoo.com

File No. 0288580-003-SFG, Hillsborough County

Dear Mr. Kara,

On August 29, 2022, we received your request for verification that a State 404 Program permit will not be required for the activity described below.

The proposed activity is to fill approximately 0.34 acres of a non-jurisdictional upland-cut ditch (FLUCCS 514), that is contiguous to Black Point Channel, a Class III Florida waterbody. This project is associated with replacement of an existing upland-cut ditch with an engineered drainage pipe to replace the stormwater capacity of the ditch so the area above the pipe can be filled to increase the useable area of the property located at Parcel ID NO. 19-30-31-Q3000113000060U, Tampa, 33619, Section 4, Township 30 South, Range 19 East, Hillsborough County.

Based on a review of the information submitted by the applicant, as well as aerial interpretation and a site inspection conducted by Department Staff, the activity, as proposed does not appear to involve discharge of dredged or fill material into the waters of the United States and therefore, would not require a permit or other form of authorization under the State 404 Program, as described in Chapter 62-331, Florida Administrative Code (F.A.C.).

This verification reflects current regulations and is only valid for a period of no longer than five years from the date of this letter unless new information warrants a revision of this verification before the expiration date.

Please retain this letter. The activities described above may be inspected by authorized state personnel in the future to ensure compliance with appropriate statutes and administrative codes. If the activities are not in compliance, you may be subject to enforcement action and possible penalties.

This letter does not relieve you from the responsibility of obtaining other federal, state (including ERP), or local authorizations that maybe required for this activity.

If you have any questions regarding this letter or permitting requirements, please contact Heather McClurg by telephone at 813-470-5739 or by e-mail at Heather.McClurg@FloridaDEP.gov.

Executed in Orange County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

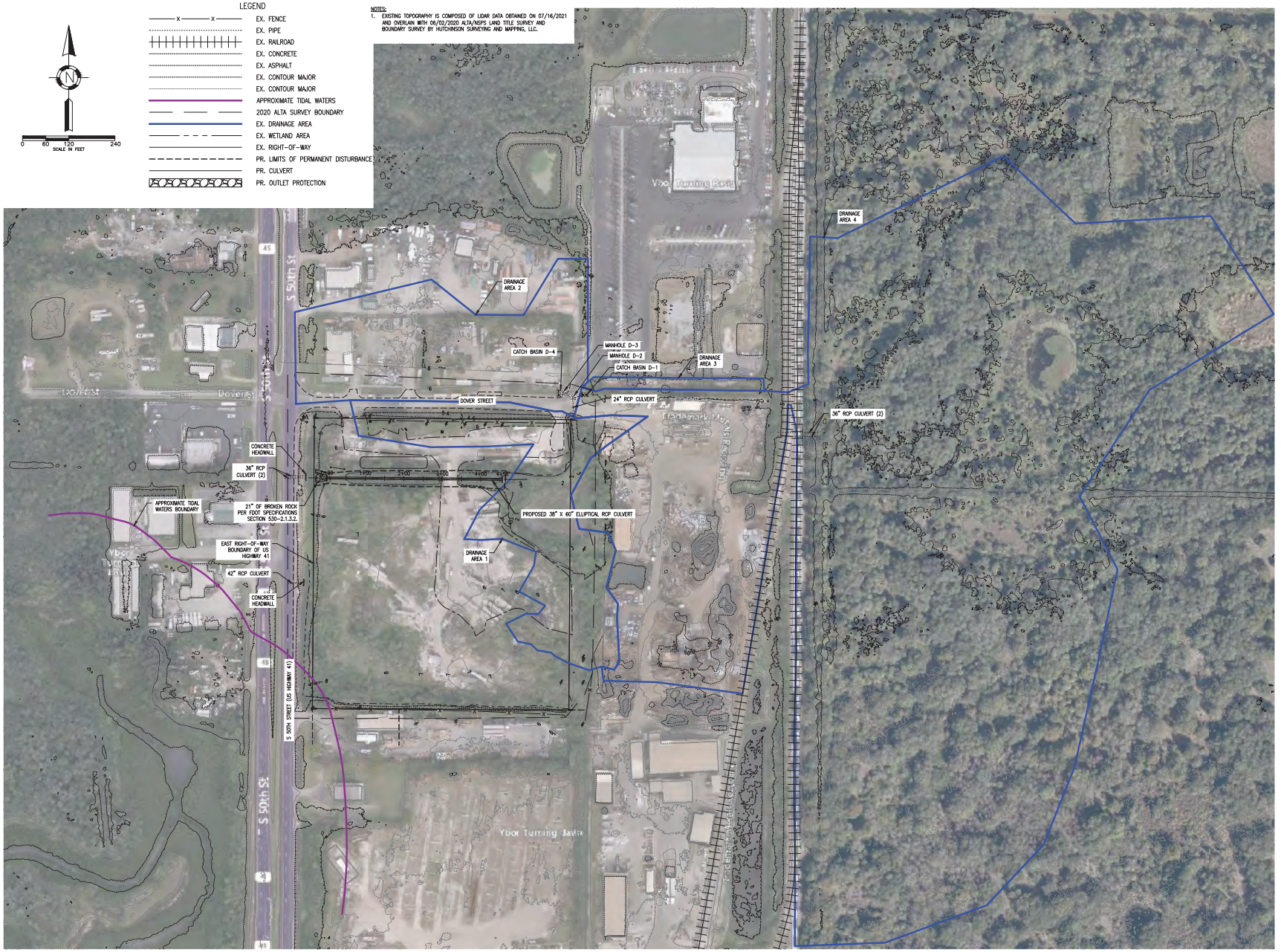
Sincerely,

Gerald Loesch

Gerald "J.J." Loesch
Environmental Administrator
Permitting and Waste Cleanup Programs
Southwest District

Attachments:
1. Project Plan, 1 page
2. WOTUS Information, 3 pages
3. NRCS Soil Map, 2 pages
4. USGS Hydrography Dataset, 1 page
5. Historical Aerial, 2 pages
6. 62-340, F.A.C., Data forms & Site Inspection Report/ Photo Log, 21 pages

cc:
Southwest District, FDEP, SW_ERP@floridadep.gov
Heather McClurg, Southwest District, Heather.McClurg@FloridaDEP.gov
Steven Folsom, HSW Consulting, LLC, sfolsom@hsweng.com
Cheryl Nichols, HSW Engineering, cnichols@verdantas.com

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Project Title:

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**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

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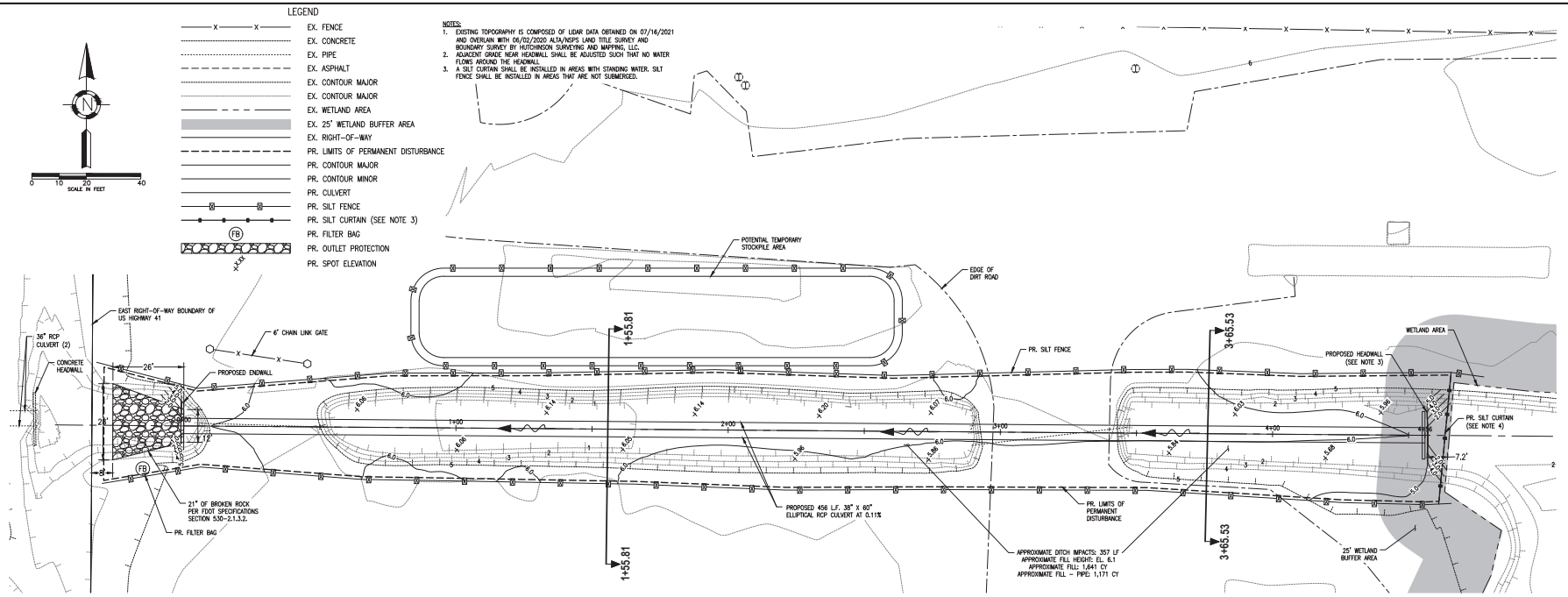
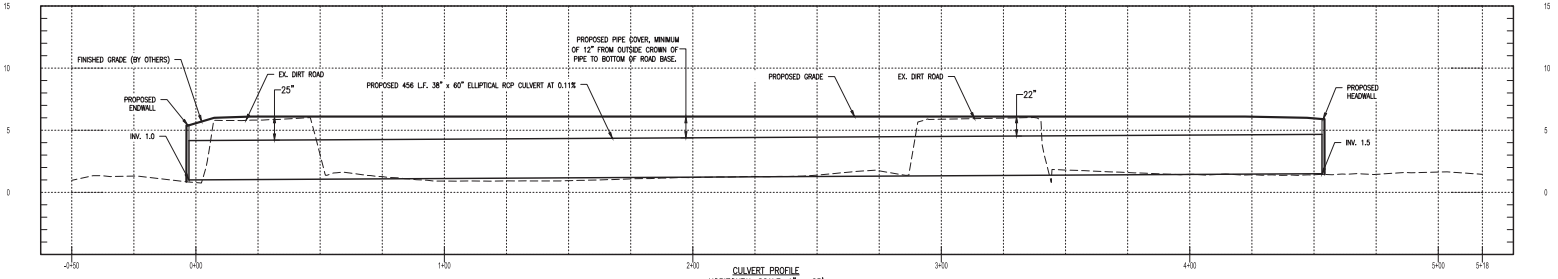
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DRAINAGE AREA MAP**

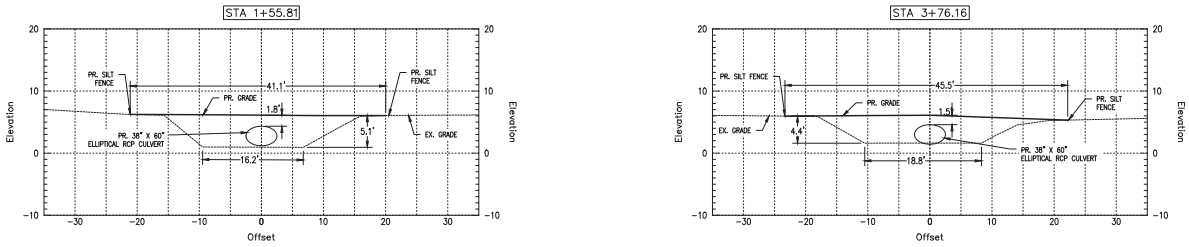
Sheet Number: 01 OF 03

**C1.0**




CULVERT PROFILE
HORIZONTAL SCALE: 1" = 25'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

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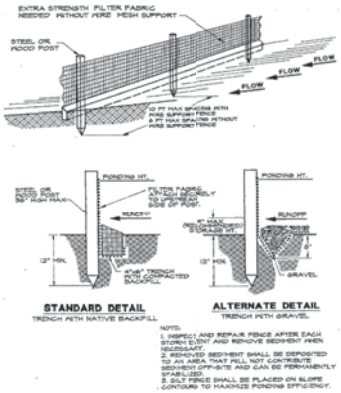
| Issue Date: | NOVEMBER 2022 |

Sheet Title:

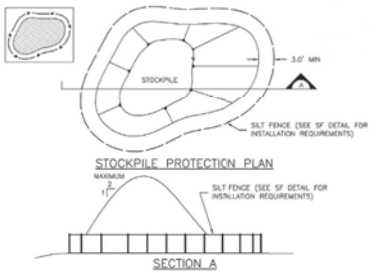
**SITE PLAN, PROFILE, AND CROSS SECTIONS**

Sheet Number: 02 OF 03

**C2.0**

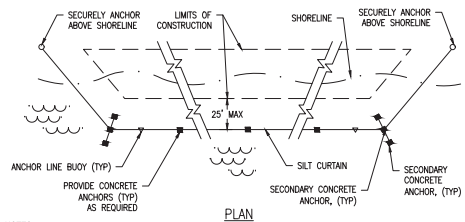



1 **TYPICAL SILT FENCE DETAIL**
Scale: N.T.S.

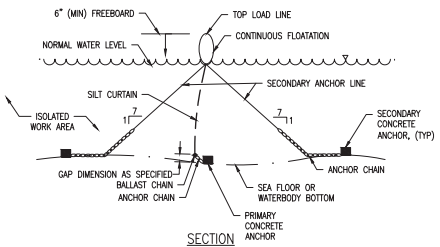



NOTES:
1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES
   –TYPE OF STOCKPILE PROTECTION
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BOIL DINERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

3 **TEMPORARY STOCKPILE PROTECTION DETAIL**
Scale: N.T.S.




NOTES:
1. ALL EXPOSED AND DISTURBED SHORELINES SHALL BE ENCLOSED WITH SILT CURTAIN.
2. SECONDARY ANCHORS SHALL BE PLACED ON ALL CORNERS AS REQUIRED TO SECRURE SILT CURTAIN IN PLACE.




SILT CURTAIN NOTES:

MATERIALS

FLOTATION SILT CURTAIN:
1. PROVIDE COMMERCIAL MANUFACTURED SILT CURTAIN, WITH DEMONSTRATED ABILITY TO TRAP AND HOLD SEDIMENT AND DEBRIS WITHIN THE DEFINED WORK AREA, AND WITH ANCHOR LINES, BALLAST, AND FLOATS THAT ARE ATTACHED TO THE SILT CURTAIN AT REINFORCED ATTACHMENT POINTS PROVI LED BY THE MANUFACTURER.
2. OBTAIN APPROVAL OF PROPOSED FLOTATION SILT CURTAIN PRIOR TO SHIPMENT TO THE PROJECT SITE. PROVIDE SUBMITTALS THAT INCLUDE CERTIFICATES OF MATERIALS TESTING, MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR SHOP DRAWINGS, AND PROPOSED INSTALLATION/REMOVAL PROCEDURES.
3. CURTAIN FABRIC SHALL BE PERVIOUS GEOTEXTILE MEETING AASHTO M 288 FOR TEMPORARY SILT FENCE OR IMPERVIOUS COATED FABRIC SUCH AS NYLON REINFORCED POLYVINYL CHLORIDE, TREATED POLYPROPYLENE/POLYESTER FABRIC, OR APPROVED EQUAL, SEE CONTRACT.
4. PROVIDE A CURTAIN TALL ENOUGH TO EXTEND FROM THE BOTTOM OF THE WATER COLUMN TO THE WATER SURFACE, LESS THE GAP DIMENSION SPECIFIED IN THE PLANS. CONSIDER THE PREDICTED TIDE FLUCTUATIONS OR RIVER FLOWS WHEN DETERMINING THE HEIGHT OF THE CURTAIN.

FLOTATION:
1. PROVIDE FLOTATION CONSISTING OF RIGID, CLOSED CELL EXPANDED POLYSTYRENE, ETHAFOAM, OR POLYETHYLENE FLOATS ATTACHED TO THE TOP OF THE SILT CURTAIN ALONG ITS ENTIRE LENGTH. PROVIDE FLOTATION MATERIAL WITH PROTECTION FROM MECHANICAL DAMAGE AND DETERIORATION THAT WOULD CAUSE POLLUTION.
2. EMPLOY FLOTATION THAT PROVIDES THE CURTAIN WITH A MINIMUM OF FREEBOARD WITHOUT GAPS. ENSURE THAT THE BUOYANCY RATIO (WEIGHT OF DISPLACED FLUID TO BARRIER WEIGHT) IS GREATER THAN 3:1.
3. PROVIDE HIGH VISIBILITY COLOR MARKING FOR THE FLOTATION DEVICES.
4. PROVIDE MANUFACTURER–INSTALLED GROMMETS OR EQUIVALENT TO REINFORCE STRESS POINTS AND PROVIDE ATTACHMENT POINTS TO ENSURE PROPER ANCHORING.

LINES:
PROVIDE ANCHOR LINES AND TOP AND BOTTOM LOAD LINES, AS REQUIRED, THAT ARE MINIMUM 1/2–INCH DIAMETER NYLON ROPE.

ANCHORS:
PROVIDE CONCRETE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.

BALLAST:
PROVIDE BALLAST CHAIN OF MINIMUM 1/2–INCH DIAMETER GALVANIZED STEEL WITH BALLAST CHAIN SEWN INTO A HEM AT THE BOTTOM OF THE CURTAIN AND SECURED TO THE MATERIAL OF THE HEM TO PREVENT SHIFTING OR ACCIDENTAL REMOVAL.

HANDLING AND INSTALLATION

1. SILT CURTAIN PLAN:
   a. SUBMIT A SILT CURTAIN PLAN FOR DEPARTMENT REVIEW AND APPROVAL.
   b. THE SILT CURTAIN PLAN MUST USE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
   c. THE SILT CURTAIN MUST BE ANCHORED AND SECURED SUFFICIENTLY TO WITHSTAND WIND, WAVES,
   d. PROPELLER WASH, RIVERINE FLOW, AND TIDAL FORCES REASONABLY EXPECTED AT THE SITE.
2. JOINING PANELS/SECTIONS:
   a. CONNECT OR SEW INDIVIDUAL PANELS/SECTIONS OR SEW TOGETHER IN THE FIELD, FOR EASE OF HANDLING AND TRANSPORTATION.
   b. DO NOT USE HEAT WELDING METHODS TO JOIN PANELS.
   c. JOIN THE PANELS IN A MANNER THAT WILL PREVENT SILT, SEDIMENT, DEBRIS, OR TURBIDITY TO MIGRATE FROM THE WORK AREA.
   d. IF JOINTS ARE SEWN TOGETHER, USE POLYESTER TWINE THREAD HAVING A TENSILE STRENGTH OF 350 LBS, AS DETERMINED BY ASTM 4268, TO MAKE DOUBLE ROW OF STITCHES THAT WILL NOT UNRAVEL IF BROKEN.
3. INSTALL SILT CURTAIN PRIOR TO STARTING IN–WATER WORK AS SPECIFIED IN THE ENVIRONMENTAL PERMITS.
4. ENSURE THAT THE FLOTATION IS SECURED TO THE BOOM TO PREVENT SHIFTING OR SLIPPING OF THE CURTAIN.
5. WEIGHT THE BASE OF THE CURTAIN WITH BALLAST SO THAT IT WILL REMAIN IN A VERTICAL POSITION.
6. PROVIDE ANCHORS IN THE SIZE AND NUMBER REQUIRED TO MAINTAIN THE CURTAIN IN POSITION FOR PROPER AND CONTINUOUS OPERATION ONCE DEPLOYED.
7. ATTACH ANCHOR CHAINS BETWEEN THE ANCHOR LINE AND ANCHOR TO PREVENT LINE FOULING, TO LOWER THE ANGLE OF LOAD PULLING ON THE ANCHOR, AND TO ACT AS A SHOCK ABSORBER.
8. EMPLOY ANCHOR LINE BUOYS TO HELP PREVENT LINE ENTANGLEMENT AND STRESS ON THE BOOM, IF NEEDED.

INSPECTION

1. INSPECT FOR VISIBILITY ABOVE THE WATER SURFACE ALONG THE ENTIRE LENGTH OF THE SILT CURTAIN.
2. INSPECT FOR 0.5 FEET OF FREEBOARD ABOVE THE WATER SURFACE DURING CALM CONDITIONS.

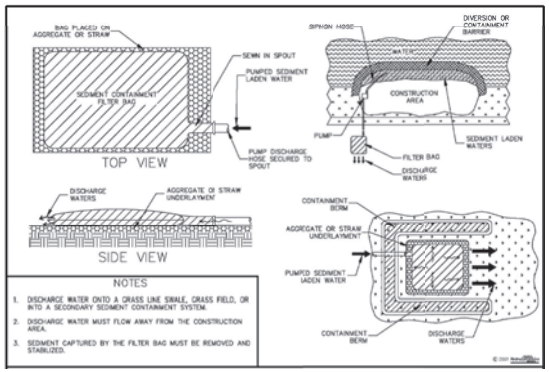
MAINTENANCE

1. MAINTAIN THE SILT CURTAIN AS REQUIRED IN THE INSTALLATION NOTES.
2. ADJUST FLOTATION TO MAINTAIN VISIBILITY AND FREEBOARD ABOVE WATER SURFACE.

REMOVAL

3. THE ENGINEER MUST APPROVE REMOVAL.
4. PREVENT RE–SUSPENSION OF SEDIMENT INTO THE WATER WHEN REMOVING THE CURTAIN. CONDUCT THE REMOVAL DURING PERIODS OF CALM WEATHER. REMOVE THE CURTAIN CAREFULLY TO MINIMIZE THE RELEASE OF TRAPPED SEDIMENT AND DEBRIS. DO NOT DRAG THE CURTAIN WHILE IN CONTACT WITH THE SEA FLOOR OR WATERBODY BOTTOM.

2 **TYPICAL SILT CURTAIN DETAIL**
Scale: NTS




4 **FILTER BAG DETAIL**
Scale: N.T.S.

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VERDANTAS LLC
15711 MAPLEDALE BLVD
SUITE B
TAMPA, FL 33624-3112
PHONE: 813.988.7722
FAX: 813.962.2496
WWW.VERDANTAS.COM

Project Title:

**5003 DOVER STREET**
**PRELIMINARY ENGINEERING**
**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



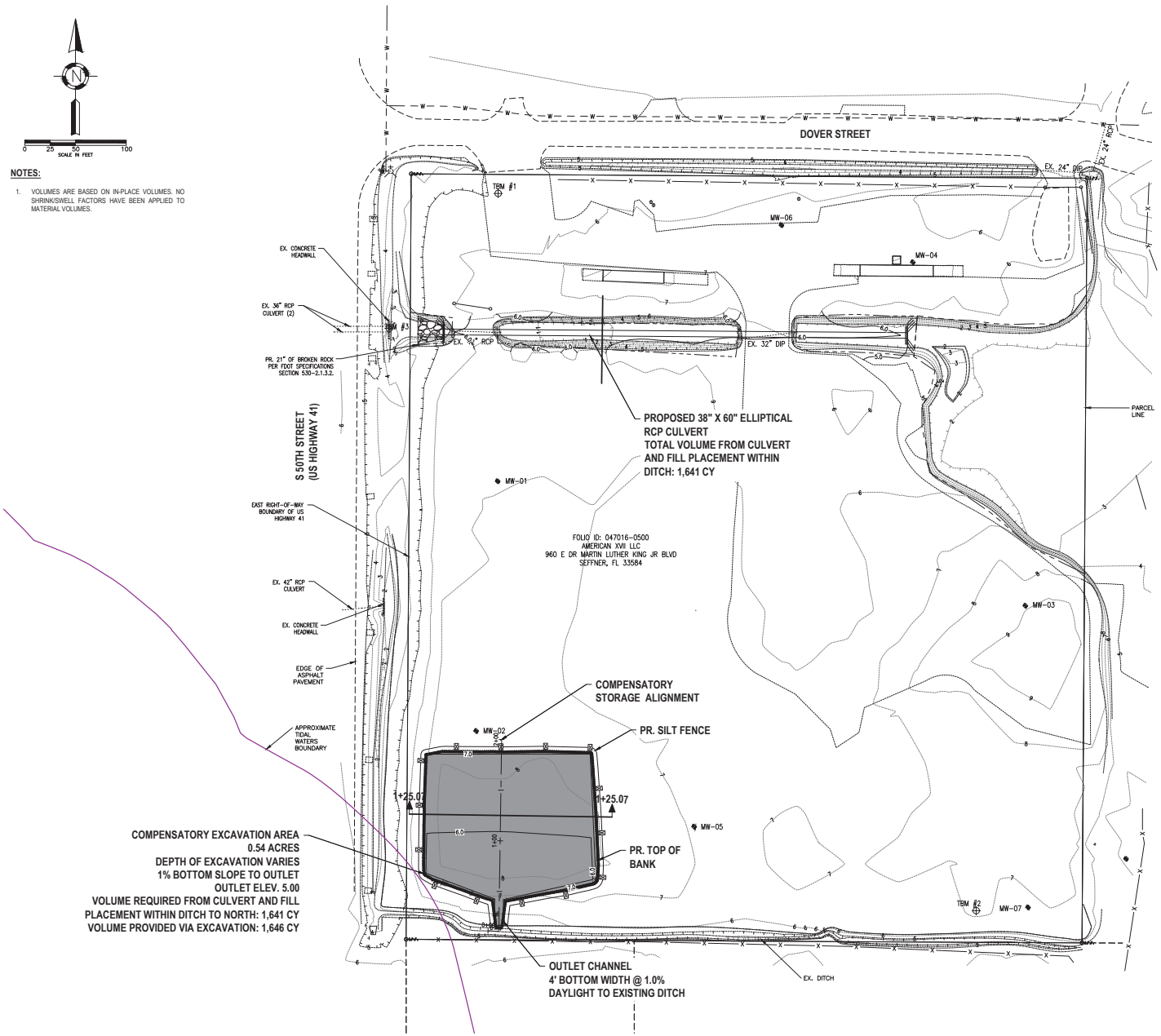
| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 11/18/2022 |

| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 11/18/22 |
| Layout By: | GJC |
| Drawn By: | GJC |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | NOVEMBER 2022 |
| Sheet Title: | |

**DETAILS**

Sheet Number: 03 OF 03

**C3.0**




**NOTES:**

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.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**HILLSBOROUGH COUNTY, FLORIDA**

Owner:

AMERICAN XVII, LLC

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TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 12/05/2022 |

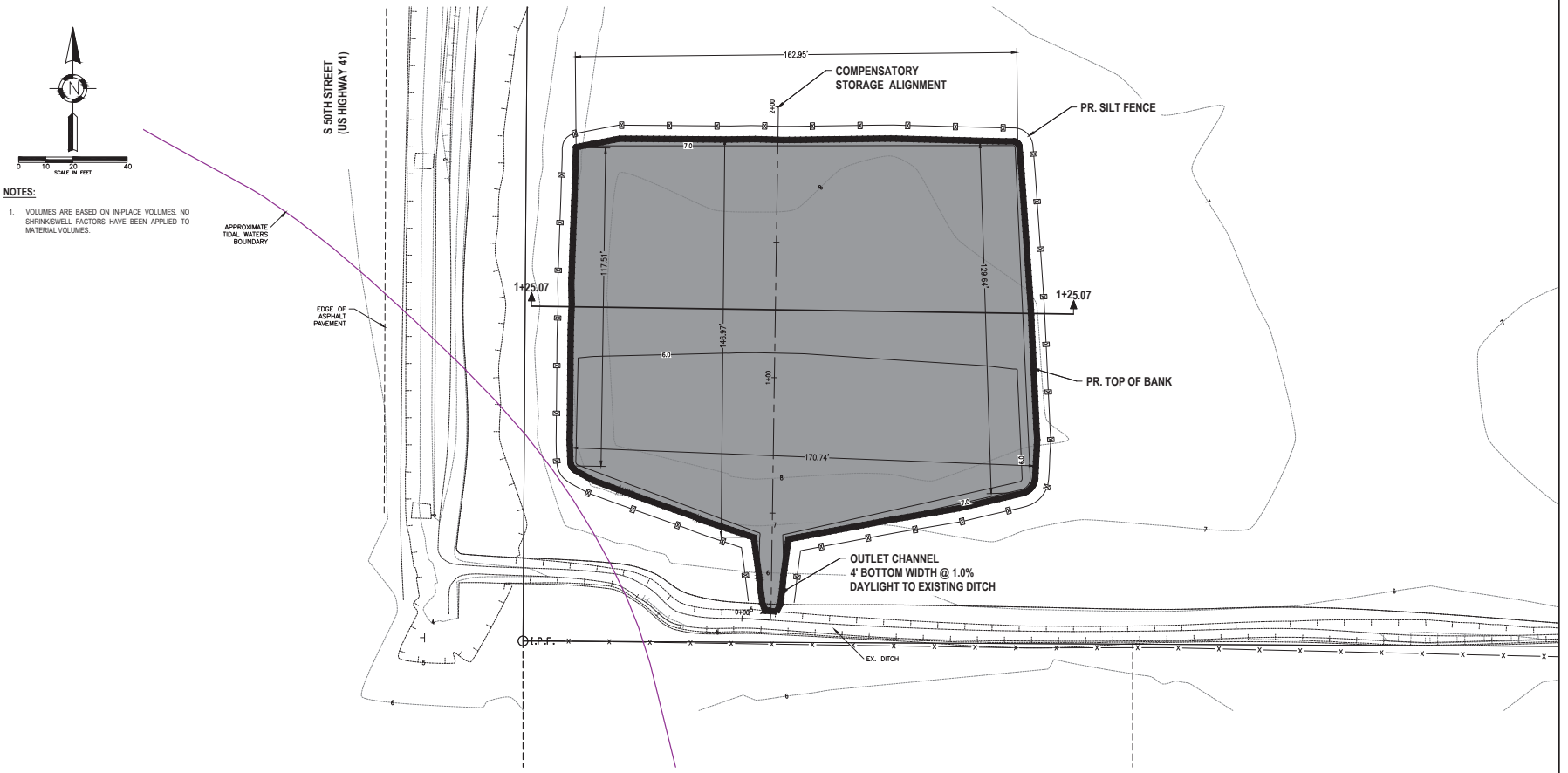
| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 12/5/2022 |
| Layout By: | CJF |
| Drawn By: | CJF |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

**CONCEPTUAL COMPENSATORY STORAGE PLAN**

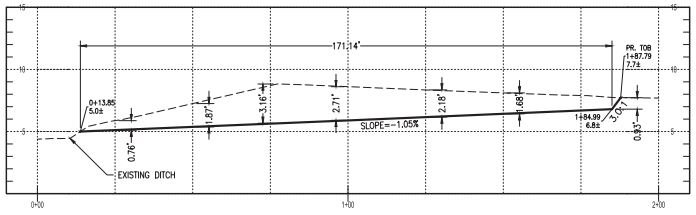
Sheet Number: 01 OF 02

**C1.0**

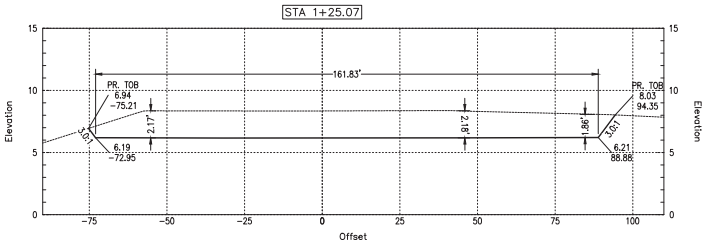



NOTES:

1. VOLUMES ARE BASED ON IN-PLACE VOLUMES. NO SHRINK/SWELL FACTORS HAVE BEEN APPLIED TO MATERIAL VOLUMES.




COMPENSATORY STORAGE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'




CROSS SECTION
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'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Project Title:

5003 DOVER STREET
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HILLSBOROUGH COUNTY, FLORIDA

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15711 MAPLEDALE BLVD., SUITE B
TAMPA, FL 33624



| Mark | Description | Date |
|---|---|---|
| | FOR PERMIT | 12/05/2022 |

| | |
|---|---|
| Project No.: | HSW004 |
| Plot Date: | 12/5/2022 |
| Layout By: | CJF |
| Drawn By: | CJF |
| Check By: | SDF |
| Scale: | AS NOTED |
| Issue Date: | JULY 2022 |

Sheet Title:

CONCEPTUAL
COMPENSATORY
STORAGE PLAN

Sheet Number: 02 OF 02

C2.0

# Information Required for a WOTUS Determination in State-assumed Waters

## I. General Information

The following information is required if an applicant is requesting that the Department perform a Waters of the United States (WOTUS) jurisdictional determination pursuant to the Navigable Waters Protection Rule (40 C.F.R. 120) during review of a State 404 Program permit application, a Formal Determination under Chapter 62-340, F.A.C., or a request for verification that no permit is required under the State 404 Program. This form is provided as a service to applicants and petitioners. Use of the form may assist efficient review.

## II. Findings

### A. Summary

Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area).
Rationale: (N/A or describe rationale)

☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.B).

● There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.C)

### B. Clean Water Act Section 404 Jurisdiction (40 C.F.R. 120)

Please expand tables or use additional sheets as needed. Include measurement units in size column (acres, linear feet, etc.)

Traditional Navigable Waters ((a)(1) waters)

| (a)(1) Name | (a)(1) Size | (a)(1) Criteria | Rationale for (a)(1) Determination |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Note: All Territorial Seas and any Traditional Navigable Water listed in Appendix B of the 404 Handbook (Retained Waters List) are not assumable under the State 404 Program. If your project site contains or borders one of these waters and you are proposing or plan to propose dredge or fill activities within 300 feet of the mean high tide line or ordinary high water mark, please apply to the US Army Corps of Engineers for a permit or jurisdictional determination under Section 404 of the Clean Water Act.

Tributaries ((a)(2) waters)

| (a)(2) Name | (a)(2) Size | (a)(2) Criteria | Rationale for (a)(2) Determination |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters)

| (a)(3) Name | (a)(3) Size | (a)(3) Criteria | Rationale for (a)(3) Determination |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Adjacent wetlands ((a)(4) waters)

| (a)(4) Name | (a)(4) Size | (a)(4) Criteria | Rationale for (a)(4) Determination |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## C. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12))

| Name | Size | (b) Exclusion | Rationale for Exclusion Determination |
|---|---|---|---|
| Upland Ditch | 0.272 acres | Title 33/Chapter II/328.3(b)(5) | Ditches that are not waters identified as territorial seas, tributaries, lakes or ponds (328.3(a)), and those portions of ditches constructed in waters identified as adjacent wetlands of this section that do not satisfy the condition of 328.3(c)(1). |
| Onsite Wetland | 0.737 acres | Title 33/Chapter II/328.3(b)(1) | Wetland is water or water feature that is not identified in 328.3(a)(1),(2),(3), or (4). |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# III. Supporting Information

## A. Resources Used

Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

- Information submitted by, or on behalf of, the applicant/consultant (Title(s) and date(s)):
  Current 62-340, F.A.C. delineation:
  Aerial photographs:
  Other photographs:
  Previous WOTUS jurisdictional determinations (Corps PJD or AJD/Department WOTUS determination):
  Previous or current 62-340, F.A.C. formal jurisdictional determination:
  Antecedent Precipitation Tool (provide detailed discussion in Section III.B.):
  USDA NRCS Soil Survey (Title(s) and/or date(s)):
  USFWS NWI maps (Title(s) and/or date(s)):
  USGS topographic maps (Title(s) and/or date(s)):

Other data sources used to aid in this determination:

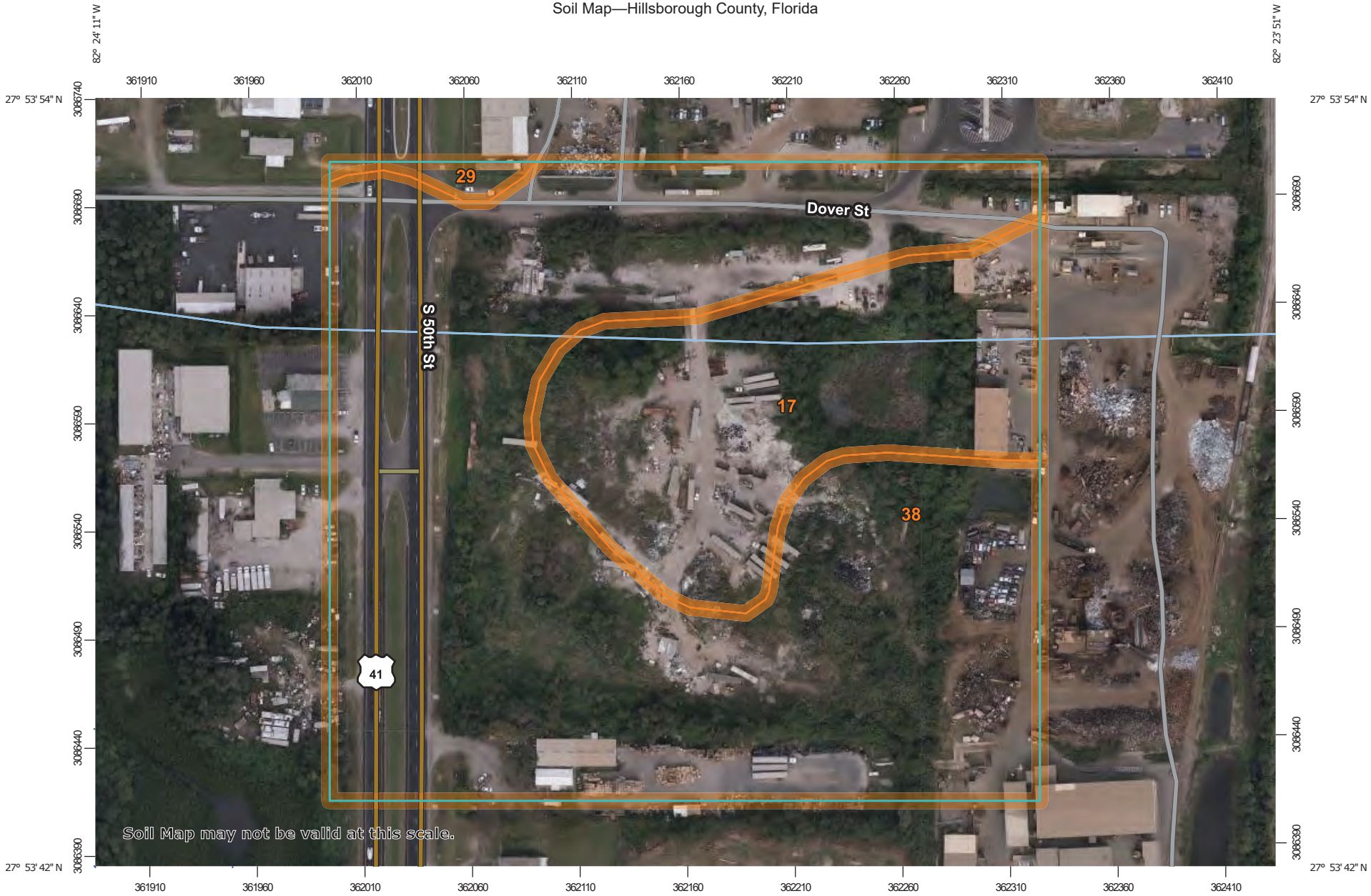
| Data source | Name and/or date and other relevant information |
|---|---|
| USGS Sources | |
| USDA Sources | |
| NOAA Sources | |
| USACE Sources | |
| State/Local/Tribal Sources | |
| Other Sources | 40 CFR 230 and 40 CFR 120 |

## B. Typical Year Assessments

**N/A** or provide typical year assessment for each relevant data source used to support the determination:

## C. Additional comments to support the WOTUS jurisdictional determination

**N/A** or provide additional discussion as appropriate:




Map Scale: 1:2,510 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hillsborough County, Florida
Survey Area Data: Version 22, Sep 1, 2022

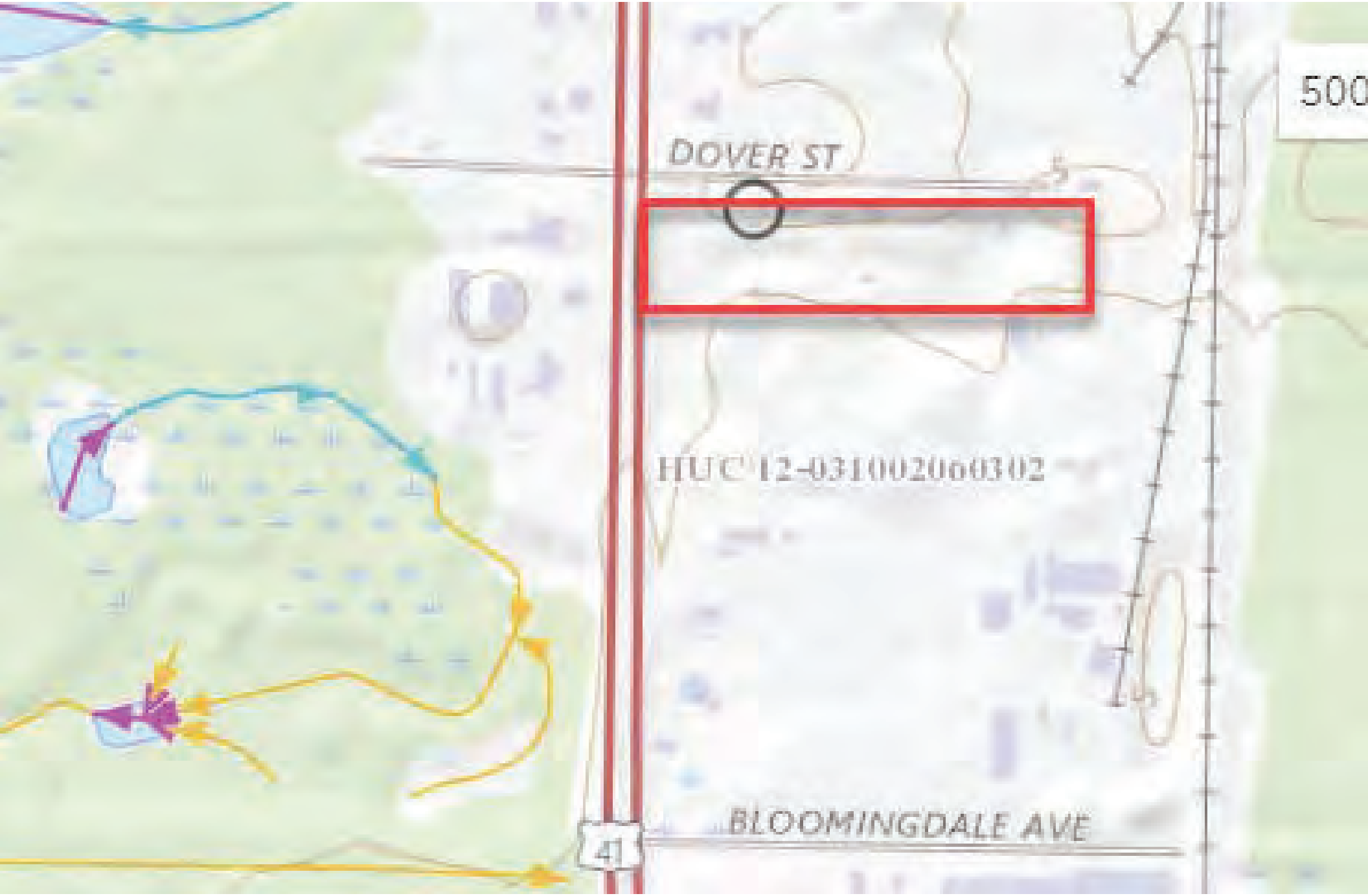
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 27, 2020—Feb 4, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 17 | Floridana fine sand, 0 to 2 percent slopes | 6.0 | 24.8% |
| 29 | Myakka fine sand, 0 to 2 percent slopes | 0.2 | 1.0% |
| 38 | Pinellas fine sand, 0 to 2 percent slopes | 18.0 | 74.2% |
| **Totals for Area of Interest** | | **24.2** | **100.0%** |


DOVER ST
HUC 12-031002060302
BLOOMINGDALE AVE
41

1957

1968

1976

# State 404 Program
# Department Certified Wetland Evaluator Work Product Cover Sheet

The attached files were reviewed/created and approved by the Certified Wetland Evaluator(s) (CWEs) employed by the Florida Department of Environmental Protection as indicated below.

State 404 File Number: 0288580-003 WMD/DLG ERP/FD File Number: 0288580-002

Date(s) of Site Inspection: November 9, 2022

Purpose of Site Inspection: Non-Wetland Surface Water Delineation

Evaluation Documentation Includes (check all that apply):

- ☒ 62-340, F.A.C. Data Forms: _____6_____ pages
- ☐ Functional assessment forms: _____ pages
  - ☐ UMAM
  - ☐ WRAP
  - ☐ WATER
  - ☐ Other _____
- ☒ Site photos: ____4_____ pages
- ☐ State 404 Program WOTUS Information Form: _____ pages
- ☐ Other WOTUS-related documentation: _____ pages

  Description_____
  _____
  _____

By signing below, the DEP CWE(s) affirm that the attached documentation was completed in accordance with the following laws and rules as applicable: Chapters 62-330, 62-331, 62-340, and 62-345, F.A.C., and 40 C.F.R. 120, and contain true and accurate information that reflects the site conditions at the time of the inspection.

Lead DEP CWE Name (legible): ____Heather McClurg_____

Signature: _____

Date Approved: ___11/09/2022_____

FDEP SLERC
August 2019

# Chapter 62-340, F.A.C. Data Form

§ denotes the Rule, subsection,paragraph, or subparagraph referenced from Ch. 62-340, F.A.C.

1. Date: November 9, 2022 2. Staff Present: H. McClurg; E. Domas; E. Love 3. Form recorder(s): HM
4. County: Hillsborough (29) 5. Site Name: Mark Kara Tracking #: 0288580-002-003
6. Point ID: OSW GPS Coordinates: 27.897362°N 82.399985°W
7. Distances and bearings from fixed objects (if no GPS):
8. Current condition of described point: ☑ Authorized or legal condition ☐ Unauthorized or illegal condition
9. Work type: ☐ Identification ☑ Delineation
Point status: ☐ Wetland ☑ Non-Wetland Surface Water ☐ Upland

**10. Vegetative Stratum §62-340.400:** Using §62-340.400, F.A.C. with reasonable scientific judgment, select the appropriate vegetative stratum. (Do not include FAC species when determining 10% minimum areal extent.)

☐ Canopy (Min. 10% areal extent) ☐ Subcanopy (Min. 10% areal extent) ☑ Groundcover (No min. areal extent)

☐ Vegetation Absent (*skip to #14*) ☐ Evaluation Impossible (*skip to #14*) **Why?**

**11. Plant List §62-340.200(2),(6),(16), §62-340.400, §62-340.450, F.A.C.:**
***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***
Areal extent estimator: HM

Select and identify plants in an area just large enough to represent and classify the plant community at the described point. Do not extend into different communities or hydrologic conditions.

| 1. Record the scientific name (binomial) and status of each plant species necessary to identify/delineate and classify the plant community in the selected area. | 2. Record the percent areal extent in the canopy, subcanopy, and groundcover columns for each species. | 3. For each species present in the **stratum selected in #10**, transfer the numbers from only that stratum's column into the appropriate status columns. |
|---|---|---|

| # | Binomial of Observed Species | Status | Canopy | Subcanopy | Groundcover | Upland | Facultative | Fac. Wet | Obligate |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Typha angustifolia | O | | | 70 | 0 | 0 | 0 | 80 |
| 2. | Bidens spp. | U | | | 10 | 10 | 0 | 0 | 0 |
| 3. | Commelina spp. | FW | | | 2 | 0 | 0 | 2 | 0 |
| 4. | Ludwigia peruviana | O | | | 5 | 0 | 0 | 0 | 0 |
| 5. | Ludwigia octovalvis | O | | | 2 | 0 | 0 | 0 | 2 |
| 6. | Schinus terebinthifolius | F | | 20 | | 0 | 0 | 0 | 0 |
| Percent areal extent totals for the stratum selected in question 10 | | | | | | 10 | 0 | 2 | 82 |

12. In the stratum selected in #10: What is the % areal extent of Obligate plants? 82

What is the % areal extent of Upland plants? 10

Is the areal extent of Obligate plants greater than that of Upland plants? ☑ Yes ☐ No

13. In the stratum selected in #10: What is the total % areal extent of Obligate & Facultative Wet plants combined? 84

What is the total % areal extent of Obligate, Facultative Wet, & Upland plants combined? 94

What is the percentage of OBL + FACW in relation to all plants, excluding FAC? $\frac{\text{OBL+FACW}}{\text{OBL+FACW+UPL}}$ 89.4%

**Point ID/Location:** 0288580-002-003 OSW | Soil describer: HM

**14. LRR/MLRA** U | **Textures:** Peat, Mucky Peat, Muck, Mucky Mineral (S or F), Sand, Fine, Marl

**15.** Is a soil profile evaluation possible? ☐ Yes ☑ No If no, why? Standing water *(**If No**, skip to #18)*

**16. Soil Description:** ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Soil surface, or 0 inch depth for purposes of Chapter 62-340, F.A.C. is the muck or mineral surface (whether natural or fill)

| Horizon | beginningto ending **Depth** (inches) | **Matrix Texture** | moist condition **Matrix Hue Value/ Chroma** | for sandy matrix horizons w/ value ≤ 3: **% Organic Coating** | - Describe soil features: DA (areas darker than matrix), LA (areas lighter than matrix),<br>- RC (redox concentrations): Record in moist condition **hue value/chroma; % volume inhorizon; boundaries** (sharp/clear/diffuse); **shape** (rounded/linear/angular).<br>- OB (organic bodies): Record texture (muck or mucky mineral), **% volume in horizon**.<br>- $H_2S$ (hydrogen sulfide odor): Indicate shallowest depth where detected<br>- Note if horizon is **Physically Mixed (PM), Nonsoil** (any material not listed in "Textures"above), or **Fill** and describe. |
|---|---|---|---|---|---|

**17. Hydric Soil Field Indicators:** If present, check all Hydric Soil Field Indicators satisfied and specify their beginning and ending depths

| # | Indicator Present | Begin Depth | End Depth |
|---|---|---|---|
| | ** = Stand-alone D Test - both hydric soiland hydrologic indicator* | To combine layers/indicators to meet thickness requirements, see NRCS Hydric Soils Technical Note 4. | |

18. Excluding organic horizons, is any nonsoil horizon present at or within the uppermost 12 inches of the ground surface?
☐ Yes *(e.g. bedrock, rock outcrop, limestone fill, gravel, etc)* ☑ No ☐ Soil profile or site inaccessible

19. Is one or more hydric soil field indicators present? ☐ Yes ☑ No ☐ Inconclusive *(e.g., evaluation to 12+ inches impeded by disturbance, water, nonsoil, no site access, etc.)*

If no or inconclusive, is the soil hydric as determined by other NRCS methods?
☐ Yes ←Which method(s)? ☑ No ☐ Inconclusive ← Why?

20. Is the depth of the soil profile 20 inches or greater from the soil surface? ☐ Yes ☑ No If no, depth of soil profile is: inches Why? Water table
*(e.g., root refusal, nonsoil, water table, loose sand, heavy texture, compaction, weather conditions, inspection interrupted)*

21. **Observed** height or depth of standing water from **soil** surface: inches ☐ Above ☐ Below ☑ Not Observed

**Point ID/Location:** 0288580-002-003 OSW | Indicator evaluator: HM

**22. Hydrologic Indicators:** ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

| **Hydrologic Indicators per §62-340.500, F.A.C.** (and as applied to §62-340.600, F.A.C.) | Present at or near point | Predicted during normal high water or wet season | Within 100 ft waterward of point (not for upland points) | 1. Describe the type of all checked indicators. 2. Approximate the distance and compass direction of indicators within 100 ft of the point. 3. For water level indicators (potential indicators denoted by *) **note the height from ground surface** at the point as well as waterward (with distance from point). Only for indicators not present due to dry season/drought |
|---|---|---|---|---|
| (8) Hydrologic data* | Yes | | | Water table at point. 1.5 inches from Soil Surface. |
| (3) Aquatic plants* | Yes | | | Duckweed at point. inches from . |

Highest water level indicator height at point: inches ☐ Above Ground Surface ☐ No Water Level Indicators ☐ Above Soil Surface ☑ N/A (described point is Upland)

**23.** Is one or more hydrologic indicator(s) listed in §62-340.500, F.A.C. present or predicted with normal high water or wet season conditions at the described point? ☑ Yes ☐ No ☐ Evaluation Impossible ← Why?

**24. Delineation by Wetland Definition §62-340.300(1), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Has a wetland boundary been delineated at the described point? ☐ Yes ☑ No ***(If No**, skip to #25)*

b) If yes to 24a, can the boundary be easily delineated using the definition of wetlands? ☐ Yes ☐ No

**25. A & B Test Wetland Criteria §62-340.300(2)(a),(b), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Is the areal extent of Obligate plants in the stratum selected in #10 greater than the areal extent of all Upland plants in that stratum? (See #12) ☑ Yes ☐ No ☐ Vegetation Absent (*skip to $25f*) ☐ Evaluation Impossible (*skip to #26a*)

b) Is the areal extent of Obligate and/or Facultative Wet plants in the stratum selected in #10 equal to or greater than 80% of all the plants in that stratum, excluding Facultative plants? (See #13) ☑ Yes ☐ No

c) Is the soil hydric as identified using standard NRCS definitions and practices? (see #19) ☐ Yes ☑ No ☐ Indeterminable with current conditions ← Why?

d) Is the substrate composed of riverwash, nonsoil (see #18), rock outcrop-soil complex, or is the substrate located within an artificially created wetland area? ☐ Yes ☐ No If yes, which condition is present?

e) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ☑ Yes ☐ No

f) Are the A Test criteria met per §62-340.300(2)(a), F.A.C. at the described point? ☑ Yes ☐ No *(Note: If yes to 25a and yes to either 25c, 25d, or 25e, A Test criteria are met)*

g) Are the B Test criteria met per §62-340.300(2)(b), F.A.C. at the described point? ☑ Yes ☐ No *(Note: If yes to 25b and yes to either 25c, 25d, or 25e, B Test criteria are met)*

h) Are there any **alterations or conditions** affecting reliable application of the A or B Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**Point ID/Location:** 0288580-002-003 OSW

**26. C Test Wetland Criteria §62-340.300(2)(c), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Per §62-340.300(2)(c), F.A.C. is the described point Pine Flatwoods or Improved Pasture, or does it havedrained soils? ☐ Yes ☑ No ***If yes**, select which of the following are met, then skip to #26d*

☐ Pine Flatwoods ☐ Improved Pasture ☐ Drained Soils

***Pine Flatwoods** must have flat terrain, a monotypic or mixed canopy of long leaf pine or slash pine, and a ground cover dominated by saw palmetto with other species that are NOT obligate or facultative wet. **Improved Pasture** means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are NOTobligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing.*

***Drained Soils** are those in which permanent alterations, excluding mechanical pumping, preclude the formation of hydric soils.*

b) Are the soils at the described point saline sands (salt flats-tidal flats), **or** have they been **field verified** by NRCS's Keys to Soil Taxonomy (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults? ☐ Yes ☑ No

c) Do the soils at the described point have a NRCS hydric soil field indicator (see #17), **and** is the point located within a map unit named or designated by the NRCS as frequently flooded, depressional, or water?
Map Unit: ☐ Yes ☑ No ☐ Inconclusive ← Why? (*skip to #27a)*

d) Are the C Test criteria met per §62-340.300(2)(c), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If no to 26a and yes to either 26b or 26c, C Test criteria are met)*

e) Are there any **alterations or conditions** affecting reliable application of the C Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**27. D Test Wetland Criteria §62-340.300(2)(d), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Is the soil hydric as verified by a NRCS hydric soil field indicator? (See #17)
☐ Yes ☑ No (*skip to #27d*) ☐ Inconclusive ← Why? (*skip to #28)*

b) Does any NRCS hydric soil field indicator begin **at the soil surface or** are any of the following indicators present: A1, A2, A3, A4, A5, A7, A8, A9, S4, F2? ☐ Yes ☐ No *(If yes, then hydrologic indicator §62-340.500(8) or (11) is met)*

c) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ☐ Yes ☐ No

d) Are the D Test criteria met per §62-340.300(2)(d), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If yes to 27a and yes to either 27b or 27c, D Test criteria may be met)*

e) Are there any **alterations or conditions** affecting reliable application of the D Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**28. Altered Sites Tests §62-340.300(3), F.A.C. (Legal/Authorized or Illegal/Unauthorized)**

*For purposes of Chapter 62-340, F.A.C. **altered** refers to any natural or man-induced condition(s) which **masks or eliminates reliable expression** of wetland indicators (i.e. hydrophytic vegetation, hydric soils, and hydrologicindicators). **Unaltered or normal does not require a natural condition**, only an expression of wetland indicators that is sufficient to **reliably** identify or delineate the wetland using the criteria in §62-340.300, F.A.C.*

Are alterations affecting normal wetland condition? ☐ Yes ☑ No (*skip to #32*) ☐ Evaluation Impossible (*skip to #32*)

**29. Authorized or Legally Altered Vegetation and Soils Test Criteria §62-340.300(3)(a), F.A.C.**

a) Are there **authorized** or **legal** alterations affecting reliable expression of vegetation at the described point?
☐ Yes ☐ No If yes, how?

b) Are there **authorized** or **legal** alterations affecting reliable soil evaluation at the described point? ☐ Yes ☐ No
If yes, how? *(**If no to both** 29a and 29b, skip to #30)*

c) If yes to 29a or 29b, which criteria tests are affected by the legal alterations? ☐ A Test ☐ B Test ☐ C Test ☐ D Test

d) Using the most reliable available information and reasonable scientific judgment, would the types of evidence and characteristics contemplated in §62-340.300, F.A.C. identify or delineate the described point as a wetland with cessation of the legal altering activities? ☐ Yes ☐ No If no, why? *(**If no**, skip to #30)*

e) If yes to 29d, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of legal altering activities? ☐ Plants ☐ Soils ☐ Hydrologic indicators

f) If yes to 29d, which tests would be passed with cessation of legal altering activities?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test **Why?**

**Point ID/Location:** 0288580-002-003 OSW

**30. Authorized or Legally Altered Hydrology Test Criteria §62-340.300(3)(b), F.A.C.**

a) Has wetland hydrology of the area been **legally** drained or lowered? ☐ Yes ☐ No *(**If no**, skip to #31)*
If yes, how?

b) Has wetland hydrology been **legally** eliminated at the described point? ☐ Yes ☐ No *(**If no**, skip to #31)*

c) If yes to 30b, using reasonable scientific judgment or §62-340.550, F.A.C., have dredging or filling activities authorized by **Part IV** of Chapter 373, F.S. **permanently eliminated** wetland hydrology at the described point such that the wetland definition cannot be met? ☐ Yes (point is upland) ☐ No *(**If yes**, skip to #31)*

*Chapter 373, F.S. Part II activities (e.g., water use permits) or other temporary hydrologic alterations (e.g., surface water pumps, drought) do **not** apply to this or any other Ch. 62-340, F.A.C. determinations.*

d) If no to 30c, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of temporary hydrologic drainage? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If no to 30c, Which tests would be passed with cessation of temporary hydrologic alterations?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
**Why?**

**31. Unauthorized or Illegally Altered Sites Test Criteria §62-340.300(3)(c), F.A.C.**

*If the altering activity is a violation of regulatory requirements, then application of §62-340.300(3)(c), F.A.C. andall provisions of Chapter 62-340, F.A.C. are utilized to identify or delineate the wetland in a forensic manner.* ***This identification or delineation reflects the condition immediately prior to the unauthorized alteration.***

a) Have any **unauthorized** alterations affected the normal wetland condition at the described point? ☐ Yes ☐ No
If yes, how? *(**If no**, skip to #32)*

b) If yes to 31a, which criteria tests are affected by the unauthorized alterations?
☐ A Test ☐ B Test
☐ C Test ☐ D Test

c) With reasonable scientific judgment is the described point a wetland, or would it have been a wetland immediately prior to the unauthorized alteration? ☐ Yes ☐ No If no, why? *(**If no**, skip to #32)*

d) If yes to 31c, what §62-340.300, F.A.C. evidence is present now and/or was present immediately prior to theunauthorized alteration? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If yes to 31c, which tests would be passed immediately prior to the unauthorized alteration?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
**Why?**

**32. Wetland and Other Surface Water Summary §62-340.600(2)(a-e), F.A.C.:**

Given **normal** expression, **cessation** of **authorized** alterations, or **immediately prior** to any **unauthorized** alterations:

a) With **reasonable scientific judgment** is the described point a wetland as defined in §62-340.200(19), F.A.C. and located by Ch. 62-340, F.A.C.? ☐ Yes ☑ No If yes, which criteria identified or delineated the wetland?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
If summary answers differ from answers in 25f, 25g, 26d, or 27d, why?

b) Is the described point located at or within the Mean High Water Line of a tidal water body?
☐ Yes ☑ No ☐ MHWL Unknown

c) Is the described point located at or within the Ordinary High Water Line of a non-tidal natural water body or natural watercourse? ☐ Yes ☑ No

d) Is the described point located at or within the top of the bank of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground? ☐ Yes ☑ No

e) Is the described point located at or within the Seasonal High Water Line of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes flatter than 1 foot vertical to 4 feet horizontal or an artificial water body created by diking or impoundment above the ground? ☑ Yes ☐ No

**33. Connection or Isolation of Wetland per Applicant's Handbook Vol.1 Section 2.0**

If the described point is a wetland, does it have a connection via wetlands or other surface waters, or is it wholly surrounded by uplands and therefore isolated? ☐ Connected ☐ Isolated ☑ N/A (Point is not wetland)

**Point ID/Location:** 0288580-002-003 OSW

**Notes:**
Heather McClurg, C.W.E.

**Helpful Definitions for Applying Ch 62-340, F.A.C.**

[1]**RSJ** stands for Reasonable Scientific Judgment where used throughout this Data Form (See *The Florida Wetlands Delineation Manual* pg. 2 & 12*)*

[2]**HSTS** stands for Hydric Soils Technical Standard (See NRCS Hydric Soils Technical Note 11)

*Definition from §62.340.200(19) Florida Administrative Code*
"**Wetlands**," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

*Definition from §373.019(19) Florida Statutes*
"**Surface water**" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

*Definition from §373.019(14) Florida Statutes*
"**Other watercourse**" means any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted.

*Definition from §62.340.200(15) Florida Administrative Code*
"**Seasonal High Water**" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

*From The Florida Wetlands Delineation Manual pg. 37*
**Ordinary high water** is that point on the slope or bank where the surface water from the water body ceases to exert a dominant influence on the character of the surrounding vegetation and soils. The OHWL frequently encompasses areas dominated by non-listed vegetation and non-hydric soils. When the OHWL is not at a wetland edge, the general view of the area may present an "upland" appearance.

*Definition from §403.803(14) Florida Statutes*
**"Swale"** means a manmade trench which:
(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;
(b) Contains contiguous areas of standing or flowing water only following a rainfall event;
(c) Is planted with or has stablized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and
Is designed to take into acount the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reducepollutant concentration of any discharge.

**34. Photographs and/or videos:** Soil profile with Data Form, Soil profile close-up, Cross section(s) at 6" depth for sandy textures and/or critical depths for fine textures, Hydric soil indicators, Water table or inundation depth, Four cardinal directions of plant strata present, Hydrologic indicators (with scale as necessary), Critical plant ID (optional)

| 1. | **Description:** | (8) Hydrologic data* |
|---|---|---|


| 2. | **Description:** | (3) Aquatic plants* |
|---|---|---|


| 3. | **Description:** | Facing N |
|---|---|---|


| | | |
|---|---|---|
| **4.** | **Description:** | Facing E |


| | | |
|---|---|---|
| **5.** | **Description:** | Facing W |


| | | |
|---|---|---|
| **6.** | **Description:** | Facing S |

**Approximate Data Form Point Location**

# State 404 Program
# Department Certified Wetland Evaluator Work Product Cover Sheet

The attached files were reviewed/created and approved by the Certified Wetland Evaluator(s) (CWEs) employed by the Florida Department of Environmental Protection as indicated below.

State 404 File Number: 0288580-003 WMD/DLG ERP/FD File Number: 0288580-002

Date(s) of Site Inspection: November 9, 2022

Purpose of Site Inspection: Upland Delineation

Evaluation Documentation Includes (check all that apply):

- ☒ 62-340, F.A.C. Data Forms: _____6_____ pages
- ☐ Functional assessment forms: _____ pages
  - ☐ UMAM
  - ☐ WRAP
  - ☐ WATER
  - ☐ Other _____
- ☒ Site photos: _____3_____ pages
- ☐ State 404 Program WOTUS Information Form: _____ pages
- ☐ Other WOTUS-related documentation: _____ pages

  Description_____
  _____
  _____

By signing below, the DEP CWE(s) affirm that the attached documentation was completed in accordance with the following laws and rules as applicable: Chapters 62-330, 62-331, 62-340, and 62-345, F.A.C., and 40 C.F.R. 120, and contain true and accurate information that reflects the site conditions at the time of the inspection.

Lead DEP CWE Name (legible): Heather McClurg

Signature: 

Date Approved: 11/09/2022

FDEP SLERC
August 2019

# Chapter 62-340, F.A.C. Data Form

§ denotes the Rule, subsection,paragraph, or subparagraph referenced from Ch. 62-340, F.A.C.

1. Date: November 9, 2022 2. Staff Present: H. McClurg; E. Domas, E. Love 3. Form recorder(s): HM
4. County: Hillsborough (29) 5. Site Name: Mark Kara Tracking #: 0288580-002-003
6. Point ID: Upland GPS Coordinates: 27.897368°N 82.400070°W
7. Distances and bearings from fixed objects (if no GPS):
8. Current condition of described point: ☑ Authorized or legal condition ☐ Unauthorized or illegal condition
9. Work type: ☐ Identification ☑ Delineation
Point status: ☐ Wetland ☐ Non-Wetland Surface Water ☑ Upland

**10. Vegetative Stratum §62-340.400:** Using §62-340.400, F.A.C. with reasonable scientific judgment, select the appropriate vegetative stratum. (Do not include FAC species when determining 10% minimum areal extent.)

☐ Canopy (Min. 10% areal extent) ☑ Subcanopy (Min. 10% areal extent) ☐ Groundcover (No min. areal extent)

☐ Vegetation Absent (*skip to #14*) ☐ Evaluation Impossible (*skip to #14*) **Why?**

**11. Plant List §62-340.200(2),(6),(16), §62-340.400, §62-340.450, F.A.C.:**
***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***
Areal extent estimator: HM

Select and identify plants in an area just large enough to represent and classify the plant community at the described point. Do not extend into different communities or hydrologic conditions.

| 1. Record the scientific name (binomial) and status of each plant species necessary to identify/delineate and classify the plant community in the selected area. | | | 2. Record the percent areal extent in the canopy, subcanopy, and groundcover columns for each species. | | | 3. For each species present in the **stratum selected in #10**, transfer the numbers from only that stratum's column into the appropriate status columns. | | | |
|---|---|---|---|---|---|---|---|---|---|
| **#** | **Binomial of Observed Species** | **Status** | **Canopy** | **Subcanopy** | **Groundcover** | **Upland** | **Facultative** | **Fac. Wet** | **Obligate** |
| 1. | Leucaena leucocephala | U | | 30 | | 30 | 0 | 0 | 0 |
| 2. | Urena lobata | U | | | 70 | 0 | 0 | 0 | 0 |
| 3. | Brachiaria purpurascens | FW | | | 25 | 0 | 0 | 0 | 0 |
| 4. | Baccharis glomeruliflora | F | | 10 | | 0 | 10 | 0 | 0 |
| Percent areal extent totals for the stratum selected in question 10 | | | | | | 30 | 10 | 0 | 0 |

12. In the stratum selected in #10: What is the % areal extent of Obligate plants? 0

What is the % areal extent of Upland plants? 30

Is the areal extent of Obligate plants greater than that of Upland plants? ☐ Yes ☑ No

13. In the stratum selected in #10: What is the total % areal extent of Obligate & Facultative Wet plants combined? 0

What is the total % areal extent of Obligate, Facultative Wet, & Upland plants combined? 30

What is the percentage of OBL + FACW in relation to all plants, excluding FAC? $\frac{\text{OBL+FACW}}{\text{OBL+FACW+UPL}}$ 0%

**Point ID/Location:** 0288580-002-003 Upland | Soil describer: HM

**14. LRR/MLRA** U | **Textures:** Peat, Mucky Peat, Muck, Mucky Mineral (S or F), Sand, Fine, Marl

**15.** Is a soil profile evaluation possible? ☐ Yes ☑ No If no, why? Root refusal ***(If No, skip to #18)***

**16. Soil Description:** ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

Soil surface, or 0 inch depth for purposes of Chapter 62-340, F.A.C. is the muck or mineral surface (whether natural or fill)

| Horizon | beginningto ending **Depth** (inches) | **Matrix Texture** | moist condition **Matrix Hue Value/ Chroma** | for sandy matrix horizons w/ value ≤ 3: **% Organic Coating** | - Describe soil features: DA (areas darker than matrix), LA (areas lighter than matrix),<br>- RC (redox concentrations): Record in moist condition **hue value/chroma; % volume inhorizon; boundaries** (sharp/clear/diffuse); **shape** (rounded/linear/angular).<br>- OB (organic bodies): Record texture (muck or mucky mineral), **% volume in horizon**.<br>- $H_2S$ (hydrogen sulfide odor): Indicate shallowest depth where detected<br>- Note if horizon is **Physically Mixed (PM), Nonsoil** (any material not listed in "Textures"above), or **Fill** and describe. |
|---|---|---|---|---|---|

**17. Hydric Soil Field Indicators:** If present, check all Hydric Soil Field Indicators satisfied and specify their beginning and ending depths

| # | Indicator Present | Begin Depth | End Depth |
|---|---|---|---|
| | ** = Stand-alone D Test - both hydric soiland hydrologic indicator* | To combine layers/indicators to meet thickness requirements, see NRCS Hydric Soils Technical Note 4. | |

18. Excluding organic horizons, is any nonsoil horizon present at or within the uppermost 12 inches of the ground surface?
☐ Yes *(e.g. bedrock, rock outcrop, limestone fill, gravel, etc)* ☑ No ☐ Soil profile or site inaccessible

19. Is one or more hydric soil field indicators present? ☐ Yes ☑ No ☐ Inconclusive *(e.g., evaluation to 12+ inches impeded by disturbance, water, nonsoil, no site access, etc.)*

If no or inconclusive, is the soil hydric as determined by other NRCS methods?
☐ Yes ←Which method(s)? ☑ No ☐ Inconclusive ← Why?

20. Is the depth of the soil profile 20 inches or greater from the soil surface? ☐ Yes ☑ No If no, depth of soil profile is: inches Why? Root refusal
*(e.g., root refusal, nonsoil, water table, loose sand, heavy texture, compaction, weather conditions, inspection interrupted)*

21. **Observed** height or depth of standing water from **soil** surface: inches ☐ Above ☐ Below ☑ Not Observed

**Point ID/Location:** 0288580-002-003 Upland | Indicator evaluator: HM

**22. Hydrologic Indicators:** ***As is under current conditions, without considering RSJ[1] or the legality of any alterations***

| **Hydrologic Indicators per §62-340.500, F.A.C.** (and as applied to §62-340.600, F.A.C.) | Present at or near point | Predicted during normal high water or wet season | Within 100 ft waterward of point (not for upland points) | 1. Describe the type of all checked indicators.<br>2. Approximate the distance and compass direction of indicators within 100 ft of the point.<br>3. For water level indicators (potential indicators denoted by *) **note the height from ground surface** at the point as well as waterward (with distance from point).<br>Only for indicators not present due to dry season/drought |
|---|---|---|---|---|
| | | | | |

Highest water level indicator height at point: inches ☐ Above Ground Surface ☐ No Water Level Indicators ☐ Above Soil Surface ☑ N/A (described point is Upland)

**23.** Is one or more hydrologic indicator(s) listed in §62-340.500, F.A.C. present or predicted with normal high water or wet season conditions at the described point? ☐ Yes ☑ No ☐ Evaluation Impossible ← Why?

**24. Delineation by Wetland Definition §62-340.300(1), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Has a wetland boundary been delineated at the described point? ☐ Yes ☑ No ***(If No**, skip to #25)*

b) If yes to 24a, can the boundary be easily delineated using the definition of wetlands? ☐ Yes ☐ No

**25. A & B Test Wetland Criteria §62-340.300(2)(a),(b), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Is the areal extent of Obligate plants in the stratum selected in #10 greater than the areal extent of all Upland plants in that stratum? (See #12) ☐ Yes ☑ No ☐ Vegetation Absent (*skip to $25f*) ☐ Evaluation Impossible (*skip to #26a*)

b) Is the areal extent of Obligate and/or Facultative Wet plants in the stratum selected in #10 equal to or greater than 80% of all the plants in that stratum, excluding Facultative plants? (See #13) ☐ Yes ☑ No

c) Is the soil hydric as identified using standard NRCS definitions and practices? (see #19) ☐ Yes ☑ No ☐ Indeterminable with current conditions ← Why?

d) Is the substrate composed of riverwash, nonsoil (see #18), rock outcrop-soil complex, or is the substrate located within an artificially created wetland area? ☐ Yes ☐ No If yes, which condition is present?

e) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ☐ Yes ☑ No

f) Are the A Test criteria met per §62-340.300(2)(a), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If yes to 25a and yes to either 25c, 25d, or 25e, A Test criteria are met)*

g) Are the B Test criteria met per §62-340.300(2)(b), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If yes to 25b and yes to either 25c, 25d, or 25e, B Test criteria are met)*

h) Are there any **alterations or conditions** affecting reliable application of the A or B Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**Point ID/Location:** 0288580-002-003 Upland

**26. C Test Wetland Criteria §62-340.300(2)(c), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Per §62-340.300(2)(c), F.A.C. is the described point Pine Flatwoods or Improved Pasture, or does it havedrained soils? ☐ Yes ☑ No ***If yes**, select which of the following are met, then skip to #26d*

☐ Pine Flatwoods ☐ Improved Pasture ☐ Drained Soils

***Pine Flatwoods** must have flat terrain, a monotypic or mixed canopy of long leaf pine or slash pine, and a ground cover dominated by saw palmetto with other species that are NOT obligate or facultative wet. **Improved Pasture** means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are NOTobligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing.*

***Drained Soils** are those in which permanent alterations, excluding mechanical pumping, preclude the formation of hydric soils.*

b) Are the soils at the described point saline sands (salt flats-tidal flats), **or** have they been **field verified** by NRCS's Keys to Soil Taxonomy (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults? ☐ Yes ☑ No

c) Do the soils at the described point have a NRCS hydric soil field indicator (see #17), **and** is the point located within a map unit named or designated by the NRCS as frequently flooded, depressional, or water?
Map Unit: ☐ Yes ☑ No ☐ Inconclusive ← Why? (*skip to #27a)*

d) Are the C Test criteria met per §62-340.300(2)(c), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If no to 26a and yes to either 26b or 26c, C Test criteria are met)*

e) Are there any **alterations or conditions** affecting reliable application of the C Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**27. D Test Wetland Criteria §62-340.300(2)(d), F.A.C.**

***As is under current conditions, without considering RSJ[1] or the legality of any alterations:***

a) Is the soil hydric as verified by a NRCS hydric soil field indicator? (See #17)
☐ Yes ☑ No (*skip to #27d*) ☐ Inconclusive ← Why? (*skip to #28)*

b) Does any NRCS hydric soil field indicator begin **at the soil surface or** are any of the following indicators present: A1, A2, A3, A4, A5, A7, A8, A9, S4, F2? ☐ Yes ☐ No *(If yes, then hydrologic indicator §62-340.500(8) or (11) is met)*

c) Is one or more of the hydrologic indicators in §62-340.500, F.A.C. present at the described point? (See #23) ☐ Yes ☐ No

d) Are the D Test criteria met per §62-340.300(2)(d), F.A.C. at the described point? ☐ Yes ☑ No
*(Note: If yes to 27a and yes to either 27b or 27c, D Test criteria may be met)*

e) Are there any **alterations or conditions** affecting reliable application of the D Test such that the Altered Sites Test is more appropriate? ☐ Yes ☑ No

**28. Altered Sites Tests §62-340.300(3), F.A.C. (Legal/Authorized or Illegal/Unauthorized)**

*For purposes of Chapter 62-340, F.A.C. **altered** refers to any natural or man-induced condition(s) which **masks or eliminates reliable expression** of wetland indicators (i.e. hydrophytic vegetation, hydric soils, and hydrologicindicators). **Unaltered or normal does not require a natural condition**, only an expression of wetland indicators that is sufficient to **reliably** identify or delineate the wetland using the criteria in §62-340.300, F.A.C.*

Are alterations affecting normal wetland condition? ☐ Yes ☑ No (*skip to #32*) ☐ Evaluation Impossible (*skip to #32*)

**29. Authorized or Legally Altered Vegetation and Soils Test Criteria §62-340.300(3)(a), F.A.C.**

a) Are there **authorized** or **legal** alterations affecting reliable expression of vegetation at the described point?
☐ Yes ☐ No If yes, how?

b) Are there **authorized** or **legal** alterations affecting reliable soil evaluation at the described point? ☐ Yes ☐ No
If yes, how? *(**If no to both** 29a and 29b, skip to #30)*

c) If yes to 29a or 29b, which criteria tests are affected by the legal alterations? ☐ A Test ☐ B Test ☐ C Test ☐ D Test

d) Using the most reliable available information and reasonable scientific judgment, would the types of evidence and characteristics contemplated in §62-340.300, F.A.C. identify or delineate the described point as a wetland with cessation of the legal altering activities? ☐ Yes ☐ No If no, why? *(**If no**, skip to #30)*

e) If yes to 29d, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of legal altering activities? ☐ Plants ☐ Soils ☐ Hydrologic indicators

f) If yes to 29d, which tests would be passed with cessation of legal altering activities?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test **Why?**

**Point ID/Location:** 0288580-002-003 Upland

**30. Authorized or Legally Altered Hydrology Test Criteria §62-340.300(3)(b), F.A.C.**

a) Has wetland hydrology of the area been **legally** drained or lowered? ☐ Yes ☐ No *(**If no**, skip to #31)*
If yes, how?

b) Has wetland hydrology been **legally** eliminated at the described point? ☐ Yes ☐ No *(**If no**, skip to #31)*

c) If yes to 30b, using reasonable scientific judgment or §62-340.550, F.A.C., have dredging or filling activities authorized by **Part IV** of Chapter 373, F.S. **permanently eliminated** wetland hydrology at the described point such that the wetland definition cannot be met? ☐ Yes (point is upland) ☐ No *(**If yes**, skip to #31)*

*Chapter 373, F.S. Part II activities (e.g., water use permits) or other temporary hydrologic alterations (e.g., surface water pumps, drought) do **not** apply to this or any other Ch. 62-340, F.A.C. determinations.*

d) If no to 30c, what §62-340.300, F.A.C. evidence is present now and/or will be present in the future with cessation of temporary hydrologic drainage? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If no to 30c, Which tests would be passed with cessation of temporary hydrologic alterations?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
**Why?**

**31. Unauthorized or Illegally Altered Sites Test Criteria §62-340.300(3)(c), F.A.C.**

*If the altering activity is a violation of regulatory requirements, then application of §62-340.300(3)(c), F.A.C. andall provisions of Chapter 62-340, F.A.C. are utilized to identify or delineate the wetland in a forensic manner.* ***This identification or delineation reflects the condition immediately prior to the unauthorized alteration**.*

a) Have any **unauthorized** alterations affected the normal wetland condition at the described point? ☐ Yes ☐ No
If yes, how? *(**If no**, skip to #32)*

b) If yes to 31a, which criteria tests are affected by the unauthorized alterations?
☐ A Test ☐ B Test
☐ C Test ☐ D Test

c) With reasonable scientific judgment is the described point a wetland, or would it have been a wetland immediately prior to the unauthorized alteration? ☐ Yes ☐ No If no, why? *(**If no**, skip to #32)*

d) If yes to 31c, what §62-340.300, F.A.C. evidence is present now and/or was present immediately prior to theunauthorized alteration? ☐ Plants ☐ Soils ☐ Hydrologic indicators

e) If yes to 31c, which tests would be passed immediately prior to the unauthorized alteration?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
**Why?**

**32. Wetland and Other Surface Water Summary §62-340.600(2)(a-e), F.A.C.:**

Given **normal** expression, **cessation** of **authorized** alterations, or **immediately prior** to any **unauthorized** alterations:

a) With **reasonable scientific judgment** is the described point a wetland as defined in §62-340.200(19), F.A.C. and located by Ch. 62-340, F.A.C.? ☐ Yes ☑ No If yes, which criteria identified or delineated the wetland?
☐ Wetland Definition ☐ A Test ☐ B Test ☐ C Test ☐ D Test
If summary answers differ from answers in 25f, 25g, 26d, or 27d, why?

b) Is the described point located at or within the Mean High Water Line of a tidal water body?
☐ Yes ☑ No ☐ MHWL Unknown

c) Is the described point located at or within the Ordinary High Water Line of a non-tidal natural water body or natural watercourse? ☐ Yes ☑ No

d) Is the described point located at or within the top of the bank of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground? ☐ Yes ☑ No

e) Is the described point located at or within the Seasonal High Water Line of an artificial lake, borrow pit, canal, ditch, or other type of artificial water body or watercourse with side slopes flatter than 1 foot vertical to 4 feet horizontal or an artificial water body created by diking or impoundment above the ground? ☐ Yes ☑ No

**33. Connection or Isolation of Wetland per Applicant's Handbook Vol.1 Section 2.0**

If the described point is a wetland, does it have a connection via wetlands or other surface waters, or is it wholly surrounded by uplands and therefore isolated? ☐ Connected ☐ Isolated ☑ N/A (Point is not wetland)

**Point ID/Location:** 0288580-002-003 Upland

**Notes:**
Heather McClurg, C.W.E.

**Helpful Definitions for Applying Ch 62-340, F.A.C.**

[1]**RSJ** stands for Reasonable Scientific Judgment where used throughout this Data Form (See *The Florida Wetlands Delineation Manual* pg. 2 & 12*)*

[2]**HSTS** stands for Hydric Soils Technical Standard (See NRCS Hydric Soils Technical Note 11)

*Definition from §62.340.200(19) Florida Administrative Code*
"**Wetlands**," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

*Definition from §373.019(19) Florida Statutes*
"**Surface water**" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

*Definition from §373.019(14) Florida Statutes*
"**Other watercourse**" means any canal, ditch, or other artificial watercourse in which water usually flows in a defined bed or channel. It is not essential that the flowing be uniform or uninterrupted.

*Definition from §62.340.200(15) Florida Administrative Code*
"**Seasonal High Water**" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

*From The Florida Wetlands Delineation Manual pg. 37*
**Ordinary high water** is that point on the slope or bank where the surface water from the water body ceases to exert a dominant influence on the character of the surrounding vegetation and soils. The OHWL frequently encompasses areas dominated by non-listed vegetation and non-hydric soils. When the OHWL is not at a wetland edge, the general view of the area may present an "upland" appearance.

*Definition from §403.803(14) Florida Statutes*
**"Swale"** means a manmade trench which:
(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;
(b) Contains contiguous areas of standing or flowing water only following a rainfall event;
(c) Is planted with or has stablized vegetation suitable for soil stabilization, stormwater treatment, and nutrient uptake; and
Is designed to take into acount the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reducepollutant concentration of any discharge.

**34. Photographs and/or videos:** Soil profile with Data Form, Soil profile close-up, Cross section(s) at 6" depth for sandy textures and/or critical depths for fine textures, Hydric soil indicators, Water table or inundation depth, Four cardinal directions of plant strata present, Hydrologic indicators (with scale as necessary), Critical plant ID (optional)

| 1. | **Description:** | Impact area-osw outfall structure |
|---|---|---|

| 2. | **Description:** | Facing S |
|---|---|---|

| | | |
|---|---|---|
| **3.** | **Description:** | Facing W |


| | | |
|---|---|---|
| **4.** | **Description:** | Facing W |


| | | |
|---|---|---|
| **5.** | **Description:** | Facing N |

**Approximate Data Form Point Location**

# Appendix F

FDEP No Exposure Certification (Form 62-620.910(17))

# NO EXPOSURE CERTIFICATION FOR EXCLUSION FROM NPDES STORMWATER PERMITTING (FORM 62-620.910(17), F.A.C.)

Incorporated by reference in Rule 62-620.100(2)(o)1.b., F.A.C.

Submission of this No Exposure Certification and certification fee constitutes your affirmation that the entity identified in Section II does not require permit authorization for stormwater discharges associated with industrial activity pursuant to paragraph 62-620.100(2)(o), F.A.C., due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to precipitation and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products or waste products. Material handling activities include the storage, loading and unloading, transportation or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in stormwater discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from permitting is available on a facility-wide basis only and not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the entity in Section II is certifying that a condition of no exposure exists at its facility or site and is obligated to comply with the terms and conditions of 62-620.100(2)(o), F.A.C.

**ALL INFORMATION MUST BE PROVIDED ON THIS FORM.**

**Detailed instructions for completing this form and obtaining the No Exposure exclusion are provided on pages 5-7.**

## I. IDENTIFICATION NUMBER:

Facility ID: _____

## II. APPLICANT INFORMATION:

| | | |
|---|---|---|
| A. Operator Name: Mark Kara | | B. Operator Status: P |
| C. Address: 960 E Dr. Martin Luther King Jr. Blvd. | | |
| D. City: Seffner | E. State: FL | F. Zip Code: 33584 |
| G. Responsible Authority: Cheryl Nichols, P.E. | | |
| H. Responsible Authority's Phone No.: (813) 968-7722 | | |

| | |
|---|---|
| I. Responsible Authority's Fax No.: | |
| J. Responsible Authority's E-mail Address: | cnichols@verdantas.com |

**III. FACILITY/SITE LOCATION INFORMATION:**

| | | | |
|---|---|---|---|
| A. Facility Name: | Waste Services, LLC | | |
| B. Street Address: | 5003 Dover | | |
| C. City: Tampa | | D. State: FL | E. Zip Code: |
| F. County: Hillsborough | G. Latitude: 27 ° 53 ′ 48 ″ | Longitude: 82 ° 24 ′ 1.8 ″ | |
| H. Is the facility located on Indian Country Lands? ☐ Yes ☑ No | | I. Water Management District: SWFWMD | |
| J. Facility Contact: | Mark Kara | | |
| K. Facility Contact's Phone No.: | (813) 376-3362 | | |
| L. Facility Contact's Fax No.: | | | |
| M. Facility Contact's E-mail Address: | americanmk92@yahoo.com | | |

**IV. FACILITY ACTIVITY INFORMATION:**

| | | |
|---|---|---|
| A. SIC or Designated Activity Code(s): | Primary: 4221 | Secondary: 4225 |
| B. Total size of site associated with industrial activity: 11 acres | | |
| C. Has a roof or pavement been installed over a formerly exposed pervious area in order to qualify for the no exposure exclusion? ☑ Yes ☐ No | | |
| D. If yes, indicate approximately how much area was paved or roofed over. Completing this question does not disqualify the applicant from the no exposure exclusion. ☐ Less than 1,000 square feet ☐ 1,000 square feet to one acre ☑ More than one acre | | |

## V. EXPOSURE CHECKLIST:

| Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions (1) through (11), you are <u>not</u> eligible for the no exposure exclusion.** | |
|---|---|
| 1. Using, storing or cleaning industrial machinery or equipment and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater. | ☐ Yes ☑ No |
| 2. Materials or residuals on the ground or in stormwater inlets from spills/leaks. | ☐ Yes ☑ No |
| 3. Materials or products from past industrial activity. | ☐ Yes ☑ No |
| 4. Material handling equipment (except adequately maintained vehicles). | ☐ Yes ☑ No |
| 5. Materials or products during loading, unloading or transporting activities. | ☐ Yes ☑ No |
| 6. Materials or products stored outdoors [except final products intended for outside use (e.g., new cars) where exposure to storm water does not result in the discharge of pollutants]. | ☐ Yes ☑ No |
| 7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks and similar containers. | ☐ Yes ☑ No |
| 8. Materials or products handled or stored on roads or railways owned or maintained by the discharger. | ☐ Yes ☑ No |
| 9. Waste material [except waste in covered, non-leaking containers (e.g., dumpsters)]. | ☐ Yes ☑ No |
| 10. Application or disposal of process wastewater (unless otherwise permitted). | ☐ Yes ☑ No |
| 11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow. | ☐ Yes ☑ No |

## VI. CERTIFICATION[1]:

I certify under penalty of law that I have read and understand the eligibility requirements as set out in 62-620.100(2)(o), F.A.C., and this form, for claiming a condition of "no exposure" and obtaining an exclusion from NPDES stormwater permitting.

I certify under penalty of law that there are no discharges of stormwater contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document [except as allowed under paragraph 62-620.100(2)(o)].

I understand that I am obligated to submit a no exposure certification form once every five years to the Department of Environmental Protection and to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the Department of Environmental Protection, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure. I understand that I must obtain coverage under a permit authorized by 403.0885, F.S. prior to any point source discharge of stormwater associated with industrial activity from the facility or at any such time I anticipate that the conditions of no exposure shall no longer apply to the facility. I further understand that the Department may determine that stormwater discharge from the facility is the cause of, or contributes to, a violation of an applicable water quality standard, including designated use, and require that I obtain a permit for the discharge at which time I would no longer be eligible for the no exposure exclusion.

Additionally, 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.**

| Responsible Authority Name and Official Title (Type or Print): |
| --- |
| Mark Kara, mgmr |

Responsible Authority Signature: _____ Date Signed: _____

[1] Signatory requirements are contained in Rule 62-620.305, F.A.C.

**INSTRUCTIONS – DEP FORM 62-620.910(17)**
**Incorporated by reference in Rule 62-620.100(2)(o)2.b., F.A.C.**
**NO EXPOSURE CERTIFICATION FOR EXCLUSION FROM NPDES STORMWATER PERMITTING**

**Who Can File a No Exposure Certification Application?**

The Department of Environmental Protection (DEP) implements the stormwater element of the federal National Pollutant Discharge Elimination System (NPDES) as part of the Department's Wastewater Facility and Activities Permitting program. Authorized by Section 403.0885 of the Florida Statutes (F.S.), the Department's NPDES Stormwater Program is set out in various provisions within Chapters 62-4, 62-620, 62-621 and 62-624 of the Florida Administrative Code (F.A.C.). The "no exposure" exclusion from NPDES stormwater permitting discussed in these instructions is published as 62-620.100(2)(o), F.A.C.

Under the Department's EPA-approved NPDES stormwater program, no facility may discharge, and no activity may result in the discharge of, stormwater associated with industrial activity to surface waters of the State unless, the discharge or activity is subject to: (a) an appropriate DEP generic permit pursuant to Chapter 62-621, F.A.C. or (b) a DEP individual permit issued pursuant to Chapter 62-620, F.A.C. If the stormwater is not exposed to industrial materials or activities, it is not stormwater associated with industrial activity but is still subject to these "no exposure" certification requirements.

The "no exposure" exclusion is only available if precipitation and/or runoff from your facility or activity is not exposed to industrial materials or activities.

To qualify for the "no exposure" exclusion, you must read and become familiar with paragraph 62-620.100(2)(o), F.A.C. and Form 62-620.910(17), F.A.C. to which these instructions are attached, and then complete, sign and submit the completed certification form along with a certification fee as required by subparagraph 62-4.050(4)(d)3, F.A.C.

By signing the form you are certifying to the State of Florida Department of Environmental Protection that a condition of no exposure exists such that stormwater discharged from your facility or activity is not associated with industrial activities or materials.

**Where to File No Exposure Certification:**

The Department encourages the electronic submission of No Exposure Certification forms through the NPDES Stormwater Program's electronic permitting application available at http://www.dep.state.fl.us/water/stormwater/npdes/. As an alternative, No Exposure Certification forms may be submitted by paper copy to the following address:

NPDES Stormwater Notices Center, MS #2510
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

**What Happens if Conditions Change?**

If at any time conditions change such that precipitation and/or runoff at your facility or activity is exposed to industrial activities or materials, or should you anticipate such a change in conditions, you no longer qualify for the "no exposure" exclusion from NPDES stormwater permitting and you must apply to the Department for coverage under an appropriate DEP generic permit or a DEP-issued individual permit.

**Part I – Identification Number:**

Enter the facility's DEP identification number (generic permit coverage/no exposure exclusion number) if known. If an ID number has not yet been assigned to this facility, leave this item blank.

**Part II – Applicant Information:**

Item A.: Provide the legal name of the person, firm, public organization or any other entity that operates the facility described in this certification. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. The name of the operator may or may not be the same as the name of the facility.

Item B.: Enter the appropriate one letter code from the list below to indicate the legal status of the operator of the facility:

F = Federal; S = State; P = Private; M = Public (other than federal or state); O = Other

Items C-F.: Provide the complete mailing address of the facility operator, including city, state and zip code.

Items G. – J.: Provide the name, telephone and fax number (including area code) and E-mail address of the person authorized to submit this certification on behalf of the facility operator. This should be the same person as indicated in the certification in Part VI.

**Part III – Facility/Site Location Information:**

Items A. – E.: Enter the facility's official or legal name and complete street address, including city, state and zip code. Do not provide a P.O. Box number as the street address.

Item F.: Enter the county in which the facility is located.

Item G.: Enter the latitude and longitude, in degrees, minutes and seconds, of the approximate center of the facility.

Item H.: Indicate whether the facility is located on Indian Country Lands.

Item I: Enter the appropriate five or six letter code from the list below to indicate the Water Management District the facility is located within:

NWFWMD = Northwest Florida Water Management District
SRWMD = Suwannee River Water Management District
SFWMD = South Florida Water Management District
SWFWMD = Southwest Florida Water Management District
SJRWMD = St. John's River Water Management District.

Items J.-M.: Give the name, telephone and fax number (including area code) and E-mail address of the person who is thoroughly familiar with the operation of the facility, the facts reported in this certification and who can be contacted by the Department if necessary.

**Part IV – Facility Activity Information:**

Item A.: List, in descending order of significance, the 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility identified in Part III. For industrial activities defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi) that do not have SIC codes that accurately describe the principal products produced or services provided, use the appropriate two letter code from the list below:

HZ = Hazardous waste treatment, storage or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA [40 CFR 122.26(b)(14)(iv)].

LF = Landfills, land application sites and open dumps that receive or have received any industrial wastes, including those that are subject to regulation under subtitle D of RCRA [40 CFR 122.26(b)(14)(v)].

SE = Steam electric power generating facilities, including coal handling sites [40 CFR 122.26(b)(14)(vii)].

TW = Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling and reclamation of municipal or domestic sewage [40 CFR 122.26(b)(14)(ix)].

Item B.: Enter the total size of the site associated with industrial activity, in acres.

Item C.: Answer "yes" or "no" to whether a roof or pavement over a formerly exposed, pervious area was installed specifically for the purpose of qualifying for the No Exposure Exclusion.

Item D.: Check the appropriate area that was paved or roofed over to qualify for the No Exposure Exclusion. Please note the statement indicating that answering this question does not disqualify applicant from the exclusion.

**Part V – Exposure Checklist:**

Items 1-11: Answer "yes" or "no" to the questions regarding present or future exposure of the listed materials. **Answering "yes" to any of these questions (1) through (11), makes the facility not eligible for the no exposure exclusion.**

**Part VI – Certification:**

Type or print the name and official title of the Responsible Authority signing the certification. Sign and date the certification.

Pursuant to Section 403.161(1)(c), F.S., it is a violation of state law to knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed with the Department. In addition to civil penalties, as set out in Section 403.141, F.S., under Section 403.161(5), any person who willfully commits a violation of Section (1)(c) is guilty of a misdemeanor of the first degree punishable by a fine of not more than $10,000 or by 6 months in jail or by both for each offense.

Consistent with Rule 62-620.305, F.A.C., the "no exposure" certification form must be signed as follows:

A. For a corporation, by a responsible corporate officer as described in Rule 62-620.305, F.A.C.;
B. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
C. For a municipality, state, federal or other public facility, by a principal executive officer or elected official.

# Appendix G

Warranty Deed

Prepared by and return to:
Bayshore Title
3431 Henderson Blvd.
Tampa, Florida 33609
BY81 2003095

| | |
|---|---|
| Consideration: | $1,500,000.00 |
| Documentary Stamps: | $ 10,500.00 |
| Parcel ID Number: | 047016.0500 |
| | 048922.0000 |

*The property being hereby conveyed, is not now, nor has it ever been, nor was it ever intended to be the homestead of the grantor, the grantor's spouse, and/or minor children, if any. Nor is it contiguous with or adjacent to such homestead. The grantor's residence is at the street or post office address designated below.*

# Warranty Deed

This Warranty Deed, made and executed the 29th day of May, 2020, by **Linda Zalkin,** whose post office address is 12407 Stillwater Terrace, Tampa, FL 33624, (hereinafter referred to as "Grantor") to **American XVII, LLC, a Florida limited liability company,** whose post office address is 960 SR 574E, Seffner, FL 33584 (hereinafter referred to as "Grantee").

(Whenever used herein the term "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

**WITNESSETH:** That Grantor, for himself, his successors and assigns, for and in consideration of the sum of Ten and No/100 Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency whereof are hereby acknowledged by Grantor, has granted, bargained, and sold, to Grantee, and Grantee's successors and assigns forever, the following described real property located in Hillsborough County, Florida, to-wit:

**See EXHIBIT "A" attached hereto**

**TOGETHER WITH** all the tenements, hereditaments, and appurtenances thereto belonging or in anywise appertaining.

**SUBJECT TO** covenants, conditions, restrictions, reservations, limitations, easements and agreements of record, if any; taxes and assessments for the year 2020 and subsequent years; and to all applicable zoning ordinances and/or restrictions and prohibitions imposed by governmental authorities, if any.

**TO HAVE AND TO HOLD** the same in fee simple forever.

**AND** Grantor hereby covenants with Grantee that Real Property is free and clear of all liens and encumbrances except taxes for 2020, which are not yet due and payable, and subsequent years and covenants, easements and restrictions of record as set forth in **EXHIBIT "B"** attached hereto and made a part hereof, provided the foregoing shall not serve to reimpose the same; that Grantor is lawfully seized of the Real Property in fee simple; that Grantor has good right and lawful authority to sell and convey the Real Property; and that Grantor hereby fully warrants the title to the Real Property and will defend the same against the lawful claims of all persons, whomsoever.

WARRANTY DEED
PAGE TWO

**IN WITNESS WHEREOF**, Grantor has executed this Warranty Deed as of the date and year first stated above.

BY: _____
Linda Zalkin

Signed, sealed and delivered in our presence:

_____ _____
Signature Signature

_____ _____
Printed Name Printed Name

STATE OF Florida
COUNTY OF Hillsborough

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 29th day of MAY, 2020, by Linda Zalkin, who is:

___ Personally known to me
✓ Produced DRIVERS LICENSE as identification.

_____
Notary Public

Jonathan Ross Fiddelke
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG195215
Expires 3/12/2022

My Commission Expires: (SEAL)

# EXHIBIT "A"

PARCEL 1:

A parcel of land being all of Lots 6, 7 and 8, inclusive, and part of Lots 1, 2, 3, 4 and 5, inclusive, Block 113; together with all of Lots 1, 2, 3, 6, 7 and 8, and a part of Lots 4 and 5, Block 120, lying East of the existing right of way line of U.S. Route 41 (State Road No. 45); and West of the West right of way line of Idaho Avenue, all lying and being in SOUTH TAMPA VILLA SITES SUBDIVISION, as per the map or plat thereof, recorded in Plat Book 6, Pages 58 and 59, of the Public Records of Hillsborough County, Florida, being more particularly described as follows: Commence at the Southeast corner of Lot 8, Block 120, said point being the Point of Beginning; thence from the Point of Beginning North 89°41'44" West along the South boundary of said SOUTH TAMPA VILLA SITES SUBDIVISION, a distance of 666.89 feet to the intersection with the East right of way line of U.S. Route 41 (State Road No. 45); thence North 00°20'18" East along said East right of way line, a distance of 755.16 feet to the intersection with the South right of way line of Dover Street; thence South 89°41'44" East along said South right of way line of Dover Street, a distance of 666.89 feet to the intersection with the West right of way line of Idaho Street; thence South 00°20'18" West along said West right of way line of Idaho Avenue, a distance of 755.16 feet to the Point of Beginning.

PARCEL 2:

That part of Tracts 6 and 11 in the Southwest 1/4 of Section 3, Township 30 South, Range 19 East of SOUTH TAMPA SUBDIVISION, according to the map or plat thereof, as recorded in Plat Book 6, Page(s) 3, of the Public Records of Hillsborough County, Florida, described as follows:

Commencing at the Southwest corner of Tract 11, of said plat; run thence North 00°18'04" West, 428.92 feet along the West boundary line of said Tract 11 to the Point of Beginning; thence run North 71°30'11" East, 33.76 feet through said Tract 11; run thence North 25°49'32" East, 34.51 feet through said Tract 11; run thence North 00°43'02" East, 222.98 feet through said Tract 11, crossing that certain strip between said Tract 11 and said Tract 6 and entering said Tract 6; run thence North 26°55'48" West, 114.31 feet through Tract 6 to the West boundary of said Tract 6; run thence South to the Point of Beginning.

**EXHIBIT "B"**

**PERMITTED EXCEPTIONS**

1. Restrictions, but omitting restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said restriction is permitted by applicable law, as shown on that certain map/plat of SOUTH TAMPA VILLA SITES recorded in Plat Book 6, Pages 58 and 59, of the Public Records of Hillsborough County, Florida.

2. Restrictions, but omitting restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, source of income, gender, gender identity, gender expression, medical condition or genetic information, as set forth in applicable state or federal laws, except to the extent that said restriction is permitted by applicable law, as shown on that certain map/plat of SOUTH TAMPA SUBDIVISION recorded in Plat Book 6, Page(s) 3, of the Public Records of Hillsborough County, Florida, (as to Parcel 2)

3. Easement in favor of Tampa Electric Company recorded in Official Record Book 4825, Page 1824, of the Public Records of Hillsborough County, Florida. (as to Parcel 2)

4. Easement in favor of Tampa Electric Company recorded in Official Record Book 4495, Page 1002, of the Public Records of Hillsborough County, Florida. (as to Parcel 2)

**2023 FLORIDA LIMITED LIABILITY COMPANY ANNUAL REPORT**

**FILED**
**Mar 22, 2023**
**Secretary of State**
**4885433275CC**

DOCUMENT# L20000054561

**Entity Name:** AMERICAN XVII, LLC.

**Current Principal Place of Business:**

5003 DOVER STREET
TAMPA, FL 33619

**Current Mailing Address:**

PO BOX 25653
SARASOTA , FL 34277 US

**FEI Number: 85-0586977**

**Certificate of Status Desired:** No

**Name and Address of Current Registered Agent:**

N. BROOK NUTTER P.A.
3407 W KENNEDY BLVD
SUITE A
TAMPA, FL 33609 US

*The above named entity submits this statement for the purpose of changing its registered office or registered agent, or both, in the State of Florida.*

SIGNATURE:

Electronic Signature of Registered Agent — Date

**Authorized Person(s) Detail :**

| | |
|---|---|
| Title | MGRM |
| Name | KARA, MARK |
| Address | PO BOX 25653 |
| City-State-Zip: | SARASOTA FL 34277 |

*I hereby certify that the information indicated on this report or supplemental report is true and accurate and that my electronic signature shall have the same legal effect as if made under oath; that I am a managing member or manager of the limited liability company or the receiver or trustee empowered to execute this report as required by Chapter 605, Florida Statutes; and that my name appears above, or on an attachment with all other like empowered.*

SIGNATURE: MARK KARA MGRM 03/22/2023

Electronic Signature of Signing Authorized Person(s) Detail — Date