

BIG BEND III BATTERY ENERGY STORAGE



**CULPEPPER &
TERPENING INC**

OPERATION & MAINTENANCE MANUAL

**C&T Project No. 20-215.005
Certificate of Authorization No. 4286**

PREPARED BY
Culpepper & Terpening, Inc
2980 South 25th Street
Fort Pierce, Florida
Tel. (772) 464-3537
www.ct-eng.com

PREPARED FOR
Tampa Electric Company
702 North Franklin Street
Tampa, Florida 33602
www.tampaelectric.com

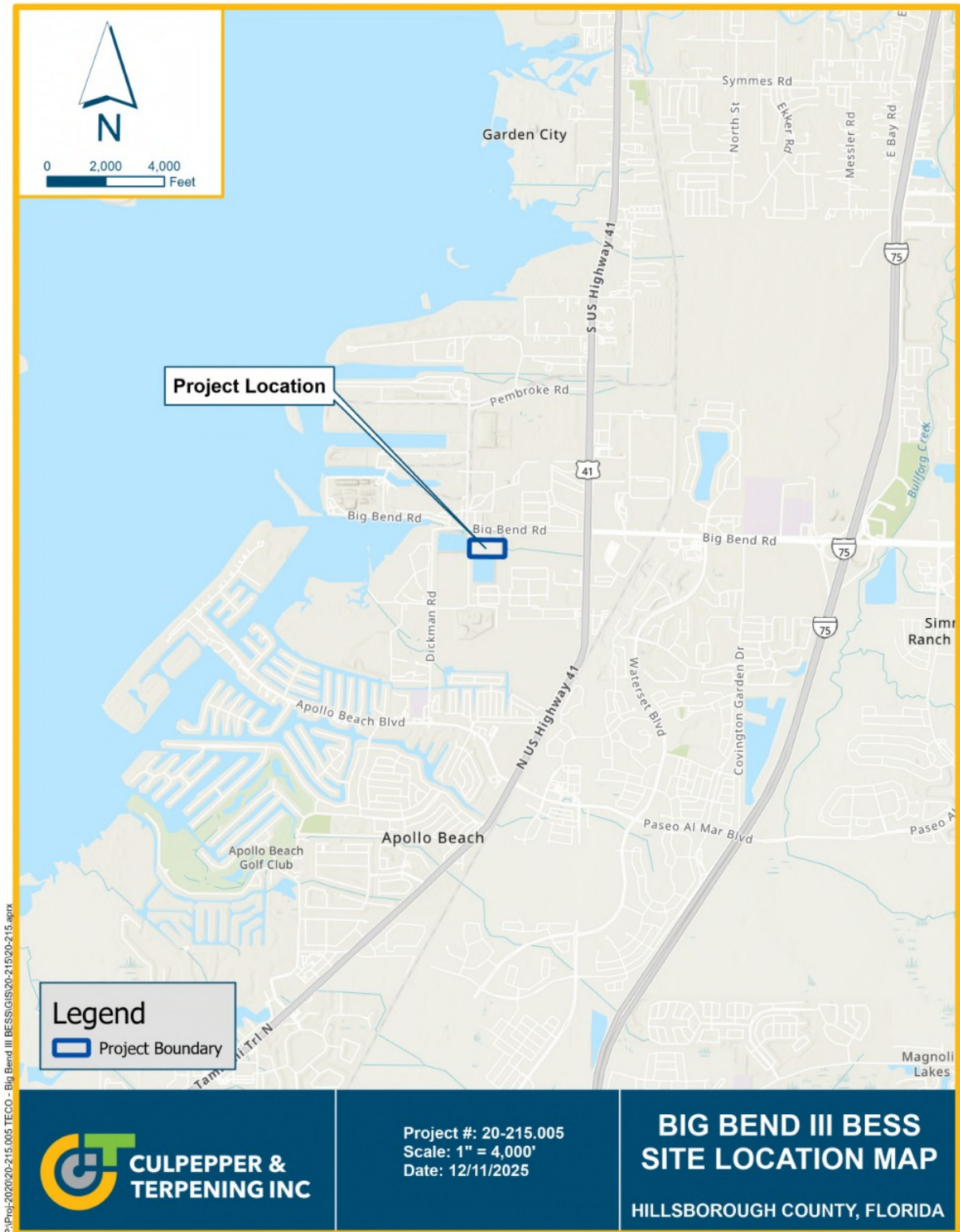


Figure 1 Location Map

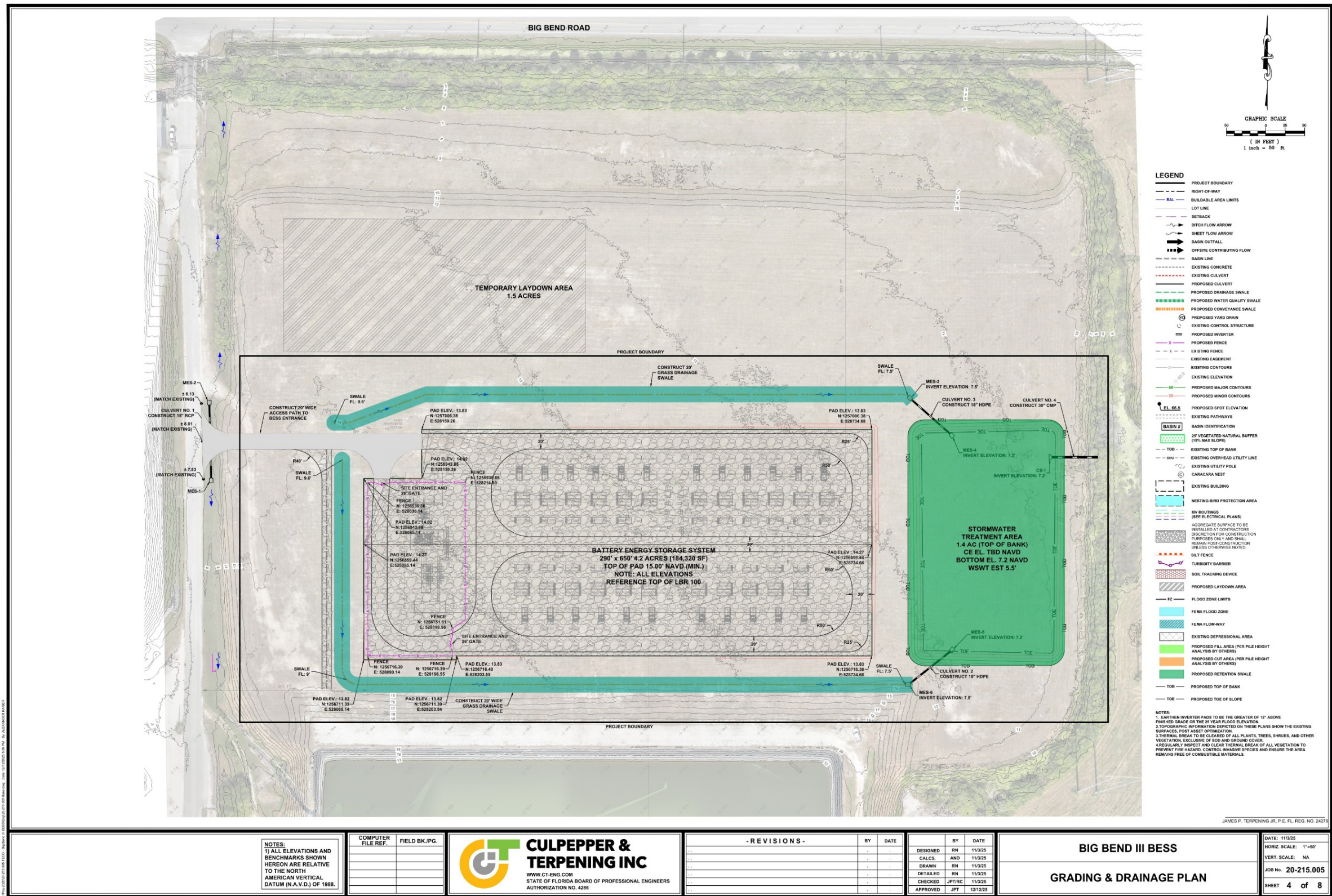


Figure 2 Grading and Drainage Overall Plan

PROJECT

Tampa Electric Company is proposing a Solar Power Generation Facility (the “facility”) known as the Big Bend III Battery Energy Storage System (“BESS”) on approximately 11.98 acres in Hillsborough County, Florida. Figure 1 “Location Map” on page 2, depicts the project location.

The Project will consist of the BESS, conveyance swales, culverts, a stormwater treatment area (Dry Retention Pond), and a control structure.

Operations inspections shall be conducted periodically to ensure that the stormwater management system functions as designed. Spot inspections after heavy rainfall events shall also be performed.

Facility access is via TECO internal roadway which is off of Big Bend Road.

THE DRAINAGE SYSTEM

The site coverage shall include 4.43 acres of impervious BESS area. The drainage system is designed to convey flow from this BESS pad area through proposed conveyance swales to the dry retention pond. The dry retention pond outfalls East to a drainage ditch on the perimeter of the property which ultimately discharges west toward Tampa Bay. The design features of the site include:

- o Approximately 1900 feet of 30’ wide Vegetated Natural Buffer (VNB) that runs between the BESS pad and the conveyance swale
- o Approximately 1900 feet of conveyance swales that convey flow towards the dry retention pond;
- o Two (2) culverts that convey flow through conveyance swales in to the dry retention pond;
- o One (1) Dry Retention pond providing both water quality treatment and stormwater attenuation for the BESS Area; and
- o One (1) Control Structure for the dry retention pond that outfalls to the perimeter drainage ditch.

The master drainage system is depicted in Figure 2 “Grading and Drainage Overall Plan,” page 3

BEST MANAGEMENT PRACTICES (BMPs)

Construction:

Best management Practices (BMPs) will be implemented during the construction phase and during the operation phase to ensure the site is stabilized with permanent vegetative cover. Prior to construction, a Stormwater Pollution Prevention Plan (SWPPP) will be developed that will include implantation of specific BMPs for grassing disturbed bare soil and bare spot areas, completing inspections of disturbed areas and re-grassing, if necessary to achieve stabilization. Vegetation will be established by seeding/fertilization, hydroseeding, and/or sodding. Seed blends will include mixtures of Bahia, millet, and/or ryegrass (based on seasonal viability and material availability).

During construction, the contractor will be responsible for conducting weekly inspections on disturbed bare soil and bare spot areas to determine the extent of re-grassing if necessary. Inspections shall also be generally conducted 24-72 hours after a rainfall event of 0.5 inches or greater. The request to convert the site from the construction phase to the operation phase will not be submitted to FDEP until final stabilization is achieved across the site (70% vegetation density or greater).

Operation:

Through inspections and implementation of BMPs to establish vegetation within disturbed areas, site conditions representative of the design land cover conditions will be achieved. At a minimum, the operations and maintenance procedures set forth in this manual will be followed during the operation phase to ensure the stormwater management BMPs are functioning as permitted and designed, and corrective actions (including stabilization) are taken necessary.

OPERATION & MAINTENANCE PLAN

OPERATION

- o **GRADING**
Grading patterns will be established to route the flow through proposed conveyance swales to the dry retention pond.
- o **STORAGE**
Water will be treated via the VNB's, Swale's, and Dry Retention pond.
- o **DISCHARGE**
Discharge will be via the control structure on the east side of the dry retention pond.
- o **DEBRIS**
Debris to be managed so as to keep all culverts free from debris and allow unimpeded flow through the culvert.

INSPECTION

A maintenance inspection must be performed by a registered professional one (1) year after conversion of the Operation Phase and then every three (3) years thereafter. The inspection must be conducted using the plans, calculations, and specifications approved by the agency. The Stormwater Facility Inspection Checklist (Form 62-330.311(3)) is to be used to complete inspections of the system, and is included with this report.

Inspections shall include the following items:

Dry Retention Pond:

1. Inspect Stormwater management facilities for areas of channelized flow and for areas with erosion and sedimentation indicating channelized flow or that stabilization of contributing area is needed.
2. Inspect Stormwater management facility embankments for evidence of erosion or instability.
3. Should standing water ever be observed for more than 72 hours after a storm event, engineering services should be engaged for remediation.
4. Pond outfall control structure weir, orifice and skimmers should be inspected for blockage by debris and vegetation.
5. Inspection of surface soils to ensure that the top layer of soil is not saturated; saturated soils may indicate clogging issues with the outfall point

Culverts:

6. A visual inspection of all culverts for silt and debris blockage shall be performed.

Inlets and Conveyance Structures:

7. A visual inspection of all structures, including control structures, for corrosion and debris build up shall be performed.
8. Inspect the inlet and outlet areas to confirm that erosion has not occurred, sediment and debris has not accumulated, and that the specified ground cover is in good condition.

Conveyance Swales:

9. Inspect the conveyance swales to confirm that erosion has not occurred, sediment and debris has not accumulated, and that the specified ground cover is in good condition.

Vegetated Natural Buffers

10. Inspect VNB's for Vegetation health and evidence of erosion or instability.

General Inspection:

11. The need for vegetation removal or spraying should be determined.

Within 30 days of the inspection, the operation and maintenance entity shall submit Form 62-330.311(1), "Operation and Maintenance Inspection Certification" to the local Florida Department of Environmental Protection district office.

MAINTENANCE

Maintenance of the stormwater management facilities shall be performed, at a minimum, on a semi-annual basis and shall include the following:

Dry Retention Pond:

1. Areas should be mown seasonally or as needed to prevent obstruction;
2. Trash and debris should be removed as needed;
3. Grassed maintained to be free from bare earth conditions to prevent potential erosion;

Perimeter Berm:

4. Grassed areas should be mowed on a regular basis and maintained free from bare earth conditions to prevent potential erosion;

Culverts:

5. If silt and debris is found in the culverts, the pipes will be cleaned and flushed to ensure that all material has been removed;

Inlets and Conveyance Structures:

6. If it is determined to be necessary, the weir will be cleaned and flushed to ensure that all debris or other obstruction has been removed;

General Tasks:

7. If exotics are found upon inspection of vegetation, they should be removed from the site; and
8. Any areas where erosion has occurred should be repaired with new sod. Other materials may be necessary based on the frequency of erosion.

CONCLUSION

The inspection protocol has been designed to provide long-term function of the stormwater management system. The periodic inspections are intended to provide the operator with the key areas of observation that are necessary to ensure compliance with the permitted requirements of the Southwest Florida Water Management District, Hillsborough County and the Florida Department of Environmental Protection.

This item has been digitally signed and sealed by
James P. Terpening, PE, on 12/23/2025 2:35:51 PM.

Printed copies of this document are not considered signed and
sealed and the signature must be verified on any electronic copies

James P. "Butch" Terpening, P.E.
Florida Registration #24276
Date: 12/12/2025

STORMWATER FACILITY INSPECTION CHECKLIST

Instructions

Prior to the inspection, the Inspector should review the permit for the facility and the design or as-built drawing for the facility.

This inspection checklist is required for the documentation of the annual inspection of all permitted stormwater systems. Complete all parts of the general data section for the project site. Attach any additional required documentation, if necessary. In the "All Technologies" category, mark all items as "satisfactory" or "unsatisfactory." For all other categories, either select "N/A" and minimize the category or mark all inspection items as "satisfactory" or "unsatisfactory." If the system described does not contain a component that is listed for inspection mark that item as "N/A"

For any item marked unsatisfactory, provide a comment below the BMP technology describing maintenance action needed to bring the system back into compliance. Within 30 days of any failure of a stormwater management system or if any components of the constructed system are found to be not in substantial conformance with the permitted system, a report shall be submitted by the permittee or their authorized representative to the Agency using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," ({effective date}), as per 62-330.331(2) F.A.C., describing the remedial actions taken to resolve the failure or deviation.

Inspection reports will be submitted by the permittee or their authorized representative to the applicable permitting agency. Each inspection report must be signed by a certified inspector or a registered professional to certify its authenticity.

Inspection Checklist

General Data

Inspection Date:

Location: Big Bend III BESS

Project Name: Big Bend III BESS

Permit Number: N/A (10-2 Permit)

Time since last storm event ☐ <24 hours

☐ 24-48 hours

☐ 48-72 hours

☐ >72 hours

Permit Holder

Permit Effective Date

Inspector Name

Inspector Contact Information

Multiple BMP types in the system No ☐ Yes ☒ List All: Vegetated Natural Buffers

Swales

Dry Retention Pond

Permit drawings have been reviewed No ☐ Yes ☐

Additional Photos Attached ☐ N/A ☐

Compliance Activity Record Attached ☐ N/A ☐

All (or other unlisted) Technologies

Items for inspection	Satisfactory	Unsatisfactory
General		
BMPs and treatment facilities are in good repair and operational	☐	☐
BMPs and treatment facilities are free from debris buildup that may impair function	☐	☐
Berms, embankments, curbing, or other methods used to impound, divert, and direct discharges are adequate and in good condition	☐	☐
The discharge (if any) is free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam, or any other signs of contamination	☐	☐
Vegetation		
Mowing done when needed	☐	☐
Grass clippings removed	☐	☐
No evidence of erosion	☐	☐
Inlets		
Good condition, no need for repair	☐	☐
No evidence of erosion*	☐	☐
Outlets/overflow spillway		
Good condition, no need for repair	☐	☐
No evidence of erosion*	☐	☐

Comments:

Traditional BMPs

Swales N/A ☐

Items for inspection	Satisfactory	Unsatisfactory
Debris Cleanout		
Swales and contributing areas clear of debris*	☐	☐
Vegetation		
No evidence of erosion*	☐	☐
No weeds or invasive plants present	☐	☐
No evidence of nutrient deficiency	☐	☐
No evidence of disease	☐	☐
Grasses/sod are not in need of replanting/resodding	☐	☐
No signs of drought stress	☐	☐
No signs of plant overgrowth	☐	☐
Recovery		
Swale recovers between storms within permitted timeframe	☐	☐
Swale clean of sediments		
Good condition, no need for repair	☐	☐
No areas of sediment buildup*	☐	☐
No evidence of erosion*	☐	☐
Inlet Structure / Pretreatment:		
Good condition, no need for repair	☐	☐
No trash/debris/sediment in or around inlet structures*	☐	☐
No evidence that runoff is short-circuiting the inlet	☐	☐
Emergency Overflow / Outlet Structure		
Good condition, no need for repair	☐	☐
No evidence of accumulation of trash, debris, or sediment in or around outlet structure(s)*	☐	☐

No evidence of erosion, or flooding around structures*	☐	☐
Swale Blocks N/A ☐		
If swale blocks or other structures are present, there is no evidence of erosion at downstream toe of structure*	☐	☐

Comments:

Wet Pond N/A ☒

Dry Pond N/A ☐

Type of dry pond: Retention

Items for inspection	Satisfactory	Unsatisfactory
Debris Cleanout		
Basin bottom clear of debris*	☐	☐
Emergency spillway clear of debris*	☐	☐
Recovery		
Pond recovers between storms	☐	☐
Vegetation		
No signs of damage from animal activity	☐	☐
No signs of stress or disease	☐	☐
No emergent invasive plant life	☐	☐
Does not need replanting	☐	☐
Not overgrown	☐	☐
Sediment cleanout of pond		
No evidence of sedimentation in pond	☐	☐
No evidence of erosion at downstream toe	☐	☐
Structural		
Embankment condition	☐	☐
Side slopes are stable	☐	☐
Fences/access repairs		
Fence(s) condition	☐	☐
Lock(s) and gate(s) function adequate	☐	☐
Underdrain/side bank Filters		
Cleanout caps present and in good condition	☐	☐
No evidence of clogging	☐	☐
No evidence of erosion over or adjacent to filter*	☐	☐
Inlets		
Inlet(s) condition	☐	☐
No evidence of erosion, gullies, rills, or flooding around inlet*	☐	☐
Outlets/overflow spillway		
Outlet(s) condition	☐	☐
No evidence of erosion, gullies, rills, or flooding around outlet*	☐	☐

Comments:

Exfiltration Trench N/A ☒

Pervious Pavers/Pavement N/A ☒

Stormwater Vaults or Tanks N/A ☒

Constructed Marsh System N/A ☒

Vegetative Natural Buffers N/A ☐

Items for inspection	Satisfactory	Unsatisfactory
Debris Cleanout		
Buffer clear of debris*	☐	☐
Vegetation		
Vegetation healthy	☐	☐
No emergent invasive plant life	☐	☐
No signs of damage from animal activity	☐	☐
No signs of stress or disease	☐	☐
No areas need replanting	☐	☐
Dead plant material removed, as necessary	☐	☐
Upland banks are maintained	☐	☐
Flow		
No signs of channeling or erosion *	☐	☐
Maintain minimum permitted water elevation	☐	☐
No signs of drought or prolonged ponding	☐	☐
Inlets		
Inlet(s) condition	☐	☐
Runoff is not short Circuiting the inlet	☐	☐
No evidence of trash/debris/sediment in or around inlet *	☐	☐
No evidence of erosion, gullies, rills, or flooding around inlet *	☐	☐
Vegetation around inlet in good condition	☐	☐
Outlets/emergency outflow N/A ☐		
Outlet(s) condition	☐	☐
No evidence of trash/debris/sediment in or around outlet *	☐	☐
No evidence of erosion, gullies, rills, or flooding around outlet *	☐	☐

Comments:

Green Roof N/A ☒

Cistern N/A ☒

Tree Box or Tree Well N/A ☒

Bioswale or Raingarden N/A ☒

Non-Traditional BMPs

Other Manufactured BMPs N/A ☒

Monitoring Devices and Adaptive Controls N/A ☒

Signature

Inspector Name:

Signature of Inspector:

Florida Registration Number: