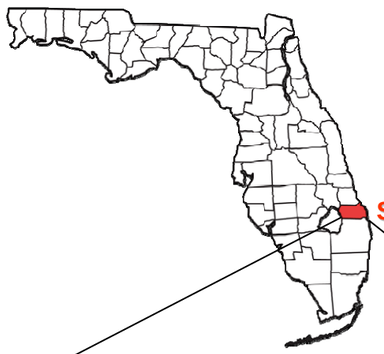
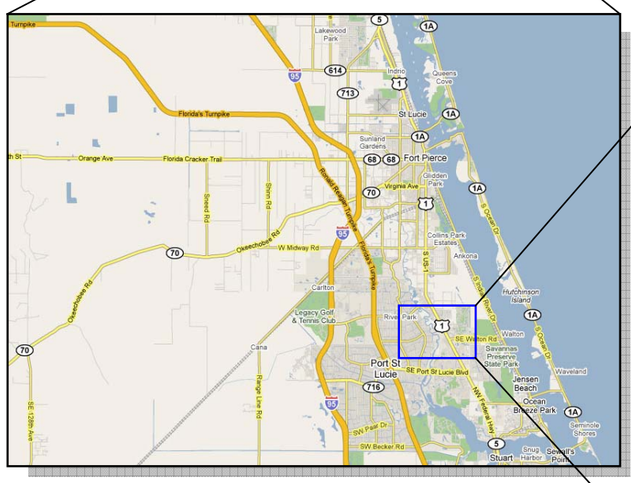
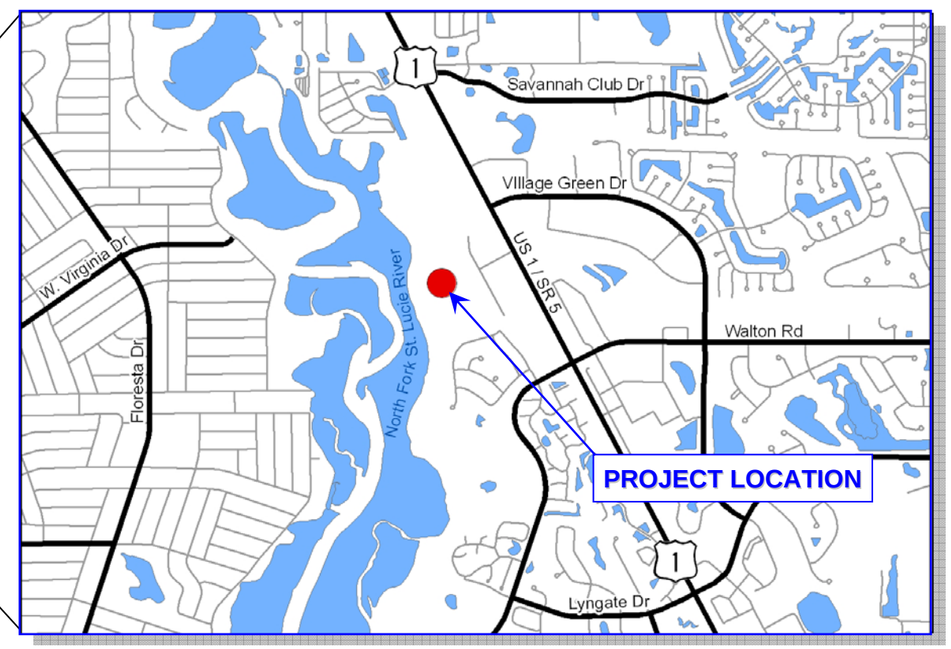
Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Halpatiokee Canoe Launch Replacement







Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

Prepared By:

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

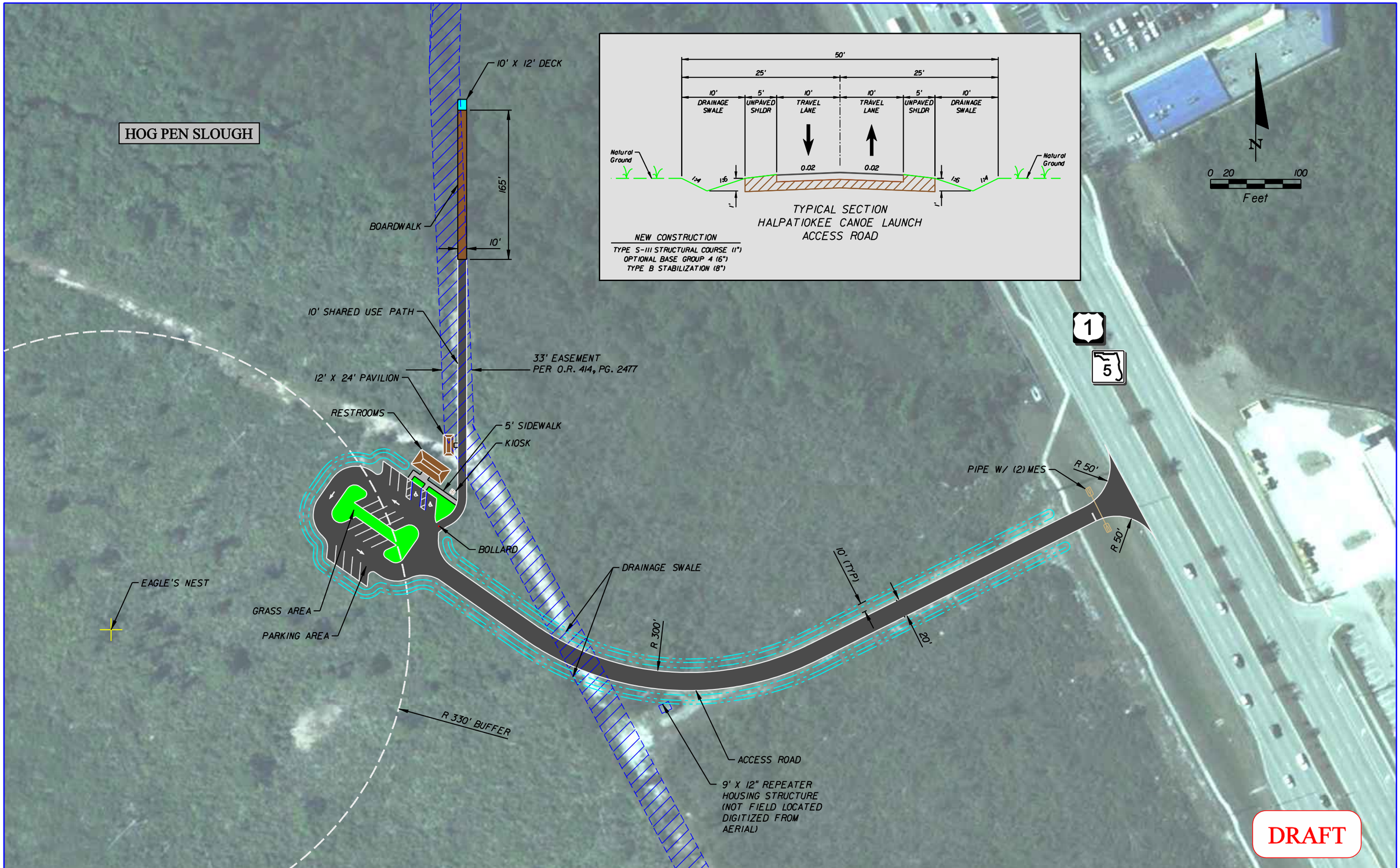
INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	ALTERNATIVE OPTION 1
3	ALTERNATIVE OPTION 2
4	ALTERNATIVE OPTION 3

March 10, 2011

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
US 1	ST. LUCIE

HALPATIOKEE CANOE LAUNCH REPLACEMENT

ALTERNATIVE OPTION 1

SHEET NO. 2

33' EASEMENT
PER O.R. 414, PG. 2477

PIPE W/ (2) MES

R 50'

9' X 12" REPEATER
HOUSING STRUCTURE
(NOT FIELD LOCATED
DIGITIZED FROM
AERIAL)

R 50'

EAGLE'S NEST

TOP OF BANK

KIOSK

5' SIDEWALK

BOLLARD

30'

10'

10' X 12'
CANOE/KAYAK
LAUNCH DECK

BOARDWALK

10' SHARED USE PATH

12' X 24' PAVILION

14' X 16' RESTROOM BUILDING

TRAILER PARKING

PARKING AREA

GRASS AREA

R 330' BUFFER

R 100'

R 80'

R 100'

R 80'

EVANS CREEK

NORTH FORK
ST. LUCIE RIVER

R 440'

WETLAND LIMITS
(NOT SURVEYED)

DRAINAGE SWALE

ACCESS ROAD

R 290'

10' (TYP)

20'

N

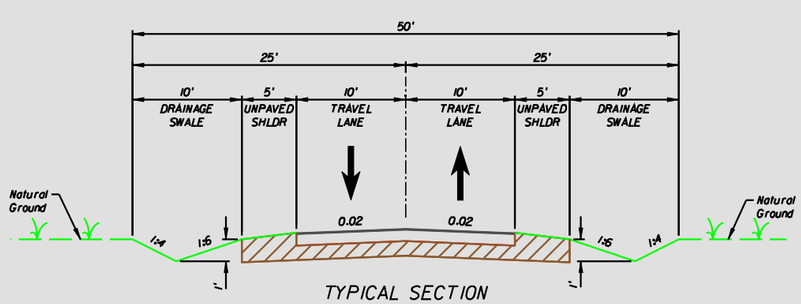
0 50 200
Feet

1

5

HIGHPOINT DRIVE

DRAFT



TYPICAL SECTION
HALPATIOKEE CANOE LAUNCH
ACCESS ROAD

NEW CONSTRUCTION

TYPE S-III STRUCTURAL COURSE (11")
OPTIONAL BASE GROUP 4 (16")
TYPE B STABILIZATION (8")

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

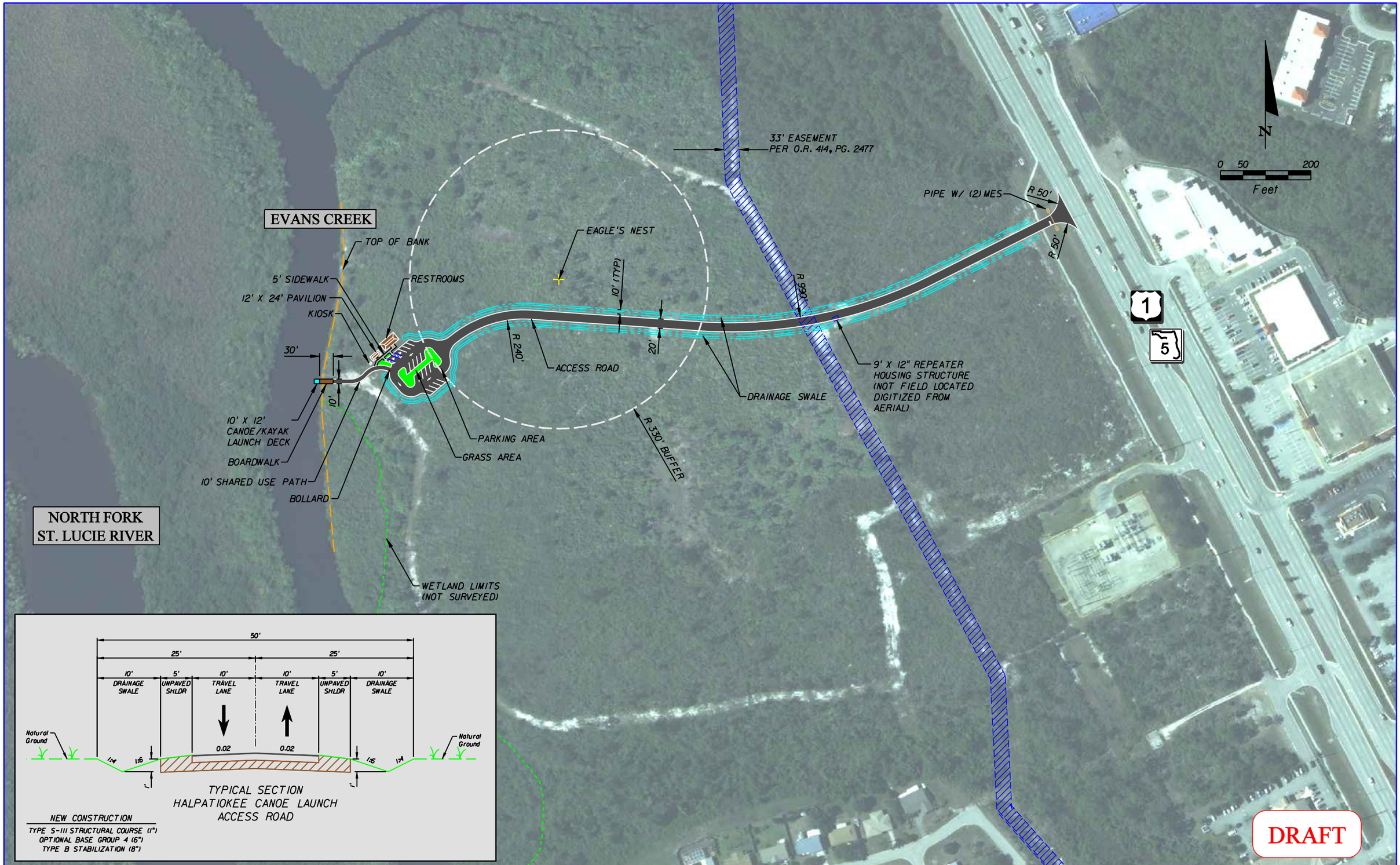
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
US 1	ST. LUCIE

HALPATIOKEE CANOE LAUNCH REPLACEMENT

ALTERNATIVE OPTION 2
PREFERRED ALTERNATIVE

SHEET NO. 3



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

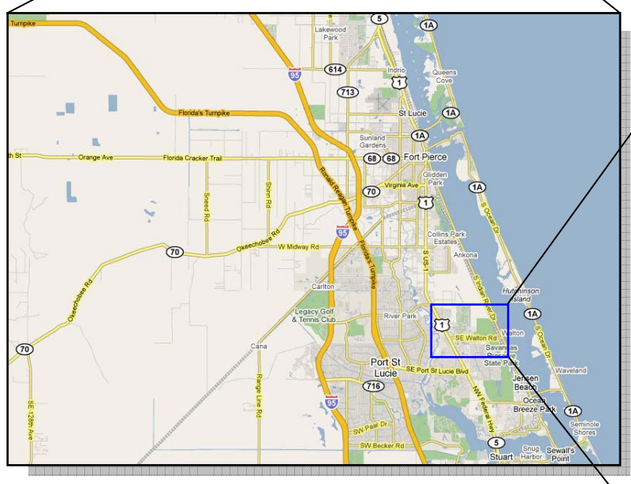
ROAD	COUNTY
US 1	ST. LUCIE

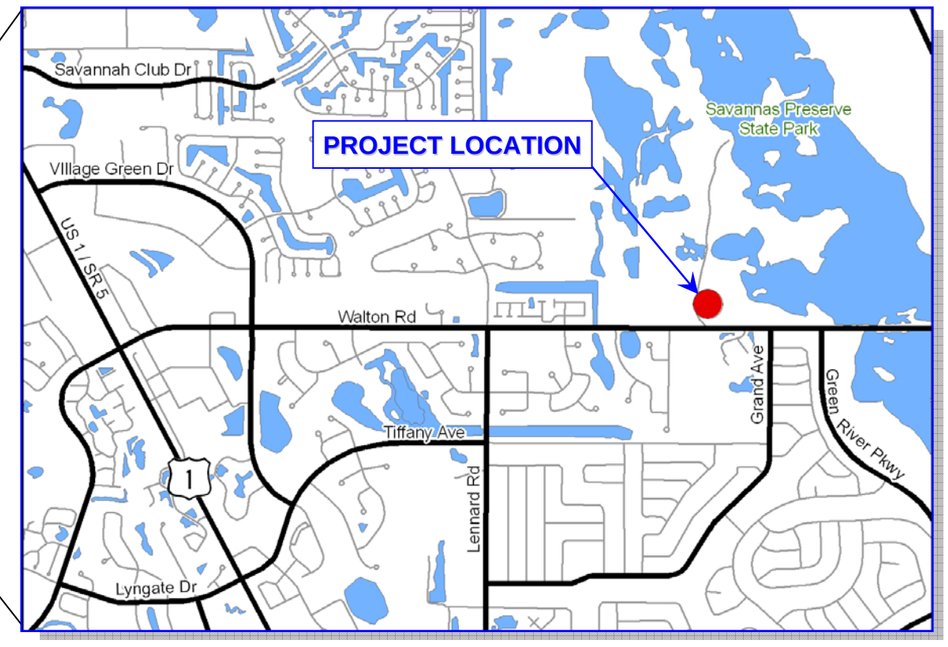
HALPATIOKEE CANOE LAUNCH REPLACEMENT

ALTERNATIVE OPTION 3

SHEET NO. 4

Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Savannas Preserve State Park
Education Center improvements





Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	ALTERNATIVE A
3	ALTERNATIVE B

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

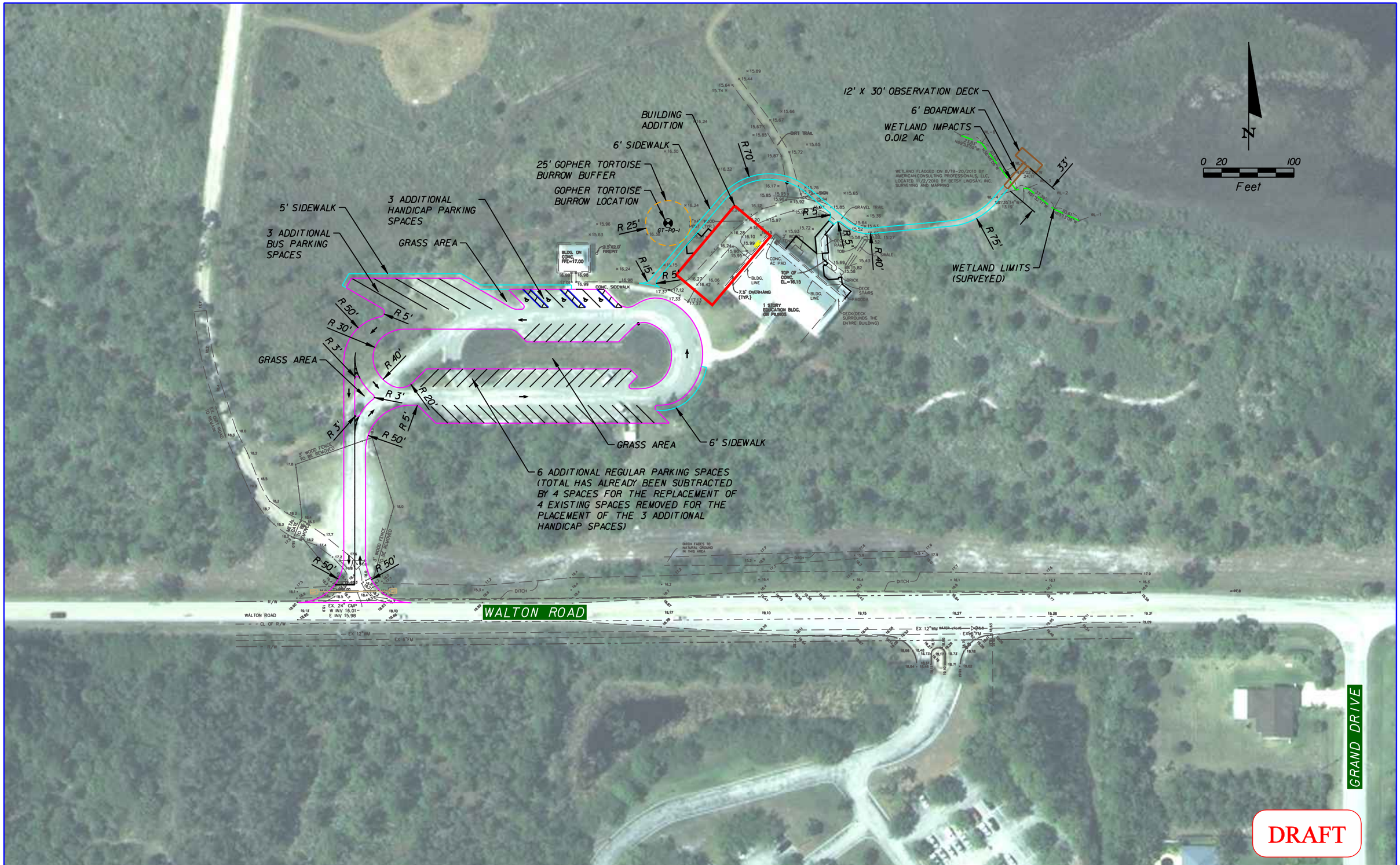
Prepared By:

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

March 10, 2011

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

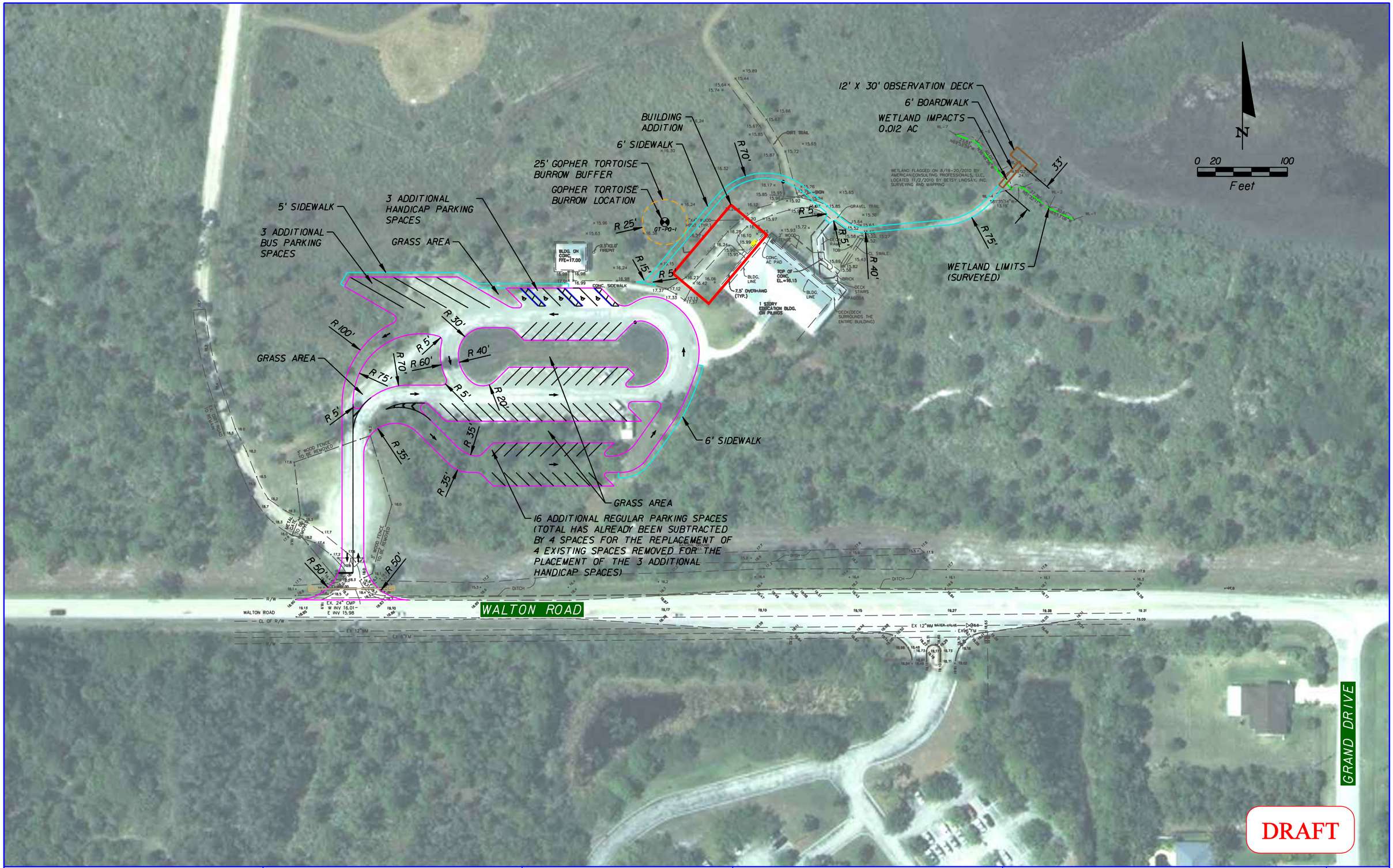
ROAD	COUNTY
WALTON ROAD	ST. LUCIE

SAVANNAS PRESERVE STATE PARK
EDUCATION CENTER IMPROVEMENTS

ALTERNATIVE A

SHEET NO. 2

USER: 5intrid 3/8/2011 2:58:39 PM f:\project\5109648\cadd\roadway\savannasedcenter\PLANRDOI.DGN



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

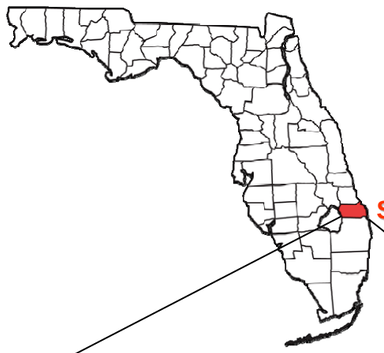
ROAD	COUNTY
WALTON ROAD	ST. LUCIE

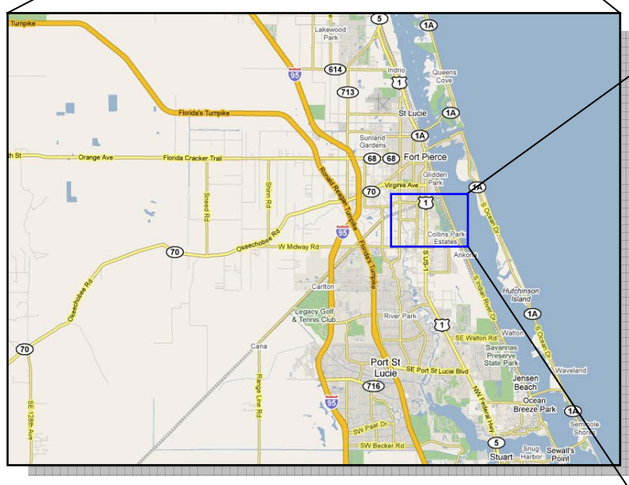
SAVANNAS PRESERVE STATE PARK
EDUCATION CENTER IMPROVEMENTS

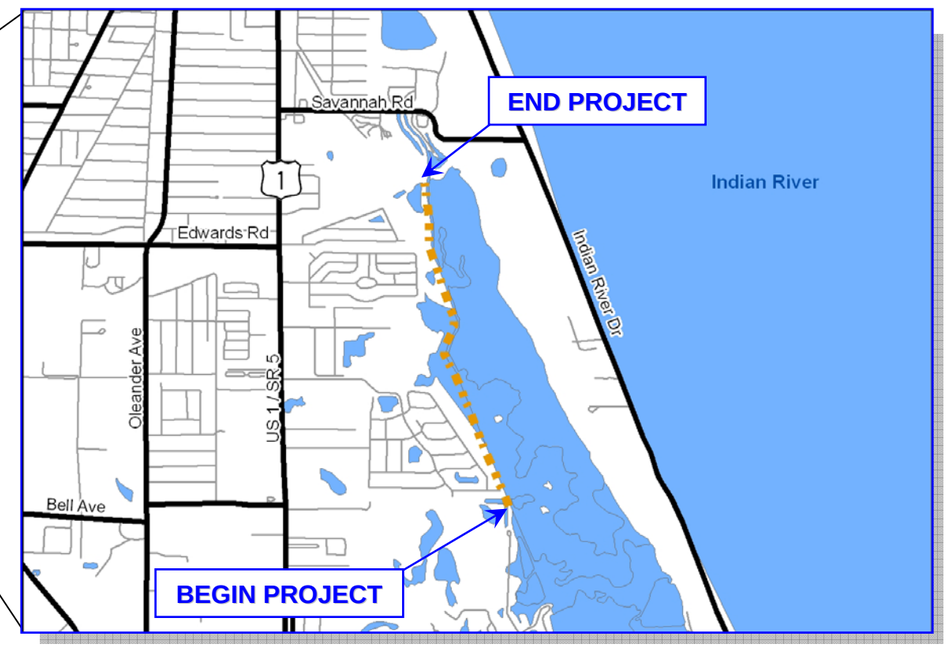
ALTERNATIVE B

SHEET NO. 3

Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Savannas Recreation Area Trail







Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	PROJECT CONCEPT LAYOUT
3-12	CONCEPT PLAN

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

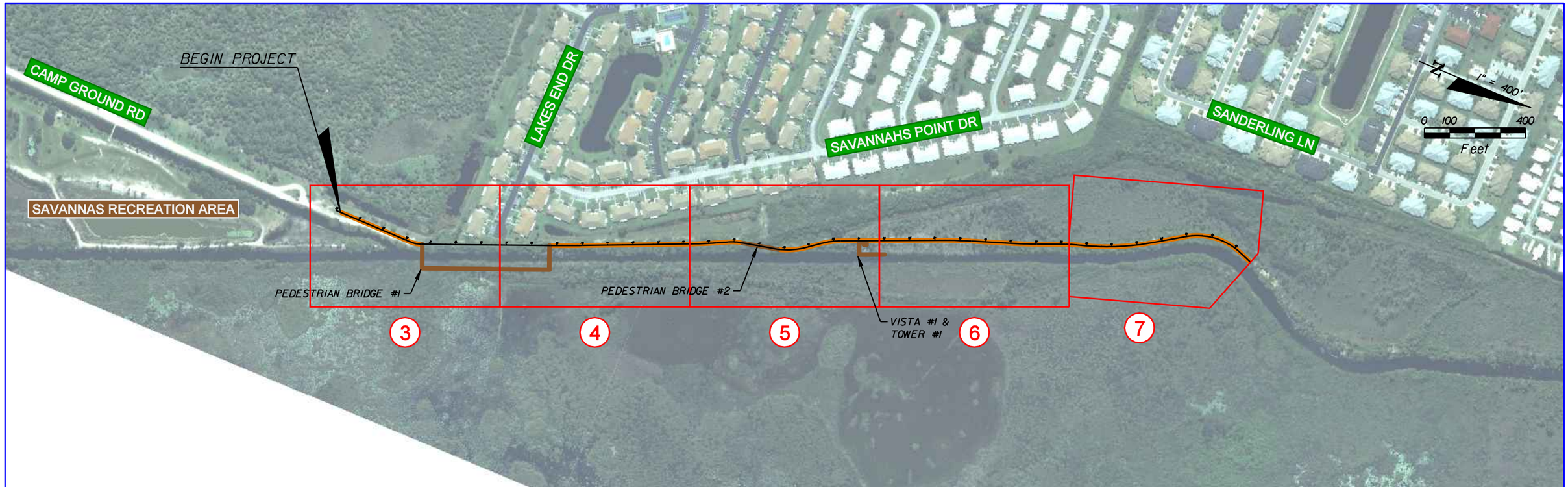
Prepared By:

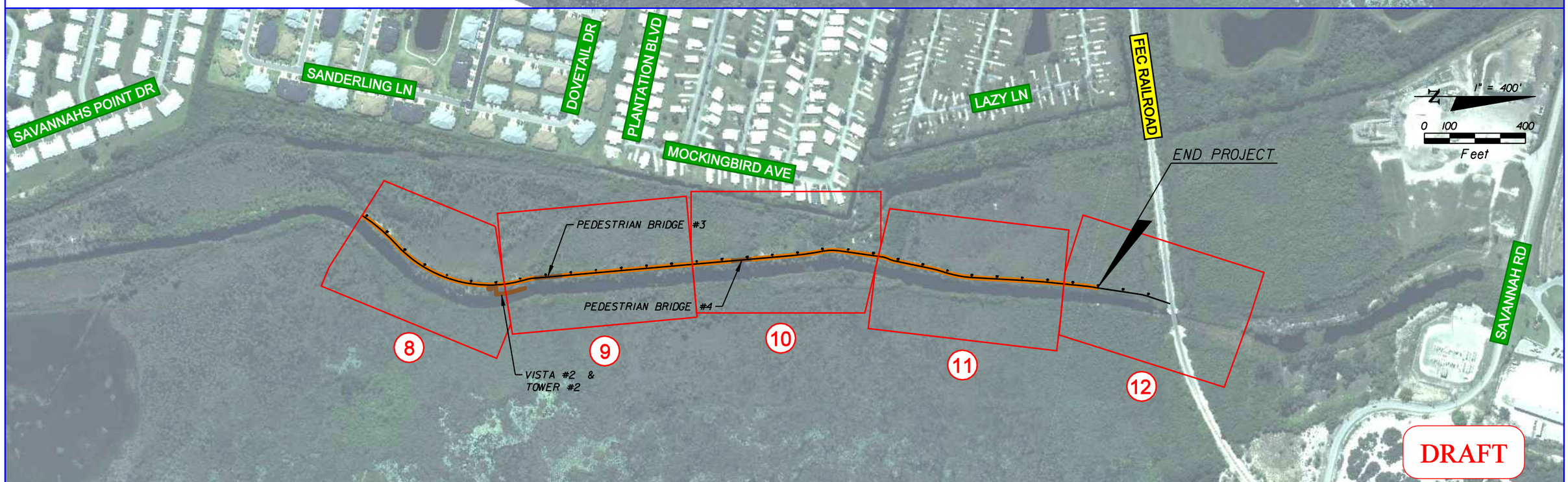
American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

March 10, 2011

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.





REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

PROJECT CONCEPT LAYOUT

SHEET NO. 2

BEGIN PROJECT
BEGIN TRAIL
STA 30+20.00

SAVANNAS
RECREATION AREA
CAMP GROUNDS

1" = 50'
0 10 50
Feet

℄ CONST

10' PROPOSED TRAIL

N 0° 21' 16" E

PC STA. 33+20.21

PT STA. 33+63.01

N 21° 56' 25" W

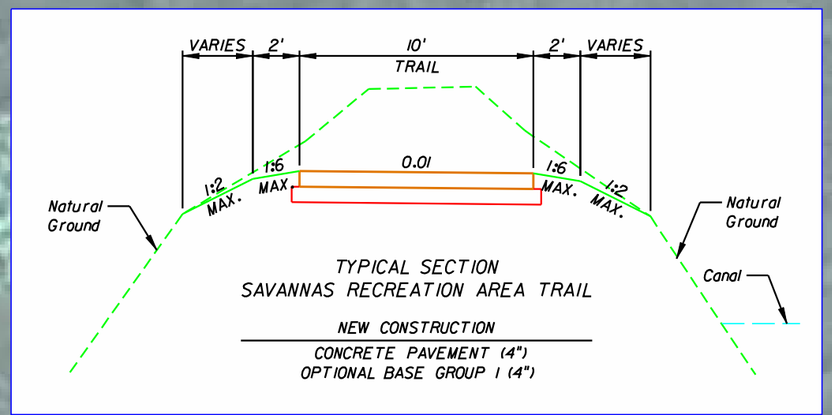
WETLAND LIMITS
(NOT SURVEYED)

WETLAND IMPACTS
0.18 AC

LIMITS OF
CONSTRUCTION

PROPOSED PEDESTRIAN BRIDGE #1
(700 LF)

LIMITS OF
CONSTRUCTION



TYPICAL SECTION
SAVANNAS RECREATION AREA TRAIL

NEW CONSTRUCTION

CONCRETE PAVEMENT (4")
OPTIONAL BASE GROUP 1 (4")

CURVE DATA CLST-1
PI STA. = 33+41.88
DELTA = 22° 17' 41" (LT)
D = 52° 05' 13"
T = 21.68
L = 42.80
R = 110.00
PC STA. = 33+20.21
PT STA. = 33+63.01

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

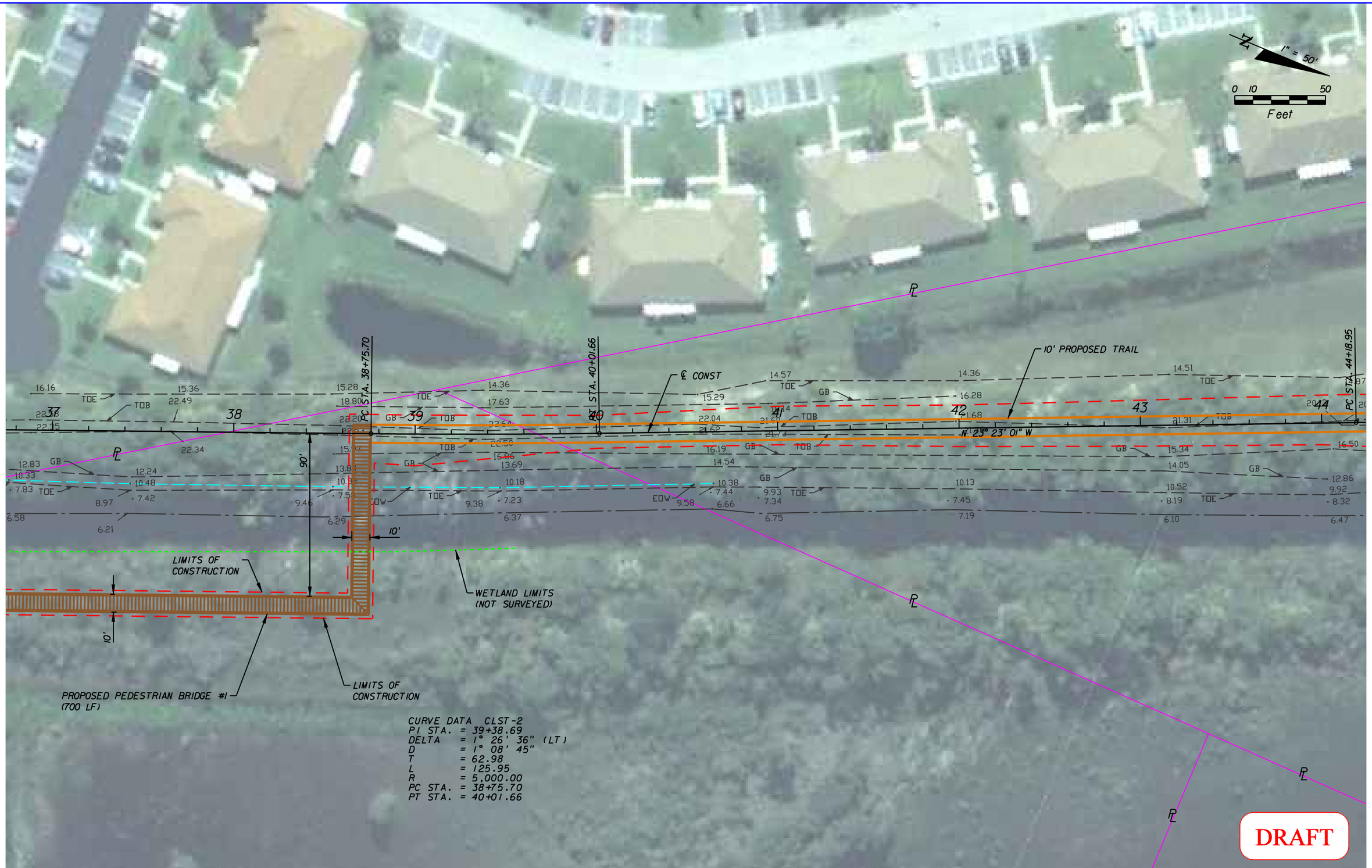
ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 3

USER: 5intrld 3/8/2011 2:53:40 PM f:\project\5109648\cadd\roadway\savannastrail\PLANRD01.dgn



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

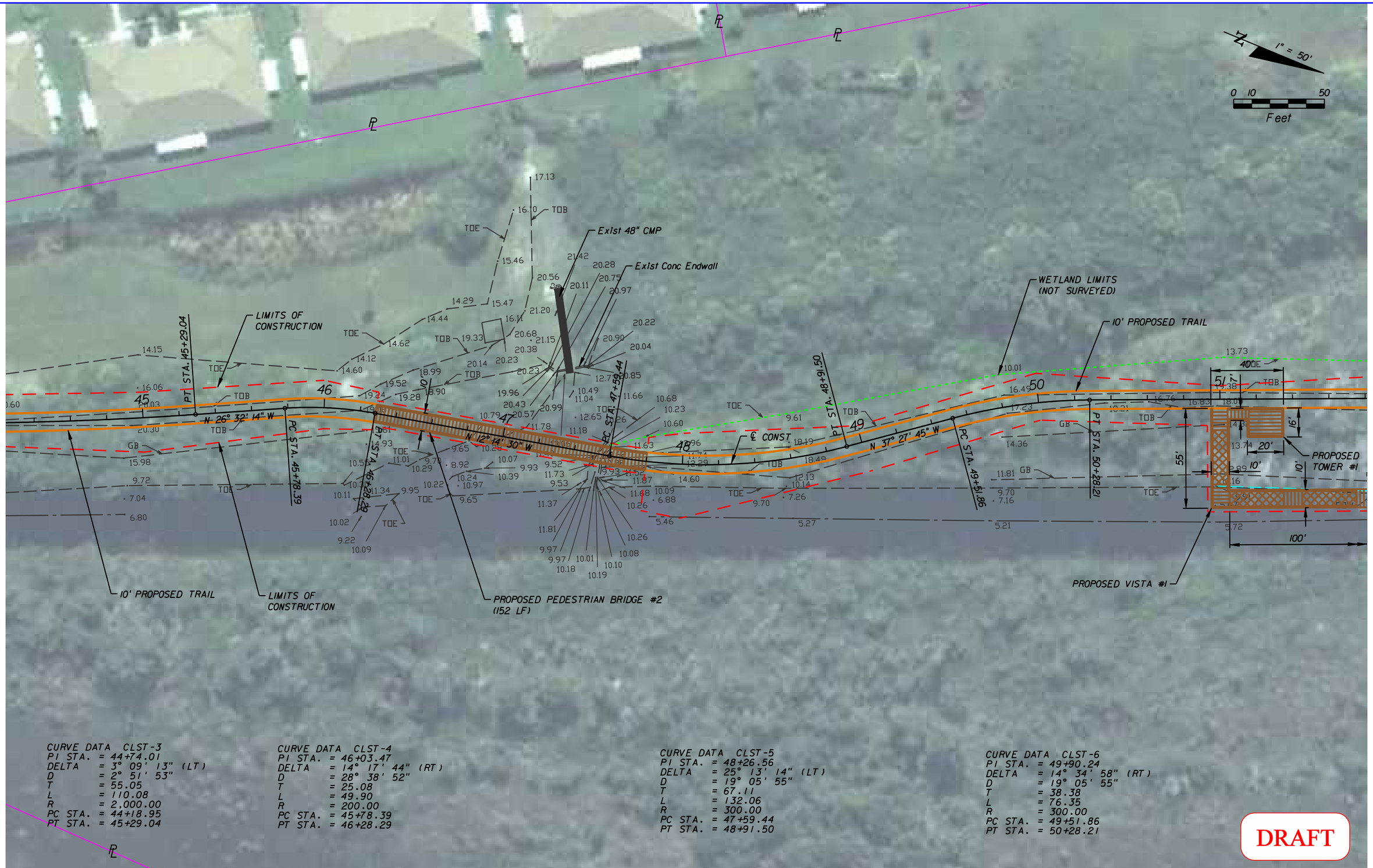
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 4



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 5

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

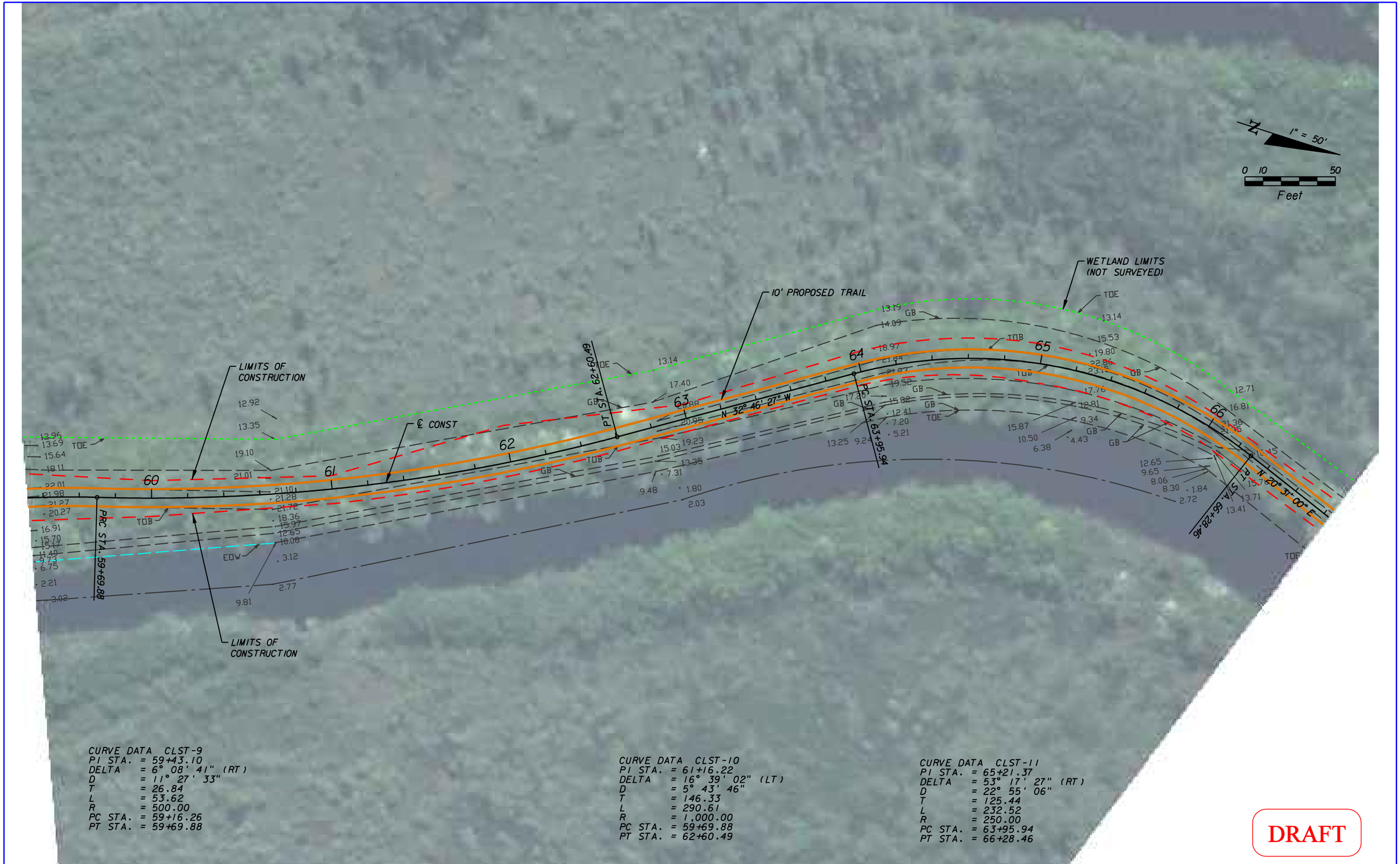
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 6



CURVE DATA CLST-9
PI STA. = 59+43.10
DELTA = 6° 08' 41" (RT)
D = 11° 27' 33"
T = 26.84
L = 53.62
R = 500.00
PC STA. = 59+16.26
PT STA. = 59+69.88

CURVE DATA CLST-10
PI STA. = 61+16.22
DELTA = 16° 39' 02" (LT)
D = 5° 43' 46"
T = 146.33
L = 290.61
R = 1,000.00
PC STA. = 59+69.88
PT STA. = 62+60.49

CURVE DATA CLST-11
PI STA. = 65+21.37
DELTA = 53° 17' 27" (RT)
D = 22° 55' 06"
T = 125.44
L = 232.52
R = 250.00
PC STA. = 63+95.94
PT STA. = 66+28.46

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

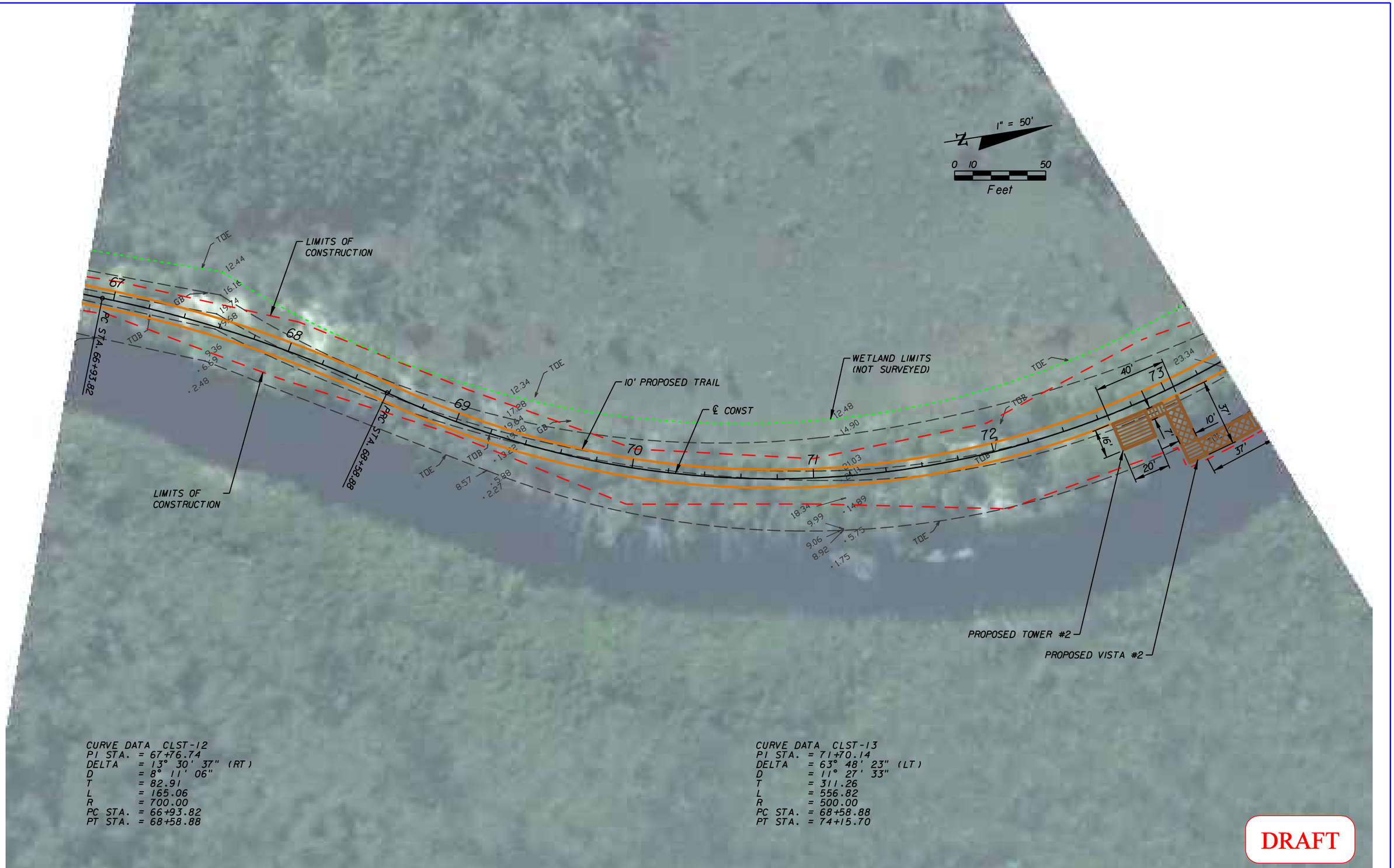
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 7



CURVE DATA CLST-12
PI STA. = 67+76.74
DELTA = 13° 30' 37" (RT)
D = 8° 11' 06"
T = 82.91
L = 165.06
R = 700.00
PC STA. = 66+93.82
PT STA. = 68+58.88

CURVE DATA CLST-13
PI STA. = 71+70.14
DELTA = 63° 48' 23" (LT)
D = 11° 27' 33"
T = 311.26
L = 556.82
R = 500.00
PC STA. = 68+58.88
PT STA. = 74+15.70

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

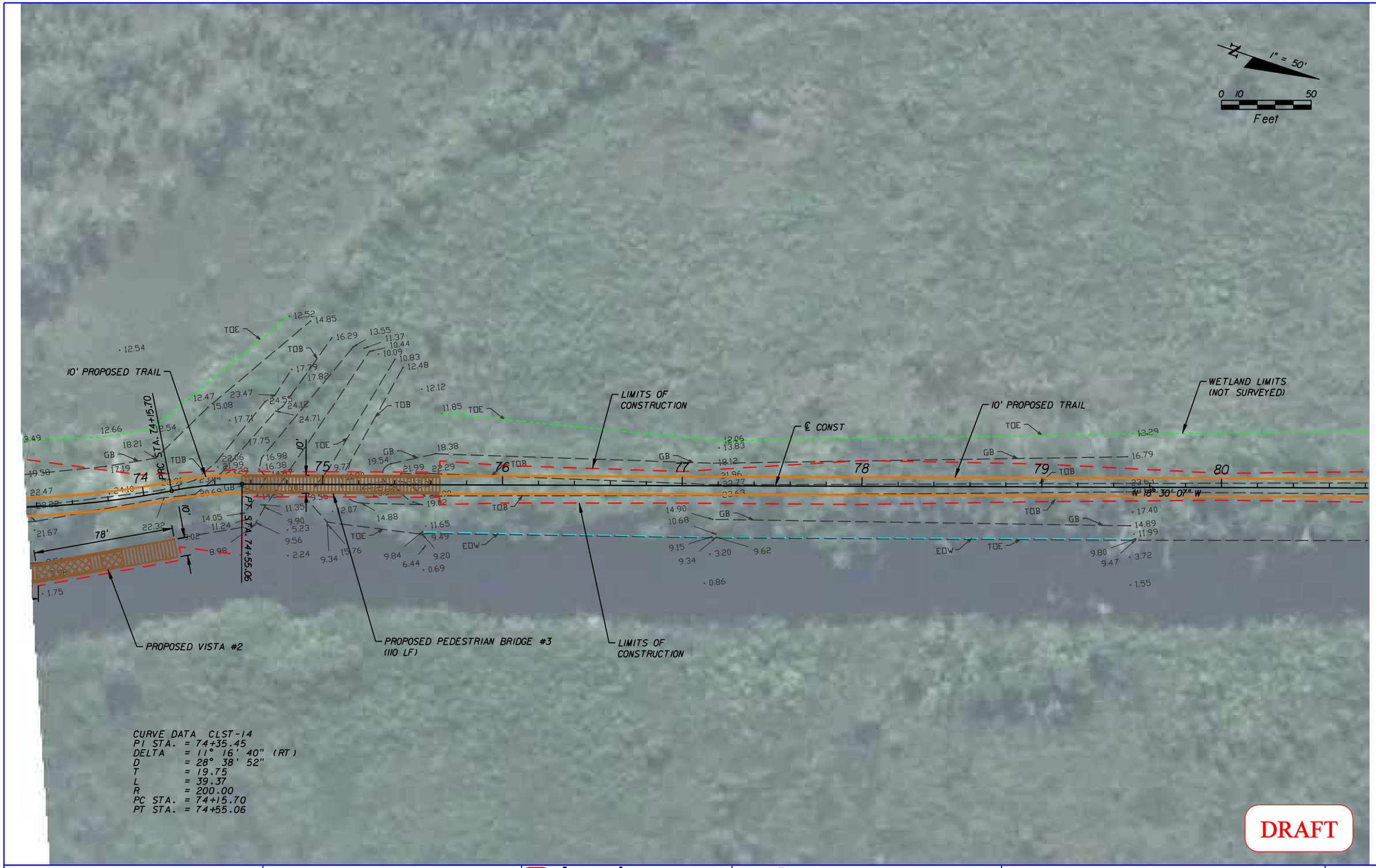
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 8



CURVE DATA CLST-14
PI STA. = 74+35.45
DELTA = 11° 16' 40" (RT)
D = 28° 38' 52"
T = 19.75
L = 39.37
R = 200.00
PC STA. = 74+15.70
PT STA. = 74+55.06

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 9

CURVE DATA CLST-15
PI STA. = 85+24.74
DELTA = 4° 38' 54" (LT)
D = 5° 43' 46"
T = 40.59
L = 81.13
R = 1,000.00
PC STA. = 84+84.15
PT STA. = 85+65.28

CURVE DATA CLST-16
PI STA. = 86+35.48
DELTA = 17° 42' 12" (RT)
D = 28° 38' 52"
T = 31.15
L = 61.80
R = 200.00
PC STA. = 86+04.33
PT STA. = 86+66.13

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

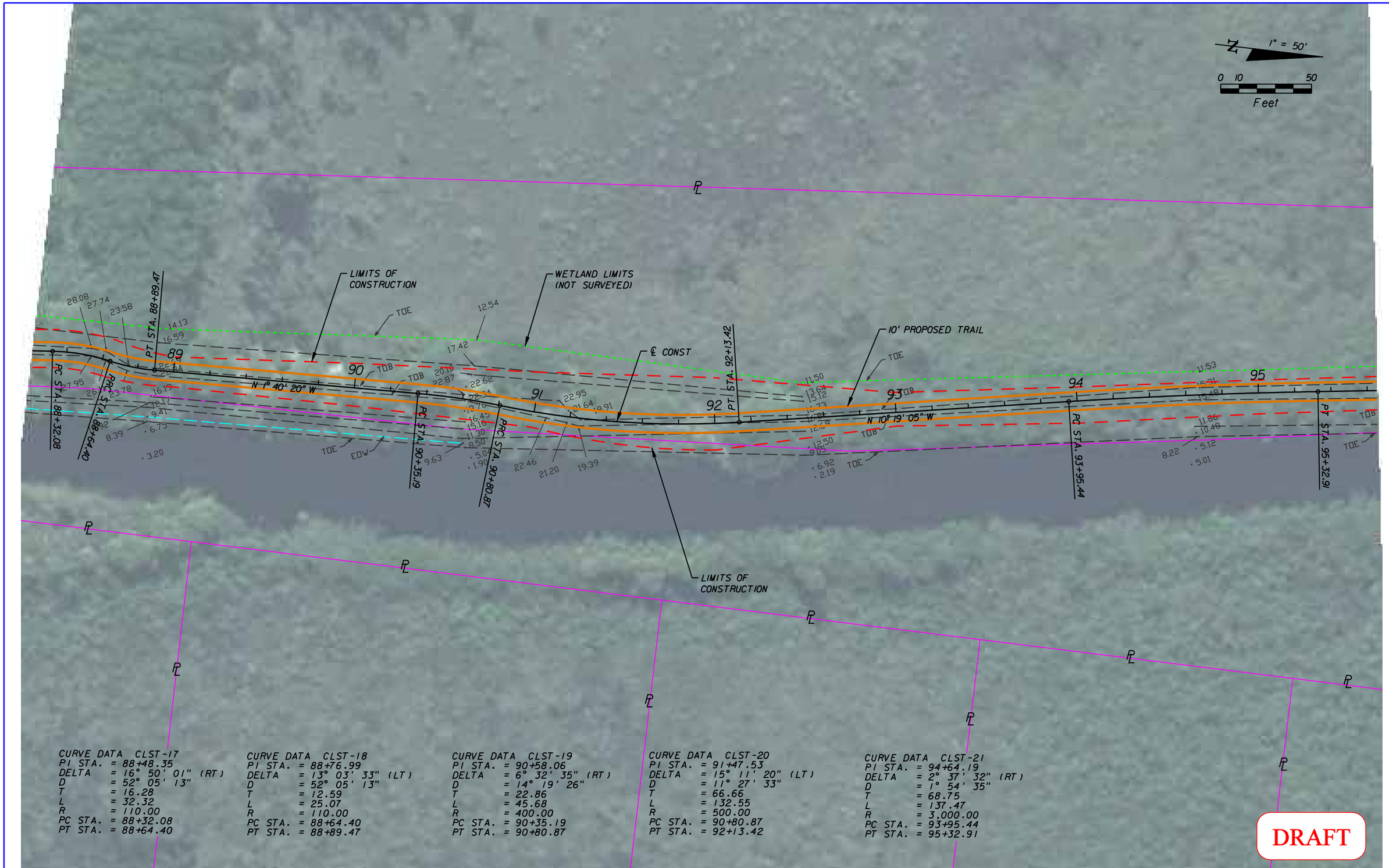
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 10



CURVE DATA CLST-17
PI STA. = 88+48.35
DELTA = 16° 50' 01" (RT)
D = 52° 05' 13"
T = 16.28
L = 32.32
R = 110.00
PC STA. = 88+32.08
PT STA. = 88+64.40

CURVE DATA CLST-18
PI STA. = 88+76.99
DELTA = 13° 03' 33" (LT)
D = 52° 05' 13"
T = 12.59
L = 25.07
R = 110.00
PC STA. = 88+64.40
PT STA. = 88+89.47

CURVE DATA CLST-19
PI STA. = 90+58.06
DELTA = 6° 32' 35" (RT)
D = 14° 19' 26"
T = 22.86
L = 45.68
R = 400.00
PC STA. = 90+35.19
PT STA. = 90+80.87

CURVE DATA CLST-20
PI STA. = 91+47.53
DELTA = 15° 11' 20" (LT)
D = 11° 27' 33"
T = 66.66
L = 132.55
R = 500.00
PC STA. = 90+80.87
PT STA. = 92+13.42

CURVE DATA CLST-21
PI STA. = 94+64.19
DELTA = 2° 37' 32" (RT)
D = 1° 54' 35"
T = 68.75
L = 137.47
R = 3,000.00
PC STA. = 93+95.44
PT STA. = 95+32.91

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO.
11

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 12

USER: 5intrld 3/8/2011 2:54:23 PM f:\project\5109648\cadd\roadway\savannastrail\PLANRD10.dgn

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

May 25, 2012

Mr. Gregory J. Oravec
City Manager
City of Port St. Lucie
121 S.W. Port St. Lucie Boulevard
Port St. Lucie, FL 34984-5099

Re: Crosstown Parkway Extension\North Fork of the St. Lucie River\Memorandum of Understanding\Acquisition Mitigation

Dear Mr. Oravec:

Thank you for your letter dated April 16, 2012, proposing additional lands for the land acquisition requirements of the Memorandum of Understanding (MOU), between the City and the Department of Environmental Protection (DEP) on the referenced project. We understand the need for the acquisition list to be expanded in order to meet all of the mitigation requirements and would like to congratulate the City on its success to date on this project.

DEP's Division of Recreation and Parks (DRP) and the Office of Coastal and Aquatic Managed Areas (CAMA) have completed their review of the City's amended list of parcels proposed for title conveyance to the Board of Trustees of the Internal Improvement Fund of the State of Florida (Board of Trustees) as part of the City's mitigation requirements and have no objections. The parcels, consisting of approximately 108.15 acres slated for transfer to Board of Trustees, will satisfy the land acquisition part of the mitigation requirement under the MOU.

Thank you for the City's continued effort in seeing this project to a successful end. Should you have any questions, please feel free to contact Delbert Harvey by telephone at (850)245-2796 or email at Delbert.Harvey@dep.state.fl.us

Sincerely,

Scott E. Woolam
Bureau Chief
Division of State Lands
Bureau of Public Land Administration

RECEIVED
MAY 31 2012
CITY ATTORNEY'S OFFICE

DH\dh

cc: Al Gregory, Bureau Chief, DRP
Lauren Milligan, Environmental Manager, Florida State Clearinghouse
Lynda Godfrey, Bureau Chief, Bureau of Land Acquisition
Larry Nall, Environmental Administrator, Office of Coastal and Aquatic Managed Areas
Patricia Roebling, P.E., City Engineer
Azlina Goldstein Siegel, Assistant City Attorney

PROGRAMMING DOCUMENT

FOR

Savannas Area Recreation Trail

Proprietary Mitigation Plan Projects
Crosstown Parkway Extension Project

June 2011

PREPARED FOR:

City of Port St. Lucie
121 SW Port St. Lucie Blvd
Port St. Lucie, FL 34984

PREPARED BY:

American Consulting Professionals, LLC
2000 Palm Beach Lakes Blvd, Suite 1000
West Palm Beach, FL 33409

TABLE OF CONTENTS

1.0 REPORT PURPOSE 1
2.0 PROJECT DESCRIPTION AND BACKGROUND 1
3.0 SCOPING HISTORY AND CONCEPTUAL DESIGN 4
3.1 Initial Meeting with St. Lucie County 4
3.2 Conceptual Design 4
4.0 PERMIT INVOLVEMENT 5
5.0 COST ESTIMATE AND BUDGET 5

PROGRAMMING DOCUMENT
SAVANNAS AREA RECREATION TRAIL

1.0 REPORT PURPOSE

The purpose of this report is to provide documentation of Phase I of the Savannas Area Recreation Trail Project to be used during future phases of this project. The first phase of this project consisted of data collection, meetings with regulatory agencies, and preparation of conceptual plans to more accurately define the ultimate scope of the project.

2.0 PROJECT DESCRIPTION AND BACKGROUND

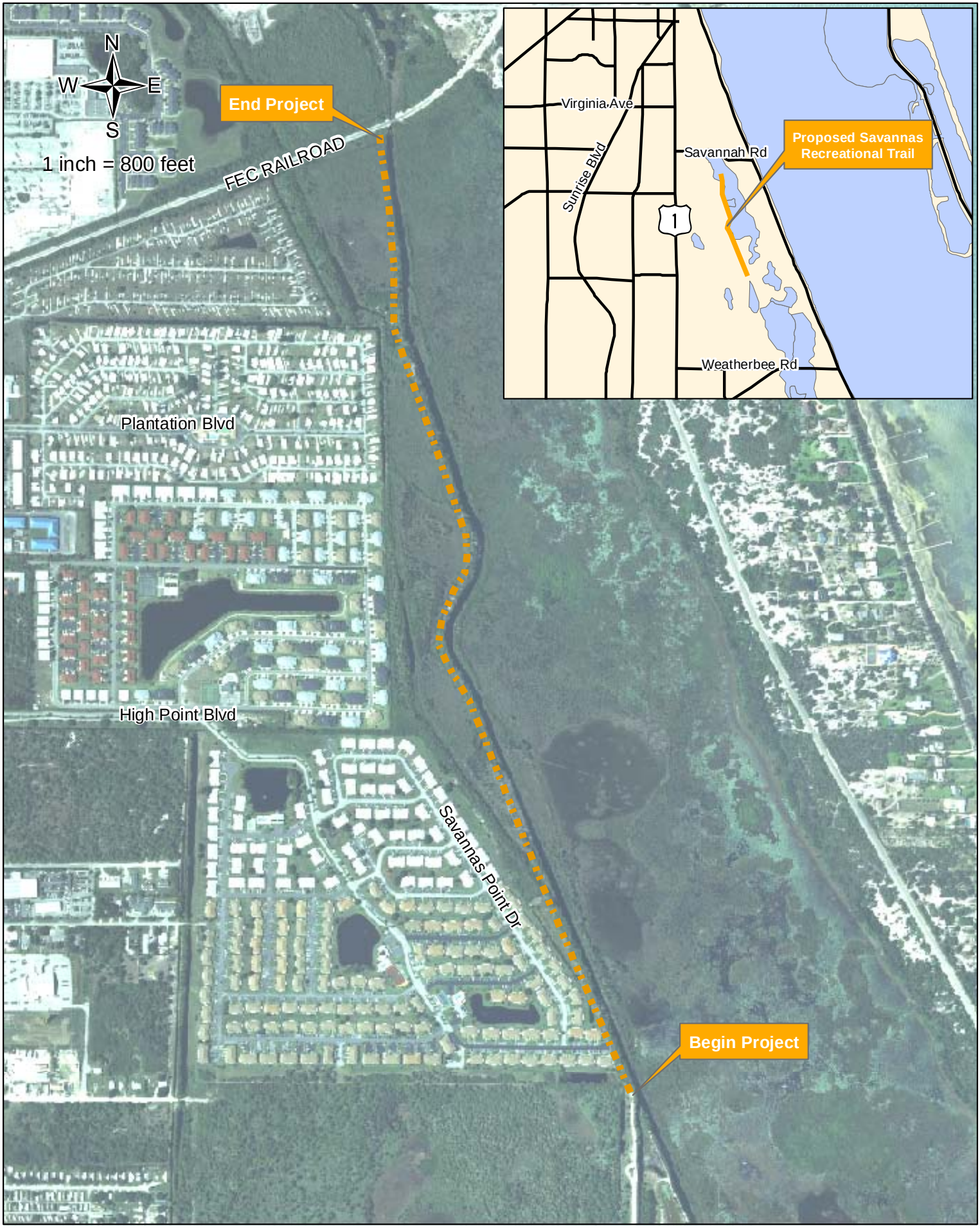
The City of Port St. Lucie (City) is working towards the construction of a new crossing over the North Fork of the St Lucie River (NFSLR) called the Crosstown Parkway Extension. The Crosstown Parkway Extension project includes the proposed construction of a bridge to provide an east-west connection of Crosstown Parkway to US 1. At this time, the specific corridor alternative for the roadway and bridge crossing has not been determined. There are six (6) build corridor alternatives and a no-build alternative that are currently being considered as part of an ongoing Environmental Impact Statement (EIS) in accordance with National Environmental Policy Act (NEPA) guidelines and Federal Highway Administration (FHWA) directives. The final alignment to be permitted for construction will be determined through the EIS process.

The EIS effort is currently ongoing and a Draft EIS was distributed to FHWA and cooperating agencies in November 2010. The City is currently pursuing a Conceptual Environmental Resource Permit (ERP) from the South Florida Water Management District (SFWMD) in order to reach an agreement with the SFWMD and the Florida Department of Environmental Protection (DEP) with respect to water management, natural resource mitigation (regulatory mitigation), state lands mitigation (proprietary mitigation) and a sovereign submerged lands (SSL) easement. During the development stages of the project, the SFWMD agreed to establish a "representative corridor" approach in obtaining a Conceptual ERP. This corridor represents a composite of the highest impacts from each of the six (6) build corridor alternatives currently being evaluated in the EIS. Using this approach, it was anticipated that the Conceptual ERP could be issued and a mitigation plan could be developed based on the expected impacts from this proposed project that could occur for any particular resource. The mitigation plans were developed for the worst case impacts of all the alternatives. Based on more recent coordination with the regulatory agencies, the Conceptual ERP will be converted to a Construction ERP when a preferred alternative is chosen through EIS.

The proprietary mitigation plan was developed together with the DEP in exchange for a crossing of state lands on the Crosstown Parkway Extension project. The projects within the proprietary mitigation plan were incorporated into a Memorandum of Understanding (MOU) between the City and DEP to be conducted in exchange for an easement across state lands. The MOU was approved by the Acquisition and Restoration Council (ARC) in December 2009. Should a build alternative be identified through the EIS process, the ARC will forward the appropriate upland easement request to the Board of Trustees with their recommendation to approve the project. In exchange, the City agreed to permit, design and construct the Savannas Recreation Area Trail for a sum total not to exceed $1,500,000. This document discusses the proposed improvements to the Savannas Recreation Area Trail.

Per the MOU, the trail is to be located within the Savannas Recreation Area between Savannah Road and Midway Road. The Trail is to be a paved multi-use trail approximately 2.5 miles long and a minimum width of 10 feet with five (5) boardwalk crossings over low, wet areas and drainage ditches with no appreciable elevation above the Trail surface. The Trail will serve as a segment within the East Coast Greenway, a multi-state trail that connects Calais, Maine, to Key West, Florida, and will also be a segment of the St. Lucie North-South Trail that connects to the Green River Parkway Trail. The trail will be owned by the City of Ft. Pierce and maintained by St. Lucie County.

Project Location Map
Savannas Recreational Trail - St. Lucie County



Proprietary Mitigation Recreational Opportunities

3.0 SCOPING HISTORY AND CONCEPTUAL DESIGN

Previously, Kimley Horn and Associates, Inc. (KHA) was retained by St. Lucie County to prepare plans for this trail (then called the South Trail Greenway Connector). The plans were completed to 90% in late 2004. The limits of the trail designed by KHA began midway along the entrance road of the Savannas Recreation Area and continued north to the F.E.C. Railroad tracks. The trail followed the berm directly adjacent to the canal, with the exception of the southern most limits which extended over the canal to the east. Six pedestrian bridges and two vistas were proposed. No survey or geotechnical work was conducted during this early design of the trail. Due to funding issues from the County, the plans were never finalized.

3.1 Initial Meeting with St. Lucie County

In a meeting on August 5, 2010 with St. Lucie County, the County decided to modify the original scope of the project. The proposed new limits of the trail were to begin at the end of the entrance road to the Savannas Recreation Area and end south of the F.E.C. Railroad tracks prior to the bridge #6 proposed by KHA (the railroad company recently re-constructed their bridge over the canal and the clearance provided is not enough to accommodate pedestrian traffic.) The County mentioned that the second vista could be removed if the budget will not allow it, though the preference is to have two vistas. In addition, the trail was originally meant to be a cleared path. However, the County would now like the trail to be compliant with the Americans with Disabilities Act (ADA), though it may not be possible to provide vistas that are ADA compliant due to the grade. Otherwise, the County was happy with the plans done by KHA and would like to follow them to the extent possible.

Regarding permits, the property of the trail is owned by the City of Ft. Pierce. A building permit will be required from the City of Ft. Pierce prior to construction. The City of Port St. Lucie and St. Lucie County will be co-applicants on the building permit. The County also mentioned that in previous meetings with the South Florida Water Management District (SFWMD), the SFWMD was not concerned with the impacts of the construction of the trail as the water stays on the property for a period long enough that solids will fall out. The County recommended silt fence and turbidity barriers and felt that would be sufficient for erosion and sediment control. A copy of the meeting minutes can be found in **Attachment A**.

3.2 Conceptual Design

A field review for the trail was conducted on August 17-18, 2010 and survey for the trail was completed in November 2010. A second field review was conducted on April 20, 2011. Based on the August meeting, subsequent field reviews and survey, a conceptual layout of the trail was created. The conceptual layout contains two pedestrian bridges, four pedestrian boardwalks and two vistas that each contain a viewing tower. The vistas are located in different locations than those proposed by KHA due to the slope of the berm confirmed by the survey. The conceptual layout can be found in **Attachment B**.

The trail, bridges and boardwalks are proposed to be 10 feet wide. With the exception of the structures, the trail will be constructed with concrete. The bridges will be constructed a minimum of 10 feet over the canal in order to provide sufficient clearance for the airboats utilized by the County and the DEP to maintain the canal. The bridge, tower and vista design will be further refined during future phases of this

project. Based on the conceptual design, wetland impacts will be avoided with the exception of the bridge crossings associated with pedestrian Bridge 1 and 2.

4.0 PERMIT INVOLVEMENT

A pre-application meeting was held with SFWMD, U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) on March 10, 2011. Meeting minutes from this meeting can be found in **Attachment A**. A Standard General Environmental Resource Permit will be required from SFWMD. The bridge crossing will be considered a 404 structure and no permit will be required from the USACE.

Mitigation will be required for unavoidable impacts to wetlands or surface waters. Removal of Brazilian pepper, Austrailian pine and melaleuca from the trail and in areas adjacent to the trail could be used as mitigation for this project. Stormwater management provisions will include measures to prevent degradation of surface waters during construction. These measures shall include temporary barriers, such as silt fence and turbidity barriers, during construction and permanent stabilization of disturbed areas once work is complete. Zero rise in Nephelometric Turbidity Units (NTU) above background levels is required during construction. Monitoring will be required during in-water construction activities to ensure the threshold is not exceeded.

The property of the trail is owned by the City of Ft. Pierce. A building permit will be required from the City of Ft. Pierce prior to construction.

5.0 COST ESTIMATE AND BUDGET

The cost estimate is based on the conceptual layout of the trail, including pedestrian boardwalks and bridges, vistas, and towers came to $2,450,236.76. As the preliminary cost estimate came to a total greater than the $1,500,000 the City is willing to contribute, American also created a cost estimate for 8'-foot wide structures as opposed to the preferred 10-foot wide structures. The total cost of the trail using structures that are 8-foot wide is $1,940,627.36 which is still greater than the proposed budget. The trail could be affordable if 8-foot wide or narrower structures were constructed and both vistas and towers were removed from the design. This cost estimate is subject to change as the design is refined and will be reviewed further as design progresses. The preliminary cost estimate can be found in **Attachment C.**

Attachment A

Meeting Minutes

Programming Document

Savannas Area Recreation Trail

American Consulting Professionals, LLC

206 W Hawthorne Street
Dalton, Georgia 30720
Tel 706.508.4029 • Fax 706.529.2746
american@acp-ga.com • www.acp-ga.com

MEETING MINUTES

Meeting Date: August 5, 2010 **Date Issued:** August 5, 2010

Location: St. Lucie County office

Project Name: FDEP Proprietary Mitigation Plan

Purpose: Savannas Recreation Area Trail

Notes by: Anna Peterfreund **American Project #:** 5109468

Copies to: File, Attendees, City of PSL, Weatherby, Carter, Salicco

See attached sign in sheet for attendees. Those who attended by phone are listed below.

Attendees	Representing	Phone	Fax or e-mail
Roxanne Chesser	City of PSL	772-871-5186	roxannec@cityofpsl.com
Summer Ivey-Platt	St. Lucie County	772-464-7855	Ivey-platts@stlucieco.org
Mark DiMascio	St. Lucie County	772-462-2551	dimasciom@stlucieco.org
Anna Peterfreund	American	706-508-4029	Anna.peterfreund@acp-ga.com
Brian Mirson	American	561-307-0068	bmirson@acp-fl.com

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The meeting began at 2:30 pm.

Brian began the meeting by describing the MOU between the City and DEP and how that included permitting and construction of the Savannas Area Recreation Trail. He went on to explain that the City is willing to contribute an amount up to $1.5 million towards the design, permitting, and construction of the trail. The more spent on design and permitting, the less money will be available for the construction of the project. Should construction cost more than the allotted amount, the scope of work will have to be reduced.

Brian then posed the question to the County what in the scope would they want to cut first? Summer responded that Bridge #6 could be removed since the trail ends before reaching the railroad tracks. Also, the second vista does not need to be included if it cannot be afforded. Brian suggested that they present these items as options that could be constructed depending on the construction cost estimate.

Summer mentioned that the SFWMD was not concerned with the impacts of construction of the trail because they water stays on the property for a period long enough that solids will fall out. Therefore, they recommended silt fence and turbidity barriers and felt that would be sufficient.

Summer and/or Mark will verify whether any cost estimates were completed, or whether survey or wetland delineation was done and get back to American. They will also see if they can get electronic copies of the files. Anna will also contact Kimley-Horn on these issues.

The plans from Kimley-Horn were 90% plans and were shelved due to lack of funds. The County is happy with the plans as they are and are ready to move forward. The trail was originally to be just a cleared path. However, with the new ADA regulations, they may need to look into that issue to see if the trail will now have to be paved. Further, regarding Vista #1, they may have to remove it due to ADA compliance issues. As an alternative, the County thinks they may be able to change the slope of the ramp and add a handrail to be ADA compliant, even though access to the canoe launch would not be possible. The County will consult with their ADA expert and get back to American on this issue.

Regarding permits, the property of the trail is owned by the City of Ft. Pierce. A building permit will be required from the City prior to construction. The permit will be a joint permit between the City of PSL and the County.

The meeting adjourned at approximately 3:30 pm.

American

www.ace-fla.com

Project Name	Savannas Recreation Area Trail		Page
Subject		Project #	Sheet of
Designer	Date 8/5/10	Checker	Date

Name	Affiliation	Phone	E-mail
Anna Peterfreund	American	706-508-4029	anna.peterfreund@acp-ga.com
Roxanne Chesser	City PSL	772/871-5186	roxannec@cityofpsl.com
Summer Irey-Platt	SLCo.	772/464-7855	Irey-Platts@stlucieco.org
Mark DiMascio	SLCo.	772-462-2551	Dimasciom@stlucieco.org
Brian Murcar	ACE	561-707-0068	bmurcar@ace-fl.com

American Consulting Professionals, LLC

206 W Hawthorne Street
Dalton, Georgia 30720
Tel 706.508.4029 • Fax 706.529.2746
american@acp-ga.com • www.acp-ga.com

MEETING MINUTES

Meeting Date: March 10, 2011 **Date Issued:** March 28, 2011

Location: SFWMD Office, Stuart, Florida

Project Name: Proprietary Mitigation Projects - Crosstown Parkway Extension

Purpose: Pre-application meeting

Notes by: Anna Peterfreund **American Project #:** 5109648

Copies to: File, City of PSL, Mirson, All Attendees

Attendees	Representing	Phone	Fax or e-mail
Garett Lips	USACE	561-472-3519	Garett.g.lips@usace.army.mil
Mindy Parrot	SFWMD	772-223-2600 x3608	mparrott@sfwmd.gov
John McCarthy	SFWMD	772-223-2600 x3625	smccart@sfwmd.gov
John Wrublik	USFWS	772-562-3908	John_wrublik@fws.gov
Brandon Howard	NMFS	561-616-8880 x210	Brandon.howard@noaa.gov
Bob Weigt	RLW	772-546-6255	bob@rlwenv.com
Freda Posin	RLW	772-546-6255	Freda@rlwenv.com
Roxanne Chesser	City of PSL	772-871-5186	roxannec@cityofpsl.com
Anna Peterfreund	American	706-508-4029	Anna.peterfreund@acp-ga.com
Chris Salicco	American	813-435-2617	csalicco@ace-fla.com
Bill Adams (via phone)	American	561-253-3567	

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The meeting began at 9:00 am.

The meeting began with a brief introduction of the project and where we are with each one. Preliminary plans or other visuals were passed out for each project. We started with a discussion of the Savannas Area Recreation Trail.

Savannas Area Recreation Trail
The Trail is to be a paved multi-use trail with a minimum width of 10 feet with five boardwalk crossings over low, wet areas and drainage ditches. The project will also include the construction of two vista towers. The trail will have approximately 0.18 acres of impact from the bridge crossing the canal. General permit from the SFWMD will be required. The bridge will be considered a 404 structure and no permit will be required from the USACE.

Mindy mentioned the possibility of putting the boardwalk within the canal or along the side slopes instead of crossing in two locations at the beginning of the project. This would avoid wetland impacts on the east side of the canal, but may obstruct use of canal for small motorized vessels or canoes/kayaks. Construction methods will need to be discussed within the permit application. Also need to include what will be planted on the slopes of the trail, turbidity and erosion control measures and mitigation

measures. We could propose that the removal of Brazilian pepper from the trail and adjacent to the trail could be mitigation for the 0.18 acres of secondary impact from shading of the boardwalk.

Halpatiokee Canoe Launch
DEP has selected Alternative 2 as a preferred alternative since it has the least impacts to natural habitat by following the existing fire break. Alternative 2 consists of a paved entrance to the canoe launch from US 1 along the existing fire break within the state park (approximately 0.25 miles long), pavilion, restroom, interpretive kiosk, paved parking for 20 vehicles, and road signage. The boardwalk would be 10 feet wide. The restroom would either be a composting restroom or would have access to a water and sewer utility line. The only impact associated with the canoe launch is the small canoe launch platform within Evans Creek. Mindy mentioned that Evans Creek could be sovereign submerged lands (SSL) and we should get a title check to determine if a permit is required for the SSL. The question was raised whether or not the entrance to the canoe launch could be moved to the FPL entrance further south. We agreed to discuss this option with DEP.

AT&T has an easement through a portion of the property where the entrance to the canoe launch is proposed. The SFWMD and USACE will need documentation that AT&T is comfortable with DEP using their easement as a public access way to the canoe launch. This could be a letter or even an email form AT&T.

SFWMD mentioned that a de-watering permit may be required for the bathroom. They also suggested we check with DEP if we need SSL authorization. The dock appears to meet the criteria for Letter of Consent, but since this is a State Park, we would need to get clarification that this still applies. The SFWMD will require a general permit similar to the Atlantic Ridge permit. If DEP has permitted a facility near the proposed location, a permit modification could be done for a reduced application fee.

USACE stated that they would need a permit for the dock only. USACE also suggested that we look into using a slope into the creek instead of a structure which would be cheaper and require less maintenance.

The location of the eagle's nest onsite has not been verified. The coordinates were given to us by DEP and may not be accurate. Currently, the project is within 330' of the eagle nest. American will survey the actual location of the eagle nest and modify the plans to ensure all work will be greater than 330' from the nest. The nest will still be within 660' of the construction activity.

Savannas Preserve Education Center
DEP has approved and selected Alternative 1A as their preferred alternative. Alternative 1A includes a 3000 SF addition to the education center, improvements to the parking area, entrance, and sidewalks onsite, and the addition of an observation deck within the wetlands. SFWMD mentioned that if DEP permitted the original education center, we can submit for a permit modification. Otherwise, this project might meet the No Notice General permit requirements. The entire project would have to include less than 2 acres of new impervious to meet the requirements of the No Notice General. The observation deck may be limited in square footage because it is within a state park. Mitigation is not required for a No Notice General permit.

Water Quality
There are four water quality improvement projects called Evans Creek, Otter Trail, Site 5 West, and River Place Upstream. The water quality improvements will be achieved by reconnecting oxbows and isolated floodplains. Restoration efforts will include dredging shoals or berms, widening or deepening portions of the waterway, and other work as identified by DEP.

SFWMD mentioned the concern that once the berms are dredged, the wetlands behind them may be drained. We will have to show that we will not drain the wetlands (make sure the elevations are compatible).

For the permits on these projects, we will need to provide dredging volumes, fill volumes, culverts, MHW, impacts, and details on how the opening will be stabilized. Also need to discuss where the dredged material will be disposed. American mentioned that on similar projects constructed by DEP, they used silt fence and other measures to ensure the opening was stabilized during construction. We will use similar methods on these projects.

For Otter Trail, the County has a permit for the Nature Center and trails that cross this project. We could modify this permit.

The question was raised as to whether DEP has set goals/parameters to monitor the success of the project. American will follow up with DEP to determine this. RLW is monitoring these sites for one year prior to construction and five years post construction. DEP has given parameters to measure during this time but not actual measures of success.

The Riverplace Upstream project is dominated by leather fern. We will have to recontour the slopes and replant with appropriate vegetation. Also, may need to do a title determination for this site.

Regarding the potential for impacts on these projects, the SFWMD mentioned that they will need UMAMs of the conditions before the project and for conditions after the project is constructed. Add a discussion to the permit of what accomplishing (with numbers, preferably) and need to be able to defend numbers. American re-iterated that these projects are meant to improve the overall system and should be self-mitigating and not require additional mitigation. The concern is that the UMAMs will show an impact at a given location but the system as a whole will receive a benefit.

NMFS mentioned that we may need consultation for the smalltooth sawfish for the Evans Creek project. The majority of the mangroves along Evans Creek are white mangroves with few red mangroves. If we trim the mangroves over the state regulations or remove mangroves, need to discuss the smalltooth sawfish and potential affects.

Send the permit applications directly to Garett Lips and Brandon Howard to ensure they review the projects.

SFWMD mentioned that we could do the DEP permits together. If the project site is owned by someone else, submit a separate application.

SFWMD asked if we had coordinated yet with the River Place on the St. Lucie CDD. No coordination has been done to date by American but DEP may have contacted them previously. American will follow up with the River Place on the St. Lucie CDD about the project.

USACE asked the USFWS is they were concerned about manatees on these projects. USFWS stated that they were not concerned with manatees given their location and project scope. USACE suggested we put manatee exclusion grates on the culvert. RLW mentioned that putting in the manatee exclusion grate could cause the culvert to back up and not work effectively. The St. Lucie County Mosquito Control has done many projects similar to these using culverts and did not use manatee exclusion grates on any of their projects. They have not had any problems with manatees to date on any of their projects.

NMFS also mentioned that the dredged material could be used towards seagrass restoration. American will coordinate with NMFS further on this topic.

The meeting adjourned at approximately 11:00 pm.

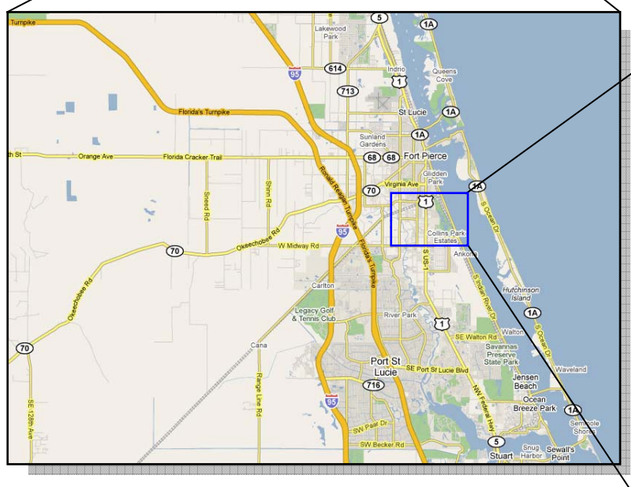
Attachment B

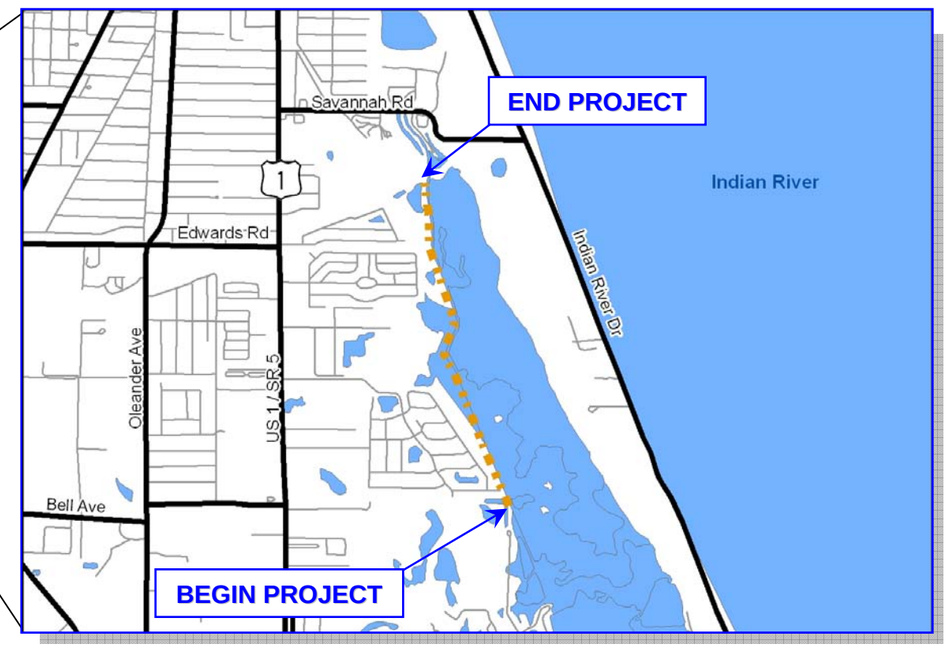
Conceptual Design

Programming Document

Savannas Area Recreation Trail

Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Savannas Recreation Area Trail





Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

Prepared By:

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409

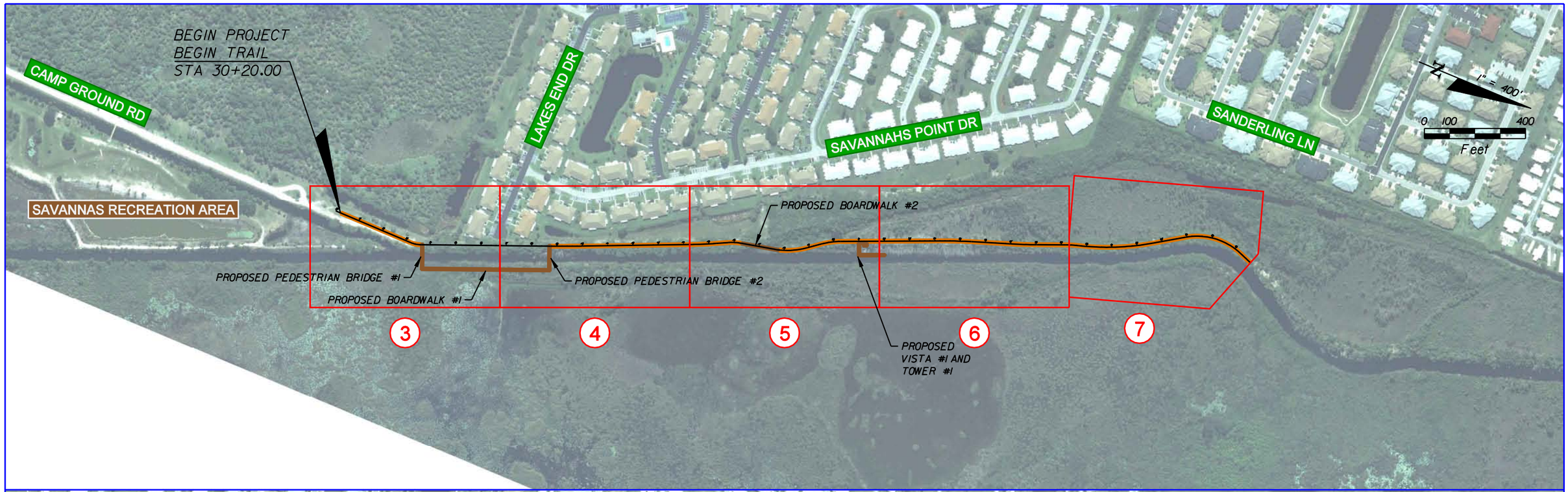
June 2011

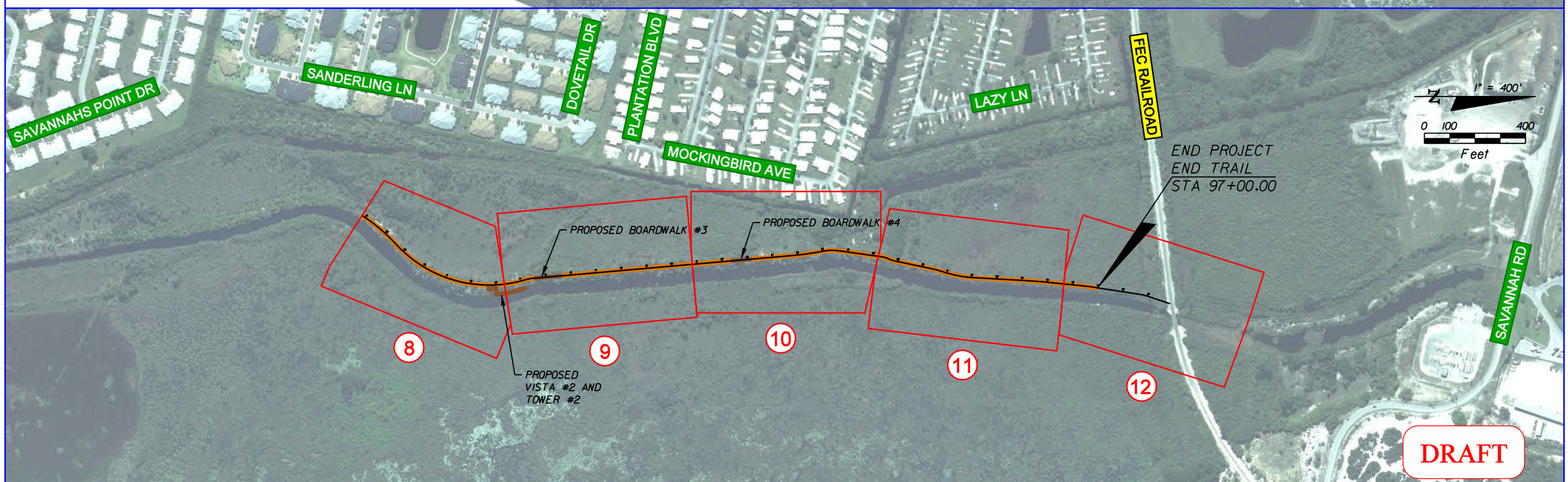
INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	PROJECT CONCEPT LAYOUT
3-12	CONCEPT PLAN
13-37	CROSS SECTIONS

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.





REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

PROJECT CONCEPT LAYOUT

SHEET NO. 2

BEGIN PROJECT
BEGIN TRAIL
STA 30+20.00

SAVANNAS
RECREATION AREA
CAMP GROUNDS

1" = 50'
0 10 50
Feet

℄ CONST

N 0° 21' 16" E

10' PROPOSED TRAIL

CURVE CLST-1

PC STA. 33+20.21

PT STA. 33+63.01

PROPOSED PEDESTRIAN BRIDGE #1
(105 LF)

N 21° 56' 25" W

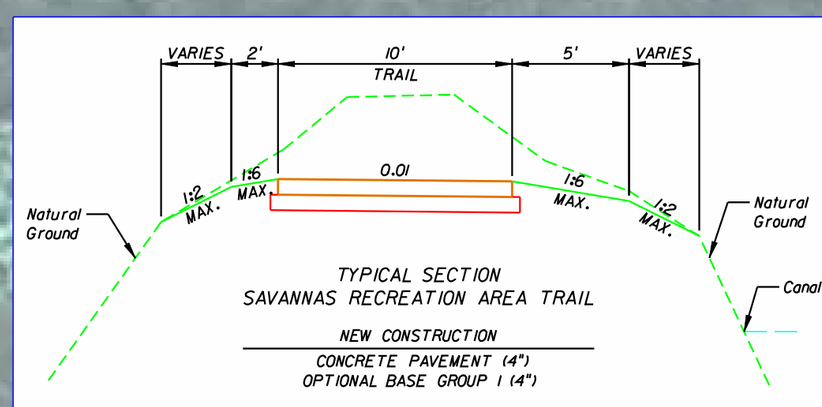
WETLAND LIMITS

WETLAND IMPACTS
0.18 AC

LIMITS OF
CONSTRUCTION

PROPOSED BOARDWALK #1
(493 LF)

LIMITS OF
CONSTRUCTION



TYPICAL SECTION
SAVANNAS RECREATION AREA TRAIL

NEW CONSTRUCTION

CONCRETE PAVEMENT (4")
OPTIONAL BASE GROUP 1 (4")

CURVE DATA CLST-1
PI STA. = 33+41.88
DELTA = 22° 17' 41" (LT)
D = 52° 05' 13"
T = 21.68
L = 42.80
R = 110.00
PC STA. = 33+20.21
PT STA. = 33+63.01

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

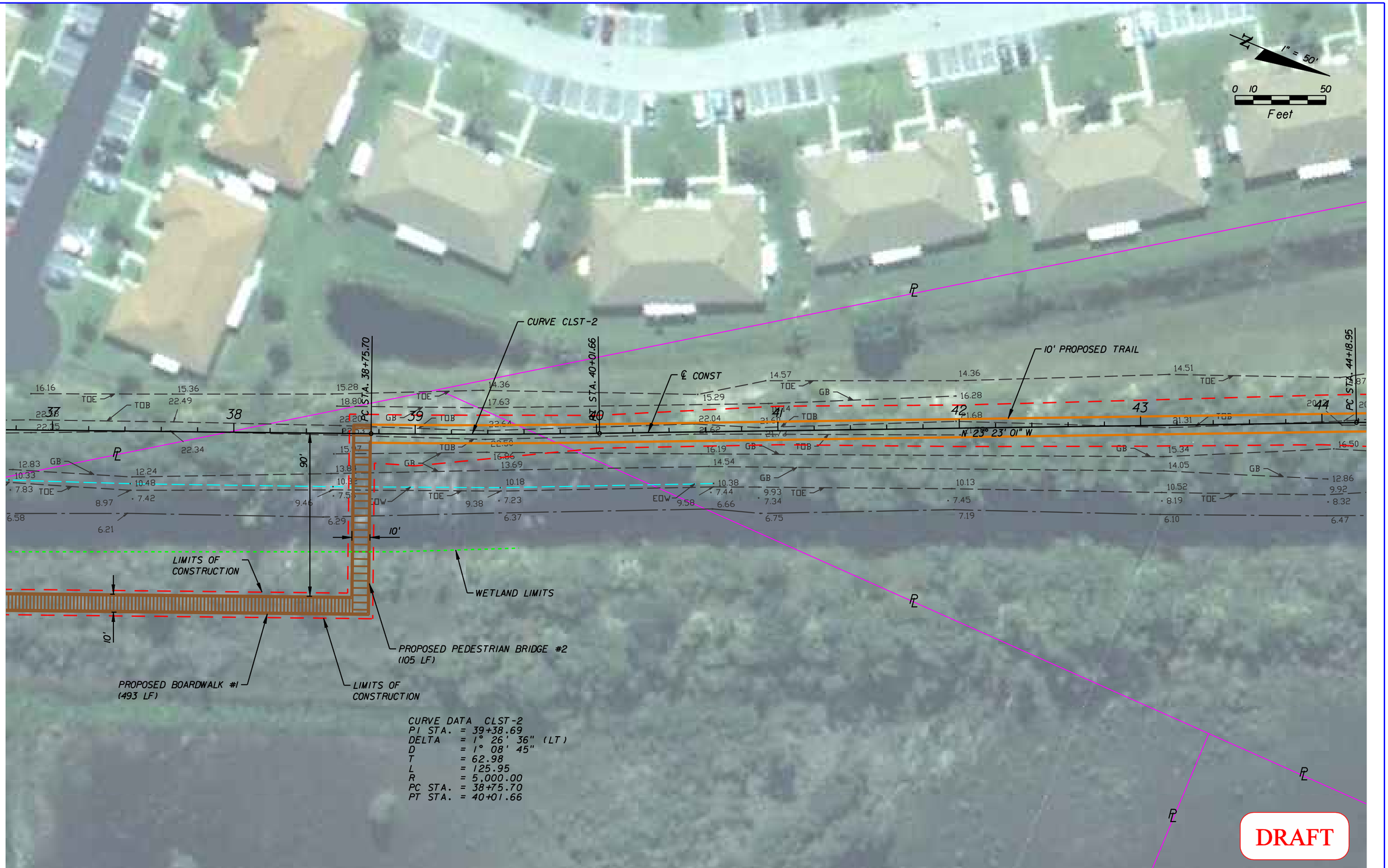
ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 3

USER: 5Intrld 6/15/2011 11:06:45 AM f:\project\5109648\cadd\roadway\savannastrail\PLANRD01.dgn



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

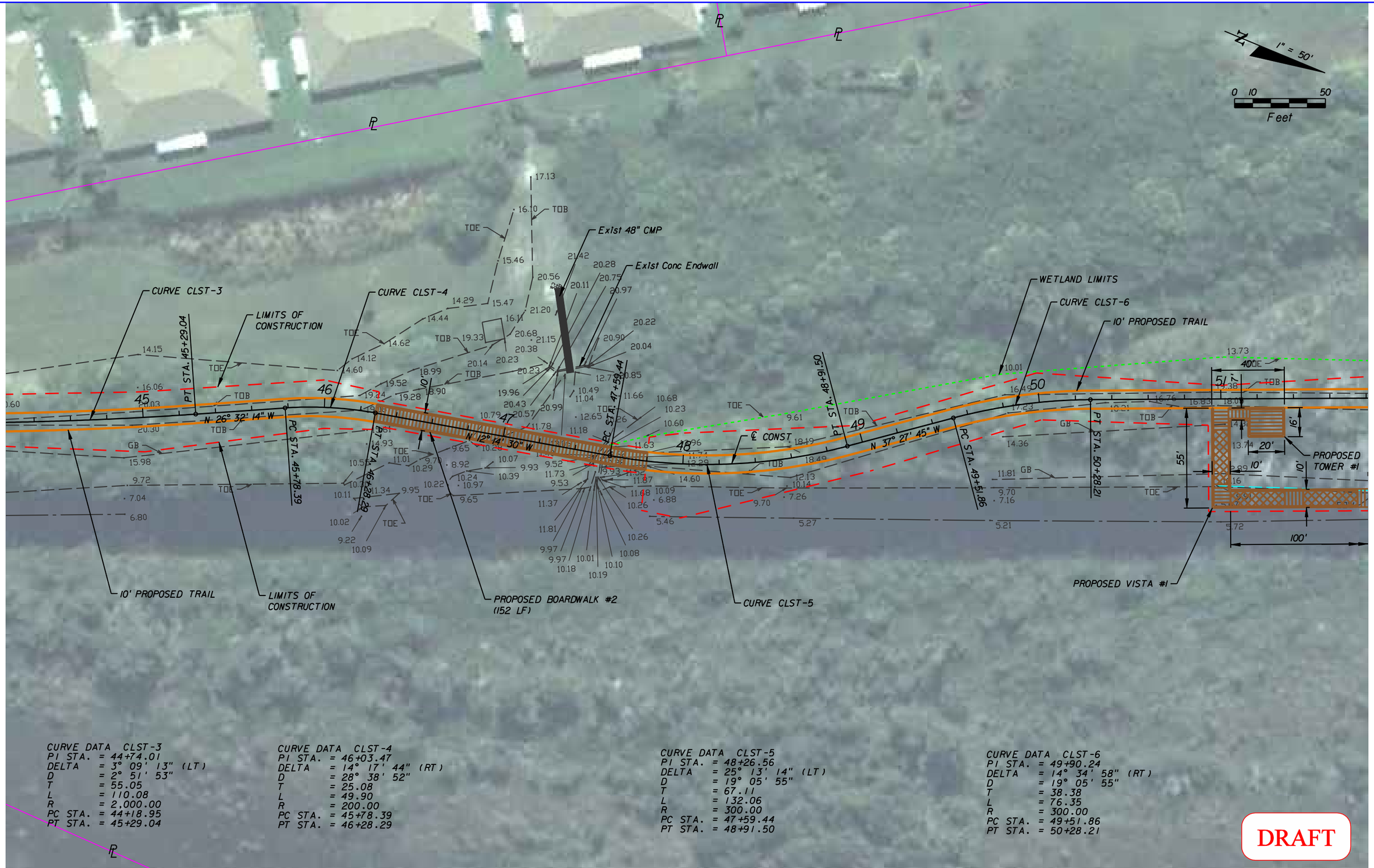
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 4



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 5

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

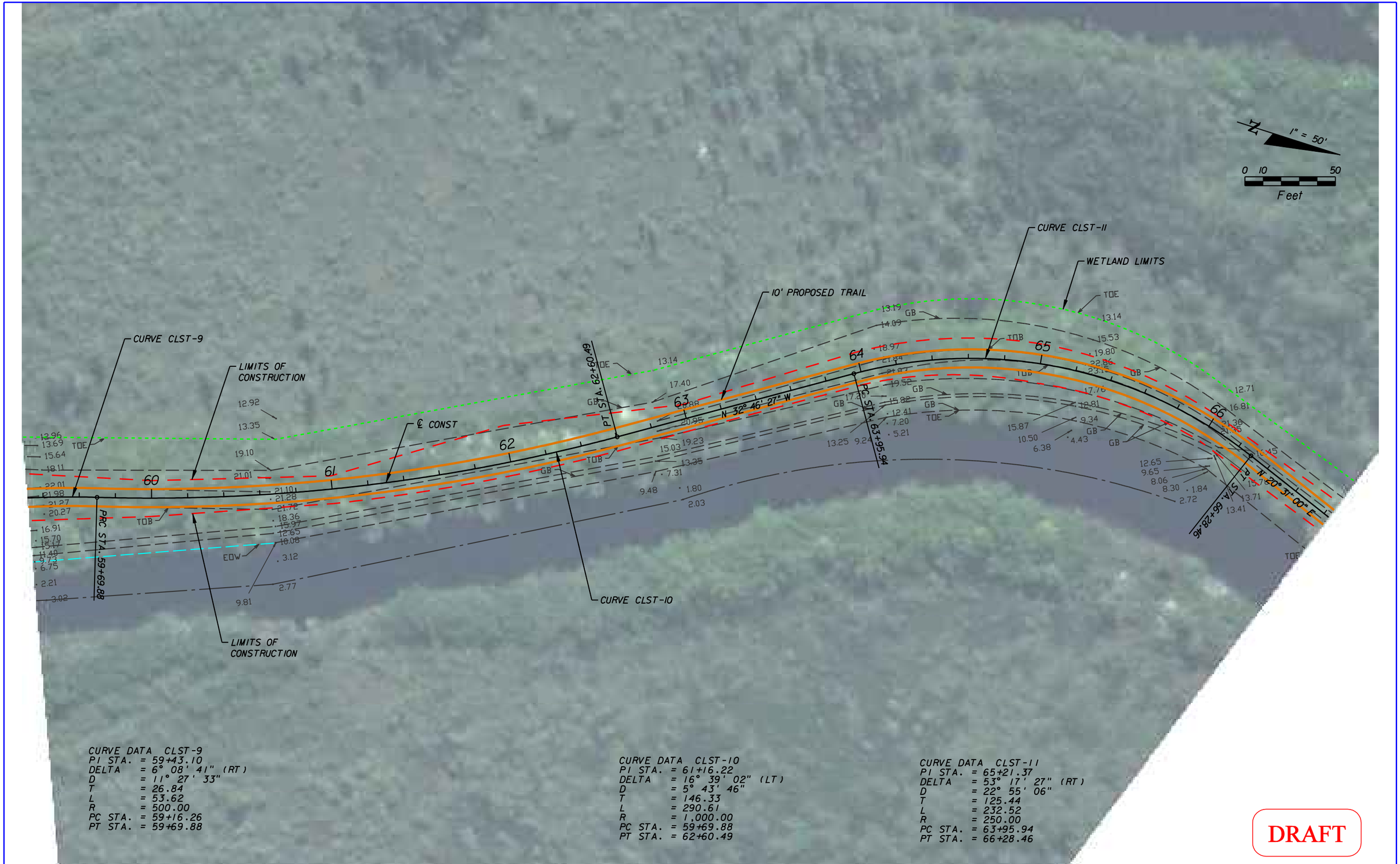
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 6



CURVE DATA CLST-9
PI STA. = 59+43.10
DELTA = 6° 08' 41" (RT)
D = 11° 27' 33"
T = 26.84
L = 53.62
R = 500.00
PC STA. = 59+16.26
PT STA. = 59+69.88

CURVE DATA CLST-10
PI STA. = 61+16.22
DELTA = 16° 39' 02" (LT)
D = 5° 43' 46"
T = 146.33
L = 290.61
R = 1,000.00
PC STA. = 59+69.88
PT STA. = 62+60.49

CURVE DATA CLST-11
PI STA. = 65+21.37
DELTA = 53° 17' 27" (RT)
D = 22° 55' 06"
T = 125.44
L = 232.52
R = 250.00
PC STA. = 63+95.94
PT STA. = 66+28.46

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

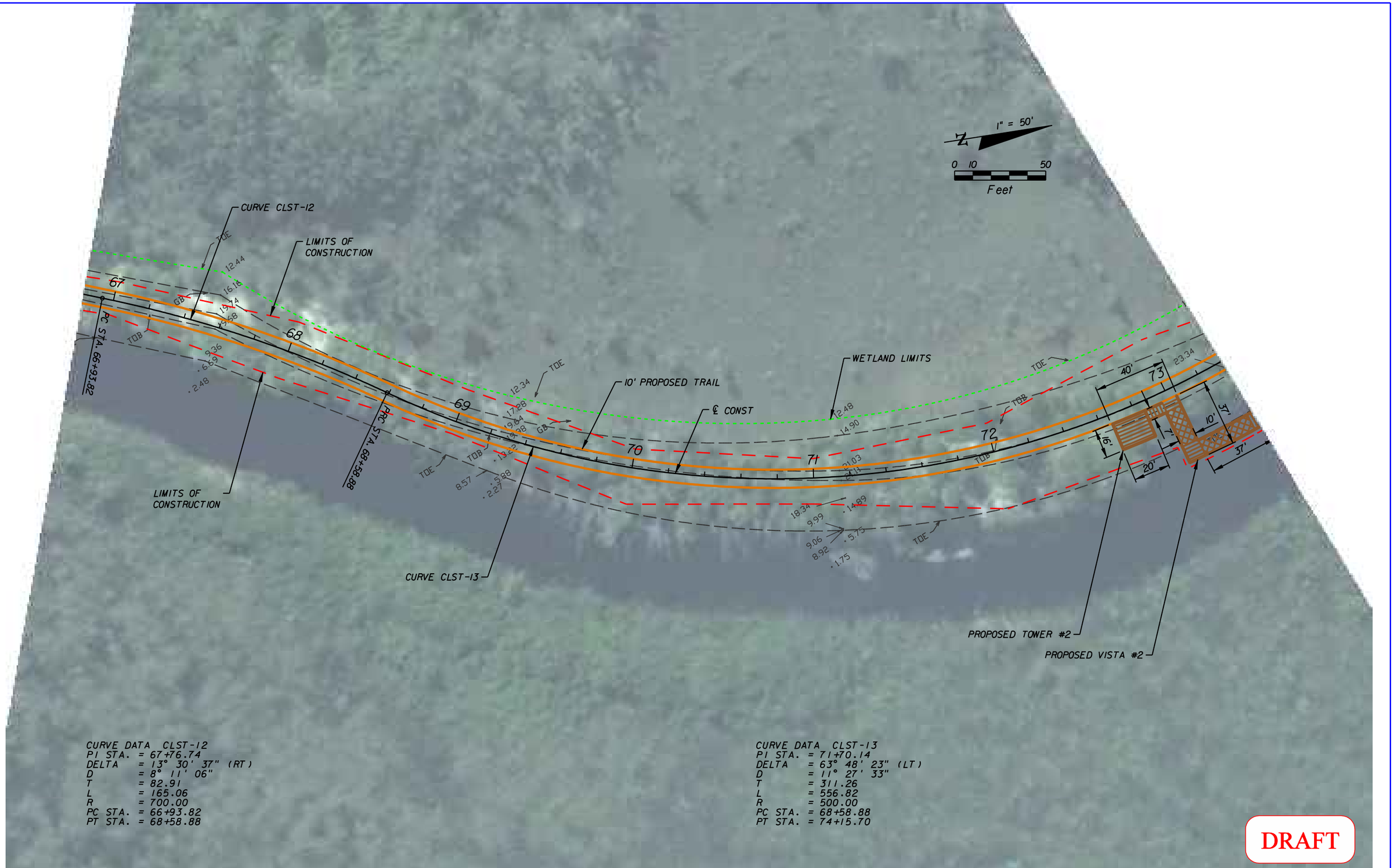
ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 7

USER: 5lntrld 6/15/2011 11:07:04 AM f:\project\5109648\cadd\roadway\savannastrail\PLANRD05.dgn



CURVE DATA CLST-12
PI STA. = 67+76.74
DELTA = 13° 30' 37" (RT)
D = 8° 11' 06"
T = 82.91
L = 165.06
R = 700.00
PC STA. = 66+93.82
PT STA. = 68+58.88

CURVE DATA CLST-13
PI STA. = 71+70.14
DELTA = 63° 48' 23" (LT)
D = 11° 27' 33"
T = 311.26
L = 556.82
R = 500.00
PC STA. = 68+58.88
PT STA. = 74+15.70

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

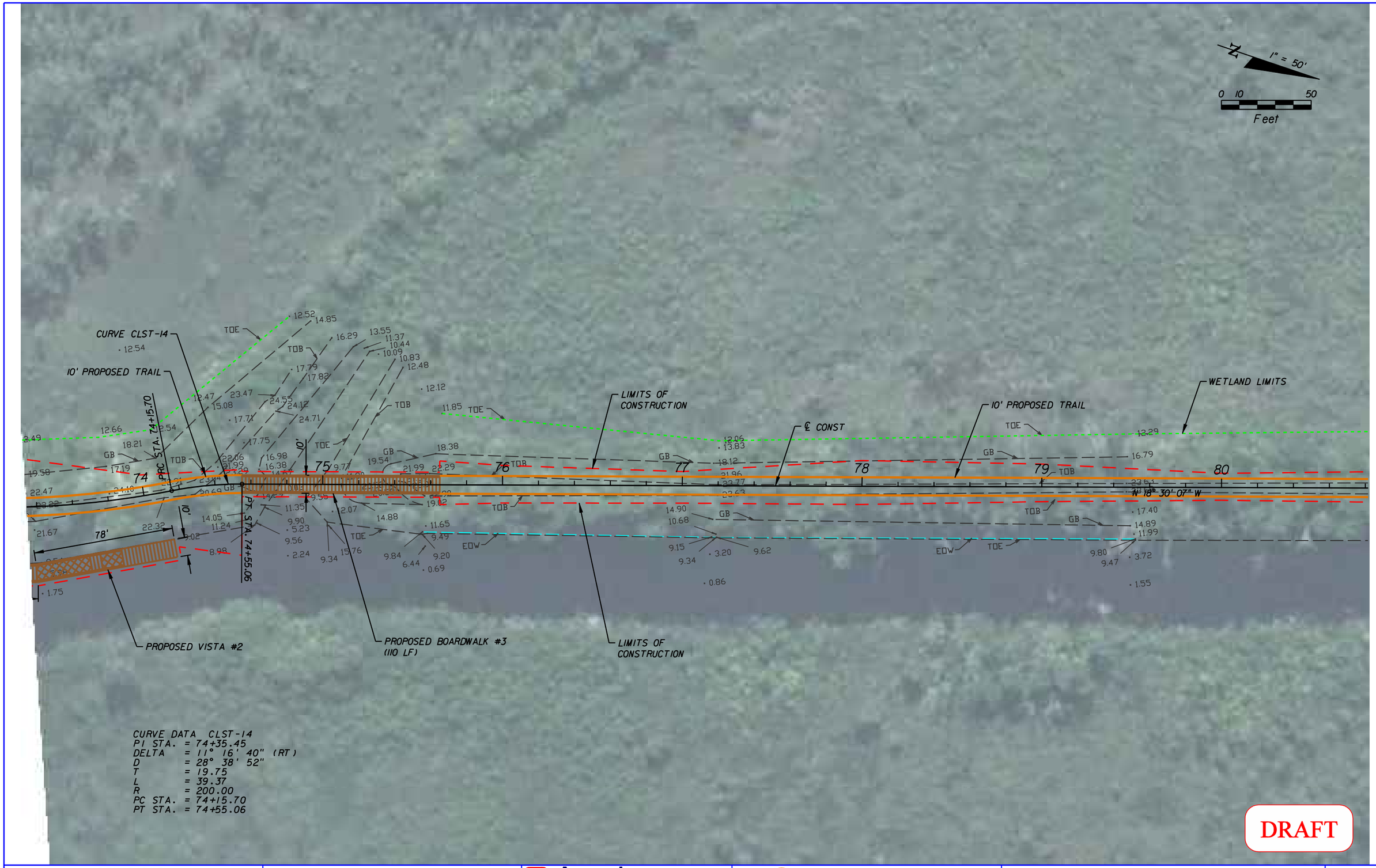
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 8



REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

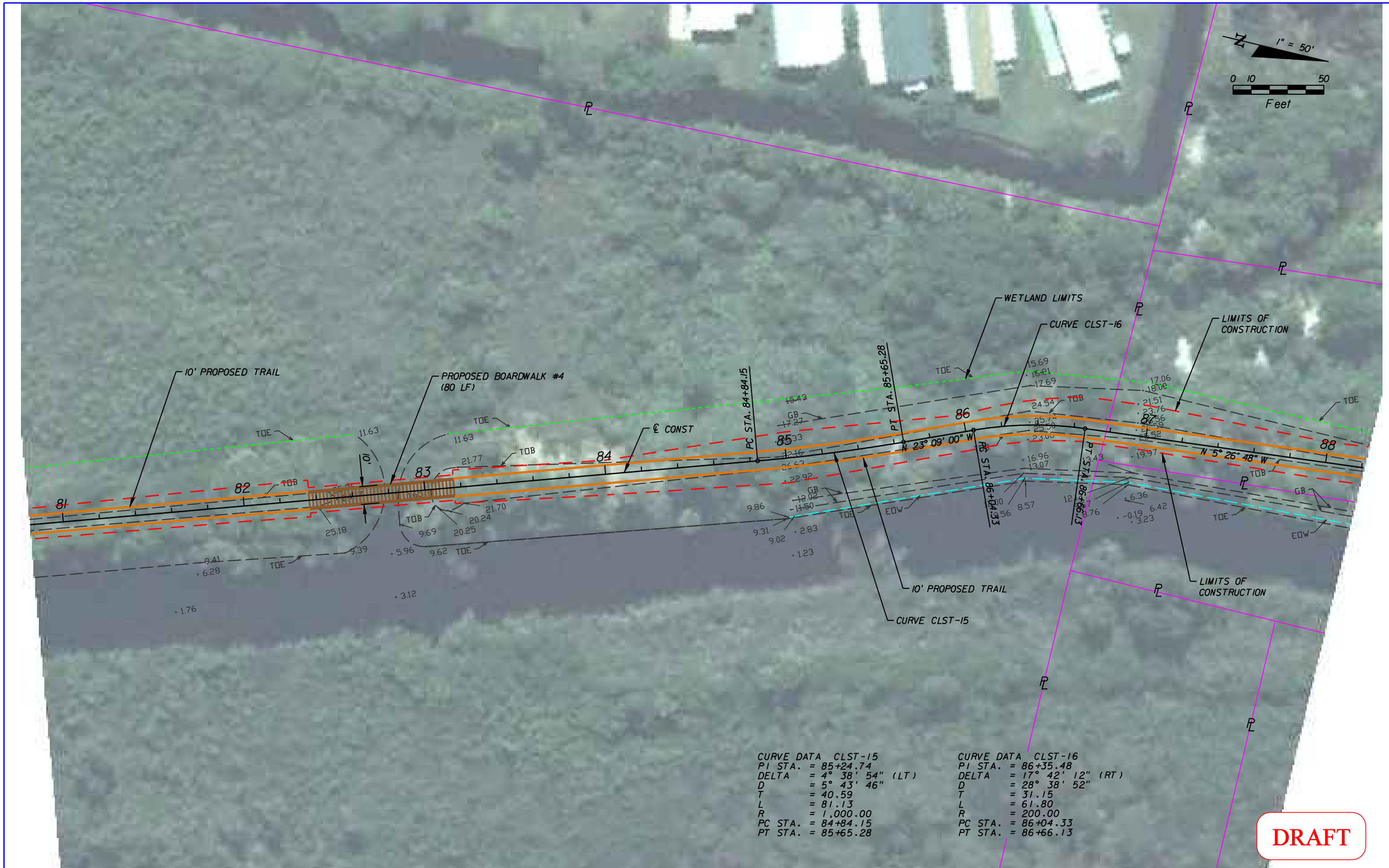
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 9



CURVE DATA CLST-15
PI STA. = 85+24.74
DELTA = 4° 38' 54" (LT)
D = 5° 43' 46"
T = 40.59
L = 81.13
R = 1,000.00
PC STA. = 84+84.15
PT STA. = 85+65.28

CURVE DATA CLST-16
PI STA. = 86+35.48
DELTA = 17° 42' 12" (RT)
D = 28° 38' 52"
T = 31.15
L = 61.80
R = 200.00
PC STA. = 86+04.33
PT STA. = 86+66.13

DRAFT

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

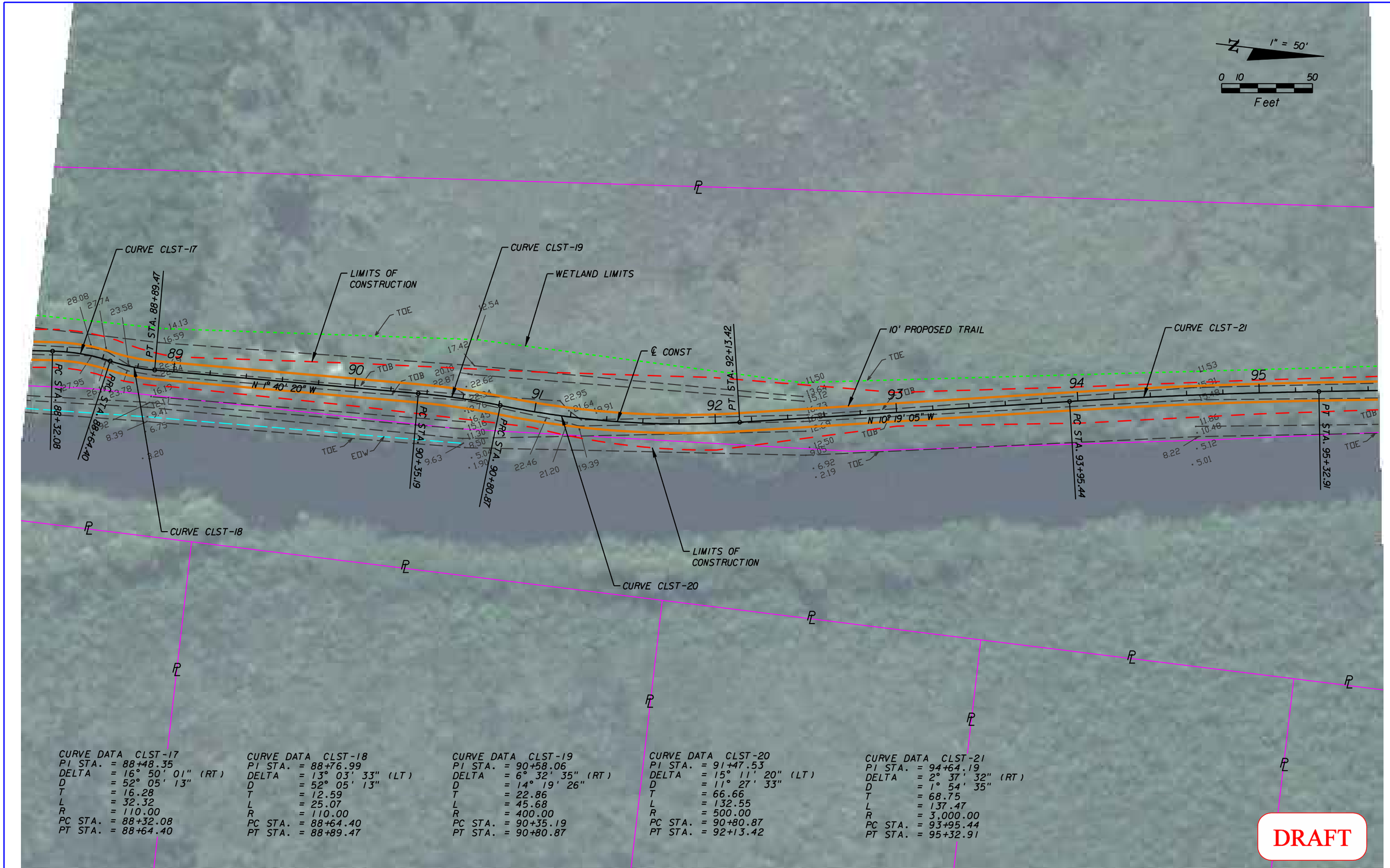
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 10



CURVE DATA CLST-17
PI STA. = 88+48.35
DELTA = 16° 50' 01" (RT)
D = 52° 05' 13"
T = 16.28
L = 32.32
R = 110.00
PC STA. = 88+32.08
PT STA. = 88+64.40

CURVE DATA CLST-18
PI STA. = 88+76.99
DELTA = 13° 03' 33" (LT)
D = 52° 05' 13"
T = 12.59
L = 25.07
R = 110.00
PC STA. = 88+64.40
PT STA. = 88+89.47

CURVE DATA CLST-19
PI STA. = 90+58.06
DELTA = 6° 32' 35" (RT)
D = 14° 19' 26"
T = 22.86
L = 45.68
R = 400.00
PC STA. = 90+35.19
PT STA. = 90+80.87

CURVE DATA CLST-20
PI STA. = 91+47.53
DELTA = 15° 11' 20" (LT)
D = 11° 27' 33"
T = 66.66
L = 132.55
R = 500.00
PC STA. = 90+80.87
PT STA. = 92+13.42

CURVE DATA CLST-21
PI STA. = 94+64.19
DELTA = 2° 37' 32" (RT)
D = 1° 54' 35"
T = 68.75
L = 137.47
R = 3,000.00
PC STA. = 93+95.44
PT STA. = 95+32.91

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO.
11

REVISIONS	
DATE	DESCRIPTION

NOTE:
DESIGN SHOWN ON THIS SHEET IS PRELIMINARY AND CONCEPTUAL NOT FOR CONSTRUCTION.

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

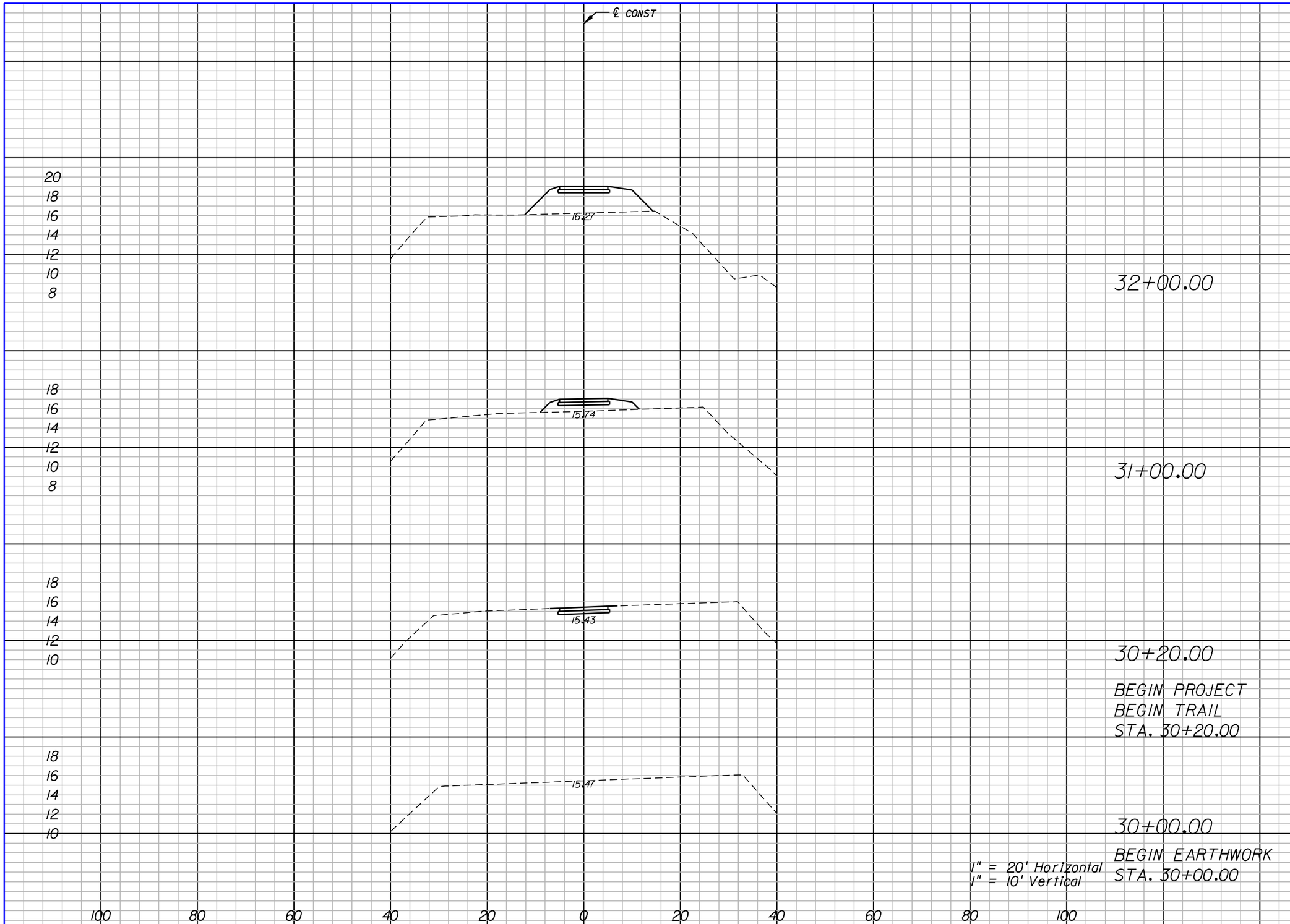
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CONCEPT PLAN

SHEET NO. 12



Regular Exc.		Embankment	
A	V	A	V
0	0	50	120
0	10	15	22
7	3	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 13

Regular Exc.		Embankment	
A	V	A	V
0	0	0	155
0	0	226	398
0	0	115	306

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

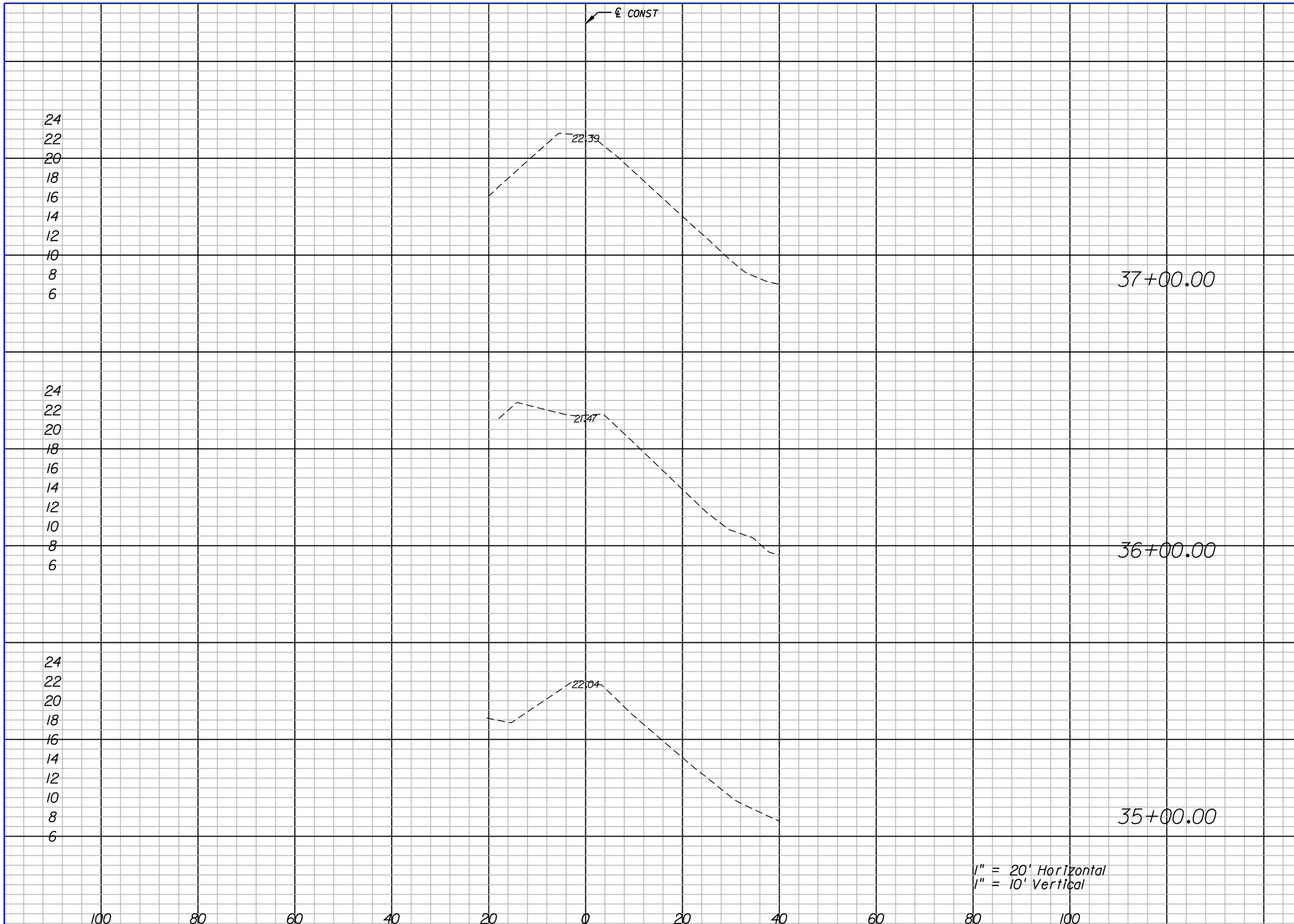
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 14



Regular Exc.		Embankment	
A	V	A	V
0	0	0	0
0	0	0	0
0	0	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

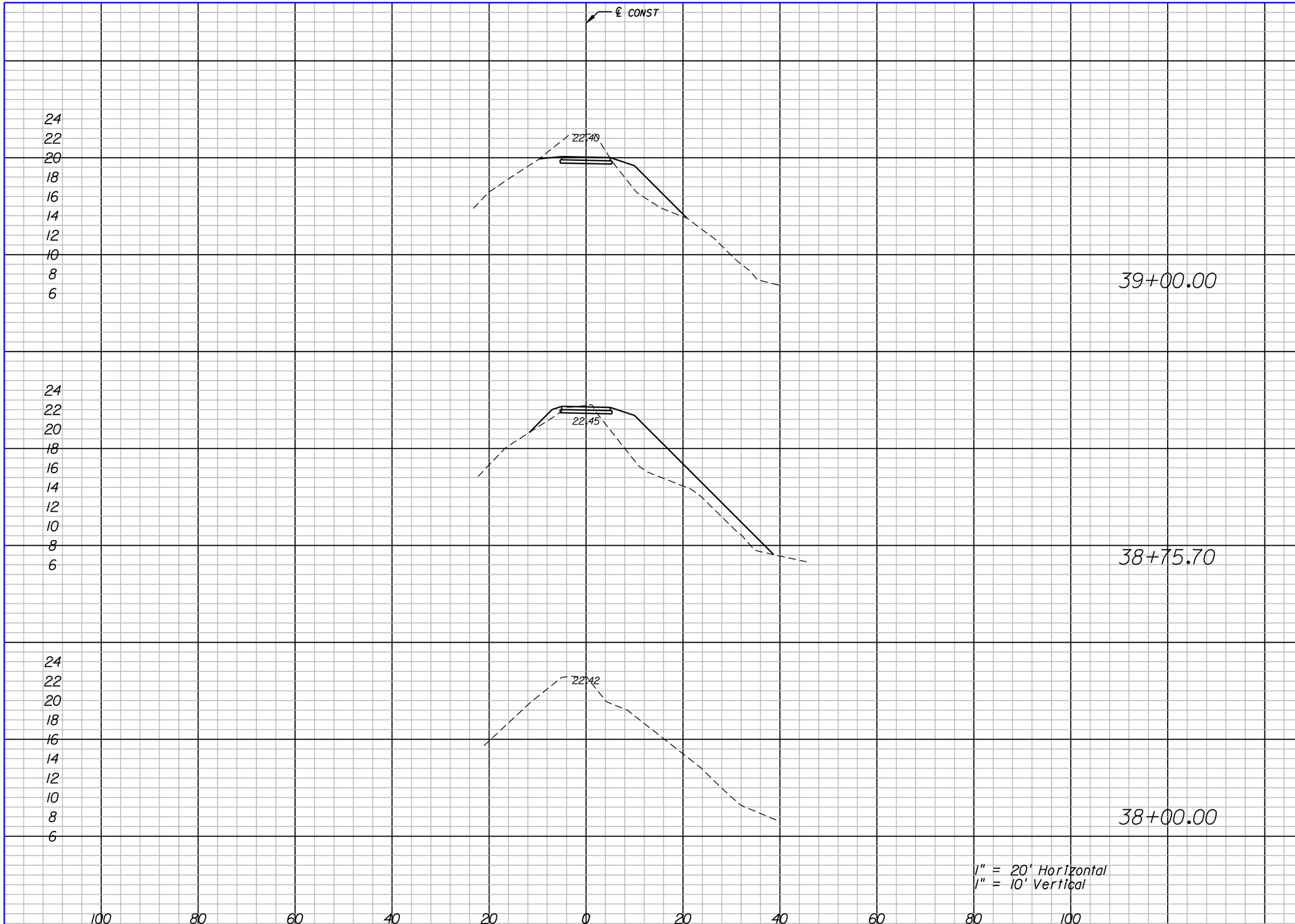
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO.
15



Regular Exc.		Embankment	
A	V	A	V
30	16	23	49
5	7	86	121
0	0	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

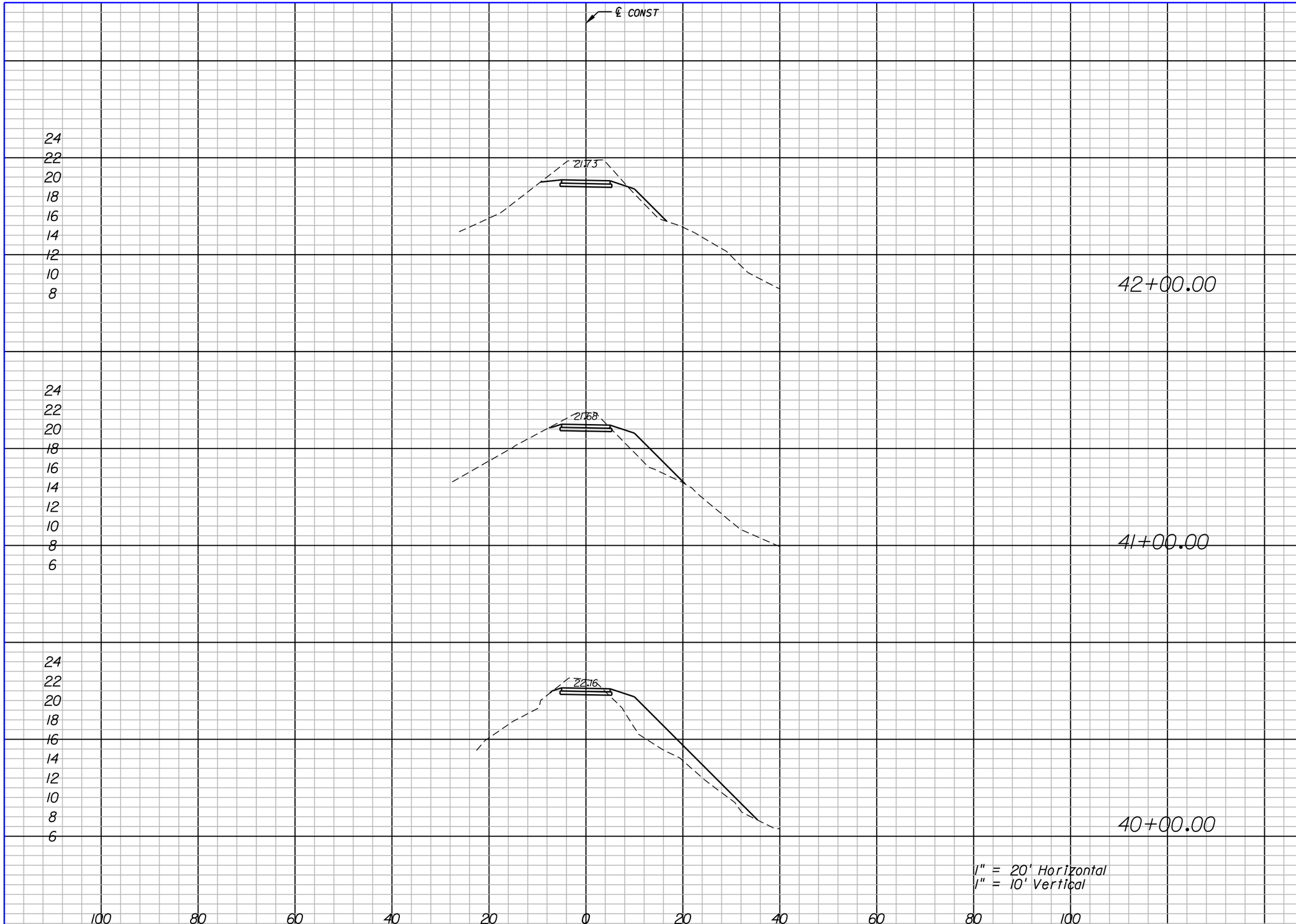
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 16



Regular Exc.		Embankment	
A	V	A	V
33	91	4	43
16	56	19	126
14	81	49	133

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

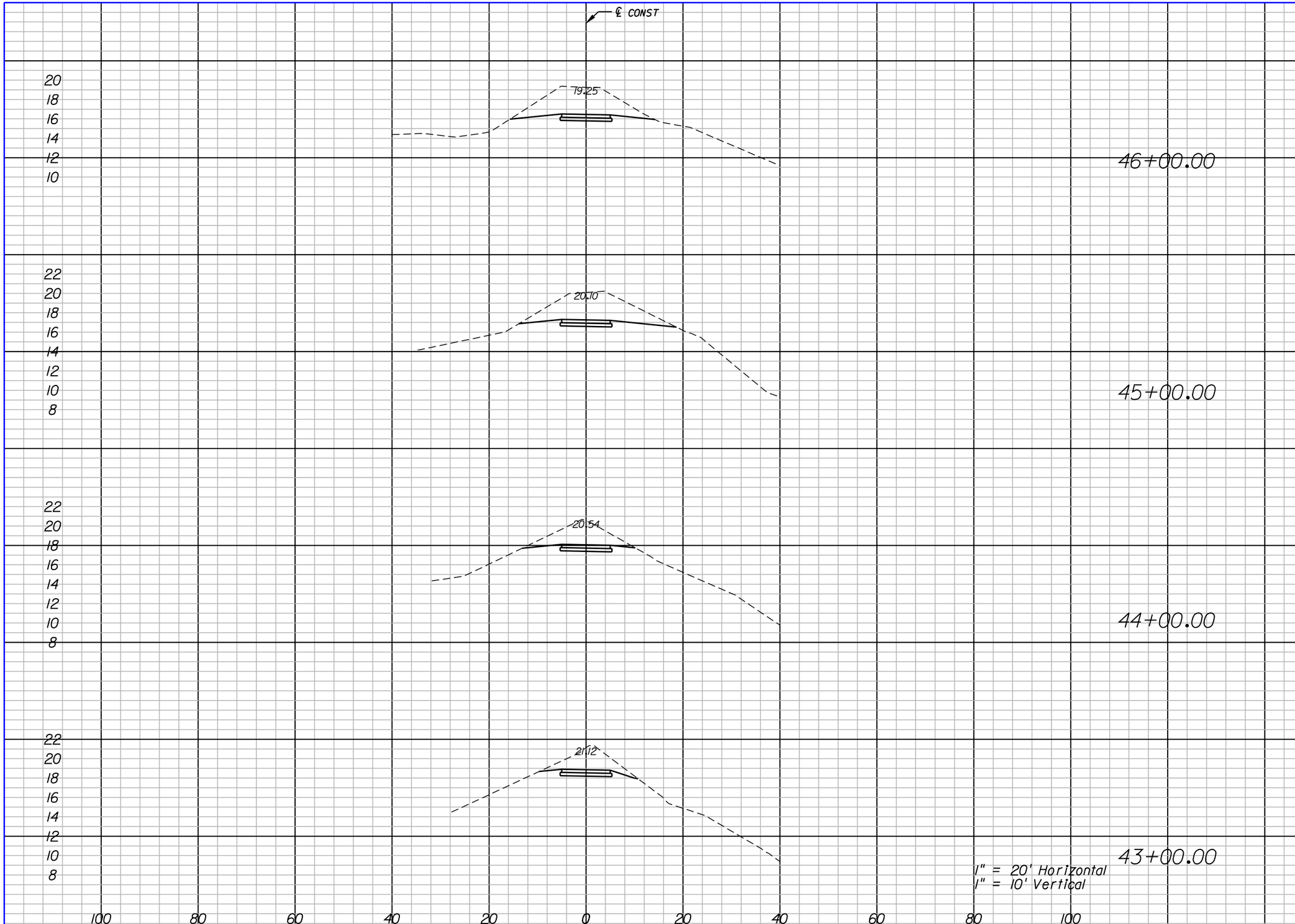
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 17



Regular Exc.		Embankment	
A	V	A	V
60	230	0	0
64	187	0	0
37	126	0	0
31	119	0	7

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

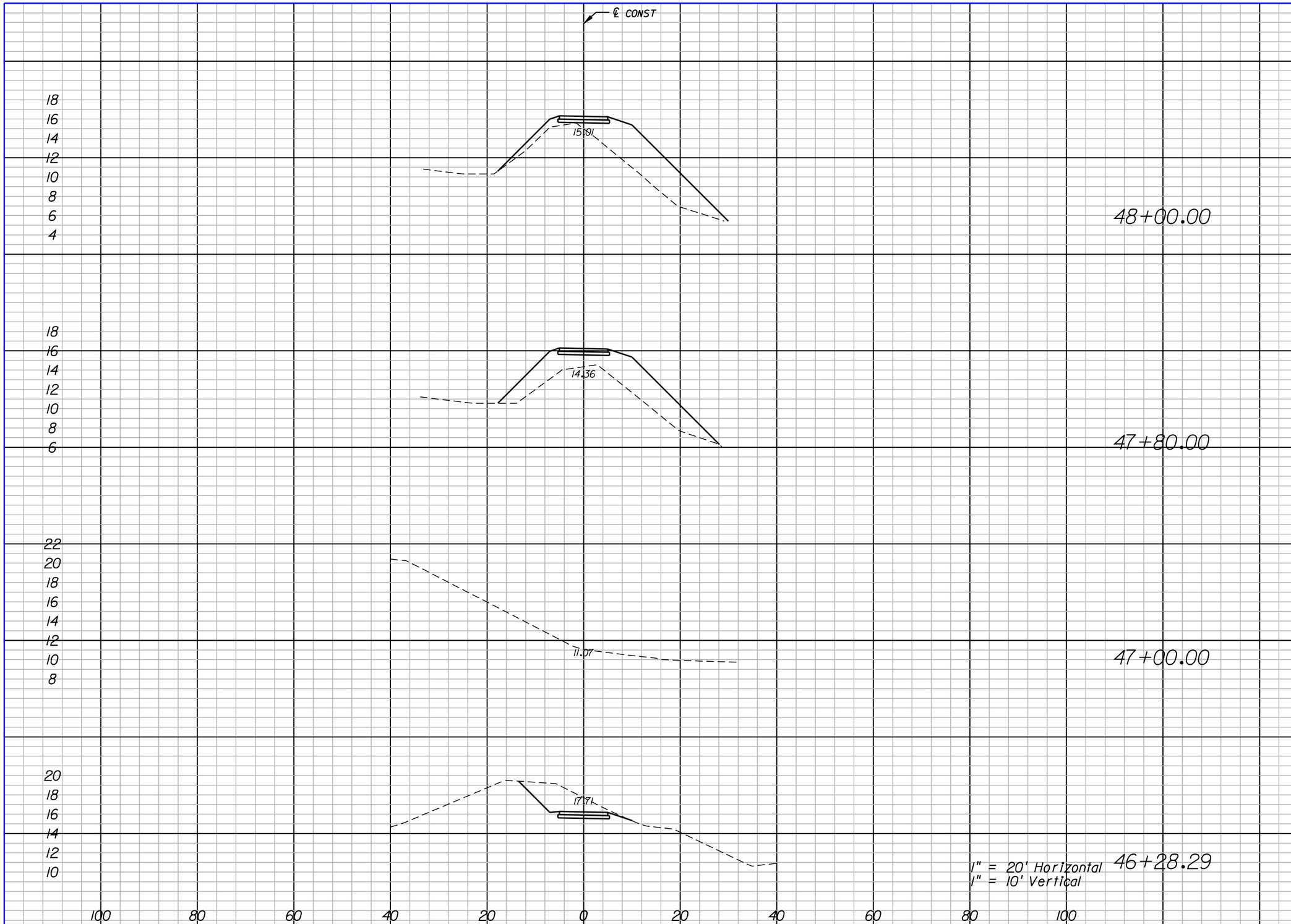
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 18



Regular Exc.		Embankment	
A	V	A	V
0	0	94	71
0	0	97	144
0	50	0	0
38	51	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

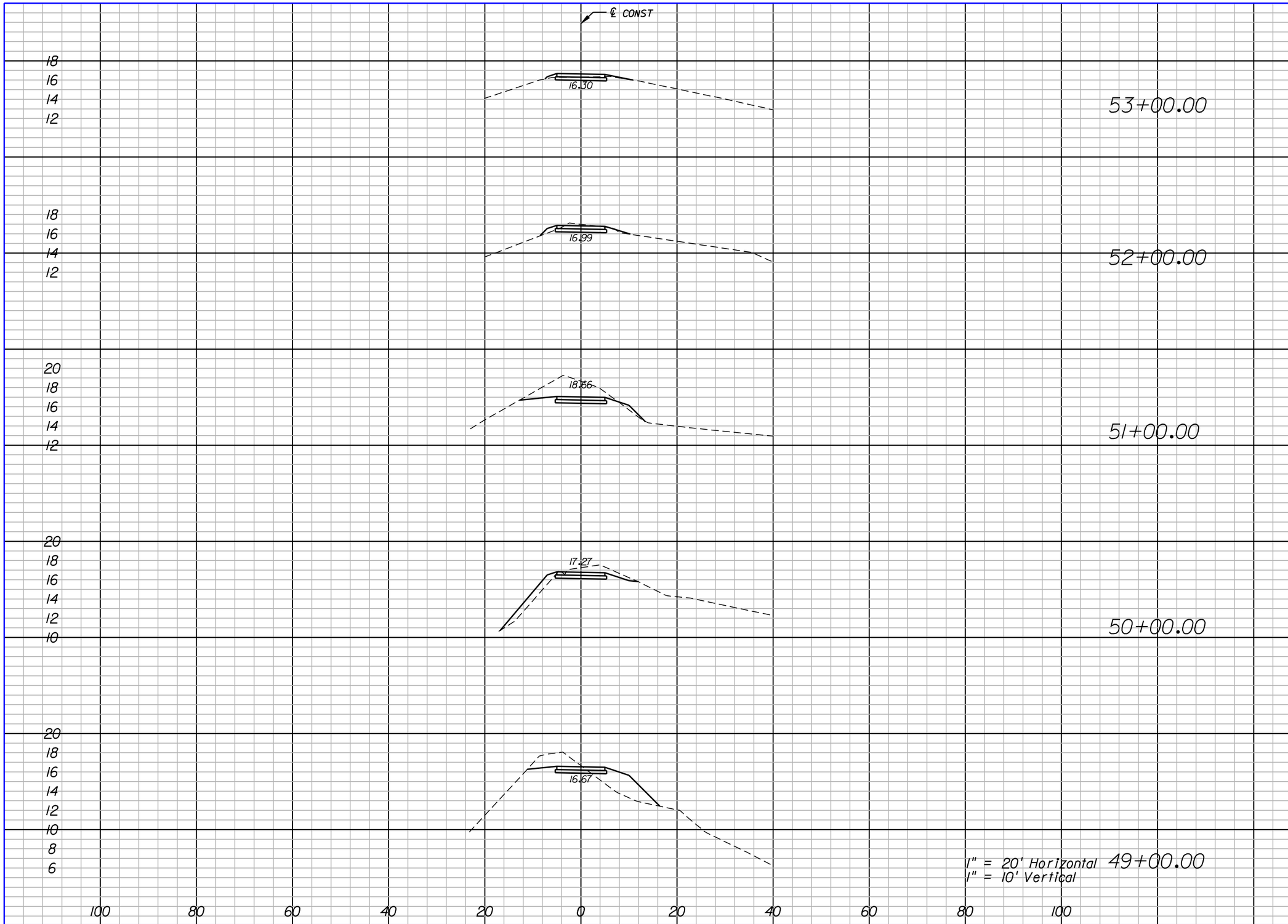
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 19



Regular Exc.		Embankment	
A	V	A	V
4	22	1	6
8	72	2	7
31	83	2	20
14	56	9	54
16	30	20	211

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

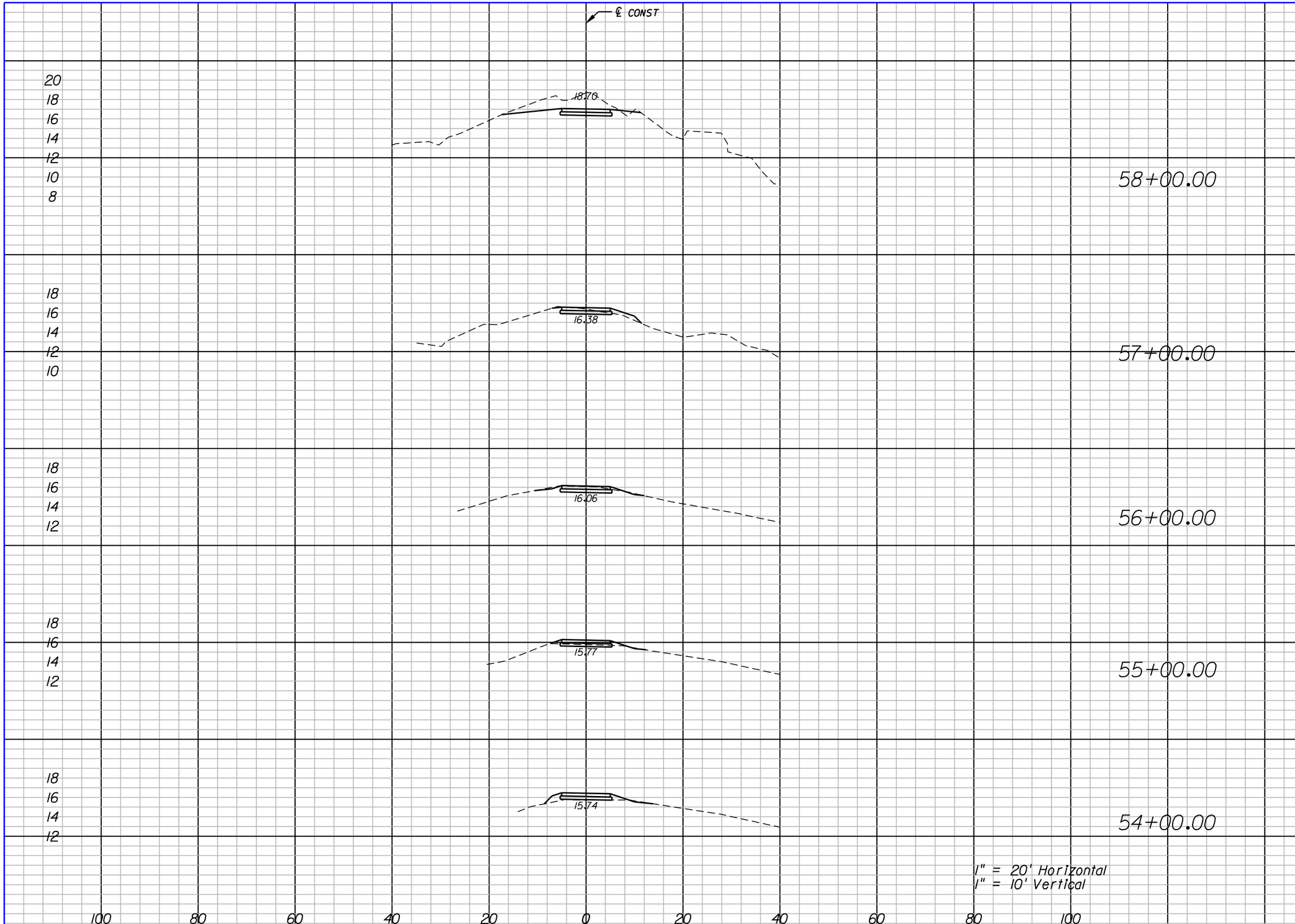
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 20



Regular Exc.		Embankment	
A	V	A	V
30	65	1	7
5	22	3	7
7	19	1	6
3	7	2	9
1	9	3	7

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

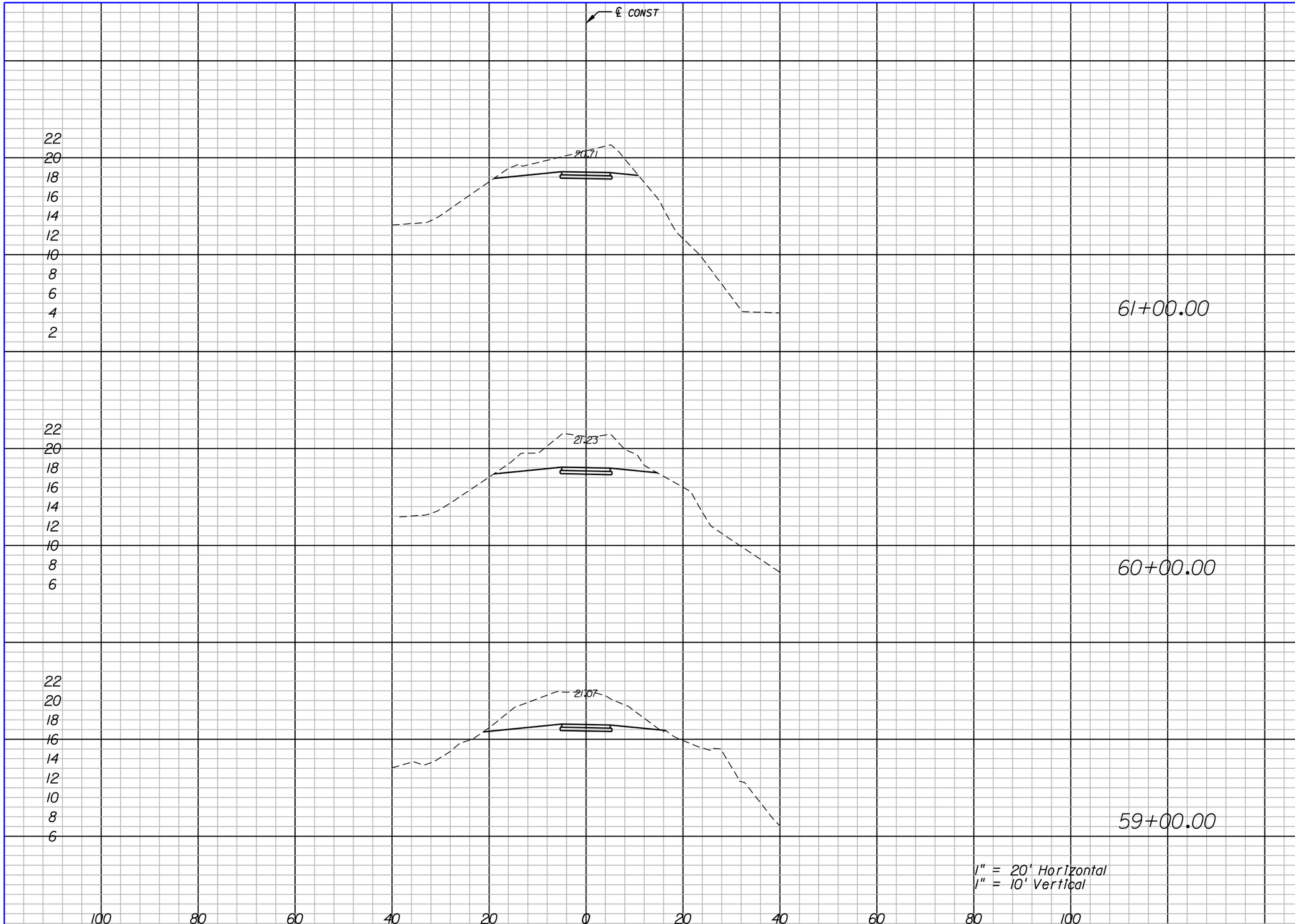
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO.
21



Regular Exc.		Embankment	
A	V	A	V
53	246	0	0
80	317	0	2
91	224	1	4

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

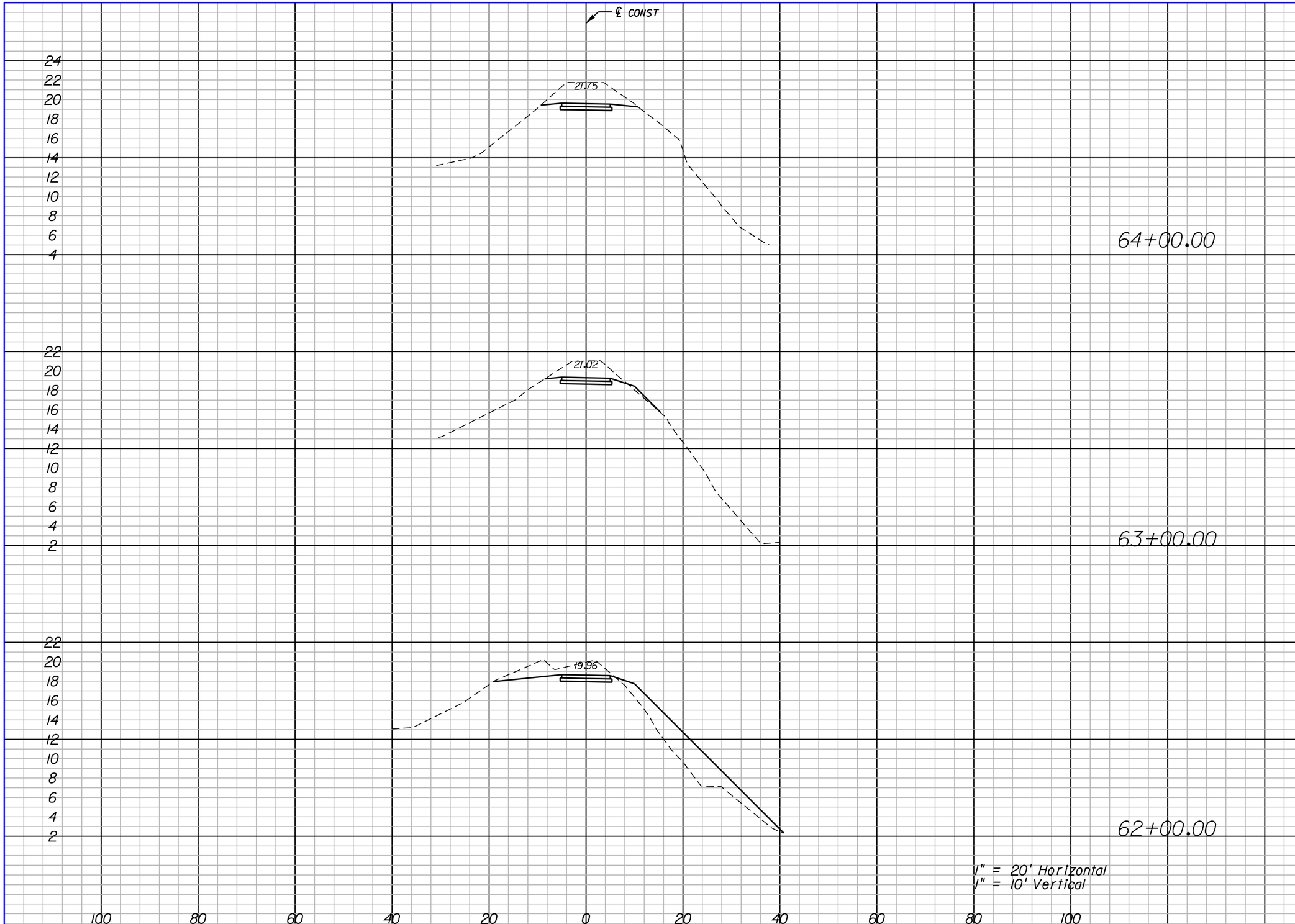
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 22



Regular Exc.		Embankment	
A	V	A	V
37	117	0	4
26	106	2	120
31	156	63	117

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

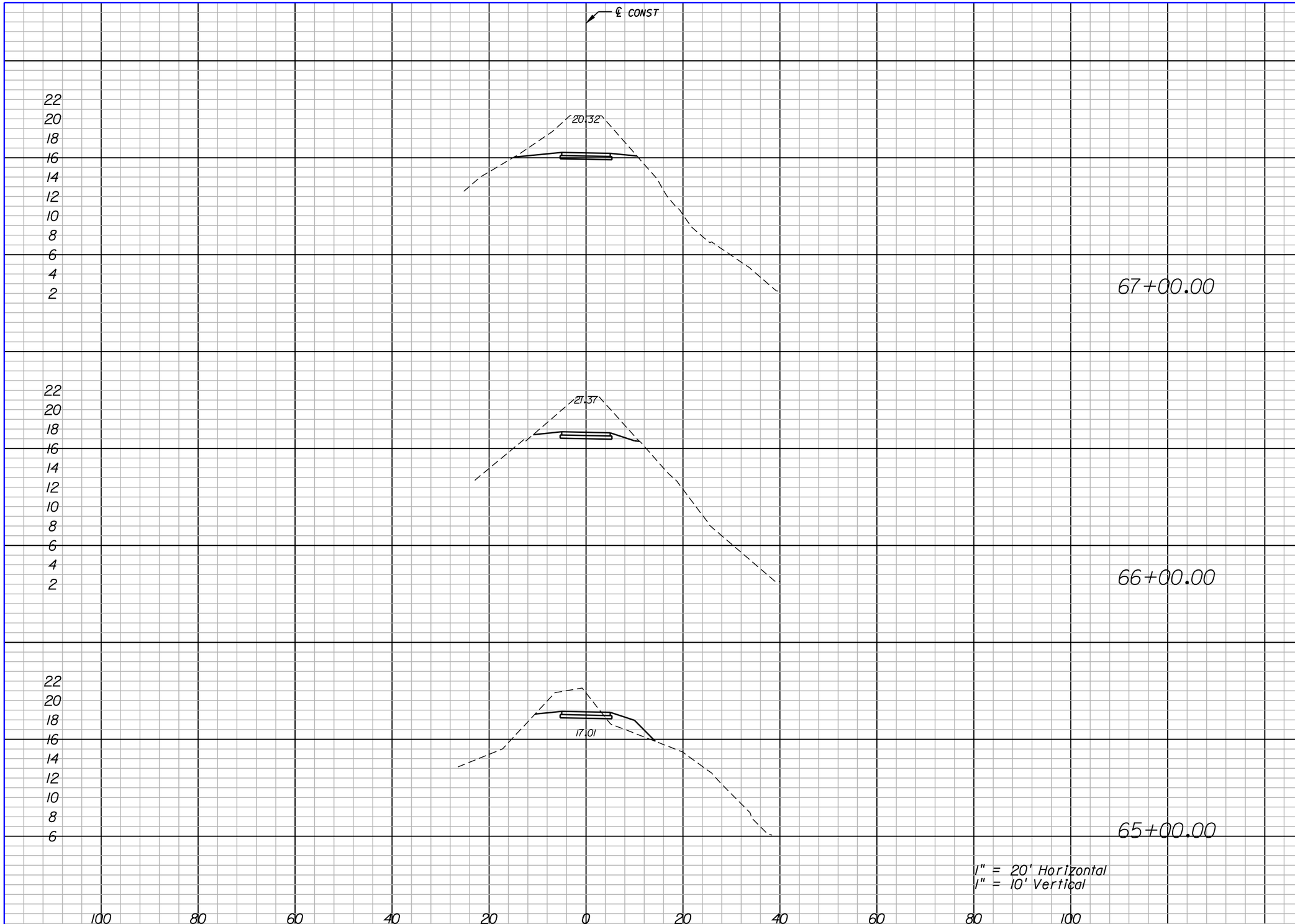
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 23



Regular Exc.		Embankment	
A	V	A	V
66	224	0	0
55	154	0	19
28	120	10	19

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 24

	Regular Exc.		Embankment	
	A	V	A	V
70+00.00	2	133	44	85
69+00.00	70	259	2	19
68+00.00	70	252	8	15

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 25

	Regular Exc.		Embankment	
	A	V	A	V
73+00.00	167	309	78	509
72+00.00	0	157	197	365
71+00.00	85	161	0	81

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 26

Regular Exc.		Embankment	
A	V	A	V
0	1	0	63
1	96	76	77
93	481	0	144

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

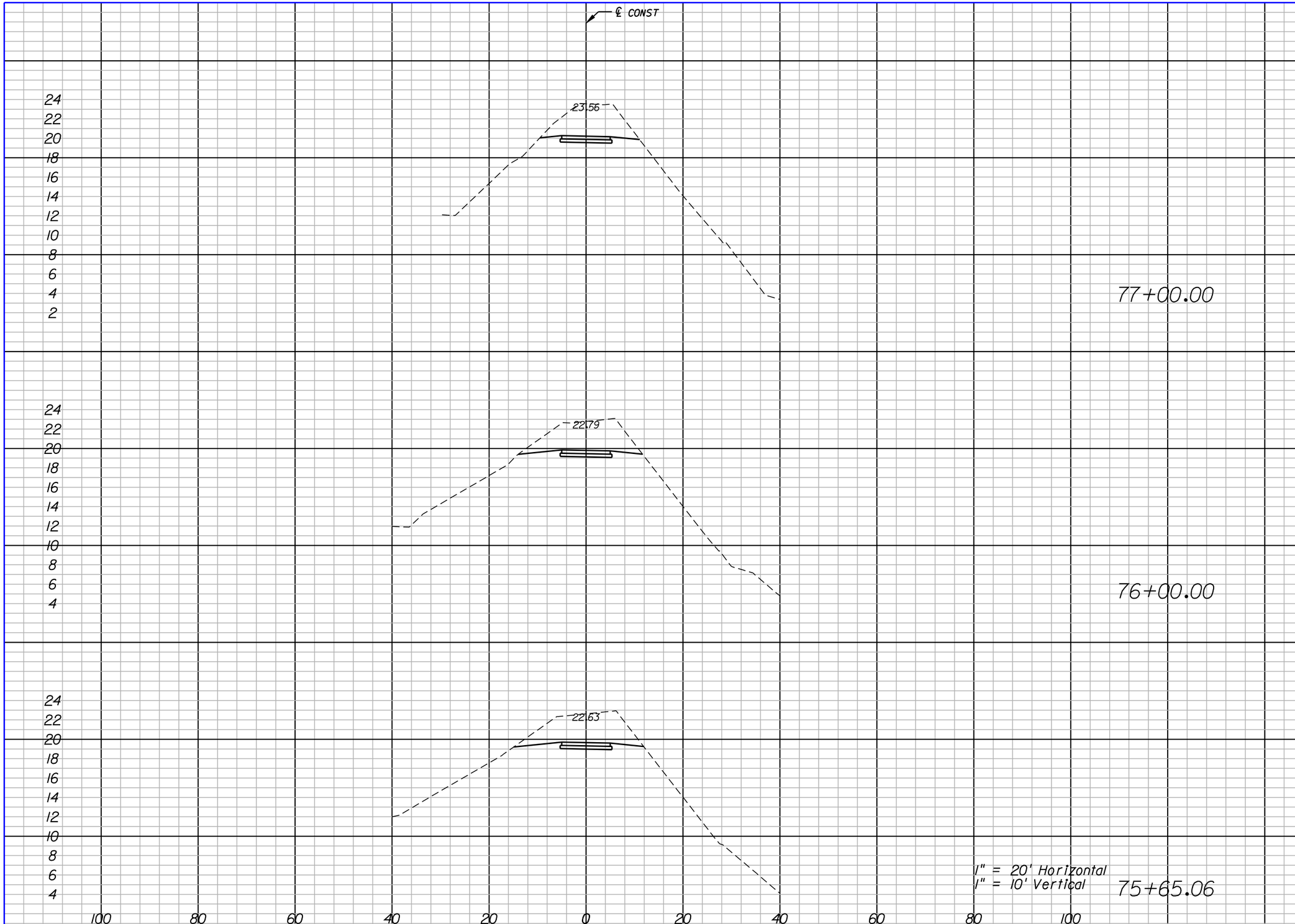
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 27



Regular Exc.		Embankment	
A	V	A	V
54	217	0	0
63	83	0	0
66	80	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

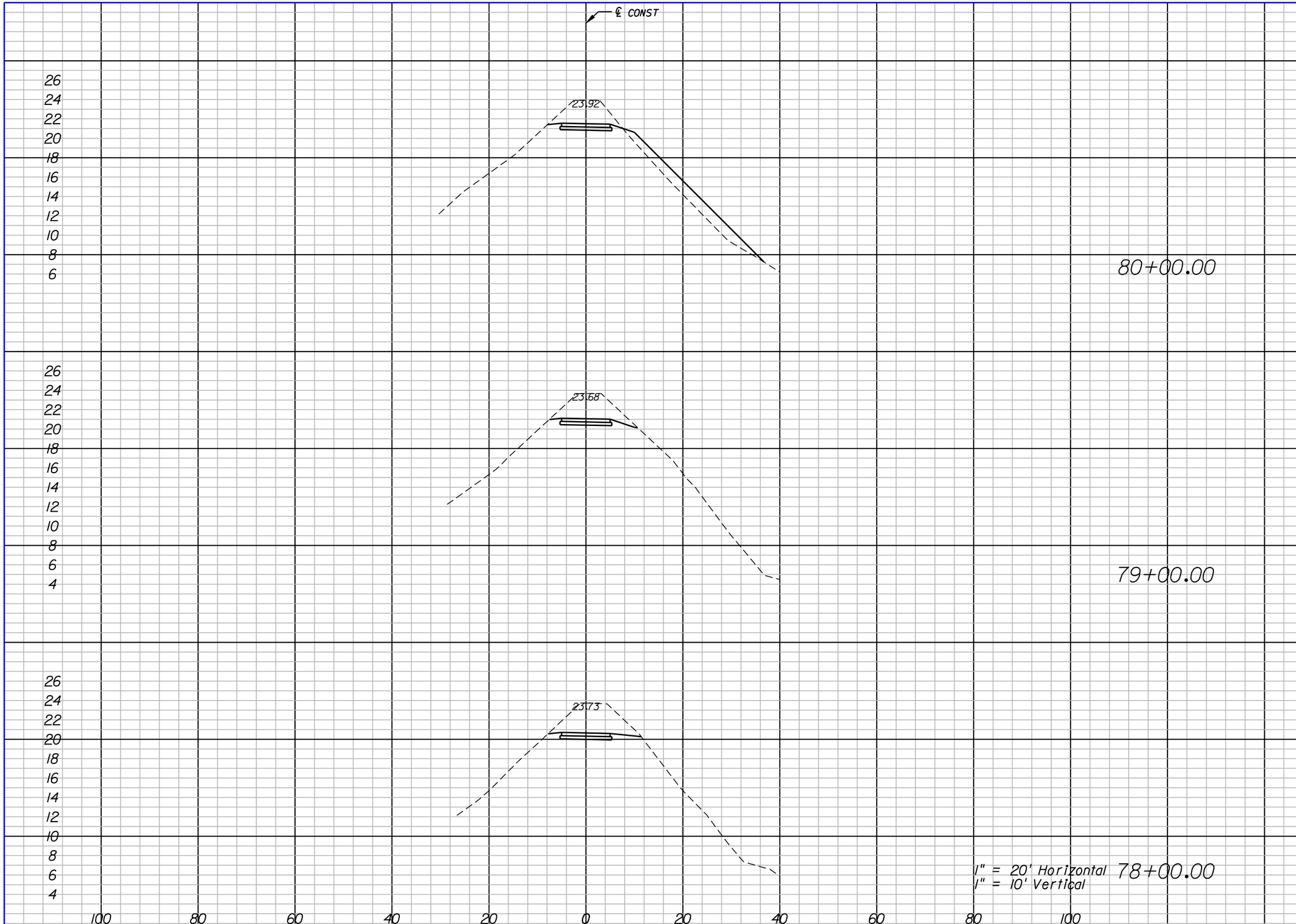
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 28



Regular Exc.		Embankment	
A	V	A	V
32	128	33	61
37	152	0	0
45	183	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

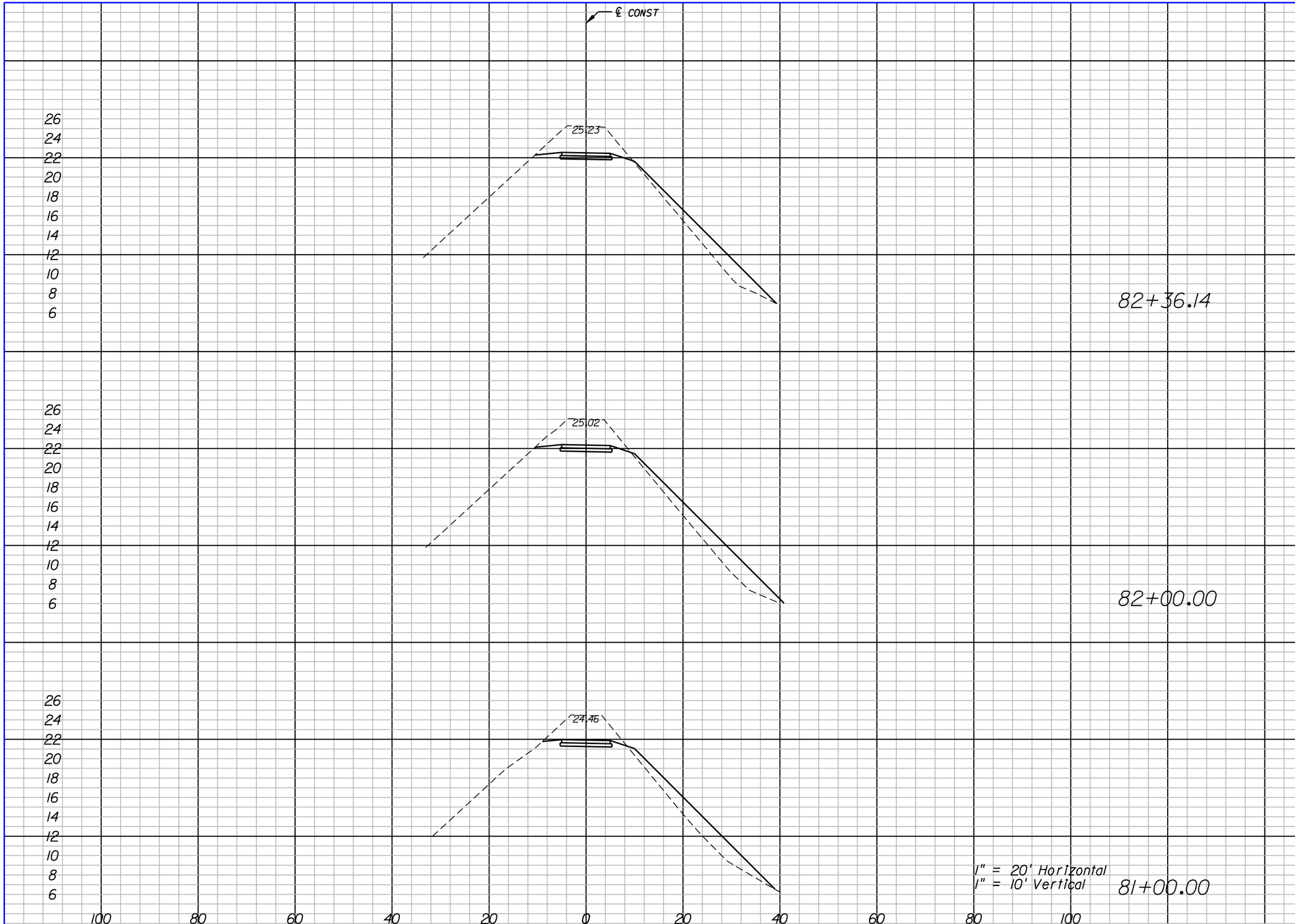
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 29



Regular Exc.		Embankment	
A	V	A	V
45	59	33	52
43	148	44	157
37	128	41	137

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO.
30

Regular Exc.		Embankment	
A	V	A	V
36	56	0	57
0	0	37	11
0	53	0	39

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

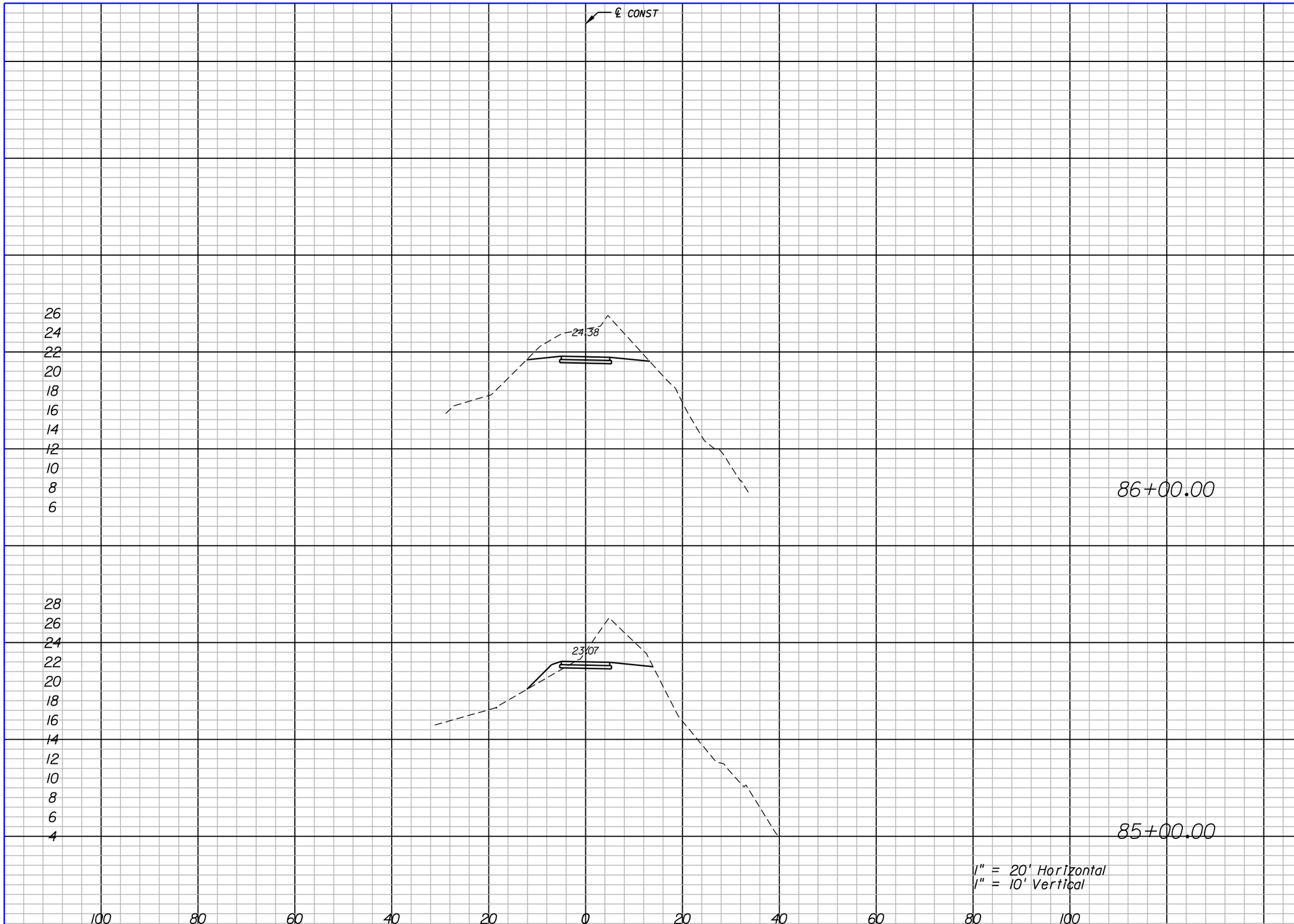
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 31



Regular Exc.		Embankment	
A	V	A	V
64	200	0	9
44	148	5	9

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

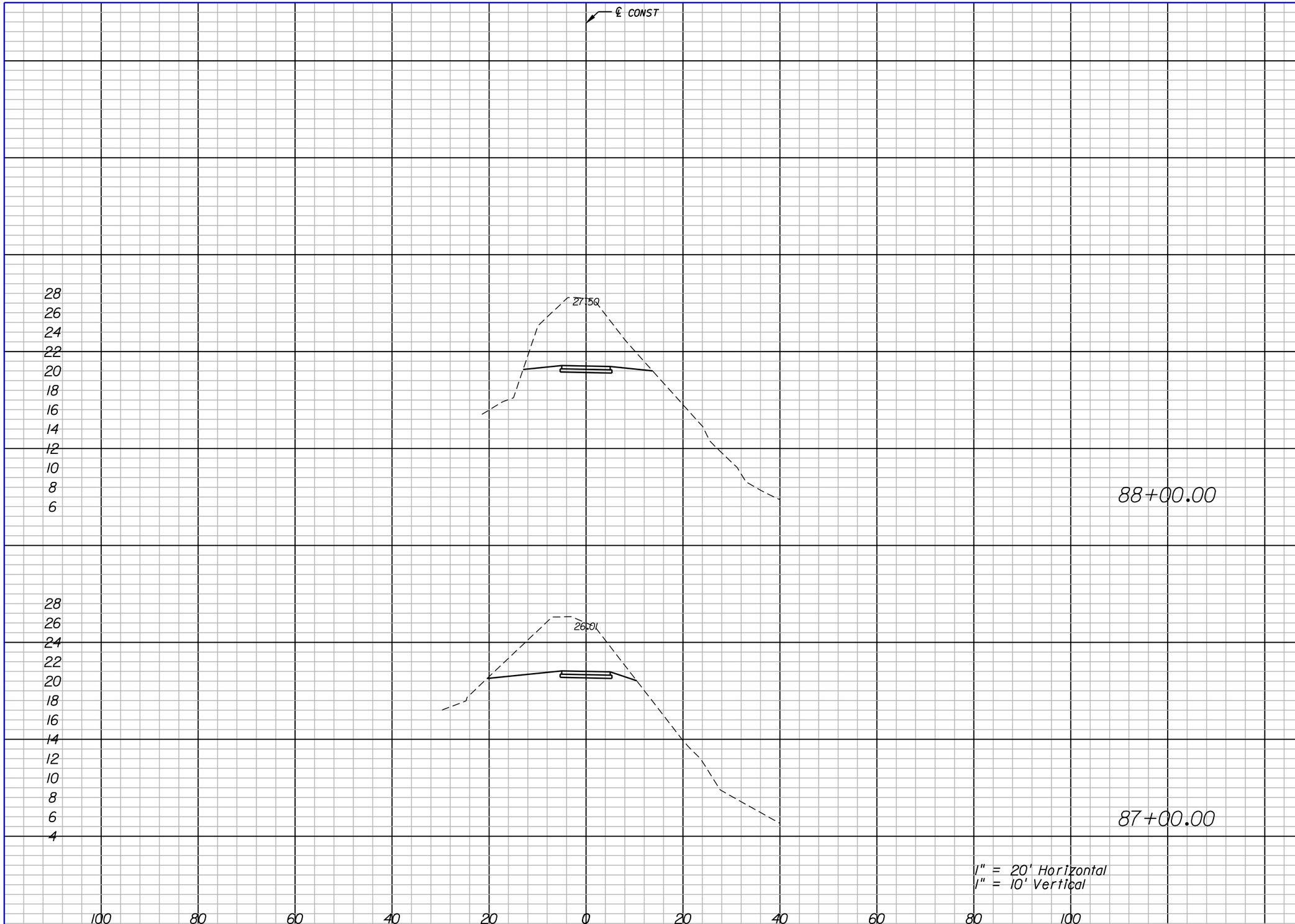
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 32



Regular Exc.		Embankment	
A	V	A	V
126	439	0	0
111	324	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

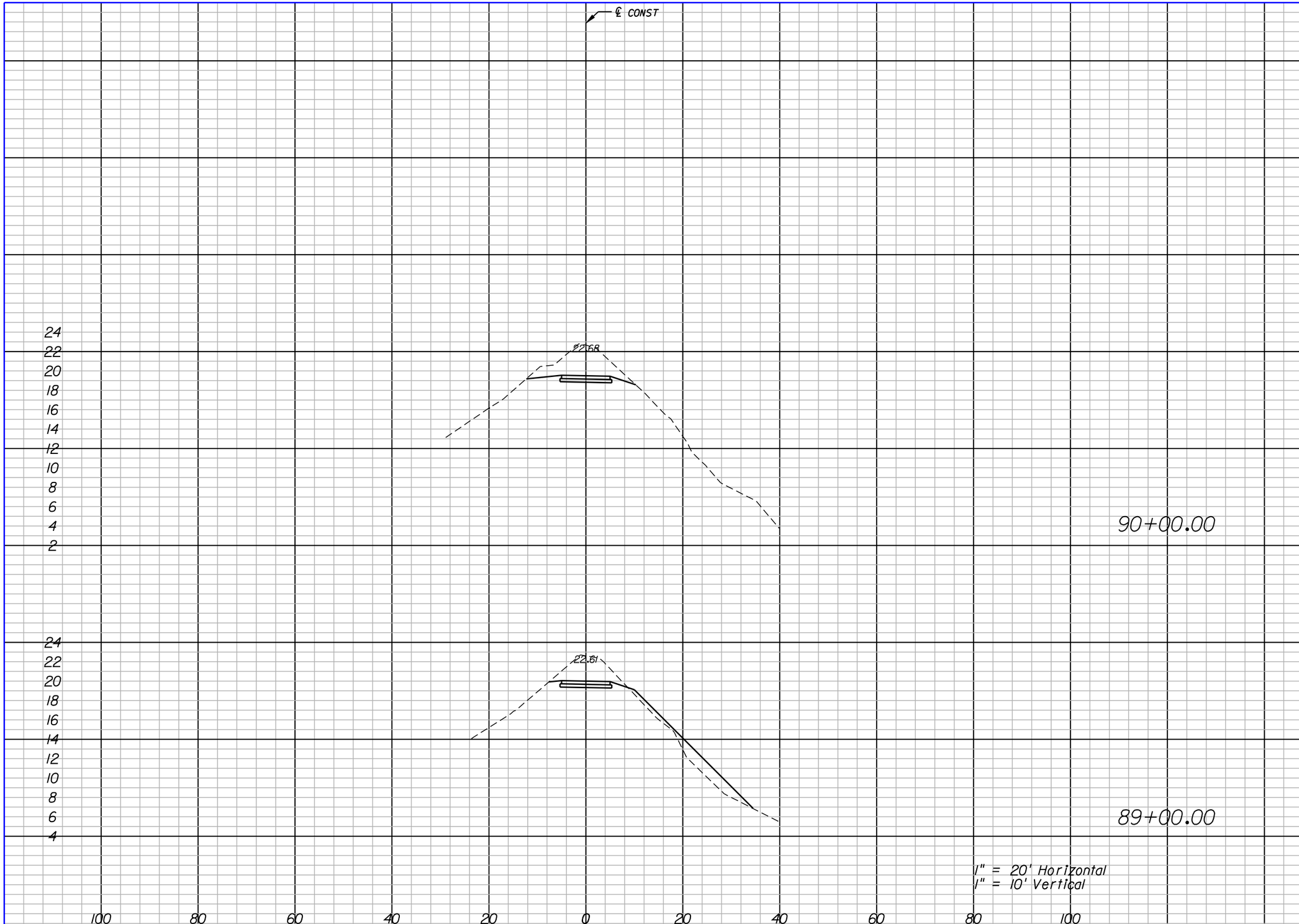
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 33



Regular Exc.		Embankment	
A	V	A	V
45	143	0	43
32	293	23	43

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 34

Regular Exc.		Embankment	
A	V	A	V
2	19	35	169
8	196	56	115
98	265	6	11

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

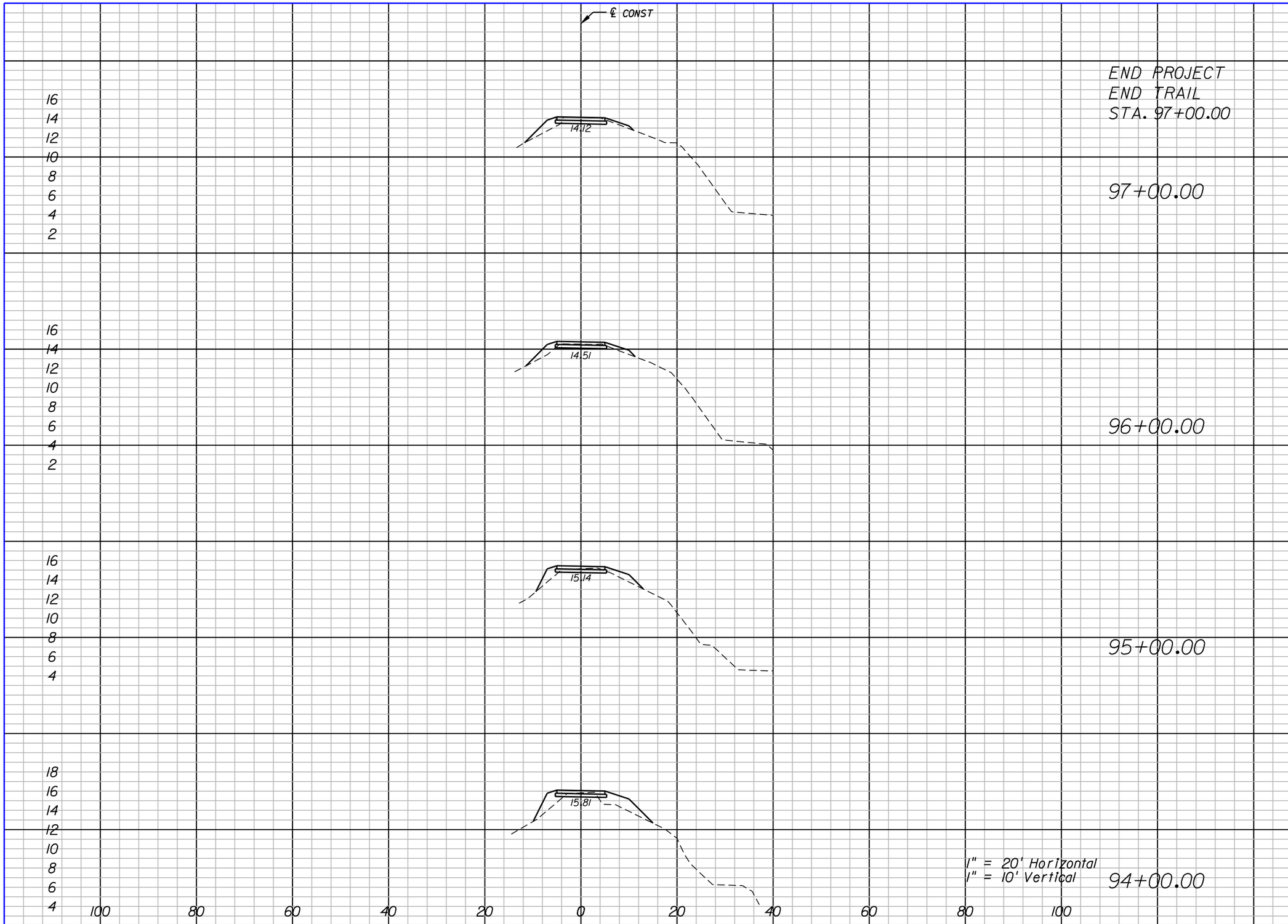
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 35



	Regular Exc.		Embankment	
	A	V	A	V
97+00.00	6	20	6	22
96+00.00	5	17	6	26
95+00.00	4	13	8	44
94+00.00	3	9	16	94

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

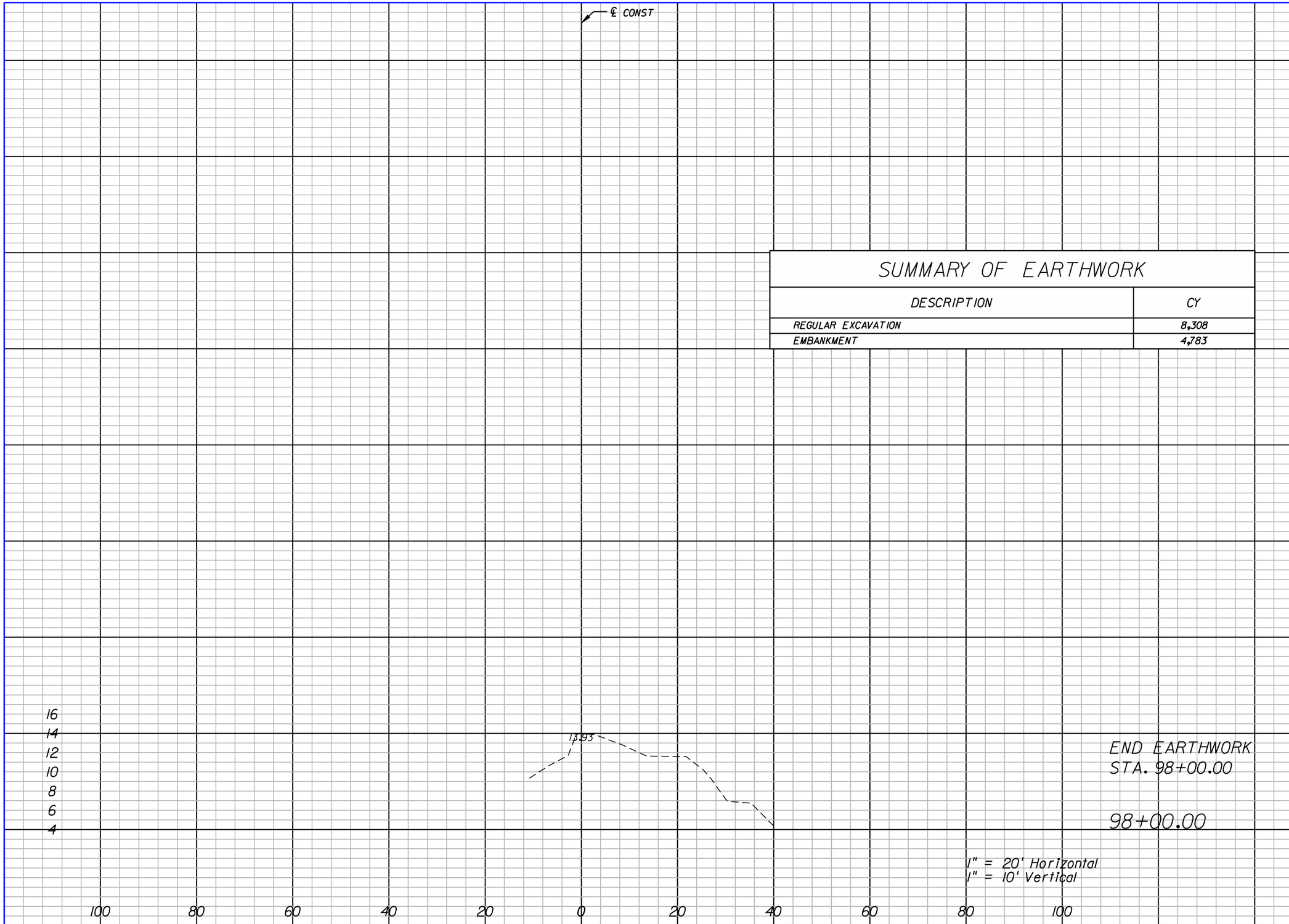
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 36



SUMMARY OF EARTHWORK

DESCRIPTION	CY
REGULAR EXCAVATION	8,308
EMBANKMENT	4,783

Regular Exc.		Embankment	
A	V	A	V
0	11	0	11

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

SAVANNAS RECREATION AREA TRAIL

CROSS SECTIONS

SHEET NO. 37

Attachment C

Preliminary Cost Estimate

Programming Document

Savannas Area Recreation Trail

Preliminary Conceptual Cost Estimate (Construction Only)
Savannas Recreation Area Trail

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
110-1-1	Clearing and Grubbing	4.15	LS/AC	$5,575.35	$23,114.54
104-10-3	Sediment Barrier	12,910	LF	$0.90	$11,619.00
104-11	Floating Turbidity Barrier	900	LF	$6.24	$5,616.00
120-1	Regular Excavation	8,308	CY	$3.15	$26,169.57
120-6	Embankment	4,783	CY	$3.29	$15,735.59
285-704	Optional Base (OBG 01) (Type B-12.5) (4")	6,904	SY	$4.63	$31,967.06
519-78	Bollards	3	EA	$291.06	$873.18
522-1	Concrete, 4" Thick	6,473	SY	$37.53	$242,931.69
570-1-2	Performance Turf (Sod)	13,613	SY	$1.51	$20,555.46
--	Pedestrian Bridge #1 (Southern Canal Crossing)	1,050	SF	$120.00	$126,000.00
--	Pedestrian Bridge #2 (Northern Canal Crossing)	1,050	SF	$120.00	$126,000.00
--	Boardwalk #1 (10 ft wide)	4,297	SF	$70.00	$300,790.00
--	Boardwalk #2 (10 ft wide)	1,517	SF	$70.00	$106,190.00
--	Boardwalk #3 (10 ft wide)	1,100	SF	$70.00	$77,000.00
--	Boardwalk #4 (10 ft wide)	800	SF	$70.00	$56,000.00
--	Vista #1	1,550	SF	$120.00	$186,000.00
--	Vista #2	1,550	SF	$120.00	$186,000.00
--	Tower #1	775	SF	$120.00	$93,000.00
--	Tower #2	775	SF	$120.00	$93,000.00
Savannas Recreation Area Trail Materials Subtotal					$1,728,562.09
				Mobilization Cost (15%)	$259,284.31
				Contingency Cost (20%)	$345,712.42
Savannas Recreation Area Trail Materials Total Costs					$2,333,558.82
				Construction Engineering Inspection (5%)	$116,677.94
Savannas Recreation Area Trail Total Construction Costs					**$2,450,236.76**

Assumptions and Notes:
1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Unit costs for Pedestrian Bridges, Vistas, Towers and Boardwalks are based on pricing for a timber boardwalk converted to a SF unit cost. Price has been increased for Pedestrian Bridges, Vistas and Towers. Boardwalk costs have been calculated for an 8' and 10' boardwalk option. 8' option below.
3) Quantities for regular excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc.
4) A 20% contingency cost has been included in the estimate due to uncertainty regarding the suitability of the existing soils as a base for the proposed trail.
5) A 15% mobilization cost has been included in the estimate due to the difficulties associated with accessing the proposed trail site for construction equipment.

Savannas Recreation Area Trail 8' Boardwalk Option					
110-1-1	Clearing and Grubbing	4.15	LS/AC	$5,575.35	$23,114.54
104-10-3	Sediment Barrier	12,910	LF	$0.90	$11,619.00
104-11	Floating Turbidity Barrier	900	LF	$6.24	$5,616.00
120-1	Regular Excavation	8,308	CY	$3.15	$26,169.57
120-6	Embankment	4,783	CY	$3.29	$15,735.59
285-704	Optional Base (OBG 01) (Type B-12.5) (4")	6,904	SY	$4.63	$31,967.06
519-78	Bollards	3	EA	$291.06	$873.18
522-1	Concrete, 4" Thick	6,473	SY	$37.53	$242,931.69
570-1-2	Performance Turf (Sod)	13,613	SY	$1.51	$20,555.46
--	Pedestrian Bridge #1 (Southern Canal Crossing)	840	SF	$96.00	$80,640.00
--	Pedestrian Bridge #2 (Northern Canal Crossing)	840	SF	$96.00	$80,640.00
--	Boardwalk #1 (8 ft wide)	3,438	SF	$56.00	$192,505.60
--	Boardwalk #2 (8 ft wide)	1,214	SF	$56.00	$67,961.60
--	Boardwalk #3 (8 ft wide)	880	SF	$56.00	$49,280.00
--	Boardwalk #4 (8 ft wide)	640	SF	$56.00	$35,840.00
--	Vista #1	1,240	SF	$120.00	$148,800.00

Preliminary Conceptual Cost Estimate (Construction Only)
Savannas Recreation Area Trail

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
--	Vista #2	1,240	SF	$120.00	$148,800.00
--	Tower #1	775	SF	$120.00	$93,000.00
--	Tower #2	775	SF	$120.00	$93,000.00
Savannas Recreation Area Trail 8' Boardwalk Option Subtotal					**$1,369,049.29**
				Mobilization Cost (15%)	$205,357.39
				Contingency Cost (20%)	$273,809.86
Savannas Recreation Area Trail 8' Boardwalk Option Materials Total Costs					$1,848,216.54
				Construction Engineering Inspection (5%)	$92,410.83
Savannas Recreation Area Trail 8' Boardwalk Option Total Construction Costs					**$1,940,627.36**

PROGRAMMING DOCUMENT

FOR

Water Quality Improvement Projects

Proprietary Mitigation Plan Projects
Crosstown Parkway Extension Project

June 2011

PREPARED FOR:

City of Port St. Lucie
121 SW Port St. Lucie Blvd
Port St. Lucie, FL 34984

PREPARED BY:

American Consulting Professionals, LLC
2000 Palm Beach Lakes Blvd, Suite 1000
West Palm Beach, FL 33409

TABLE OF CONTENTS

1.0 REPORT PURPOSE 1
2.0 PROJECT DESCRIPTION AND BACKGROUND 1
3.0 SCOPING HISTORY AND CONCEPTUAL DESIGN 4
3.1 Field Review with DEP Staff 4
3.2 Second Meeting with DEP Staff 4
3.3 Conceptual Design 5
4.0 PERMIT INVOLVEMENT 7
4.1 Evans Creek 7
4.2 Site 5 West 7
4.3 Riverplace Upstream 7
4.4 Otter Trail 7
5.0 COST ESTIMATE AND BUDGET 8

PROGRAMMING DOCUMENT
WATER QUALITY IMPROVEMENT PROJECTS

1.0 REPORT PURPOSE

The purpose of this report is to provide documentation of Phase I of the four (4) water quality projects within the North Fork St. Lucie River to be used during future phases of this project. The first phase of this project consisted of data collection, meetings with regulatory agencies, and preparation of schematics to more accurately define the ultimate scope of the project.

2.0 PROJECT DESCRIPTION AND BACKGROUND

The City of Port St. Lucie (City) is working towards the construction of a new crossing over the North Fork of the St Lucie River (NFSLR) called the Crosstown Parkway Extension. The Crosstown Parkway Extension project includes the proposed construction of a bridge to provide an east-west connection of Crosstown Parkway to US 1. At this time, the specific corridor alternative for the roadway and bridge crossing has not been determined. There are six (6) build corridor alternatives and a no-build alternative that are currently being considered as part of an ongoing Environmental Impact Statement (EIS) in accordance with National Environmental Policy Act (NEPA) guidelines and Federal Highway Administration (FHWA) directives. The final alignment to be permitted for construction will be determined through the EIS process.

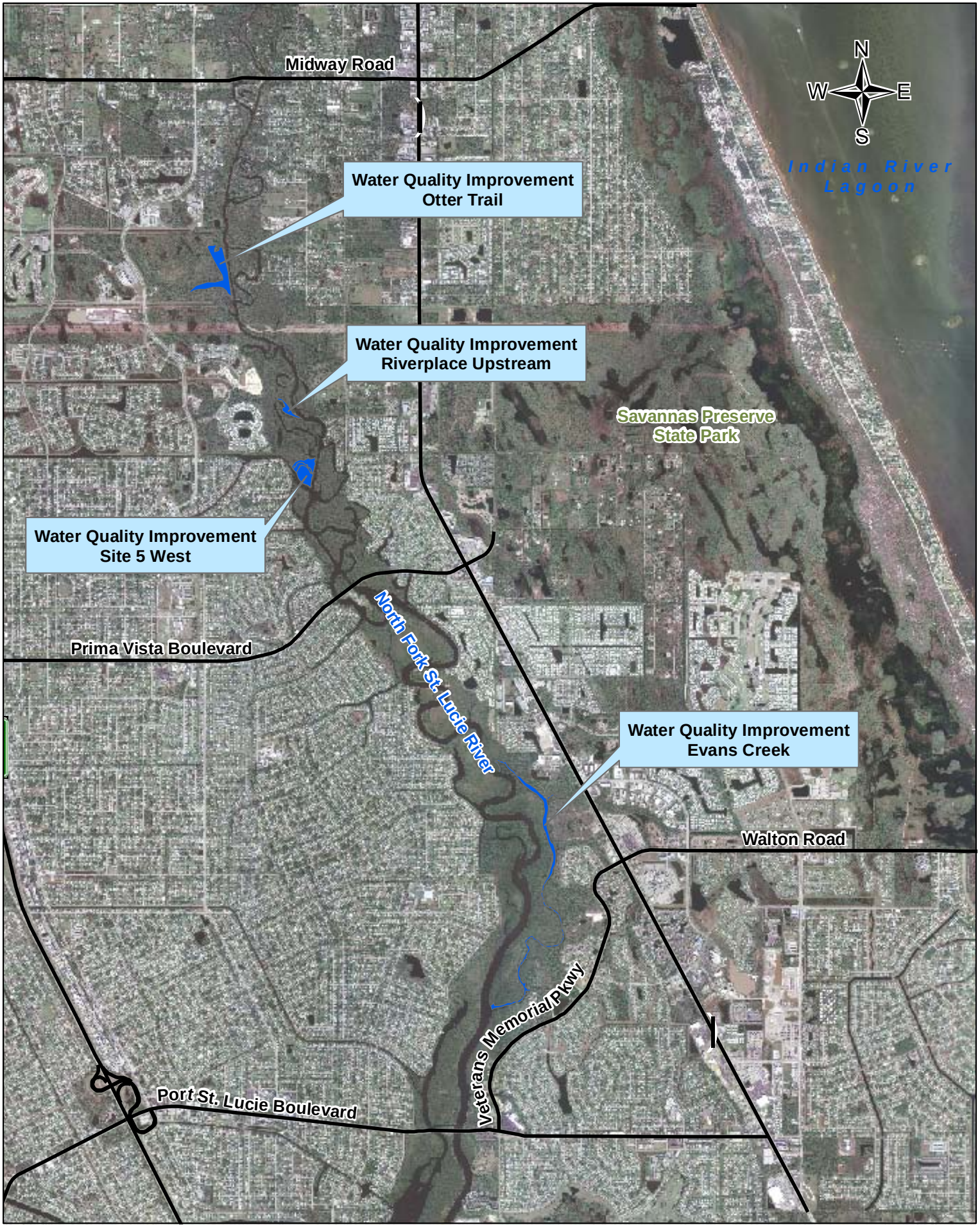
The EIS effort is currently ongoing and a Draft EIS was distributed to FHWA and cooperating agencies in November 2010. The City is currently pursuing a Conceptual Environmental Resource Permit (ERP) from the South Florida Water Management District (SFWMD) in order to reach an agreement with the SFWMD and the Florida Department of Environmental Protection (DEP) with respect to water management, natural resource mitigation (regulatory mitigation), state lands mitigation (proprietary mitigation) and a sovereign submerged lands (SSL) easement. During the development stages of the project, the SFWMD agreed to establish a "representative corridor" approach in obtaining a Conceptual ERP. This corridor represents a composite of the highest impacts from each of the six (6) build corridor alternatives currently being evaluated in the EIS. Using this approach, it was anticipated that the Conceptual ERP could be issued and a mitigation plan could be developed based on the expected impacts from this proposed project that could occur for any particular resource. The mitigation plans were developed for the worst case impacts of all the alternatives. Based on more recent coordination with the regulatory agencies, the Conceptual ERP will be converted to a Construction ERP when a preferred alternative is chosen through EIS.

The proprietary mitigation plan was developed together with the DEP in exchange for a crossing of state lands on the Crosstown Parkway Extension project. The projects within the proprietary mitigation plan were incorporated into a Memorandum of Understanding (MOU) between the City and DEP to be conducted in exchange for an easement across state lands. The MOU was approved by the Acquisition and Restoration Council (ARC) in December 2009. Should a build alternative be identified through the EIS process, the ARC will forward the appropriate upland easement request to the Board of Trustees with their recommendation to approve the project. In exchange, the City agreed to permit, design and construct four (4) water quality projects called Evans Creek, Otter Trail, Site 5 West, and River Place Upstream. This document discusses all four water quality projects.

Per the MOU, the four restoration projects are outlined in the North Fork St. Lucie River Aquatic Preserve Management Plan dated August 2009. The water quality improvements will be achieved by reconnecting

oxbows and isolated floodplains. Restoration efforts will include dredging shoals or berms, widening or deepening portions of the waterway, and other work as identified by DEP. The costs incurred by the City for the design, permitting, construction, and inspection of the four restoration projects shall not exceed $2,000,000. If the cost is expected to exceed that amount, the City will work with DEP to identify a replacement project that will allow the total costs incurred to remain under $2,000,000.

Project Location Map
Water Quality Improvement Projects



Proprietary Mitigation Water Quality Improvements

3.0 SCOPING HISTORY AND CONCEPTUAL DESIGN

3.1 Field Review with DEP Staff

On December 4, 2009, American attended a field review of the four oxbow reconnection sites with the DEP and the Florida Fish and Wildlife Conservation Commission (FWC) in order to clarify the scope of services for each. Each project will require biological and water quality monitoring before and after the projects are implemented. The monitoring will be required for 5 years after implementation. There is no set length for the monitoring to be conducted prior to the construction of the projects; however, most of the projects implemented by DEP are monitored between 1 and 3 years beforehand.

All areas that are disturbed during construction will have to be replanted. The preferred shoreline species include leather fern, swamp lily, salt bush, cordgrass and mangroves (depending on location and habitat type).

In the past, DEP has been required to do soil testing on the dredged material. The preference is to take the soil to a local landfill where it can be used for local government projects. However, if petroleum is present, most local landfills will not accept the soil. DEP identified the Evans Creek project as having the highest potential for contamination.

The location of the reconnection sites should minimize impacts to hardwoods to the extent possible. Though the ranking forms produced by DEP and shown in **Attachment A** give an approximate depth to dredge to, the actual depth should be based on engineering analysis and thus, is subject to change. The proposed depth should match the depth of the existing portions of the waterways.

The Otter Trail project contains a pedestrian trail that may need to be taken into account. The River Place Upstream project is on private property on conservation land owned by the River Place on the St. Lucie Community Development District (CDD). Site 5 contains a completed project adjacent to the Site 5 West site that can be used as an example. None of the hydrologic projects DEP and FWC have implemented in the past, have required compensatory mitigation for impacts. A copy of the meeting minutes can be found in **Attachment B**.

3.2 Second Meeting with DEP Staff

A second meeting was held with DEP and FWC on August 6, 2010 to further discuss the protocol for the monitoring and construction of the water quality projects. Data loggers will be used to collect information on the water levels at each site. The FWC suggested that the PVC encasing the water level data loggers be supported by a tree or other relatively permanent structure to ensure the pipes do not move. The Evans Creek project is largely a dredge project and the Otter Trail project is a berm breach to rehydrate wetlands. Thus, it was decided that 3 data loggers would be used for Evans Creek and one data logger would be used in the wetland area near the northern cut of the Otter Trail site. Two data loggers will be used for the other two projects. The locations will be surveyed in.

To measure water quality parameters, R. L. Weigt (RLW) will measure water levels every half hour. Specifically, dissolved oxygen, temperature, salinity, specific conductivity, turbidity, clarity, and pH will be monitored at each site monthly. Measurements will be taken at the surface, middle, and bottom of the

water body. During the meeting, it was decided that redox potential was not necessary to measure. The water quality measurements will be taken at the same location (fixed points) each month.

For the biological monitoring, RLW will utilize box traps, Breder traps, fike nets, seines, and hook and line. The types of traps used will be determined by vegetative cover, sediment stability, and flow. Electroshocking from a boat may be needed for Evans Creek. FWC has been doing some electroshocking along the NFSLR and Evans Creek and RLW may be able to utilize their data or see if the FWC could do additional electroshocking within Evans Creek to supplement their data. Biological monitoring will be done quarterly and will include an inventory of invertebrates.

The vegetation sampling should be done once prior to construction, once at time zero, once at 6 months, once at 1 year, and then annually after that for a total of 5 years. The FWC did not feel that sampling was necessary this often and it was agreed that this protocol would be discussed in the pre-application meeting for these projects. For Evans Creek, vegetation sampling could be done through video and photo documentation and aerials. Fixed photo stations should be set up for each project to take pre and post-construction photos in the same location. These should be done at least once each year.

From an engineering standpoint, American can begin conceptual designs once there is approximately 6 months of data logger data to work with. RLW will begin collecting this data in fall of 2010. Data will be needed for most of fall and most of winter to include the most useful data for engineering. The engineering may have to be refined once the entire year's worth of data is completed.

The total cost of construction estimated by DEP for all four oxbow reconnections comes to approximately $1.4 million. The City has an upper limit of $2 million to include engineering, permitting, monitoring, and construction.

All four projects should be able to be constructed via barge. To minimize mobilization costs, all four projects should be constructed one right after the other. There could be a complication with barging the cranes and construction equipment under the existing bridges, though launching from the Prima Vista Bridge could be possible. For the northern section (upstream opening) of Evans Creek, a barge may be too large and the material may have to be pumped out. The DEP and FWC suggested piping out the material so that work could still be done from the water. They have been successful using this method in the past. A copy of the meeting minutes can be found in **Attachment B**.

3.3 Conceptual Design

A hydrologic/hydraulic model is underway to compute flows and stages for both the existing and proposed conditions for each of the water quality improvement sites. The results of the modeling will be utilized to evaluate the effectiveness of the improvements. The greater the predicted increase in flow, the greater the expected water quality improvement.

A geotechnical analysis was also undertaken to determine organic content, moisture content, corrosion series and the presence/absence of contaminants in the soil. The sands and organic soils encountered can be excavated or dredged with normal excavating equipment in good working order. If needed, the soils can be re-used in non-structural areas. All of the soil samples were clean for 8260 and 8270 Methods. The FL-PRO results were well below the 340 mg/kg SCTL. The metals were also below the SCTL limits for residential or commercial usage. The full geotechnical report can be found in **Attachment C.**

Based on the geotechnical analysis, preliminary drainage analysis, survey, and preliminary engineering data, conceptual layouts for all four water quality projects were developed (**Attachment D**). Below is a brief description of the conceptual design of each project.

3.3.1 Evans Creek

The Evans Creek project is largely a dredge project that will require deepening the upstream and downstream ends of Evans Creek to improve flushing. The project site is located on the east side of the NFSLR between Prima Vista Boulevard and Port St. Lucie Boulevard. Four main areas were identified as requiring dredging referred to as Downstream, Middle Downstream, Middle Upstream and Upstream. Based on survey data, the downstream and middle downstream segments were combined into one segment which will be dredged approximately 750' long. The Middle Upstream segment will be dredged approximately 650' long. The width and depth of the proposed dredging varies. Based on the survey data, it was determined that the Upstream segment does not require improvements and has been removed from the project. See **Attachment D** for more details and cross sections.

3.3.2 Site 5 West

The Site 5 West project is hydrologic restoration project involving one berm breach and on oxbow reconnection. The project is located north of Prima Vista Boulevard and north of Channel Marker 32. The berm breach will be dredged approximately 75' long and 25' wide. The oxbow (near Emerson Street) was not historically connected, but the water is stagnant and connection is expected to benefit the NFSLR. The oxbow will be dredged approximately 250' long and 50' wide. The depth of the proposed dredging varies. See **Attachment D** for more details and cross sections.

3.3.3 Riverplace Upstream

The River Place Upstream project also involves dredging the main channel and a berm breach on a north branch of the channel to rehydrate wetlands. The project is located upstream of Prima Vista Boulevard adjacent to the Rivers Edge neighborhood. The goal of the project is to provide a connection of the upstream end of the River Place oxbow to the NFSLR. This segment has a main (historical) channel that is weakly connected to the NFSLR. In addition, a berm will be removed along the north branch to the upstream end that is cut off from the NFSLR by the berm. The main channel will be widened and deepened and the berm on the north branch will be removed. The main channel will be dredged approximately 725' long. The north branch will be dredged approximately 75' long. The width and depth of the proposed dredging varies. See **Attachment D** for more details and cross sections.

3.3.4 Otter Trail

The Otter Trail project is a berm breach to rehydrate wetlands. The project site is located south of Midway Road within the St. Lucie County's Oxbow Eco-Center preserve just north of the Channel Marker 34. Otter Trail is an unimproved trail within the Oxbow Eco-Center that runs along the NFSLR. Two cuts (one breach and one culvert site) are needed to rehydrate the historical floodplain that runs along the west side of the otter trail at the Oxbow Eco-Center. The southern downstream breach is just north of the upstream end of the Oxbow Eco-center oxbow. The downstream segment will be dredged approximately 100' long, 40' wide and to a depth of 6'. The northern upstream culvert site is just south of the upstream end of the Idabelle Island oxbow. The upstream segment will be dredged approximately 60' long, 40' wide, and to a depth of 15'. The width of the proposed dredging varies. Three 36" pipe culverts will be utilized for the upstream segment. In addition, a pedestrian boardwalk will be constructed to

maintain the existing Oxbow Eco-Center Otter Trail. Based on conversations with St. Lucie County, the existing boardwalks within the Oxbow Eco-Center are either 4 or 6 feet wide. The conceptual drawings assumed a 6-foot boardwalk. See **Attachment D** for more details and cross sections.

4.0 PERMIT INVOLVEMENT

A pre-application meeting was held with SFWMD, U.S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) on March 10, 2011. Meeting minutes from this meeting can be found in **Attachment B**. A follow up permitting synopsis on these projects was provided by the SFWMD and can also be found in **Attachment B**.

4.1 Evans Creek

This project could qualify for a Noticed General Permit (NGP) under 40E-400.485 F.A.C. if DEP will send a memo to the Attorney General for the Secretary of the DEP to approve the project. The DEP will not commit to doing this until preliminary plans have been completed. If we cannot receive a NGP, an Individual Permit will be required based on the amount of dredging work within surface waters. Detailed UMAM scores will be necessary to show that the functional gain from the water quality improvements will offset the functional loss of wetland impacts.

4.2 Site 5 West

This project could qualify for a Noticed General Permit (NGP) under 40E-400.485 F.A.C. if DEP will send a memo to the Attorney General for the Secretary of the DEP to approve the project. The DEP will not commit to doing this until preliminary plans have been completed. If we cannot receive a NGP, a new General Permit will be required. Detailed UMAM scores will be necessary to show that the functional gain from the water quality improvements will offset the functional loss of wetland impacts.

4.3 Riverplace Upstream

This project will require a General Permit based on the proposed work within surface waters. The River Place on the St. Lucie CDD will be a co-applicant. Detailed UMAM scores will be necessary to show that the functional gain from the water quality improvements will offset the functional loss of wetland impacts.

4.4 Otter Trail

A General Permit modification to Permit 56-04164-P will be required for this project. The seasonal high and normal pools elevations of adjacent wetlands will be needed to determine the possible adverse impacts from the proposed activities. Elevations of the connections should not result in drainage of the upstream wetland, though this wetland has been dry during all monthly field reviews since August 2010. Grates may be required on the culver to prevent impacts to the West Indian manatee. Detailed UMAM scores will be necessary to show that the functional gain from the water quality improvements will offset the functional loss of wetland impacts.

For all projects, measures to prevent degradation of surface waters will be required during construction. These measures shall include temporary sediment and turbidity barriers during construction and appropriate Best Management Practices (BMP). Should dewatering be required to construct the proposed improvements, the dewatering plan will ensure no degradation of surface waters occur as a

result of dewatering activities. Zero rise in Nephelometric Turbidity Units (NTU) above background levels is required during construction. Monitoring will be required throughout construction to ensure the threshold is not exceeded.

Stormwater management requirements will include water quality treatment per impaired water body criteria since the project is within a state park. Impaired water criteria includes 50% additional water quality treatment over standard requirements and limiting post-development nutrient discharges to the pre-development condition. Discharge attenuation requirements are to limit the post improvement peak discharge to the pre-development condition.

5.0 COST ESTIMATE AND BUDGET

The preliminary cost estimates were based on the conceptual layout for each project and are subject to change as the design is refined and with further input from DEP. The total cost for all four water quality projects totals $803,375.41. The Evans Creek project is predicted to cost $449,992.73. The Site 5 West project is predicted to cost $76,002.02. The River Place Upstream is predicted to cost $196,869.28. The Otter Trail project is predicted to cost $80,581.38. The preliminary cost estimate can be found in **Attachment E.** Based on these cost estimates, it appears that the City will be able to fund all four projects within the budget allotted.

Attachment A

DEP Ranking Forms

Programming Document

Water Quality Improvement Projects

Evans Creek

Ranking Form
POTENTIAL RECONNECTION PROJECTS FOR THE ST. LUCIE RIVER, NORTH FORK NARROWS, AND TEN MILE CREEK

Date: 26 September 2008 and 26 January 2009

Site: Evans Creek

Latitude, longitude: Multiple – See Notes

Upstream or downstream of Gordy Road: Downstream

River mile range: 18 – 20.25

Ranking team: Dr. John Tucker (SLC), Jeff Beal (FWC), Dan Haunert (SFWMD), Laura Herren (FDEP CAMA), Brian Sharpe (FDEP CAMA)

Criteria	**Score ***	**Subjective Weighting Factor ***	**Weighted Score**	**Comments**
Tier 1 – Benefits				
Reconnected area for wildlife				
Wetland acres	**0**	x5	**0**	
Open water acres	**18.82**	x5	**94.1**	
Public benefits				
Health	**2**	x3	**6**	
Access	**4**	x3	**12**	
		Tier 1 Total:	**112.1**	
Tier 2 – Other Factors				
Logistics				
Accessibility	**5**	x4	**20**	River Park Marina – wide and no bridges
DMMA sites	**3**	x3	**9**	
Simultaneous reconnection of sites	**1**	x3	**3**	
Erosion potential	**4**	x3	**12**	See notes
Estimated cost	**4**	x5	**20**	120K (see notes)
Ease of obtaining a permit				
Natural resources	**5**	x3	**15**	
Pollutants	**3**	x2	**6**	
Controversy	**3**	x1	**3**	
Land ownership	**5**	x3	**15**	CAMA-managed sovereign submerged lands
Timeliness/urgency	**1**	x2	**2**	
		Tier 2 Total:	**105**	
		Grand Total:	**217.1**	

* Range is 1 (lowest) to 5 (highest)

Evans Creek Notes:

Project Location

East side of the North Fork between Prima Vista Blvd. and Port St. Lucie Blvd.

Project Goals

Deepening the downstream and upstream connection of the creek to ambient conditions (-4' NGVD). Internal downstream shoals (named Downstream, Middle Downstream, and Middle Upstream) need to be removed. Mean high water in this area is approximately +1.5. Thus, at mean high the water depth should be 5.5 feet in this area after the project has been completed.

Cost Estimate/Erosion Potential

Cost Estimate Scores: 5 = 0-99K; 4 = 100-199K; 3=200-399K; 2=400-499K; 1= 500K +

Downstream: 250' long x 150' wide x 2'NGVD deep (current elevation: -2 to -4'NGVD)
Downstream Middle: 225' long x 50' wide x 1' NGVD deep (current elevation: -3 to -5' NGVD)
Upstream Middle: 475' long x 50' wide x 2'NGVD deep (current elevation : -2 to -4' NGVD with small section -4 to -5' NGVD)
Upstream: 800' long x 30' wide (currently about 2 – 2.5' at low tide)

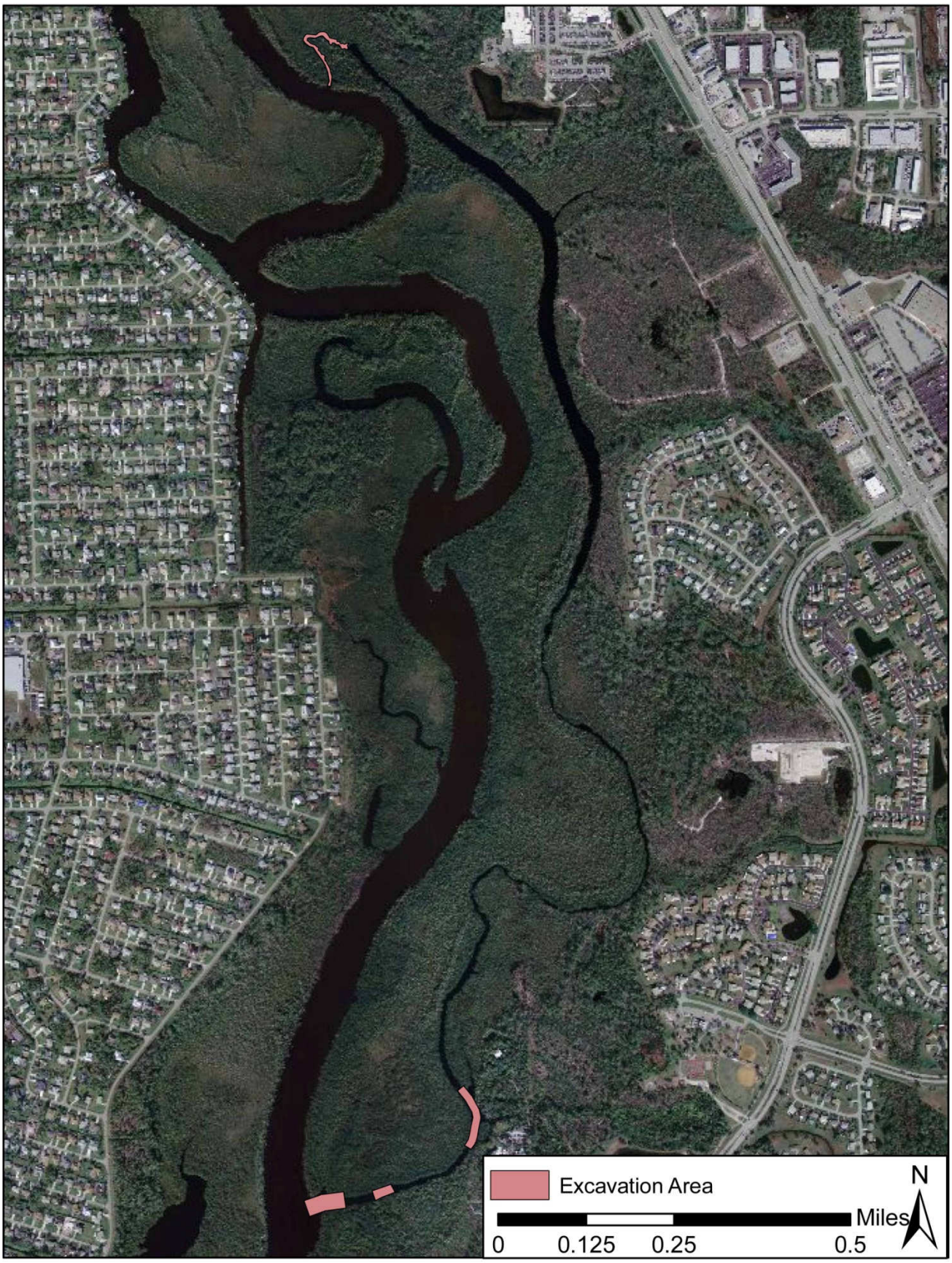
Natural Resources

Downstream: Brazilian pepper (small amount), red and white mangroves, leather fern, pond apple
Middle Downstream: Brazilian pepper, cabbage palm, red mangrove, leather fern, pond apple
Middle Upstream: Brazilian pepper, melaleuca, red and white mangroves, cabbage palm, leather fern, southern redcedar, pond apple, wild pineapple, cattails
Upstream: Brazilian pepper, cabbage palm, coin vine, leather fern, red and white mangroves, pond apple

Waypoints

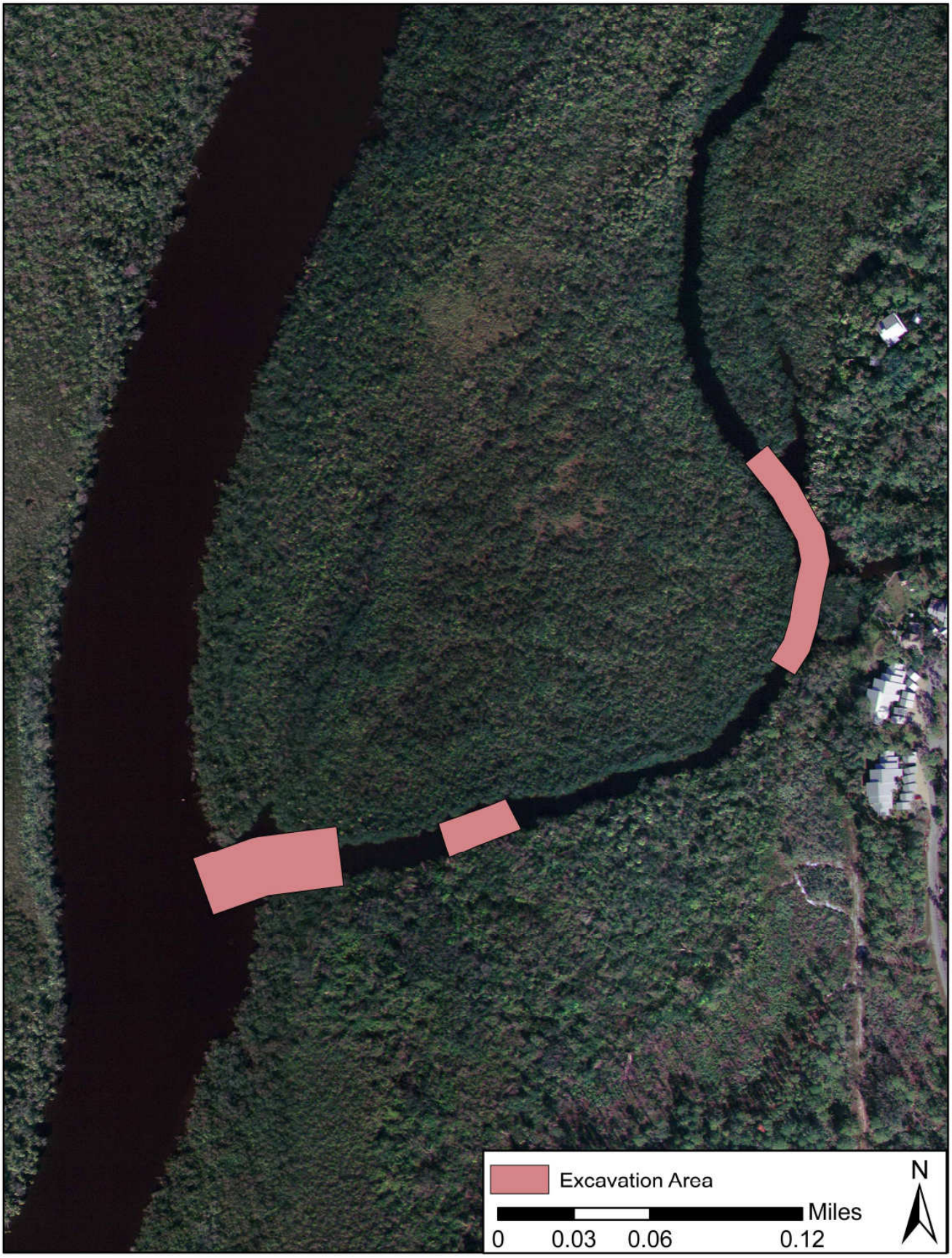
Downstream (west): 27.283769 -80.318553
Downstream (east): 27.283878 -80.317847
Middle Downstream (west): 27.283915 -80.317314
Middle Downstream (east): 27.284161 -80.316488
Middle Upstream (south): 27.284936 -80.314927
Middle Upstream (north): 27.286192 -80.315100
Upstream (west): 27.30677 -80.31739
Upstream (east): 27.30757 -80.31692

Evans Creek Excavation Area Map

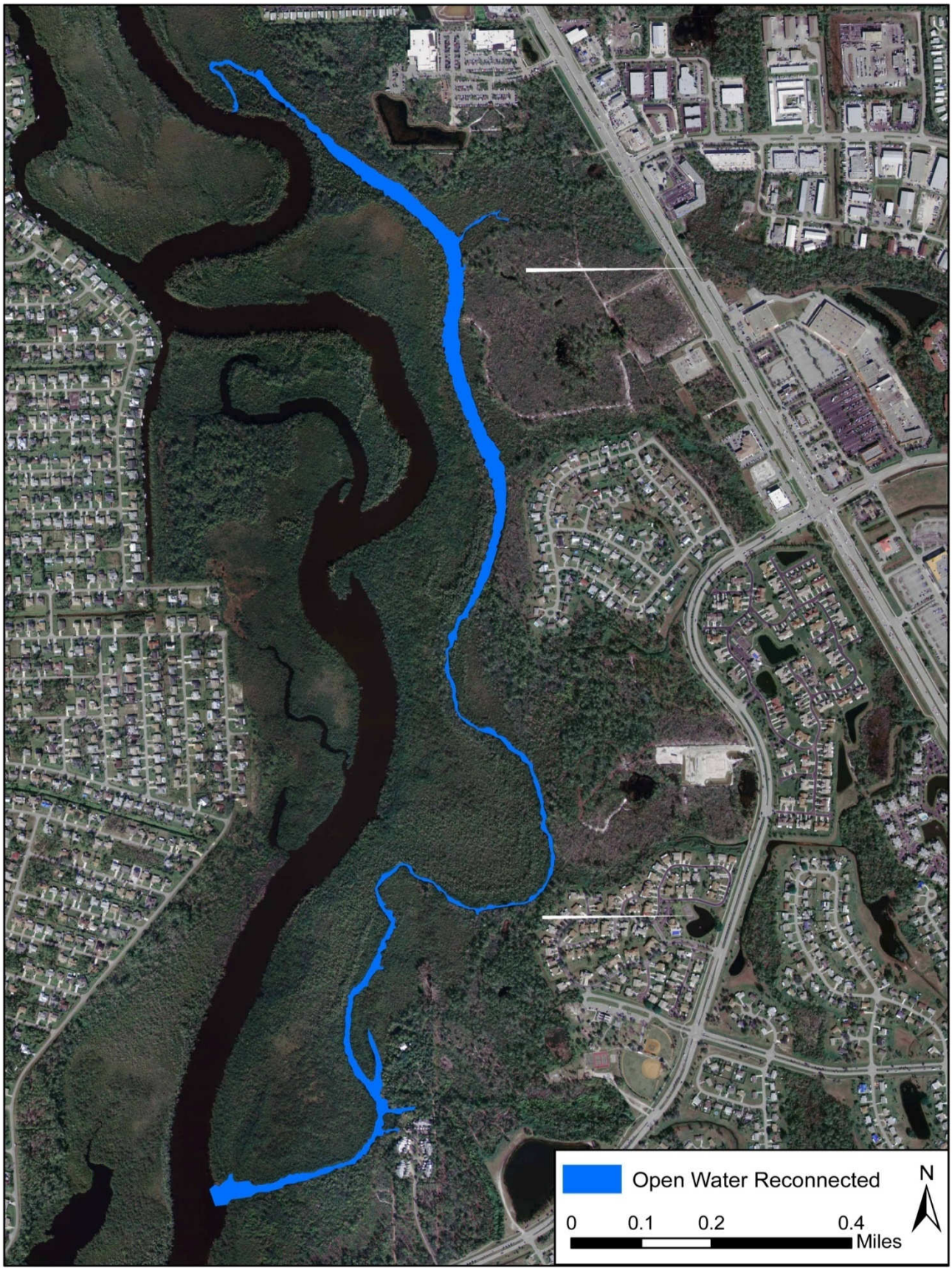


Evans Creek Upstream Excavation Area Map

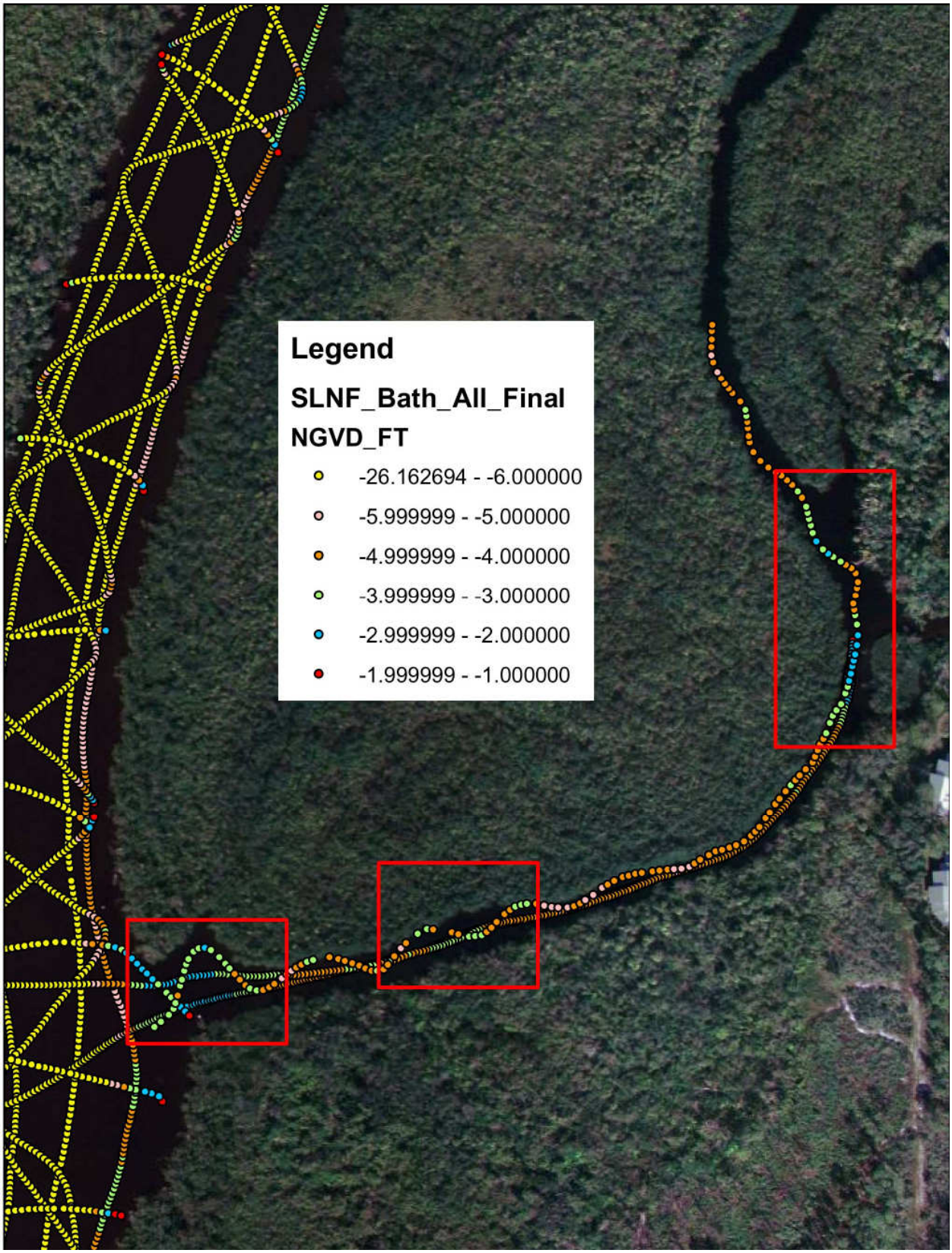
Evans Creek Downstream Excavation Area Map

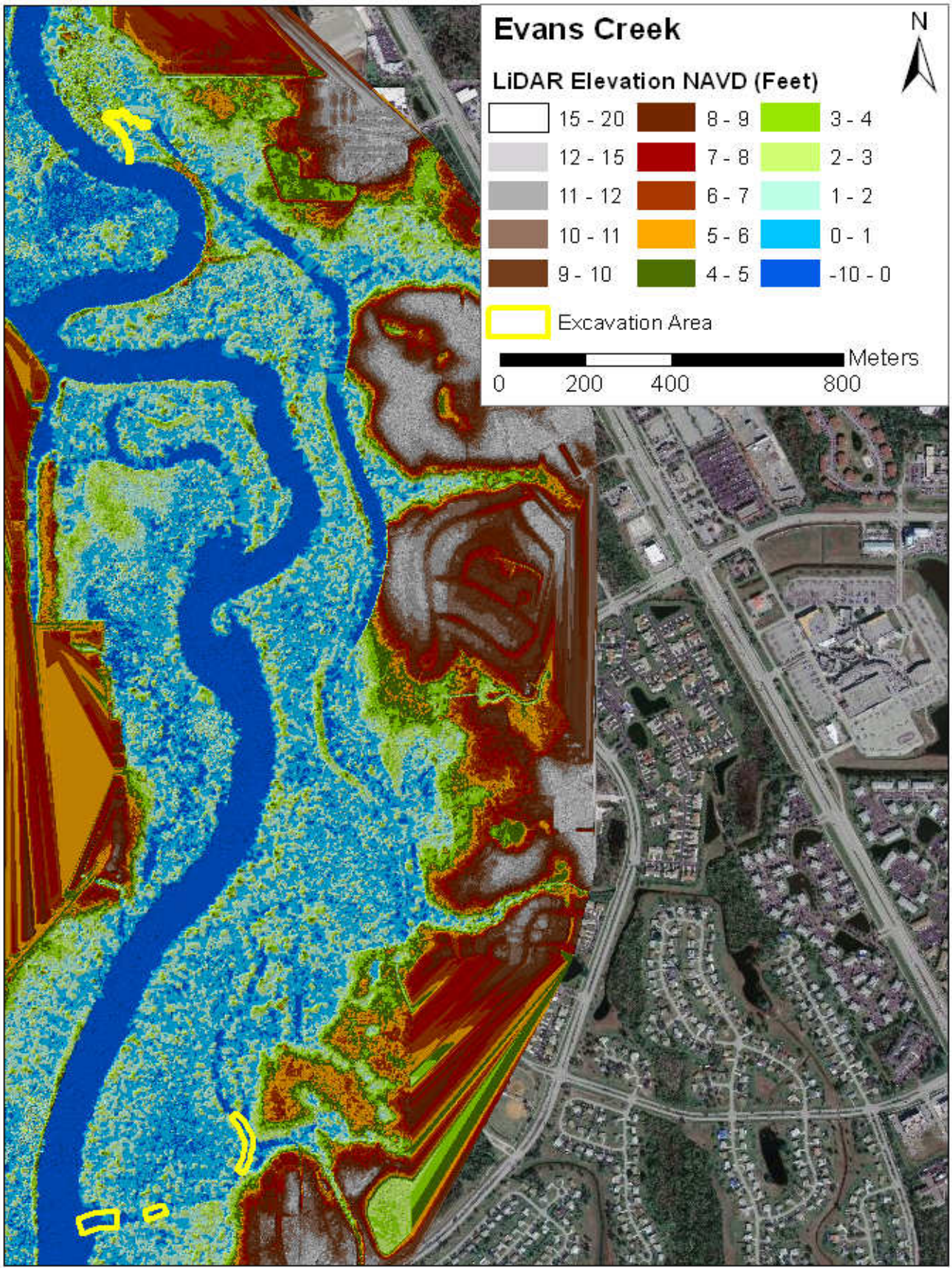


Evans Creek Open Water-Floodplain Map



Evans Creek 2008 Elevations




Evans Creek
N
LiDAR Elevation NAVD (Feet)
15 - 20
12 - 15
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
-10 - 0
Excavation Area
Meters
0
200
400
800

Evans Creek Downstream (looking north)

Evans Creek Downstream Middle

Evans Creek Upstream Middle (looking north)

Evans Creek Upstream (looking northeast)

River Place Upstream

Ranking Form
POTENTIAL RECONNECTION PROJECTS FOR THE ST. LUCIE RIVER, NORTH FORK NARROWS, AND TEN MILE CREEK

Date: 18 August 2008/02 September 2008/26 January 2009

Site: River Place Upstream / PBS&J Oxbow 3 / SLC 4, 5 (Do both SLC 4 and SLC 5 at same time)

Latitude, longitude: See Notes

Upstream or downstream of Gordy Road: Downstream

River mile range: 24.5

Ranking team: Dr. John Tucker (SLC), Jeff Beal (FWC), Laura Herren (FDEP CAMA), Brian Sharpe (FDEP CAMA)

Criteria	Score *	Subjective Weighting Factor *	Weighted Score	Comments
Tier 1 – Benefits				
Reconnection area for wildlife				
Wetland acres	**3.83**	x5	**19.15**	
Open water acres	**1.89**	x5	**9.45**	
Public benefit				
Health	**3**	x3	**9**	
Access	**3**	x3	**9**	
		Tier 1 Total:	**46.6**	
Tier 2 – Other Factors				
Logistics				
Accessibility	**3**	x4	**12**	
DMMA sites	**1**	x3	**3**	
Simultaneous reconnection of sites	**5**	x3	**15**	Complete at same time as River Place Berm Breach.
Erosion potential	**3**	x3	**9**	See notes
Estimated cost	**1**	x5	**5**	575K (see notes)
Ease of obtaining a permit				
Natural resources	**3**	x3	**9**	
Pollutants	**4**	x2	**8**	
Controversy	**2**	x1	**2**	
Land ownership	**3**	x3	**9**	Main channel: River Place on the St. Lucie CDD North branch: River Place Dev. Conserv. Easement.
Timeliness/urgency	**1**	x2	**2**	
		Tier 2 Total:	**74**	
		Grand Total:	**120.6**	

* Range is 1 (lowest) to 5 (highest)

River Place Upstream Notes:

Project Location

Upstream of Prima Vista Blvd. at the fifth left (west) turn. This is just north of the Rivers Edge HOA on the west side of the North Fork. The upstream end is weakly connected at the river and the upstream branch is south of a large pine tree and north of two cabbage palms – one obviously leaning over the water, the other high and leaning toward the water (see pictures).

Project Goals

The connection of the upstream end of the River Place oxbow. This end has: 1) a main (historical) channel that is weakly connected to the river and 2) a north branch to the upstream end that is cut off from the river by a berm. The main channel needs to be widened and deepened and the plug on the north branch needs to be removed.

Cost Estimate/Erosion Potential

Cost Estimate Scores: 5 = 0-99K; 4 = 100-199K; 3=200-399K; 2=400-499K; 1= 500K +

Main Channel (deepen existing opening): 750' long x 25' wide x 2' high, need to deepen to -2' NGVD. Some areas have no berm, but could need to pull a large number of trees including one red mangrove on the east end that might be the northernmost individual along the North Fork). Fairly long but straightforward. Already connected during high water-need to widen and deepen. Heavy disturbance by hogs.

North Branch (berm breach): 75' long x 25' wide x 6' high (some large cabbage palms in the excavation footprint)

Natural Resources

Main Channel: coin vine, pond apple, ferns, leather fern, red bay, red maple, cabbage palm, wedelia, pines, 1 red mangrove. High total number of trees.

North Branch (berm breach): cabbage palm, shoebutton ardisia, passion vine, pond apple, swamp fern, royal fern, leather fern, wax myrtle, saw palmetto, coin vine, red maple, pop ash, beautyberry, goldenrod, poison ivy, shoestring fern, caesarweed, and laurel oak.

Waypoints

Main Channel: 27.34128 -80.33875

North Branch along river (berm breach): 27.34228 -80.33975

North Branch at western side of plug (berm breach): 27.34215 -80.33985

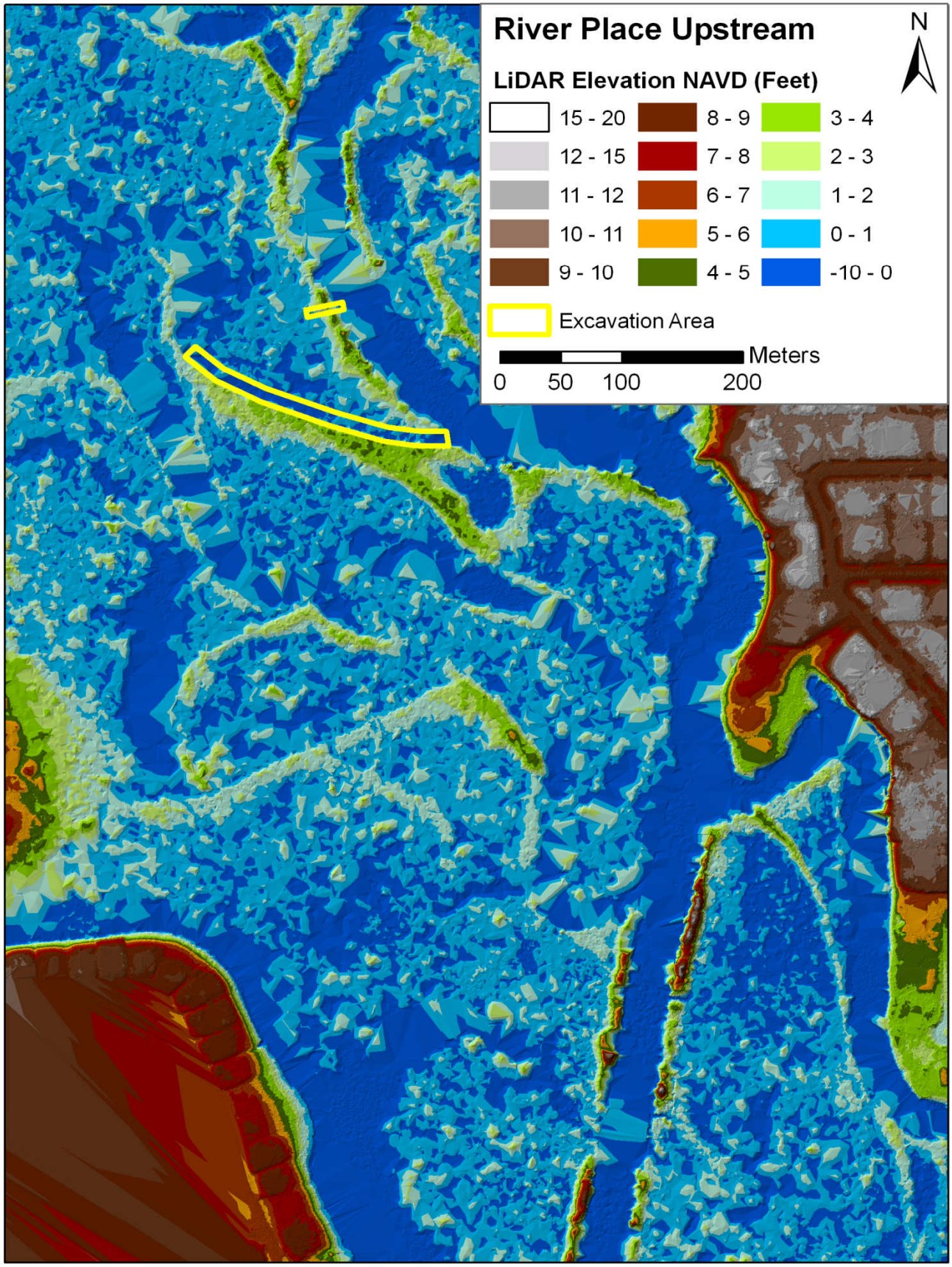
Additional Notes

SLC Category A. Might also want to add a connection to the existing pond/lake. SLC Categories are: A –

Reconnection would be very beneficial (probably with a high benefit:effort ratio); B – Reconnection would be beneficial; C – Reconnection would be helpful (mostly smaller areas); B+ - The site is large, but not easy to restore (if easier, it would be an A); C+ - The site is small, but easy to restore (if larger, it would be a B).

River Place Upstream Excavation Area Map

River Place Upstream Open Water-Floodplain Map


River Place Upstream
N
LiDAR Elevation NAVD (Feet)
15 - 20
12 - 15
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
-10 - 0
Excavation Area
Meters
0
50
100
200

River Place Upstream – Main Downstream Branch Looking West

River Place Upstream – Southernmost Downstream Opening

River Place Upstream – Upstream Branch Looking East

River Place Upstream – Upstream Branch Looking West

Otter Trail

Ranking Form
POTENTIAL RECONNECTION PROJECTS FOR THE ST. LUCIE RIVER, NORTH FORK NARROWS, AND TEN MILE CREEK

Date: 02 September 2008

Site: Otter Trail / PBS&J Berms 14, 15

Latitude, longitude: Multiple – See Notes

Upstream or downstream of Gordy Road: Downstream

River mile range: 25.5 – 25.9

Ranking team: Dr. John Tucker (SLC), Jeff Beal (FWC), Brian Sharpe (FDEP CAMA), Laura Herren (FDEP CAMA)

Criteria	**Score ***	**Subjective Weighting Factor ***	**Weighted Score**	**Comments**
Tier 1 – Benefits				
Reconnected area for wildlife				
Wetland acres	**14.48**	x5	**72.4**	
Open water acres	**0.11**	x5	**0.55**	
Public benefits				
Health	**3**	x3	**9**	
Access	**2**	x3	**6**	
		Tier 1 Total:	**87.95**	
Tier 2 – Other Factors				
Logistics				
Accessibility	**1**	x4	**4**	Large barge – use River Park Marina boat ramp if low and can fit under Prima Vista bridge.
DMMA sites	**2**	x3	**6**	Possibly Idabelle Island?
Simultaneous reconnection of sites	**3**	x3	**9**	
Erosion potential	**1**	x3	**3**	See notes
Estimated cost	**2**	x5	**10**	450K See notes
Ease of obtaining a permit				
Natural resources	**1**	x3	**3**	
Pollutants	**4**	x2	**8**	North end near canal outfall, but surrounded by natural lands.
Controversy	**2**	x1	**2**	
Land ownership	**4**	x3	**12**	SFWMD & City of PSL
Timeliness/urgency	**1**	x2	**2**	
		Tier 2 Total:	**59**	
		Grand Total:	**146.95**	

* Range is 1 (lowest) to 5 (highest)

Otter Trail Notes:

Project Location

South of Midway Rd at SLC's Oxbow Eco-Center Otter Trail just north of Channel Marker 34 on the west side of the North Fork.

Project Goals

Two cuts (one breach and one culvert site) are needed to rehydrate the historical floodplain that runs along the west side of the Otter Trail at the Oxbow Eco-Center. The southern downstream breach is just north of the upstream end of the Oxbow Eco-Center oxbow. The northern upstream culvert site is just south of the upstream end of the Idabelle Island oxbow.

Cost Estimate/Erosion Potential

Cost Estimate Scores: 5 = 0-99K; 4 = 100-199K; 3=200-399K; 2=400-499K; 1= 500K +

Downstream: 125' long x 40' wide x 6' high (breach)

Upstream: 150' long x 40' wide x 15' high (three 3' culverts)

Natural Resources

Downstream: saw palmetto, high density of young cabbage palms, laurel oak

Upstream: Large oaks (can be avoided using culverts) and cabbage palm

Waypoints

Downstream: 27.35364 -80.34641

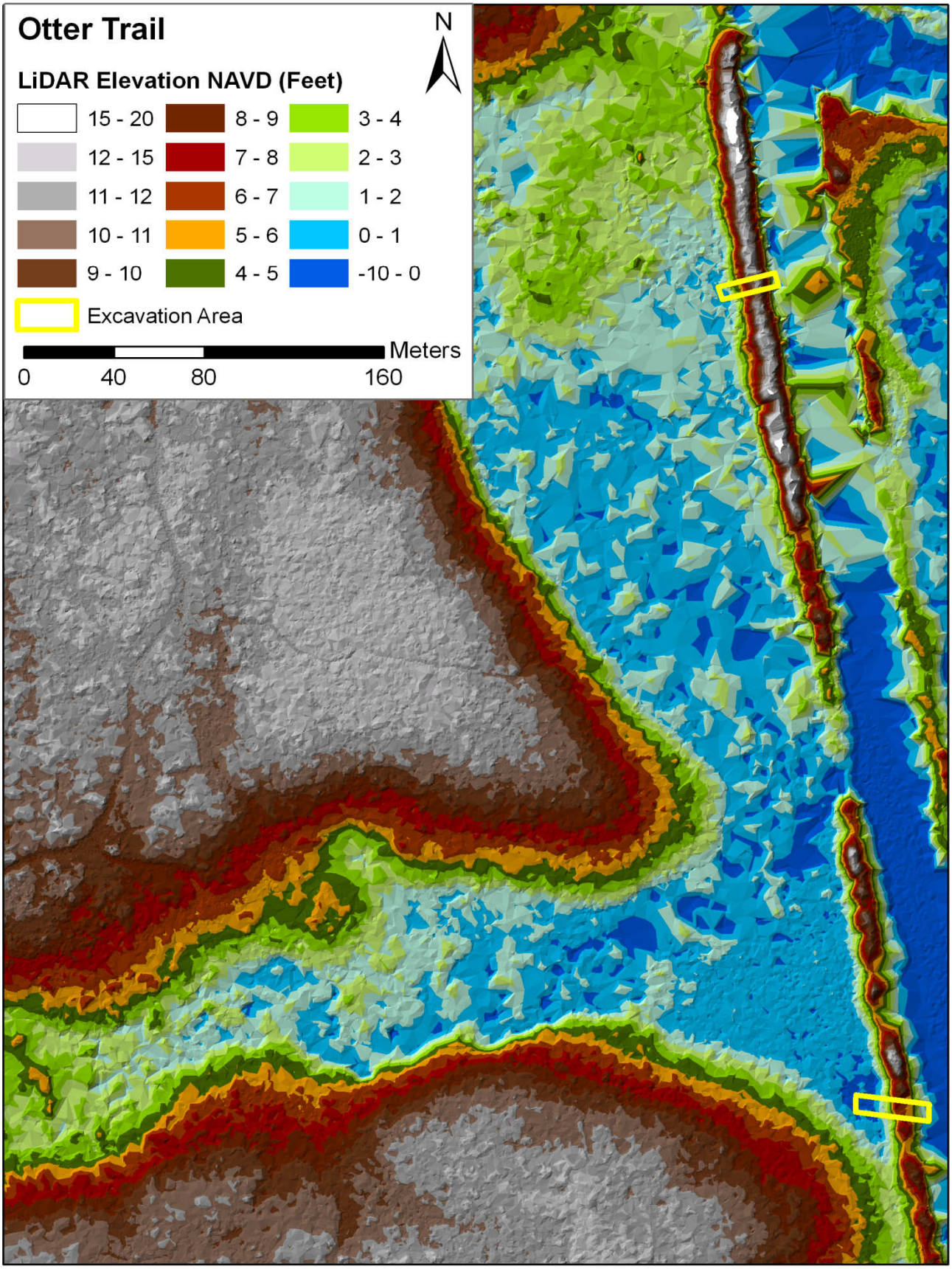
Upstream: 27.35711 -80.34704

Additional Notes

Coordinate with St. Lucie County Environmental Resource Department.

Otter Trail Excavation Area Map

Otter Trail Open Water-Floodplain Map


Otter Trail
N
LiDAR Elevation NAVD (Feet)
15 - 20
12 - 15
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
-10 - 0
Excavation Area
Meters
0
40
80
160

Otter Trail Upstream

Otter Trail Downstream

Site 5 West

Ranking Form
POTENTIAL RECONNECTION PROJECTS FOR THE ST. LUCIE RIVER, NORTH FORK NARROWS, AND TEN MILE CREEK

Date: 18 August 2008

Site: Site 5 West / PBS&J Berm 7

Latitude, longitude: See notes.

Upstream or downstream of Gordy Road: Downstream

River mile range: 23.9 – 24.2

Ranking team: Dr. John Tucker (SLC), Jeff Beal (FWC), Laura Herren (FDEP CAMA)

Criteria	Score *	Subjective Weighting Factor *	Weighted Score	Comments
Tier 1 – Benefits				
Reconnection area for wildlife				
Wetland acres	**9.75**	x5	**48.75**	
Open water acres	**1.88**	x5	**9.4**	
Public benefits				
Health	**3**	x3	**9**	
Access	**3**	x3	**9**	
		Tier 1 Total:	**76.15**	
Tier 2 – Other Factors				
Logistics				
Accessibility	**4**	x4	**16**	
DMMA sites	**4**	x3	**12**	
Simultaneous reconnection of sites	**5**	x3	**15**	
Erosion potential	**4**	x3	**12**	See notes
Estimated cost	**3**	x5	**15**	$200K (see notes)
Ease of obtaining a permit				
Natural resources	**3**	x3	**9**	
Pollutants	**4**	x2	**8**	
Controversy	**4**	x1	**4**	
Land ownership	**5**	x3	**15**	Savannas Preserve State Park/NFSLR AP
Timeliness/urgency	**1**	x2	**2**	
		Tier 2 Total:	**108**	
		Grand Total:	**184.15**	

* Range is 1 (lowest) to 5 (highest)

Site 5 West Notes:

Project Location

North of Prima Vista Blvd along the west side of the North Fork immediately west of Site 5 and north of channel marker 32. Site 5 has two open breaches and one culvert on the east side of the river. Emerson is the closest road to the west.

Project Goals

Hydrological restoration through one berm breach and one oxbow connection. This oxbow (near Emerson Street) was not known to be historically connected, but the water is stagnant and connection is expected to benefit the river.

Cost Estimate/Erosion Potential

Cost Estimate Scores: 5 = 0-99K; 4 = 100-199K; 3=200-399K; 2=400-499K; 1= 500K +

Breach: 60' long x 25 feet wide x 5' high.

Oxbow: 150' long x 50' wide x 1 ' high

Natural Resources

Breach: grapevine, ficus, red maple, Boston fern, cabbage palm

Oxbow: cabbage palm, pond apple, leather fern, wax myrtle, willow, saltbush

Waypoints

Breach: 27.33691 -80.33733

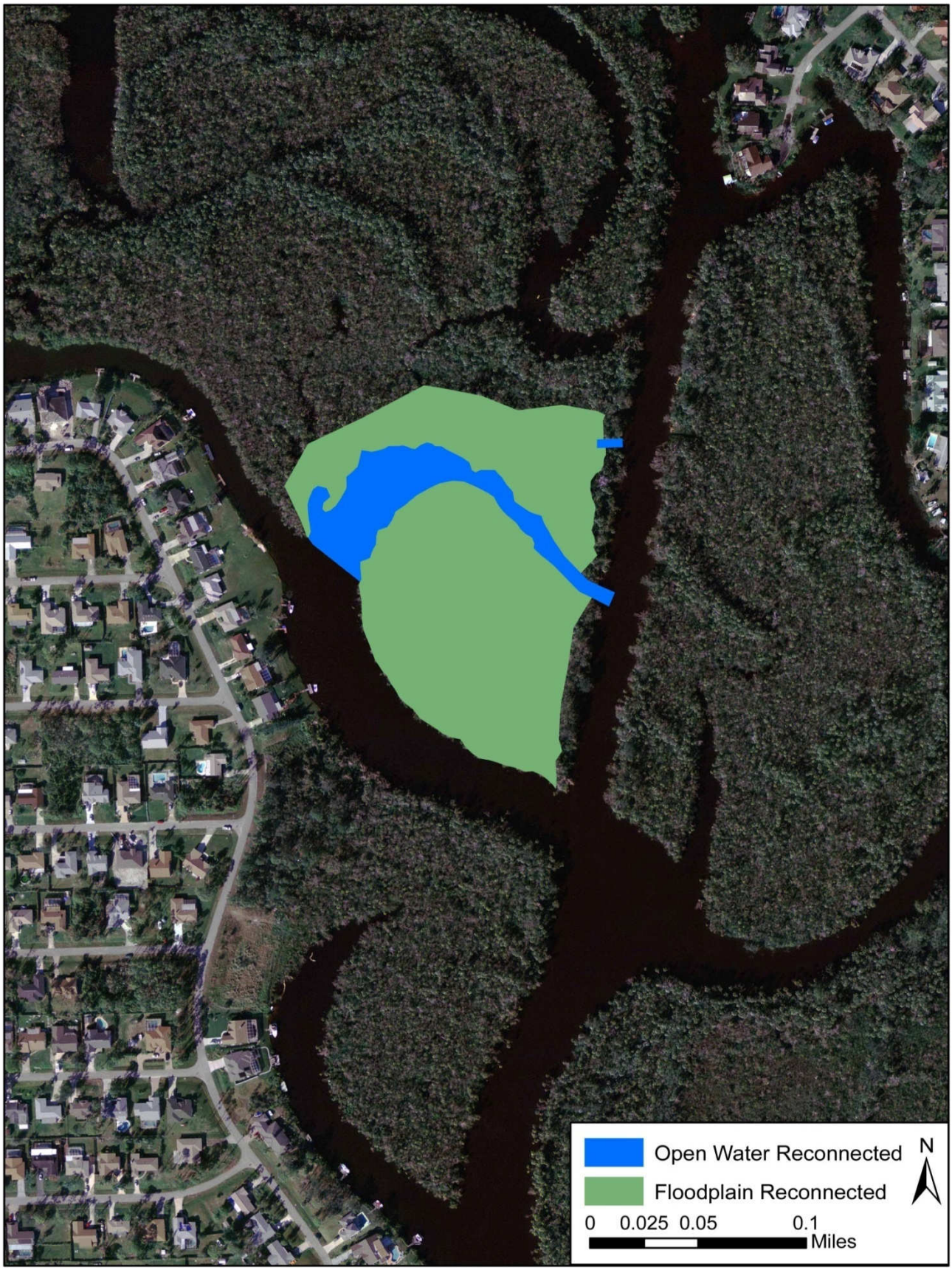
Oxbow: 27.33603 -80.33753

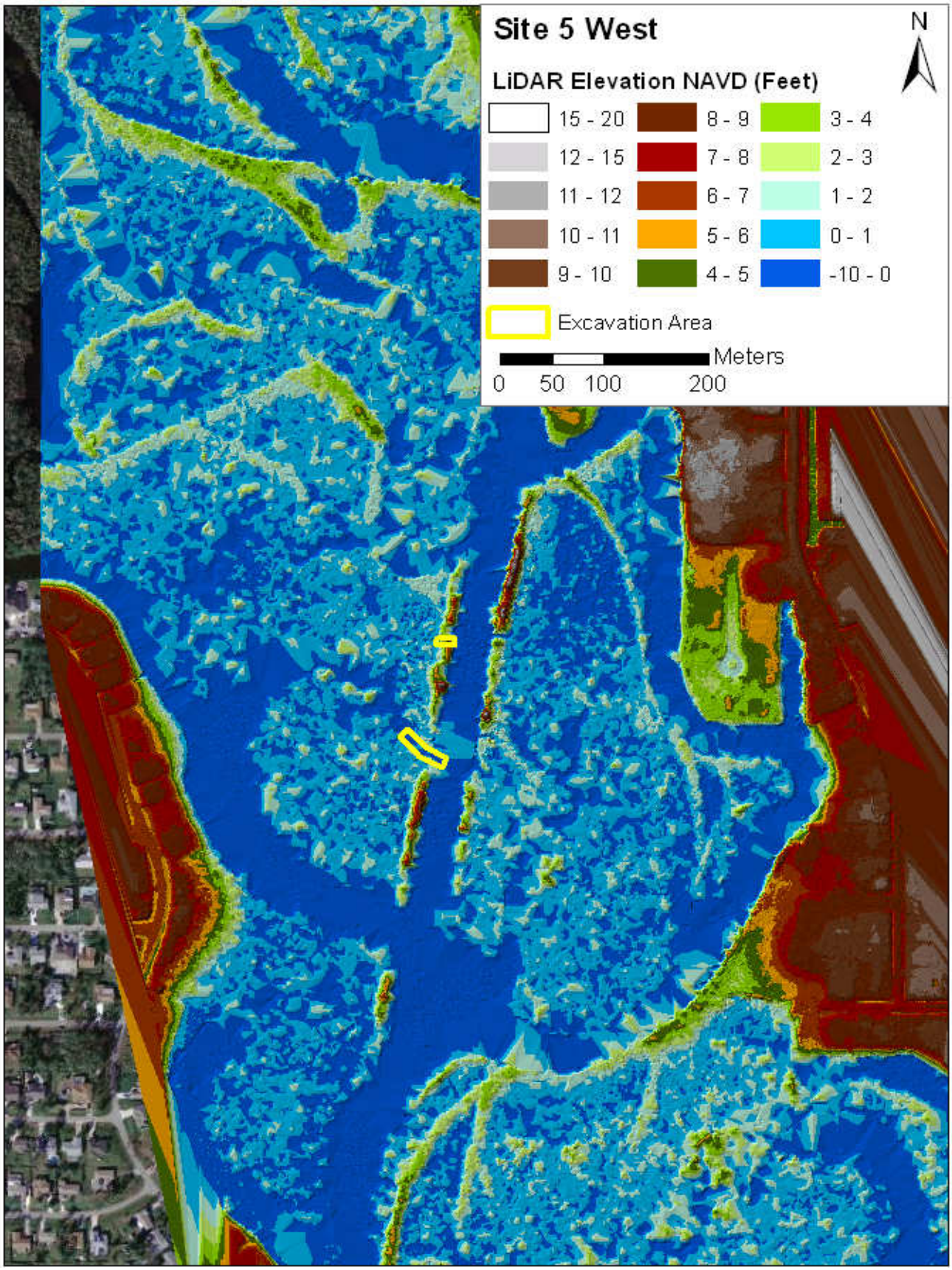
Additional Notes

Berm height at the needed breach ranges from 6' to 9' and the width ranges from 30' to 42'. PBS&J Berm 5 & 7 are on Board of Trustees of the Internal Improvement Trust Fund (state-owned) property and Berm 9 is on River Place on the St. Lucie Community Development District property. Eliminate PBS&J Berms 5 and 9 - remnant berms not impeding flow.

Site 5 West Excavation Area Map

Site 5 West Open Water-Floodplain Map




Site 5 West
N
LiDAR Elevation NAVD (Feet)
15 - 20
12 - 15
11 - 12
10 - 11
9 - 10
8 - 9
7 - 8
6 - 7
5 - 6
4 - 5
3 - 4
2 - 3
1 - 2
0 - 1
-10 - 0
Excavation Area
Meters
0 50 100 200

Site 5 West Berm Cut

Site 5 West Oxbow Dead End

Attachment B

Meeting Minutes

Programming Document

Water Quality Improvement Projects

American Consulting Professionals, LLC

206 W Hawthorne Street
Dalton, Georgia 30720
Tel 706.508.4029 • Fax 706.529.2746
american@acp-ga.com • www.acp-ga.com

MEETING MINUTES

Meeting Date: 12/4/09 **Date Issued:** 12/14/09

Location: North Fork St. Lucie River Aquatic Preserve

Project Name: Crosstown Parkway Project

Purpose: Review of hydrologic restoration projects

Notes by: Anna Peterfreund **American Project #:** 5079986

Copies to: All attendees; City of PSL; American

Attendees	Representing	Phone	Fax or e-mail
Anna Peterfreund	American	706-508-4029	Anna.peterfreund@acp-ga.com
Bill Adams	American	561-253-9567	wadams@ace-fla.com
Jeff Beal	FFWCC	772-465-2400 ext 561	Jeff.beal@myfwc.com
Laura Herren	DEP	772-429-2995	Laura.Herren@dep.state.fl.us
Brian Sharpe	DEP	772-429-2995	Brian.Sharpe@dep.state.fl.us

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

Pictures from the trip can be found under folder B.06 in the file cabinet.

The restoration projects consist of shoreline stabilization and dredging. Each project will require biological and water quality monitoring before and after the projects are implemented. The monitoring will be required for 5 years after implementation. There is no set length for the monitoring to be conducted prior to the construction of the projects; however, most of the projects are monitored between 1 and 3 years beforehand. All areas that have been disturbed we have to be replanted. The preferred shoreline species include leather fern, swamp lily, salt bush, cordgrass and mangroves (depending on location and habitat type).

In the past, DEP has been required to do soil testing on the dredged material. The preference is to take the soil to a local landfill where they can use it for local government projects. However, if petroleum is present, most local landfills will not accept the soil. The Evans Creek project has the highest potential for contamination.

The location of the reconnection sites should minimize impacts to hardwoods to the extent possible. Though the ranking forms produced by DEP give an approximate depth to dredge to, the actual depth should be based on engineering analysis and thus, is subject to change. For the most part, the proposed depth should match the depth of the existing portions of the waterways. Using the old riverbed is a good estimate of how deep the dredging should be done.

The Roberts Upstream project would require the replacement of a bridge. The site is easily accessible and construction of the improvements would be easier to implement than other projects proposed.

The Otter Trail project contains a pedestrian trail that may need to be taken into account.

The Riverplace project is also on private property on conservation land owned by the River Place on the St. Lucie CDD.

Site 5 contains a completed project adjacent to the Site 5 West site that can be used as an example.

The northern section of the Evans Creek site is likely too narrow to be done from a barge. The DEP and FWC suggested piping out the material so that work could still be done from the water. They have been successful using this method in the past.

None of the hydrologic projects DEP and FWC have implemented in the past, have required compensatory mitigation for impacts.

American Consulting Professionals, LLC

206 W Hawthorne Street
Dalton, Georgia 30720
Tel 706.508.4029 • Fax 706.529.2746
american@acp-ga.com • www.acp-ga.com

MEETING MINUTES

Meeting Date: August 6, 2010 **Date Issued:** August 6, 2010

Location: DEP CAMA Field Office

Project Name: FDEP Proprietary Mitigation Plan

Purpose: Oxbow Reconnection Projects

Notes by: Anna Peterfreund **American Project #:** 5109468

Copies to: File, Attendees, City of PSL, Weatherby, Carter, Salicco

Attendees	Representing	Phone	Fax or e-mail
Roxanne Chesser	City of PSL	772-871-5186	roxannec@cityofpsl.com
Laura Herren	DEP	772-429-2995	Laura.herren@dep.state.fl.us
Brian Sharpe	DEP	772-429-2995	Brian.sharpe@dep.state.fl.us
Jeff Beal	FWC	772-242-2561	Jeff.beal@myfwc.com
Bob Weigt	R.L. Weigt (RLW)	772-546-6255	bob@rlwenv.com
Freda Posin	R.L. Weigt (RLW)	772-546-6255	freda@rlwenv.com
Anna Peterfreund	American	706-508-4029	Anna.peterfreund@acp-ga.com
Bill Adams	American	561-253-9567	wadams@acp-fl.com

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The meeting began at 10:00 am.

Laura began the meeting by providing some notes on the monitoring protocol and next steps (attached).

Data Loggers: Bob handed out maps containing sites he felt were appropriate for the data loggers. Bob mentioned that they only have money in the budget for 8 data loggers and asked if one data logger for the Otter Trail or Site 5 West site would be sufficient. Jeff mentioned that the SFWMD has tide gauges along the NFSLR that could be utilized to get data for the second Otter Trail if more data loggers are not available. He thought the White City Park gauge would give accurate information for that site.

Laura mentioned that conversations with Eric Shea and Mindy Parrott indicate that permits required to install the data loggers within the North Fork St. Lucie River Aquatic Preserve would go through South Florida Water Management District (Mindy Parrott) and not Florida Department of Environmental Protection (Eric Shea) Mindy indicated to Laura over the phone on 8/5/2010 that a *de minimus* permit would most likely be fine. Bob mentioned that the data loggers are 4" in diameter or less and that a platform may be required to stabilize the PVC encasement for the water level logger. Laura has suggested not installing a platform if possible. Based on information collected at other sites, RLW will collect water level data every half hour and will be downloaded once a month. Jeff suggested that the

PVC encasing the water level data loggers be supported by a tree or other relatively permanent structure to ensure the pipes do not move.

The Evans Creek project is largely a dredge project. The Otter Trail project is a berm breach to rehydrate wetlands. So, it was decided that 3 data loggers would be used for Evans Creek and one data logger would be used in the wetland area near the northern cut of the Otter Trail site. Bob mentioned that they may be able to access more data loggers and could use them in this site if they come available. Laura would like a map of the locations of the data loggers once the location is finalized. The locations will be surveyed in.

Water Quality: RLW will measure water levels every ½ hour and dissolved oxygen, temperature, salinity, specific conductivity, turbidity, clarity, , and pH at each site monthly. Measurements will be taken at the surface, middle, and bottom of the water body. During the meeting, it was decided that redox potential was not necessary to measure. The water quality measurements will be taken at the same location (fixed points) each month.

Jeff mentioned that the typical breaches were approximately 40 feet wide from TOB to TOB.

Engineering: From an engineering standpoint, American can begin conceptual designs once there is approximately 6 months of data logger data to work with. Data will be needed for most of fall and most of winter to include the most useful data for engineering. The engineering may have to be refined once the entire year's worth of data is completed.

Schedule: Laura inquired about the current EIS schedule. Roxanne mentioned that the DEIS will be submitted to FHWA this month. The City, FDOT, and the City's consultants are reviewing the schedule to determine when the public hearing will occur.

Biological Monitoring: RLW will utilizebox traps, Breder traps, fike nets, seines, hook and line for the biological monitoring. The types of traps used will be determined by vegetative cover, sediment stability, and flow. Electroshocking from a boat will likely be needed for Evans Creek. FWC has been doing some electroshocking along the NFSLR and Evans Creek and RLW may be able to utilize their data or see if the FWC could do additional electroshocking within Evans Creek to supplement data. Jim Wittington in the Tequesta Office would be the contact for this. RLW will call to discuss with FWC.

Biological monitoring will be done quarterly and will include an inventory of invertebrates.

Bob mentioned on of the standard conditions of the permit they had to acquire from FWC to do the biological monitoring within the Aquatic Preserve does not allow them to leave out nets overnight. Jeff mentioned that he may be able to call Lisa Greg with RLW to discuss getting an exemption from this condition.

Vegetation Sampling: Laura handed out vegetation sampling and monitoring techniques to RLW to utilize for these projects. She suggested using Marion Hedgepeth's protocol with more transects placed parallel along each side of each cut. Laura would like to see transects, approximately 100 m in length depending on the site, north and south of each cut. For Site 5 West, the vegetation sampling would be done all along the length of the cut.

Vegetation sampling should be done once prior to construction, once at time zero, once at 6 months, once at 1 year, and then annually after that for a total of 5 years. Annual sampling should be done in the spring. When Laura told South Florida Water Management District (Mindy Parrott) the monitoring schedule for the vegetation transects, Mindy Parrott felt that annual monitoring between year 1-5 would

be sufficient. Jeff mentioned that sampling may not be needed that frequently. American and RLW will discuss this with the SFWMD.

For Evans Creek, vegetation sampling could be done through video and photo documentation and aerials.

Fixed photo stations should be set up for each project to take pre and post-construction photos in the same location. This should be done at least once each year.

Construction: Laura felt that the construction costs estimated within the packets for each project were accurate. The total cost of construction estimated for all four oxbow reconnections comes to approximately $1.4 million. The City has an upper limit of $2 million to include engineering, permitting, monitoring, and construction. Anna mentioned that they will have to go back and estimate how much engineering, permitting and monitoring would be for this length of time to ensure they are appropriate funds for construction. Using the same contractor and letting all four projects together could reduce construction costs.

All four projects should be able to be constructed via barge. To minimize mobilization costs, all four projects should be constructed one right after the other. The complications come from getting the cranes and construction equipment under the existing bridges. Jeff suggested that the City talk to the County about launching from a crane stationed on the Prima Vista bridge. For the northern section (upstream opening) of Evans Creek, a barge may be too large and the material may have to be pumped out.

The Strazulla and Platts sites were constructed by Vance Construction.
The Miller site was constructed by South Florida Land Clearing.
The Site 5 site was constructed by Arbor Tree and Land.

Jeff mentioned that all three were great to work with. For those projects, the contractor was able to find a use for the dredged material. Materials from these sites will need to be tested to determine what the soil could be used for. American confirmed that geotechnical analyses would be done.

The meeting adjourned at approximately 12:00 pm.

American

www.ace-fla.com

Project Name	Oxbow Reconnections		Page
Subject		Project #	Sheet of
Designer	Date 8/6/10	Checker	Date

Name	Affiliation	Phone	E-mail
Anna Peterfreund	American	706-508-4029	anna.peterfreund@acp-ga.com
Bill Adams	American	561 2539567	wadams@acp-fl.com
BRIAN SHARPE	DEP	772 429-2995	Brian.Sharpe@dep.state.fl.us
LAURA HERREN	DEP	772 429-2995	Laura.Herren@dep.state.fl.us
Roxanne Chausser	City PSL	772/871-5186	roxannec@cityofpsl.com
JEFF BEAL	FWC	772.242.2561	jeff.beal@myfwc.com
FREDA POSIN	RLW	772 5466255	freda@rlwenv.com
Bob Weigt	RLW	"	bob@rlwenv.com

Monitoring at the hydrologic restoration sites selected as Public Interest Projects for PSL's proposed river crossing.

Laura Herren, FDEP CAMA, Indian River Lagoon Aquatic Preserve

10:00 on August 6, 2010

Completed North Fork SLR hydrologic restoration projects:

Site 5	Monitor the three berm breaches during the spring and fall surge in April and October. Takes approximately one week. Use box trap at the two cuts and the fike net at the culvert. Seine, Breeder traps, and box trap used at all three breaches. Photodocumentation each year since established in June 2002. Water quality parameters collected at the time of monitoring: DO and salinity. Stabilized with riprap then subsequently planted. Vegetation monitoring was conducted pre and post construction.
Strazulla Oxbow	No set monitoring schedule. Use fike net and Breeder traps for three days. Photodocumentation each year since established in June 2003. Water quality parameters collected at time of monitoring: DO and salinity. Stabilized with riprap and subsequently planted. Vegetation monitoring was conducted pre and post construction. Permit type: Notice General Permit (40E-400.85 – General Permit to the Department for Environmental Restoration or Enhancement Activities) through FDEP since it was SFWMD-owned land. Note that on FDEP-owned land SFWMD would issue the permit.
Miller Oxbow	Monitoring schedule? Pre-monitoring with fike net at downstream end and backpack electroshocker. Established May 2010. Part of the SFWMD NF Vegetation transect project – PI Marion Hedgepeth 561-682-6348

Sites of interest for PSL's Third River Crossing:

Evans Creek	upstream and downstream dredge project
Site 5 West	berm breach and dredge project
Otter Trail	berm breach project
RiverPlace Upstream	berm breach and dredge project
Robert's Upstream	backup site on private property

Pre and post monitoring should entail the following along the shoreline of the channel where the cut is to be made and inside the project area (want to eventually provide evidence that the projects effectively improved water quality - DO has increased, turbidity has decreased, water clarity has improved and that planted/recruited shoreline vegetation in the breached areas has provided additional habitat for fish and inverts that didn't exist prior to the project):

Environmental: water level and rainfall (daily max-min), DO, salinity, turbidity, water clarity/secchi, temperature (monthly) John Tucker with SLC MCD also suggested: pH, eH, redox potential - I am open to discussion on these three parameters.

Biological:

Fish and invertebrates : Monitor quarterly on a seasonally high incoming tide while there is standing water on the marsh surface using a combination of fike nets, Breder traps, seines, box traps, drop nets, or other appropriate gear. Document to lowest recognizable taxon – species, size, abundance, and any other significant observations such as, but not limited to, breeding condition, commercially important, protected, and rare (tropical peripheral) species.

Vegetation: Set up transects and monitor vegetation once pre-construction, T0, 6 mo, 1 yr, 2, yr, 3, yr, 4 yr, and 5 yr. Non-native species that grow in the construction area should be removed/treated in place by the contractor for the first five years such that exotic growth does not exceed that at T0. The vegetative transect protocol used at Site 5 was provided to Weigt Environmental as a starting point on how to proceed.

Helpful Resources:

Site 5 Progress reports – provided to American Consulting previously and Weigt Environmental during the meeting by Laura Herren.

Permit Applications – provided to American Consulting by Laura Herren

Photographs/video - Consultant can retrieve from AP office computer by scheduling a visit with Laura Herren

Draft North Fork Hydrologic Restoration Report - Consultant can retrieve from AP office computer by scheduling a visit with Laura Herren

North Fork SLR Plant Inventory – associated with SFWMD floodplain vegetation transects. PI Marion Hedgepeth 561-682-6348

North Fork SLR Aquatic Preserve Management Plan - Provided during the meeting by Laura Herren.

North Fork SLR Plant List for the Buffer Preserve/State Park - Provided during the meeting by Laura Herren.

LiDAR – maps provided during the meeting.

Helpful Information:

USGS tide gauge at Prima Vista Blvd

Tidal delay is 1-1.5 hrs behind the high tide at the inlet at Site 5

Average tidal amplitude is 1.5' with lows around -1.0' and highs around 2.75'

100 year flood elevation is approximately 10'

American Consulting Professionals, LLC

206 W Hawthorne Street
Dalton, Georgia 30720
Tel 706.508.4029 • Fax 706.529.2746
american@acp-ga.com • www.acp-ga.com

MEETING MINUTES

Meeting Date: March 10, 2011 **Date Issued:** March 28, 2011

Location: SFWMD Office, Stuart, Florida

Project Name: Proprietary Mitigation Projects - Crosstown Parkway Extension

Purpose: Pre-application meeting

Notes by: Anna Peterfreund **American Project #:** 5109648

Copies to: File, City of PSL, Mirson, All Attendees

Attendees	Representing	Phone	Fax or e-mail
Garett Lips	USACE	561-472-3519	Garett.g.lips@usace.army.mil
Mindy Parrot	SFWMD	772-223-2600 x3608	mparrott@sfwmd.gov
John McCarthy	SFWMD	772-223-2600 x3625	smccart@sfwmd.gov
John Wrublik	USFWS	772-562-3908	John_wrublik@fws.gov
Brandon Howard	NMFS	561-616-8880 x210	Brandon.howard@noaa.gov
Bob Weigt	RLW	772-546-6255	bob@rlwenv.com
Freda Posin	RLW	772-546-6255	Freda@rlwenv.com
Roxanne Chesser	City of PSL	772-871-5186	roxannec@cityofpsl.com
Anna Peterfreund	American	706-508-4029	Anna.peterfreund@acp-ga.com
Chris Salicco	American	813-435-2617	csalicco@ace-fla.com
Bill Adams (via phone)	American	561-253-3567	

The following notes reflect our understanding of the discussions and decisions made at this meeting. If you have any questions, additions or comments, please contact us at the above address. We will consider the minutes to be accurate unless written notice is received within 10 working days of the date issued.

The meeting began at 9:00 am.

The meeting began with a brief introduction of the project and where we are with each one. Preliminary plans or other visuals were passed out for each project. We started with a discussion of the Savannas Area Recreation Trail.

Savannas Area Recreation Trail
The Trail is to be a paved multi-use trail with a minimum width of 10 feet with five boardwalk crossings over low, wet areas and drainage ditches. The project will also include the construction of two vista towers. The trail will have approximately 0.18 acres of impact from the bridge crossing the canal. General permit from the SFWMD will be required. The bridge will be considered a 404 structure and no permit will be required from the USACE.

Mindy mentioned the possibility of putting the boardwalk within the canal or along the side slopes instead of crossing in two locations at the beginning of the project. This would avoid wetland impacts on the east side of the canal, but may obstruct use of canal for small motorized vessels or canoes/kayaks. Construction methods will need to be discussed within the permit application. Also need to include what will be planted on the slopes of the trail, turbidity and erosion control measures and mitigation

measures. We could propose that the removal of Brazilian pepper from the trail and adjacent to the trail could be mitigation for the 0.18 acres of secondary impact from shading of the boardwalk.

Halpatiokee Canoe Launch
DEP has selected Alternative 2 as a preferred alternative since it has the least impacts to natural habitat by following the existing fire break. Alternative 2 consists of a paved entrance to the canoe launch from US 1 along the existing fire break within the state park (approximately 0.25 miles long), pavilion, restroom, interpretive kiosk, paved parking for 20 vehicles, and road signage. The boardwalk would be 10 feet wide. The restroom would either be a composting restroom or would have access to a water and sewer utility line. The only impact associated with the canoe launch is the small canoe launch platform within Evans Creek. Mindy mentioned that Evans Creek could be sovereign submerged lands (SSL) and we should get a title check to determine if a permit is required for the SSL. The question was raised whether or not the entrance to the canoe launch could be moved to the FPL entrance further south. We agreed to discuss this option with DEP.

AT&T has an easement through a portion of the property where the entrance to the canoe launch is proposed. The SFWMD and USACE will need documentation that AT&T is comfortable with DEP using their easement as a public access way to the canoe launch. This could be a letter or even an email form AT&T.

SFWMD mentioned that a de-watering permit may be required for the bathroom. They also suggested we check with DEP if we need SSL authorization. The dock appears to meet the criteria for Letter of Consent, but since this is a State Park, we would need to get clarification that this still applies. The SFWMD will require a general permit similar to the Atlantic Ridge permit. If DEP has permitted a facility near the proposed location, a permit modification could be done for a reduced application fee.

USACE stated that they would need a permit for the dock only. USACE also suggested that we look into using a slope into the creek instead of a structure which would be cheaper and require less maintenance.

The location of the eagle's nest onsite has not been verified. The coordinates were given to us by DEP and may not be accurate. Currently, the project is within 330' of the eagle nest. American will survey the actual location of the eagle nest and modify the plans to ensure all work will be greater than 330' from the nest. The nest will still be within 660' of the construction activity.

Savannas Preserve Education Center
DEP has approved and selected Alternative 1A as their preferred alternative. Alternative 1A includes a 3000 SF addition to the education center, improvements to the parking area, entrance, and sidewalks onsite, and the addition of an observation deck within the wetlands. SFWMD mentioned that if DEP permitted the original education center, we can submit for a permit modification. Otherwise, this project might meet the No Notice General permit requirements. The entire project would have to include less than 2 acres of new impervious to meet the requirements of the No Notice General. The observation deck may be limited in square footage because it is within a state park. Mitigation is not required for a No Notice General permit.

Water Quality
There are four water quality improvement projects called Evans Creek, Otter Trail, Site 5 West, and River Place Upstream. The water quality improvements will be achieved by reconnecting oxbows and isolated floodplains. Restoration efforts will include dredging shoals or berms, widening or deepening portions of the waterway, and other work as identified by DEP.

SFWMD mentioned the concern that once the berms are dredged, the wetlands behind them may be drained. We will have to show that we will not drain the wetlands (make sure the elevations are compatible).

For the permits on these projects, we will need to provide dredging volumes, fill volumes, culverts, MHW, impacts, and details on how the opening will be stabilized. Also need to discuss where the dredged material will be disposed. American mentioned that on similar projects constructed by DEP, they used silt fence and other measures to ensure the opening was stabilized during construction. We will use similar methods on these projects.

For Otter Trail, the County has a permit for the Nature Center and trails that cross this project. We could modify this permit.

The question was raised as to whether DEP has set goals/parameters to monitor the success of the project. American will follow up with DEP to determine this. RLW is monitoring these sites for one year prior to construction and five years post construction. DEP has given parameters to measure during this time but not actual measures of success.

The Riverplace Upstream project is dominated by leather fern. We will have to recontour the slopes and replant with appropriate vegetation. Also, may need to do a title determination for this site.

Regarding the potential for impacts on these projects, the SFWMD mentioned that they will need UMAMs of the conditions before the project and for conditions after the project is constructed. Add a discussion to the permit of what accomplishing (with numbers, preferably) and need to be able to defend numbers. American re-iterated that these projects are meant to improve the overall system and should be self-mitigating and not require additional mitigation. The concern is that the UMAMs will show an impact at a given location but the system as a whole will receive a benefit.

NMFS mentioned that we may need consultation for the smalltooth sawfish for the Evans Creek project. The majority of the mangroves along Evans Creek are white mangroves with few red mangroves. If we trim the mangroves over the state regulations or remove mangroves, need to discuss the smalltooth sawfish and potential affects.

Send the permit applications directly to Garett Lips and Brandon Howard to ensure they review the projects.

SFWMD mentioned that we could do the DEP permits together. If the project site is owned by someone else, submit a separate application.

SFWMD asked if we had coordinated yet with the River Place on the St. Lucie CDD. No coordination has been done to date by American but DEP may have contacted them previously. American will follow up with the River Place on the St. Lucie CDD about the project.

USACE asked the USFWS is they were concerned about manatees on these projects. USFWS stated that they were not concerned with manatees given their location and project scope. USACE suggested we put manatee exclusion grates on the culvert. RLW mentioned that putting in the manatee exclusion grate could cause the culvert to back up and not work effectively. The St. Lucie County Mosquito Control has done many projects similar to these using culverts and did not use manatee exclusion grates on any of their projects. They have not had any problems with manatees to date on any of their projects.

NMFS also mentioned that the dredged material could be used towards seagrass restoration. American will coordinate with NMFS further on this topic.

The meeting adjourned at approximately 11:00 pm.

Water Quality Projects for Crosstown Parkway Bridge-

Permits needed from SFWMD based on information reviewed from pre-application meeting on March 10th

1. Evans Creek – This project will likely qualify as an Individual Permit with a fee of $7500 based on the proposed dredging work within surface waters (2.22 acres).
   - The project could qualify for a noticed general permit under 40E-400.485 FAC if the project is part of a "surface water improvement project and management plan developed by FDEP" or the project "is approved by the secretary of the Department after at least one public meeting". The fee would be $250.
   - A sovereign lands title determination will be needed to verify ownership of land below Mean High water.
   - Detailed construction methodology will be needed describing the activities and disposal of dredge material
   - UMAM scores will be necessary to show that functional gain from water quality improvement offsets the functional loss if wetlands are impacted from widening activities.

2. Site 5 West – This project will likely qualify for a New General Permit with a fee of $3500 based on the proposed work within surface waters (0.20 acres). However, the project may qualify for a Noticed General Permit (40E-400.485 FAC) if it's with a fee of $250 (see above). **Evans Creek and Site 5 west could be combined into one permit with one fee if there is one owner (FDEP) for both projects.**

   - As with Evan's Creek, UMAM scores will be necessary to show that functional gain from project offsets the functional loss if there are wetland impacts.
   - Detailed construction methodology will be needed describing the activities and disposal of dredge material

3. Otter Trail – A GP modification to Permit 56-01461-P ($1500) will be needed for the proposed southern breach on SFWMD property. The proposed northern culvert is located on a different parcel owned by city of PSL. All owners must be co-applicants/ permittees. It might be easier to issue a separate GP for the PSL culvert, but there would be a separate fee of $3500.

- The seasonal high and normal pools elevations of adjacent wetlands will be needed to determine the possible adverse impacts from the proposed activities. Elevations of the connections should not result in drainage of the upstream wetland.
- Grate(s) are needed on end of any culvert below MHW to protect manatees.
- Description of construction techniques will be needed.

4. Riverplace Upstream – The project will likely qualify for a new General Permit ($3500 fee) based on the proposed work within surface waters (0.47 acres).
   - River Place on the Saint Lucie CDD may need to be co-applicant because of ownership if there is work above MHW.
   - Sovereign lands title determination is needed to verify ownership below mean high water
   - UMAM scores needed to show functional gain from project will offset loss if there are wetland impacts from widening.
   - Detailed construction methodology will be needed describing the activities and disposal of dredge material

Attachment C

Geotechnical Report

Programming Document

Water Quality Improvement Projects

June 16, 2011 Revised

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard
West Palm Beach, FL 33409

Attention: Mr. William Adams, P.E.

RE: Geotechnical Services
Sediment Sampling and Testing
Evans Creek
St. Lucie County, Florida
TSF Project No. 7111-11-115

Dear Bill:

TIERRA SOUTH FLORIDA (TSF), Inc. is pleased to submit the results of our geotechnical study including environmental tests performed on sediment samples, and the borings performed along Evans Creek including River Place Upstream, Otter Trail and Site #5 West in St. Lucie County, Florida.

Project Description

We understand that the projects will involve the following environmental remedial/water quality improvements:

1-Evans Creek- Deepen downstream connection of the creek; remove 3 internal downstream shoals and removal of exotic species.
2-River Place Upstream- Connecting upstream end that is cut off from river by berm, improve historical channel, widen and deepen main channel, remove plug on the north branch.
3-Otter Trail- Southern downstream breach and northern upstream culvert site needed to rehydrate historical floodplain.
4-Site #5 West- Hydrologic restoration through one berm breech, one oxbow connection and removal of exotic species.

REPORT LIMITATIONS

The opinions expressed in this report are based on the available subsurface information obtained by TSF. If deviations from the subsurface conditions noted in this report are encountered during construction, TSF should be notified immediately. If TSF is not retained to perform these functions, TSF will not be responsible for the impact of those conditions of the project.

The geotechnical engineer warrants that the findings, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

This geotechnical report has been prepared for the exclusive use of American Consulting Engineers of Florida, LLC for the specific application to the Evans Creek project in St. Lucie County, Florida.

CLOSURE

We appreciate the opportunity to perform this Subsurface Investigation Study and look forward to continued participation during the design and construction phase of this project. If you have any questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,

TIERRA SOUTH FLORIDA, INC.

Francois Thomas, P.E.
Principal Engineer
FL Registration # 56381

Ramakumar V.Vedula, P.E.
Principal Engineer

APPENDIX: Certificate of Analysis
(Palm Beach Environmental Laboratories, Inc.)

tierra
SOUTH FLORIDA
GEOTECHNICAL ENGINEERING / MATERIAL TESTING / INSPECTION SERVICES

June 16, 2011 Revised

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard
West Palm Beach, FL 33409

Attention: Mr. William Adams, P.E.

RE: Geotechnical Services
Sediment Sampling and Testing
Evans Creek
St. Lucie County, Florida
TSF Project No. 7111-11-115

Dear Bill:

TIERRA SOUTH FLORIDA (TSF), Inc. is pleased to submit the results of our geotechnical study including environmental tests performed on sediment samples, and the borings performed along Evans Creek including River Place Upstream, Otter Trail and Site #5 West in St. Lucie County, Florida.

Project Description

We understand that the projects will involve the following environmental remedial/water quality improvements:

1-Evans Creek- Deepen downstream connection of the creek; remove 3 internal downstream shoals and removal of exotic species.
2-River Place Upstream- Connecting upstream end that is cut off from river by berm, improve historical channel, widen and deepen main channel, remove plug on the north branch.
3-Otter Trail- Southern downstream breach and northern upstream culvert site needed to rehydrate historical floodplain.
4-Site #5 West- Hydrologic restoration through one berm breech, one oxbow connection and removal of exotic species.

2765 VISTA PARKWAY, SUITE 10 · WEST PALM BEACH, FLORIDA 33411
(561) 687-8539 · FAX (561) 687-8570
State of Florida Professional Engineers License #28073

Field Description

For this study, a total of nine (9) sample probes were collected at approximate locations (S1 through S9) shown in the attached location plan Sheets 2 and 3. The samples were collected using a 2-men crew on a 1448 Tracker Aluminum Boat. A vibro-core sampler was used to retrieve the sediment/soil to a depth of about 5 feet below mud line. The crew used a GPS and Trimble RTK to determine bottom of creeks/canals at sampling locations.

The probe borings performed in the various sites indicated the presence of sand with trace organic, roots and silt (SP-SM), silty sands with trace organic and roots (SM), and muck (PT) to the terminated depth of the probes. The sample probe profiles are presented on Sheet 1.

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The soil boring profiles should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, and Standard Penetration resistances. The stratifications shown on the soil profiles represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The mudline information obtained during field operations is also shown on these soil profiles. Samples collected for classification and laboratory testing will be retained for 30 days from the date of this report and then will be discarded.

Laboratory Sampling and Test Results

Sample aliquots were placed in a sample bag, the top of the bag sealed after removing the headspace, and kneaded until blended.

Soil samples were taken to our laboratory for sieve analysis, organic content, moisture content and corrosion series. The test results are summarized below and presented in the Soil Survey Table, Sheet 1.

Test Type	Result (range)	Requirements
Moisture Content (%)	27-92	Based on usage
Organic Content (%)	1.4-18.1	Based on usage
#200 Sieve	5-22	Based on usage
Resistivity (ohm-cm)	270-3000	>3000*
Chloride (ppm)	150-1500	<100*
Sulfates (ppm)	37.5-216	<200*
Ph	5-7.8	5-10*

Note: *As per FDOT Structures Design Guidelines, Table 1.1, Updated July 2007.

In our opinion, the sands and organic soils encountered can be excavated or dredged with normal excavating equipment in good working order. If needed, the soils can be re-used in non-structural areas.

Some of the composite samples were placed in laboratory supplied containers, stored on wet ice and transported to a State Certified laboratory for the following test series:

- Pugeable Organics-EPA Method 8260
- Base/Neutral and Acid Extractable Organics-EPA Method 8270
- RCRA 8 Metals, EPA Method 6010.
- Total Petroleum Hydrocarbon-FL-Pro Method.

The sampling Chain-of-Custody and environmental test results on the sediment samples are included in the appendix. Analytical results are summarized below:

Analyte	Result (mg/kg)	FDEP/SCTL
Arsenic	0.19-0.49	2.1
Barium	2.9-13.1	120
Cadmium	0.020	7.5
Chromium	1.0-6.7	38
Lead	1.84-6.39	400
FL-PRO	30-55.1	340

Note: SCTL's are the lesser of Direct Exposure or Groundwater Leachability Potential. "Less Than" values represent laboratory method detection limit. Arsenic was not detected in sample S-8.

All of the samples are clean for the 8260 and 8270 Methods. The FL-PRO results are well below the 340 mg/kg SCTL. The metals, which have hits as indicated on the above table, are also below the SCTL limits for residential or commercial usage.

REPORT LIMITATIONS

The opinions expressed in this report are based on the available subsurface information obtained by TSF. If deviations from the subsurface conditions noted in this report are encountered during construction, TSF should be notified immediately. If TSF is not retained to perform these functions, TSF will not be responsible for the impact of those conditions of the project.

The geotechnical engineer warrants that the findings, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

This geotechnical report has been prepared for the exclusive use of American Consulting Engineers of Florida, LLC for the specific application to the Evans Creek project in St. Lucie County, Florida.

CLOSURE

We appreciate the opportunity to perform this Subsurface Investigation Study and look forward to continued participation during the design and construction phase of this project. If you have any questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,

TIERRA SOUTH FLORIDA, INC.

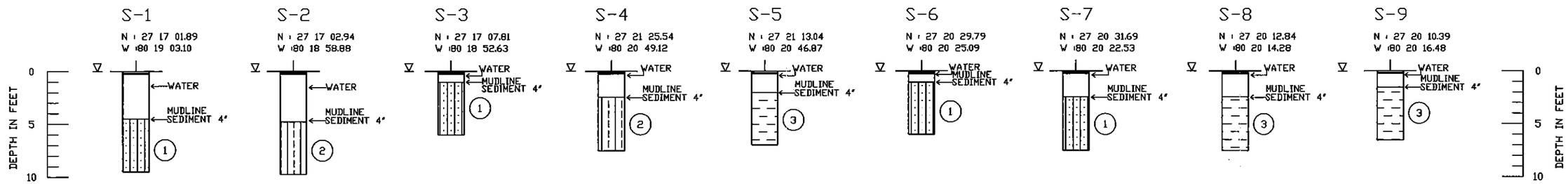
6/16/11

Francois Thomas, P.E.
Principal Engineer
FL Registration # 56381

6/16/11

Ramakumar V.Vedula, P.E.
Principal Engineer

APPENDIX: Certificate of Analysis
(Palm Beach Environmental Laboratories, Inc.)



DATE OF SURVEY : MAY 2011

SURVEY MADE BY : TIERRA SOUTH FLORIDA

COUNTY : ST. LUCIE

SOIL SURVEY FOR THE EVANS CREEK - WATER QUALITY IMPROVEMENTS

	ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS						USC GROUP	DESCRIPTION
STRATUM N°	N° OF TESTS	% ORGANIC	N° OF TESTS	MOISTURE CONTENT	N° OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH		
1	4	1.4 - 2.9	4	27 - 80	4	97 - 100	84 - 99	43 - 99	23 - 76	5 - 9	SP - SM	BROWN SAND WITH TRACE OF ORGANICS,ROOTS AND SILT
2	2	4.8 - 6.2	2	41 - 92	2	99 - 99	85 - 97	50 - 88	30 - 66	13 - 22	SM	BROWN SILTY SAND WITH TRACE OF ORGANICS AND ROOTS
3	3	12.4 - 18.1	3	29 - 84	3	94 - 100	82 - 100	72 - 98	33 - 75	5 - 7	PT	MUCK

CORROSION TEST RESULTS					ENVIROMENTAL CLASSIFICATION * (SOIL)	
BORING N°	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	ph	STEEL	CONCRETE
S-1	300	960	165.9	7.0	Extremely Aggressive	Extremely Aggressive
S-2	270	1500	198.9	7.3	Extremely Aggressive	Extremely Aggressive
S-3	400	900	188.7	7.7	Extremely Aggressive	Extremely Aggressive
S-4	1200	225	112.8	7.6	Moderately Aggressive	Moderately Aggressive
S-5	3000	150	37.5	5	Extremely Aggressive	Moderately Aggressive
S-6	1100	300	81	7.2	Moderately Aggressive	Moderately Aggressive
S-7	1100	315	90	7.8	Moderately Aggressive	Moderately Aggressive
S-8	660	295	165.9	7.4	Extremely Aggressive	Moderately Aggressive
S-9	530	270	216	6.9	Extremely Aggressive	Moderately Aggressive

* As per FDOT Structures Design Guidelines, Table 1.1, Updated July 7, 2007

LEGEND

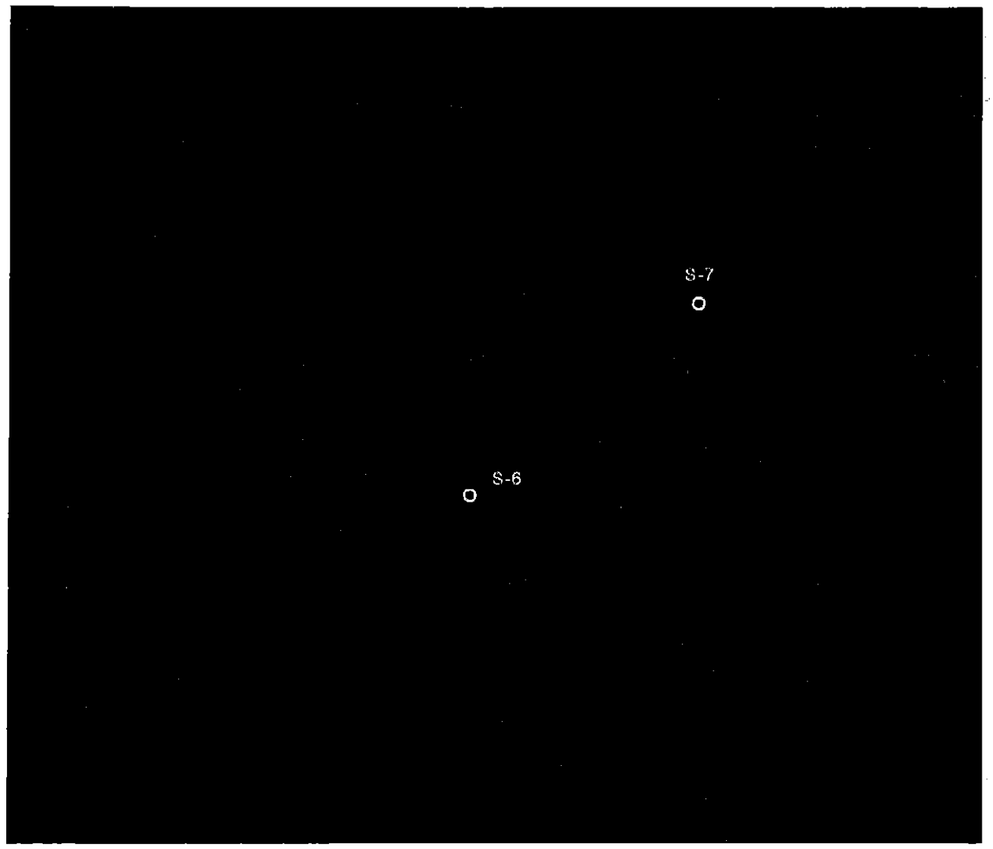
1. BROWN SAND WITH TRACE OF ORGANIC,ROOTS AND SILT (SP-SM)
2. BROWN SILTY SAND WITH TRACE OF ORGANIC AND ROOTS (SM)
3. ORGANIC SOIL - MUCK (PT)

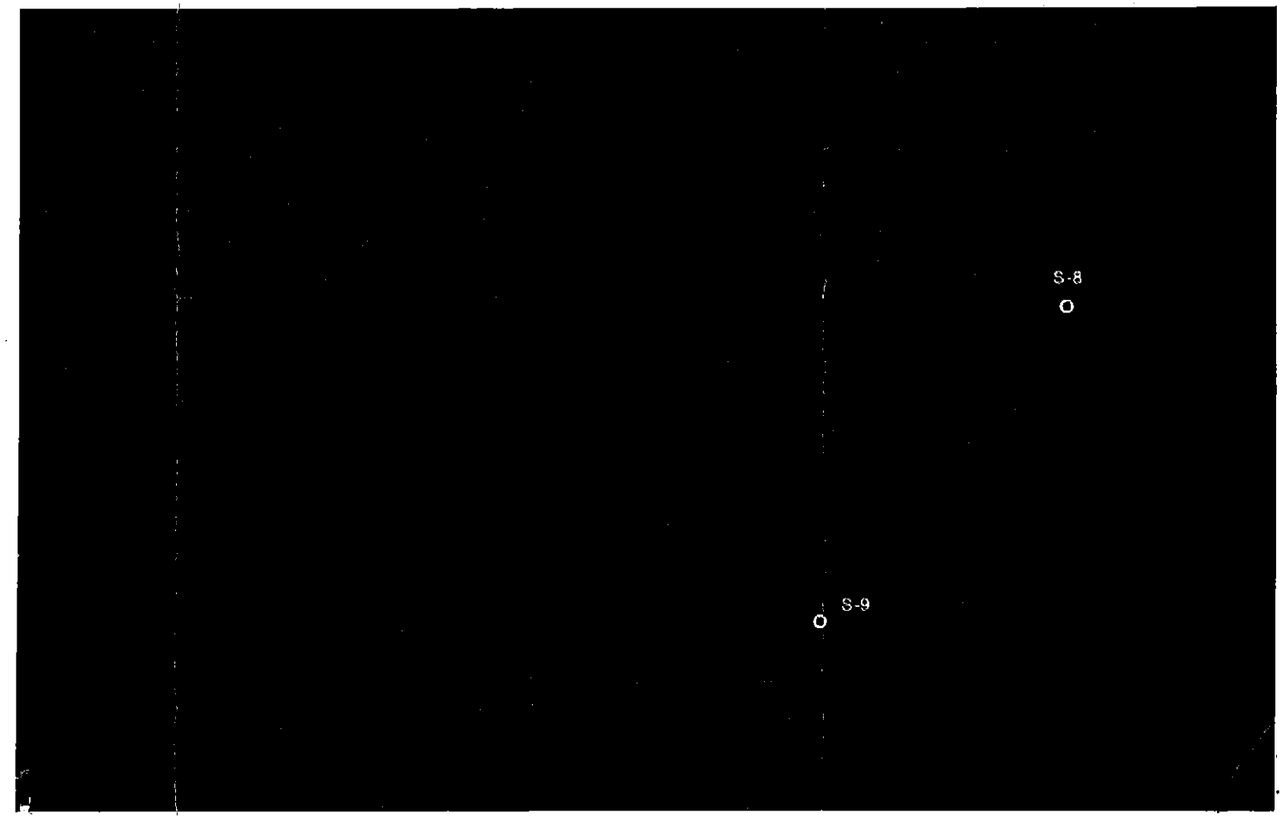
∇ GROUNDWATER TABLE

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW

SOIL PROFILES

DRAWN BY: MM	APPROVED BY: RK	ENGINEER OF RECORD: RAJ KRISHNASAMY, P.E.	Tierra South Florida	SCALE: NTS	PROJECT NUMBER: 7111-11-115	GEOTECHNICAL ENGINEERING SERVICES	SHEET 1
CHECKED BY: FT	DATE: 5/27/2011	FLORIDA LICENSE NO.: 53567	2765 Vista Parkway Suite 9 West Palm Beach, Florida 33411 Phone: 561-687-8536 Fax: 561-687-8570 FL Cert. No.: 28073			EVANS CREEK WATER QUALITY IMPROVEMENTS PORT ST. LUCIE, FLORIDA	

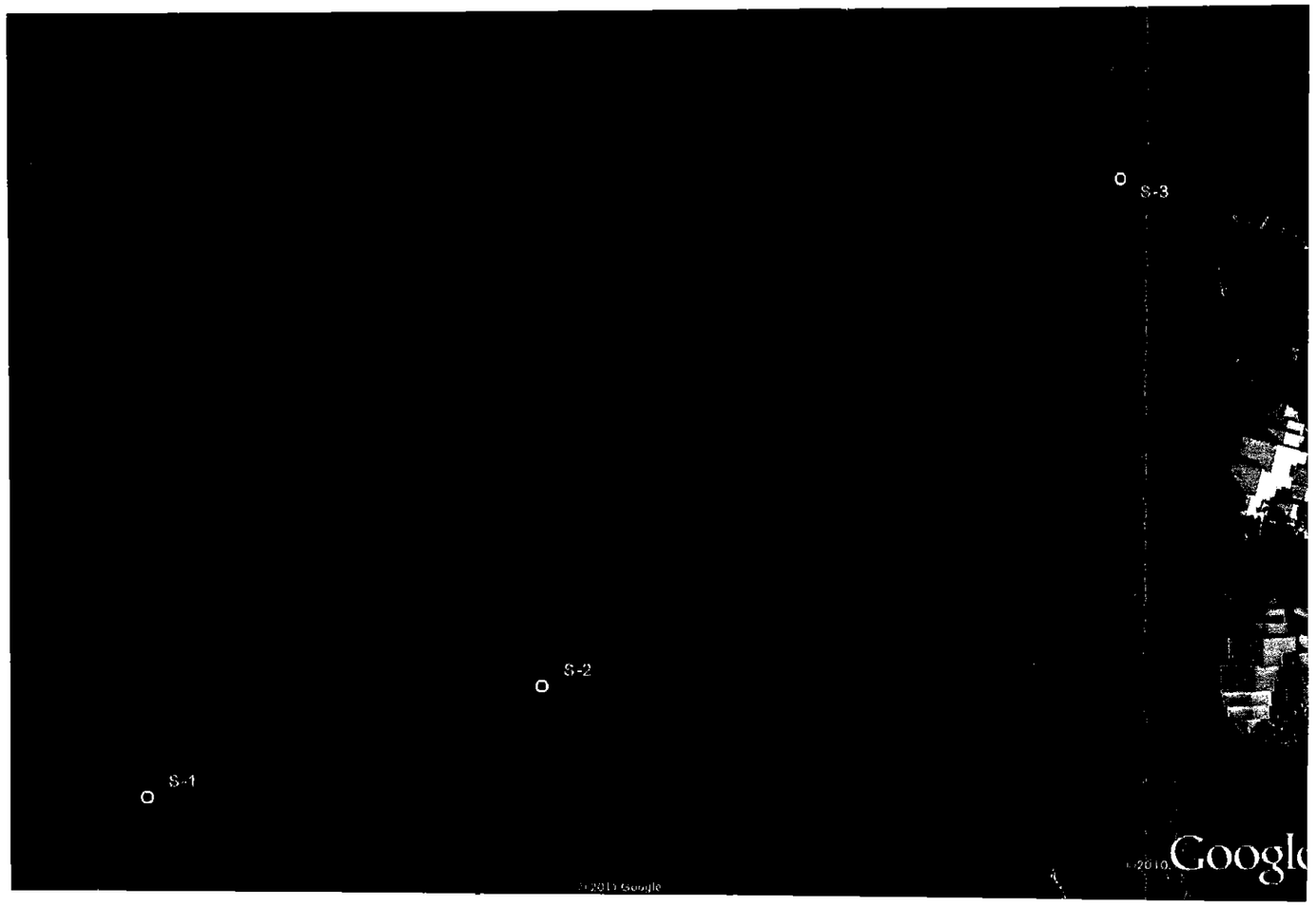


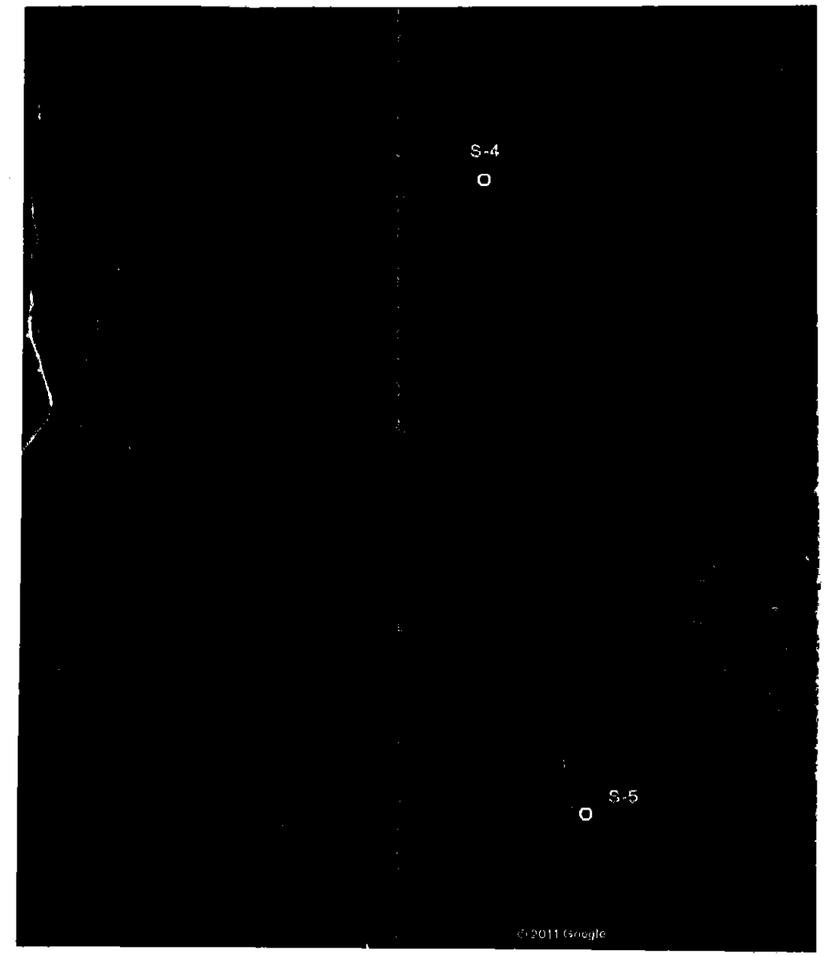


BORING LOCATION PLAN

◉ SAMPLE PROBES APPROXIMATE LOCATIONS

DRAWN BY: MM CHECKED BY: FT	APPROVED BY: RK DATE: 5/27/2011	ENGINEER OF RECORD: RAJ KRISHNASAMY, P.E. FLORIDA LICENSE NO.: 53567	Tierra South Florida 2765 Vista Parkway Suite 9 West Palm Beach, Florida 33411 Phone: 561-687-8536 Fax: 561-687-8570 FL Cert. No.: 28073	SCALE: NTS	PROJECT NUMBER: 7111-11-115	GEOTECHNICAL ENGINEERING SERVICES EVANS CREEK WATER QUALITY IMPROVEMENTS PORT ST. LUCIE, FLORIDA	SHEET 3





BORING LOCATION PLAN

◉ SAMPLE PROBES APPROXIMATE LOCATIONS

DRAWN BY: MM CHECKED BY: FT	APPROVED BY: RK DATE: 5/27/2011	ENGINEER OF RECORD: RAJ KRISHNASAMY, P.E. FLORIDA LICENSE NO.: 53567	Tierra South Florida 2765 Vista Parkway Suite 9 West Palm Beach, Florida 33411 Phone: 561-687-8536 Fax: 561-687-8570 FL Cert. No.: 28073	SCALE: NTS	PROJECT NUMBER: 7111-11-115	GEOTECHNICAL ENGINEERING SERVICES EVANS CREEK WATER QUALITY IMPROVEMENTS PORT ST. LUCIE, FLORIDA	SHEET 2

APPENDIX

Palm Beach Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Log #: [illegible]
PO #:
Quote #:
FDEP :

Company Name: [illegible]
Address: [illegible]
City: [illegible] State: [illegible] Zip: [illegible]
Attn: [illegible] Phone#: [illegible]
email: [illegible] Fax#: [illegible]
Project Name [illegible] Proj#:
Sampler Signature / Name

LAB ANALYSIS

#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix	Field Filtered	Integrity OK	Total # of containers	pH	[illegible]									
								PRES CODE	A	–								
_1	[illegible]	[illegible]		SO		✓	3		✓									
_2	[illegible]	"		SO		✓	3		✓									
_3	[illegible]	"		SO		✓	3		✓									
_4	[illegible]	"		SO		✓	3		✓									
_5	[illegible]	"		SO		✓	3		✓									
_6	[illegible]	"		SO		✓	3		✓									
_7	[illegible]	"		SO		✓	3		✓									
_8	[illegible]	"		SO		✓	3		✓									
_9	[illegible]	"		SO		✓	3		✓									
_0																		

Parameters: [illegible]

Matrix Codes

SD	Solid Waste	OL	Oil
GW	Ground Water	SL	Sludge
EFF	Effluent	SO	Soil Sediment
AFW	Analyte Free H2O	AQ	Aqueous
WW	Waste Water	NA	Nonaqueous
DW	Drinking Water		
SW	Surface Water	O	Other_____ (Please Specify)

Press Codes

A. None	E. HCL	O. Other
B. HNO3	F. MeOH	
C. H2SO4	G. Na2S2O3	
D. NaOH	I. Ice	

T.A.T. Request

Standard	RUSH
Y/N	24 Hour 48 Hour Date Due:

QA/QC Report Level: None___ 1___ 2___ 3___ Other___

COC OK: Y N

Initials

Item	Relinquished by	Affiliation	Date	Time	Received By	Affiliation	Date	Time
1-9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

Lab Use Only

	Yes	No	N/A
Sample INTACT upon arrival?			
Received on Wet Ice? Temp___°C			
Proper Preservatives Indicated?			
Received within holding time?			
Custody seals intact?			
Volatile rec'd without headspace?			
Proper Containers Used?			

1550 Latham Road, Suite 2 • West Palm Beach, FL 33409 • Tel: (561) 689-6701 • Fax: (561) 689-6702

COC# 12640

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	136 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	93.2 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	71.3 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	73.4 %		Limit 42-146
NA	Surrogate: Phenol-d5	70.2 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	68.2 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	79.3 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	76.2 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	90.5 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-1 **Lab ID:** 0008630-01 **Sampled:** 05/18/11 10:00
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	43.4		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	75.4 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.30		mg/kg dry	EPA 6020B	1	0.004	0.30	05/23/11	05/24/11	MH
7440-39-3	Barium	2.9	I	mg/kg dry	EPA 6020B	1	0.004	3.7	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.597	05/23/11	05/24/11	MH
7440-47-3	Chromium	2.4		mg/kg dry	EPA 6020B	1	0.004	0.06	05/23/11	05/24/11	MH
7439-92-1	Lead	2.99		mg/kg dry	EPA 6020B	1	0.010	0.299	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0007	U	mg/kg dry	EPA 6020B	1	0.0007	0.149	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.005	U	mg/kg dry	EPA 6020B	1	0.005	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	67.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	142 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	87.1 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	65.5 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	99.5 %		Limit 42-146
NA	Surrogate: Phenol-d5	94.6 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	70.8 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	82.1 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	83.2 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	95.4 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-2 **Lab ID:** 0008630-02 **Sampled:** 05/18/11 10:10
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	**FLPRO Total**	**53.2**		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	47.1 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	**Arsenic**	**0.49**		mg/kg dry	EPA 6020B	1	0.004	0.30	05/23/11	05/24/11	MH
7440-39-3	**Barium**	**6.3**		mg/kg dry	EPA 6020B	1	0.004	3.8	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.606	05/23/11	05/24/11	MH
7440-47-3	**Chromium**	**4.5**		mg/kg dry	EPA 6020B	1	0.004	0.06	05/23/11	05/24/11	MH
7439-92-1	**Lead**	**5.10**		mg/kg dry	EPA 6020B	1	0.010	0.303	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0008	U	mg/kg dry	EPA 6020B	1	0.0008	0.152	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.005	U	mg/kg dry	EPA 6020B	1	0.005	0.5	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.02	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	**% Solids**	**66.0**		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	126 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	75.9 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	60.2 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	62.6 %		Limit 42-146
NA	Surrogate: Phenol-d5	58.4 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	56.5 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	61.4 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	62.7 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	66.0 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-3 **Lab ID:** 0008630-03 **Sampled:** 05/18/11 10:20
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	30.0	U	mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	49.1 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	**Arsenic**	**0.29**		mg/kg dry	EPA 6020B	1	0.004	0.26	05/23/11	05/24/11	MH
7440-39-3	**Barium**	**5.1**		mg/kg dry	EPA 6020B	1	0.004	3.2	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.513	05/23/11	05/24/11	MH
7440-47-3	**Chromium**	**1.0**		mg/kg dry	EPA 6020B	1	0.004	0.05	05/23/11	05/24/11	MH
7439-92-1	**Lead**	**1.84**		mg/kg dry	EPA 6020B	1	0.008	0.256	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0006	U	mg/kg dry	EPA 6020B	1	0.0006	0.128	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	**% Solids**	**78.0**		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	121 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	129 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	105 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	80.8 %		Limit 42-146
NA	Surrogate: Phenol-d5	78.5 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	72.8 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	87.2 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	76.3 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	92.9 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-4 **Lab ID:** 0008630-04 **Sampled:** 05/18/11 12:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	42.8		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	60.7 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.18	I	mg/kg dry	EPA 6020B	1	0.004	0.27	05/23/11	05/24/11	MH
7440-39-3	Barium	8.7		mg/kg dry	EPA 6020B	1	0.004	3.4	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.020	I	mg/kg dry	EPA 6020B	1	0.004	0.541	05/23/11	05/24/11	MH
7440-47-3	Chromium	4.3		mg/kg dry	EPA 6020B	1	0.004	0.05	05/23/11	05/24/11	MH
7439-92-1	Lead	3.71		mg/kg dry	EPA 6020B	1	0.009	0.270	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0007	U	mg/kg dry	EPA 6020B	1	0.0007	0.135	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	74.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	106 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	111 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	90.4 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	96.4 %		Limit 42-146
NA	Surrogate: Phenol-d5	86.6 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	66.1 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	85.4 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	76.0 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	93.9 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-5 **Lab ID:** 0008630-05 **Sampled:** 05/18/11 12:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	49.4		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	72.8 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.33		mg/kg dry	EPA 6020B	1	0.003	0.25	05/23/11	05/24/11	MH
7440-39-3	Barium	13.1		mg/kg dry	EPA 6020B	1	0.003	3.1	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.494	05/23/11	05/24/11	MH
7440-47-3	Chromium	6.7		mg/kg dry	EPA 6020B	1	0.003	0.05	05/23/11	05/24/11	MH
7439-92-1	Lead	5.00		mg/kg dry	EPA 6020B	1	0.008	0.247	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0006	U	mg/kg dry	EPA 6020B	1	0.0006	0.123	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.002	U	mg/kg dry	EPA 6020B	1	0.002	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	81.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	130 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	96.2 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	82.6 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroanilne	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroanilne	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	94.9 %		Limit 42-146
NA	Surrogate: Phenol-d5	93.6 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	75.2 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	87.6 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	78.4 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	99.3 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-6 **Lab ID:** 0008630-06 **Sampled:** 05/18/11 11:30
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	45.2		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	59.1 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.38		mg/kg dry	EPA 6020B	1	0.005	0.32	05/23/11	05/24/11	MH
7440-39-3	Barium	5.0		mg/kg dry	EPA 6020B	1	0.005	4.0	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.005	U	mg/kg dry	EPA 6020B	1	0.005	0.645	05/23/11	05/24/11	MH
7440-47-3	Chromium	3.0		mg/kg dry	EPA 6020B	1	0.005	0.06	05/23/11	05/24/11	MH
7439-92-1	Lead	4.49		mg/kg dry	EPA 6020B	1	0.011	0.323	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0008	U	mg/kg dry	EPA 6020B	1	0.0008	0.161	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.005	U	mg/kg dry	EPA 6020B	1	0.005	0.5	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.02	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	62.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	124 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	91.0 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	79.7 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	POL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	78.4 %		Limit 42-146
NA	Surrogate: Phenol-d5	81.3 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	76.4 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	93.5 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	85.4 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	98.3 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-7 **Lab ID:** 0008630-07 **Sampled:** 05/18/11 11:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	37.0	I	mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	46.8 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.19	I	mg/kg dry	EPA 6020B	1	0.004	0.26	05/23/11	05/24/11	MH
7440-39-3	Barium	5.2		mg/kg dry	EPA 6020B	1	0.004	3.2	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.519	05/23/11	05/24/11	MH
7440-47-3	Chromium	2.2		mg/kg dry	EPA 6020B	1	0.004	0.05	05/23/11	05/24/11	MH
7439-92-1	Lead	3.12		mg/kg dry	EPA 6020B	1	0.009	0.260	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0006	U	mg/kg dry	EPA 6020B	1	0.0006	0.130	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	77.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	126 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	82.6 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	85.2 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	93.4 %		Limit 42-146
NA	Surrogate: Phenol-d5	91.0 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	77.1 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	89.2 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	88.4 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	94.7 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-8 **Lab ID:** 0008630-08 **Sampled:** 05/18/11 10:50
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	30.0	U	mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	40.7 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.25	05/23/11	05/24/11	MH
7440-39-3	**Barium**	**2.7**	I	mg/kg dry	EPA 6020B	1	0.004	3.2	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.506	05/23/11	05/24/11	MH
7440-47-3	**Chromium**	**3.9**		mg/kg dry	EPA 6020B	1	0.004	0.05	05/23/11	05/24/11	MH
7439-92-1	**Lead**	**2.67**		mg/kg dry	EPA 6020B	1	0.008	0.253	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.0006	U	mg/kg dry	EPA 6020B	1	0.0006	0.127	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.004	U	mg/kg dry	EPA 6020B	1	0.004	0.4	05/23/11	05/24/11	MH
7440-22-4	Silver	0.003	U	mg/kg dry	EPA 6020B	1	0.003	0.01	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	**% Solids**	**79.0**		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	1,2-Dibromomethane (EDB)	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
	1,2-Dicholoropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-71-8	Dichlorodifluoromethane	0.0001	U	mg/kg	EPA 5035 / 8260C	1	0.0001	0.001	05/23/11	05/24/11	PLS
74-87-3	Chloromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-01-4	Vinyl Chloride	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-83-9	Bromomethane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
75-00-3	Chloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
75-69-4	Trichlorofluoromethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
75-35-4	1,1-Dichloroethene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
75-09-2	Methylene Chloride	0.001	U	mg/kg	EPA 5035 / 8260C	1	0.001	0.001	05/23/11	05/24/11	PLS
1634-04-4	MTBE	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
156-60-5	trans-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-34-3	1,1-Dichloroethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
590-20-7	2,2-Dichloropropane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
156-59-2	cis-1,2-Dichloroethene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
67-66-3	Chloroform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
74-97-5	Bromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-55-6	1,1,1-Trichloroethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
563-58-6	1,1-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
56-23-5	Carbon Tetrachloride	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
71-43-2	Benzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
79-01-6	Trichloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
74-95-3	Dibromomethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-27-4	Bromodichloromethane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-01-5	cis-1,3-Dichloropropene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-88-3	Toluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
10061-02-6	trans-1,3-Dichloropropene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
79-00-5	1,1,2-Trichloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
142-28-9	1,3-Dichloropropane	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
127-18-4	Tetrachloroethene	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
124-48-1	Dibromochloromethane	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
108-90-7	Chlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
630-20-6	1,1,1,2-Tetrachloroethane	0.0005	U	mg/kg	EPA 5035 / 8260C	1	0.0005	0.001	05/23/11	05/24/11	PLS
100-41-4	Ethylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8260C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
108-38-3/106-42-3	m,p-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
95-47-6	o-Xylene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
100-42-5	Styrene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
75-25-2	Bromoform	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
98-82-8	Isopropylbenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
79-34-5	1,1,2,2-Tetrachloroethane	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
96-18-4	1,2,3-Trichloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
108-86-1	Bromobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
103-65-1	N-Propylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
95-49-8	2-Chlorotoluene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
108-67-8	1,3,5-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
106-43-4	4-Chlorotoluene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
98-06-6	tert-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-63-6	1,2,4-Trimethylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
135-98-8	sec-Butylbenzene	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
99-87-6	4-Isopropyltoluene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
541-73-1	1,3-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
106-46-7	1,4-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
104-51-8	N-Butylbenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
95-50-1	1,2-Dichlorobenzene	0.0003	U	mg/kg	EPA 5035 / 8260C	1	0.0003	0.001	05/23/11	05/24/11	PLS
96-12-8	1,2-Dibromo-3-Chloropropane	0.0007	U	mg/kg	EPA 5035 / 8260C	1	0.0007	0.001	05/23/11	05/24/11	PLS
120-82-1	1,2,4-Trichlorobenzene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
87-68-3	Hexachlorobutadiene	0.0004	U	mg/kg	EPA 5035 / 8260C	1	0.0004	0.001	05/23/11	05/24/11	PLS
91-20-3	Naphthalene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS
87-61-6	1,2,3-Trichlorobenzene	0.0002	U	mg/kg	EPA 5035 / 8260C	1	0.0002	0.001	05/23/11	05/24/11	PLS

		% Recovery	Q	% Recovery Limits
1868-53-7	Surrogate: Dibromofluoromethane	128 %		Limit 62-157
2037-26-5	Surrogate: Toluene-d8	83.5 %		Limit 66-144
460-00-4	Surrogate: 4-Bromofluorobenzene	77.0 %		Limit 70-131

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
	3,3-Dichlorobenzidine	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
	3-Methylchoanthrene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
83-32-9	Acenaphthene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
208-96-8	Acenaphthylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
98-86-2	Acetophenone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-96-3	2-Acetylaminofluorene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-53-3	Aniline	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
120-12-7	Anthracene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
140-57-8	Aramite	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
56-55-3	Benzo[a]anthracene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH
50-32-8	Benzo[a]pyrene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
205-99-2	Benzo[b]fluoranthene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
191-24-2	Benzo[g,h,i]perylene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.1	05/23/11	05/24/11	MH
207-08-9	Benzo[k]fluoranthene	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
111-91-1	bis(2-Chloroethoxy)methane	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
39638-32-9	bis(2-chloroisopropyl)ether	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.3	05/23/11	05/24/11	MH
117-81-7	bis(2-Ethylhexyl)phthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
NA	bis(Chloroethyl)ether	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
101-55-3	4-Bromophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
85-68-7	Butylbenzylphthalate	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-47-8	4-Chloroaniline	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.005	05/23/11	05/24/11	MH
510-15-6	Chlorobenzilate	0.004	U	mg/kg	EPA 3545 / 8270C	1	0.004	0.004	05/23/11	05/24/11	MH
59-50-7	4-Chloro-3-methylphenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
91-58-7	2-Chloronaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-57-8	2-Chlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
7005-72-3	4-Chlorophenyl-phenylether	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
218-01-9	Chrysene	0.005	U	mg/kg	EPA 3545 / 8270C	1	0.005	0.02	05/23/11	05/24/11	MH
2303-16-4	Diallate	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
132-64-9	Dibenzofuran	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
53-70-3	Dibenz[a,h]anthracene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.05	05/23/11	05/24/11	MH
95-50-1	1,2-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
541-73-1	1,3-Dichlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
106-46-7	1,4-Dichlorobenzene	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
120-83-2	2,4-Dichlorophenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
87-65-0	2,6-Dichlorophenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
84-66-2	Diethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
60-11-7	Dimethylaminoazobenzene	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
57-97-6	7,12-Dimethylbenz[a]anthracene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
119-93-7	3,3-Dimethylbenzidine	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
105-67-9	2,4-Dimethylphenol	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
131-11-3	Dimethylphthalate	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
84-74-2	Di-n-butylphthalate	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
99-65-0	1,3-Dinitrobenzene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
534-52-1	4,6-Dinitro-2-methylphenol	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
51-28-5	2,4-Dinitrophenol	0.09	U	mg/kg	EPA 3545 / 8270C	1	0.09	0.3	05/23/11	05/24/11	MH
121-14-2	2,4-Dinitrotoluene	0.009	U	mg/kg	EPA 3545 / 8270C	1	0.009	0.009	05/23/11	05/24/11	MH
606-20-2	2,6-Dinitrotoluene	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
117-84-0	Di-n-octylphthalate	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
206-44-0	Fluoranthene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
86-73-7	Fluorene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
87-68-3	Hexachlorobutadiene	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
77-47-4	Hexachlorocyclopentadiene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
67-72-1	Hexachloroethane	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
70-30-4	Hexachlorophene	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
1888-71-7	Hexachloropropene	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
193-39-5	Indeno[1,2,3-cd]pyrene	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.2	05/23/11	05/24/11	MH
465-73-6	Isodrin	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
78-59-1	Isophorone	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
120-58-1	Isosafrole	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
91-80-5	Methapyrilene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
95-48-7	2-Methylphenol	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
108-39-4	3-Methylphenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
106-44-5	4-Methylphenol	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
90-12-0	1-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
91-57-6	2-Methylnaphthalene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
99-09-2	3-Nitroaniline	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
924-16-3	N-Nitroso-di-n-butylamine	0.003	U	mg/kg	EPA 3545 / 8270C	1	0.003	0.003	05/23/11	05/24/11	MH
621-64-7	N-Nitroso-di-n-propylamine	0.002	U	mg/kg	EPA 3545 / 8270C	1	0.002	0.002	05/23/11	05/24/11	MH
55-18-5	N-Nitrosodiethylamine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
62-75-9	N-Nitrosodimethylamine	0.006	U	mg/kg	EPA 3545 / 8270C	1	0.006	0.006	05/23/11	05/24/11	MH
59-89-2	N-Nitrosomorpholine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
100-75-4	N-Nitrosopiperidine	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

EPA Method 8270C in Soil

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
930-55-2	N-Nitrosopyrrolidine	0.2	U	mg/kg	EPA 3545 / 8270C	1	0.2	0.3	05/23/11	05/24/11	MH
91-20-3	Naphthalene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
88-74-4	2-Nitroaniline	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
100-01-6	4-Nitroaniline	0.008	U	mg/kg	EPA 3545 / 8270C	1	0.008	0.008	05/23/11	05/24/11	MH
98-95-3	Nitrobenzene	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.3	05/23/11	05/24/11	MH
88-75-5	2-Nitrophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
100-02-7	4-Nitrophenol	0.1	U	mg/kg	EPA 3545 / 8270C	1	0.1	0.3	05/23/11	05/24/11	MH
56-38-2	Parathion	0.007	U	mg/kg	EPA 3545 / 8270C	1	0.007	0.007	05/23/11	05/24/11	MH
608-93-5	Pentachlorobenzene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
76-01-7	Pentachloroethane	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
82-68-8	Pentachloronitrobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.02	05/23/11	05/24/11	MH
62-44-2	Phenacetin	0.08	U	mg/kg	EPA 3545 / 8270C	1	0.08	0.3	05/23/11	05/24/11	MH
85-01-8	Phenanthrene	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.3	05/23/11	05/24/11	MH
108-95-2	Phenol	0.03	U	mg/kg	EPA 3545 / 8270C	1	0.03	0.03	05/23/11	05/24/11	MH
106-50-3	1,4-Phenylenediamine	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
129-00-0	Pyrene	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
110-86-1	Pyridine	0.07	U	mg/kg	EPA 3545 / 8270C	1	0.07	0.3	05/23/11	05/24/11	MH
94-59-7	Safrole	0.04	U	mg/kg	EPA 3545 / 8270C	1	0.04	0.3	05/23/11	05/24/11	MH
3689-24-5	Sulfotep	0.05	U	mg/kg	EPA 3545 / 8270C	1	0.05	0.3	05/23/11	05/24/11	MH
95-94-3	1,2,4,5-Tetrachlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
58-90-2	2,3,4,6-Tetrachlorophenol	0.01	U	mg/kg	EPA 3545 / 8270C	1	0.01	0.01	05/23/11	05/24/11	MH
120-82-1	1,2,4-Trichlorobenzene	0.02	U	mg/kg	EPA 3545 / 8270C	1	0.02	0.3	05/23/11	05/24/11	MH
95-95-4	2,4,5-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.3	05/23/11	05/24/11	MH
88-06-2	2,4,6-Trichlorophenol	0.06	U	mg/kg	EPA 3545 / 8270C	1	0.06	0.06	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
367-12-4	Surrogate: 2-Fluorophenol	73.8 %		Limit 42-146
NA	Surrogate: Phenol-d5	72.6 %		Limit 43-148
NA	Surrogate: Nitrobenzene-d5	78.9 %		Limit 35-139
321-60-8	Surrogate: 2-Fluorobiphenyl	92.9 %		Limit 37-141
118-79-6	Surrogate: 2,4,6-Tribromophenol	74.8 %		Limit 45-142
NA	Surrogate: p-Terphenyl-d14	105 %		Limit 40-135

Palm Beach Environmental Laboratories Inc.

CERTIFICATE OF ANALYSIS

Tierra South Florida
2765 Vista Parkway, Building H Suite 10
West Palm Beach, FL 33411
ATTN: Francoise Thomas
PHONE: (561) 687-8536 **FAX:** (561) 687-8570

LOG #: 0008630
COC#: 12640
REPORTED: 5/24/2011 10:48:21AM
PROJECT #: [none]
PROJECT: St. Lucie River

Description: S-9 **Lab ID:** 0008630-09 **Sampled:** 05/18/11 10:40
Matrix: Soil **Sampled By:** Francoise Thomas **Received:** 05/19/11 11:11

FLPRO

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	FLPRO Total	55.1		mg/kg	EPA 3545 /RO	1	30.0	40.0	05/23/11	05/24/11	MH

		% Recovery	Q	% Recovery Limits
84-15-1	Surrogate: o-Terphenyl	61.0 %		Limit 37-142

Metals by EPA 6000/7000 Series Methods

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
7440-38-2	Arsenic	0.47	I	mg/kg dry	EPA 6020B	1	0.008	0.56	05/23/11	05/24/11	MH
7440-39-3	Barium	4.9	I	mg/kg dry	EPA 6020B	1	0.008	6.9	05/23/11	05/24/11	MH
7440-43-9	Cadmium	0.008	U	mg/kg dry	EPA 6020B	1	0.008	1.11	05/23/11	05/24/11	MH
7440-47-3	Chromium	3.7		mg/kg dry	EPA 6020B	1	0.008	0.1	05/23/11	05/24/11	MH
7439-92-1	Lead	6.39		mg/kg dry	EPA 6020B	1	0.018	0.556	05/23/11	05/24/11	MH
7439-97-6	Mercury	0.001	U	mg/kg dry	EPA 6020B	1	0.001	0.278	05/23/11	05/24/11	MH
7782-49-2	Selenium	0.009	U	mg/kg dry	EPA 6020B	1	0.009	0.8	05/23/11	05/24/11	MH
7440-22-4	Silver	0.006	U	mg/kg dry	EPA 6020B	1	0.006	0.03	05/23/11	05/24/11	MH

Percent Dry Weight

CAS #	Parameter	Results	Q	Units	Method	DF	MDL	PQL	Extraction Date	Analysis Date	Analyst
NA	% Solids	36.0		%	Calculation	1	1.0	1.0	05/20/11	05/20/11	AT

Palm Beach Environmental Laboratories Inc.

Notes and Definitions

U	Analyte included in the analysis, but not detected
I	The reported value is between the laboratory Method Detction Limit & the laboratory Practical Quantitaion Limit

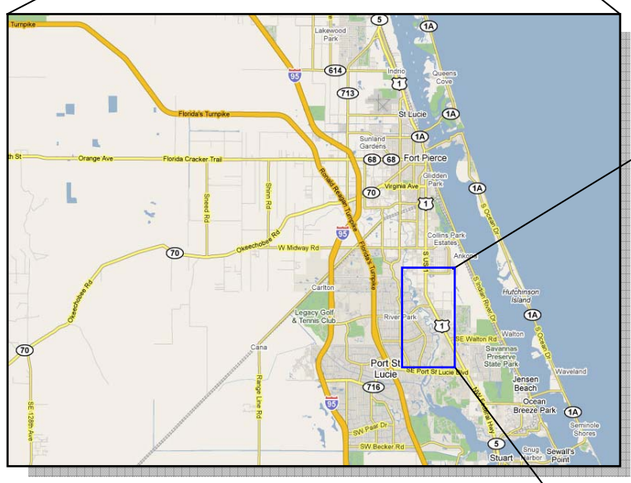
Attachment D

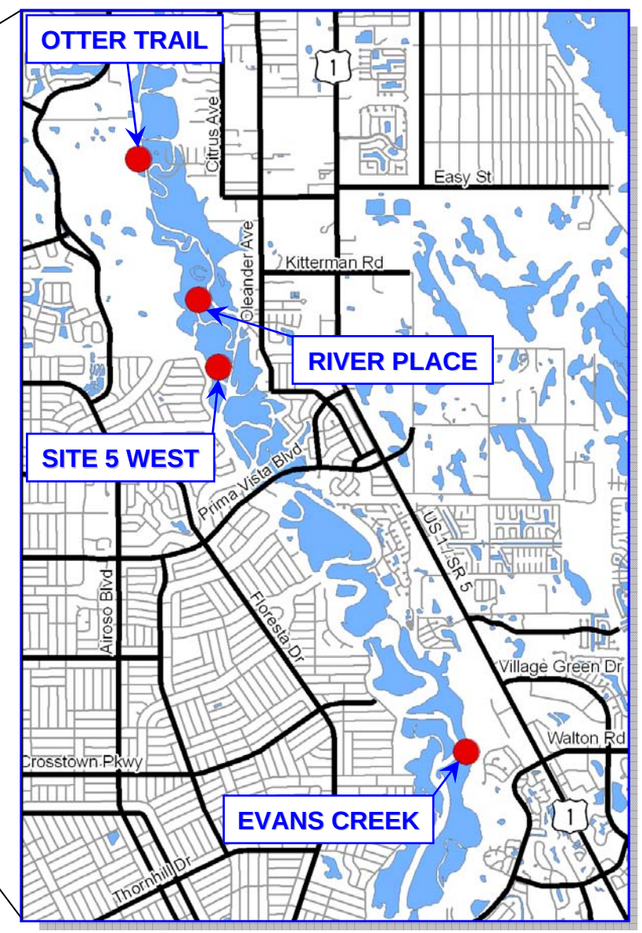
Conceptual Plans

Programming Document

Water Quality Improvement Projects

Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Water Quality Improvements





Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

Prepared By:

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409

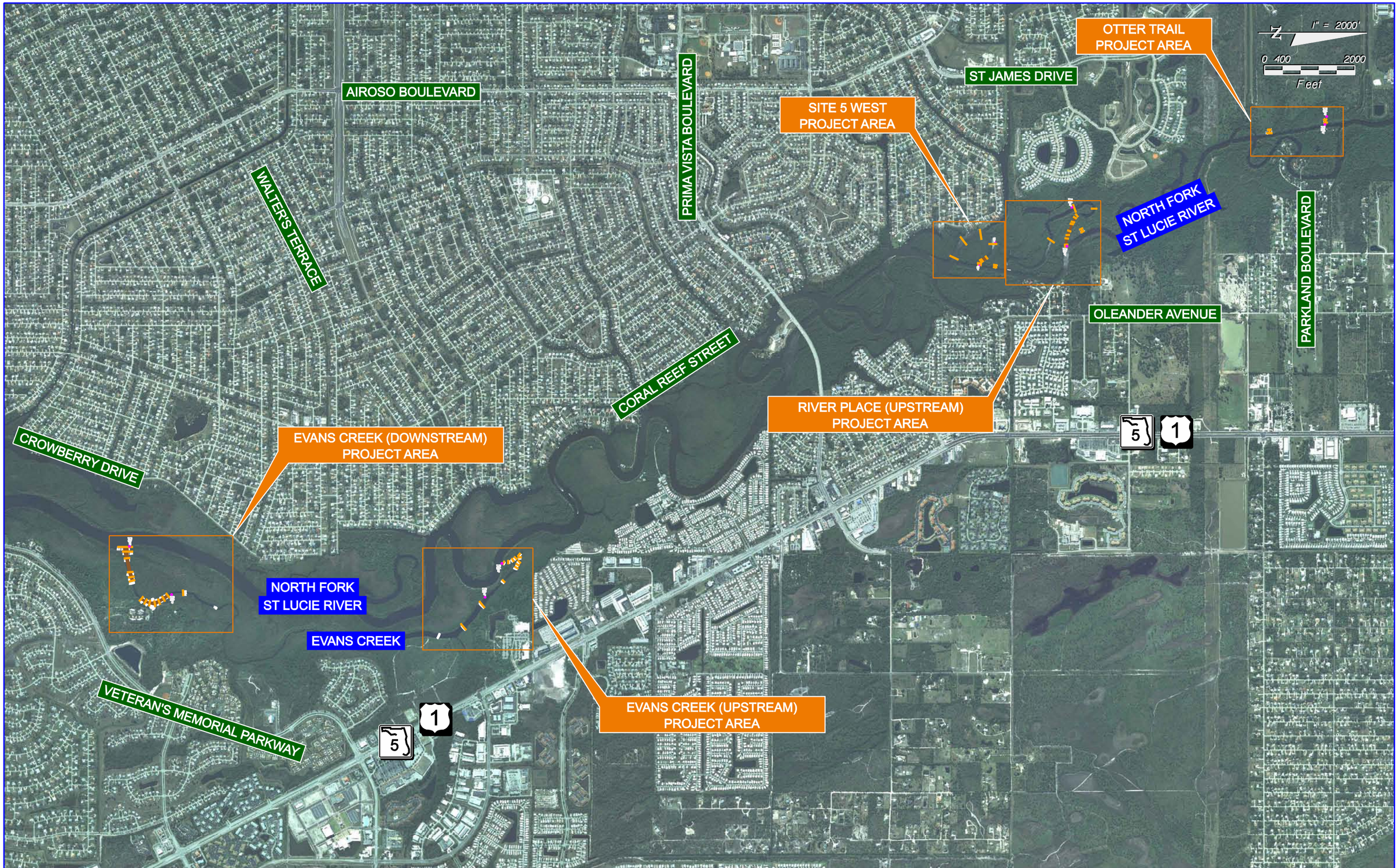
June 2011

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	PROJECTS OVERVIEW
3	EVANS CREEK (DOWNSTREAM)
4	EVANS CREEK (UPSTREAM)
5	OTTER TRAIL
6	RIVER PLACE (UPSTREAM)
7	SITE 5 WEST
8-12	EVANS CREEK (DOWNSTREAM) CROSS SECTIONS
13-16	EVANS CREEK (UPSTREAM) CROSS SECTIONS
17-18	OTTER TRAIL CROSS SECTIONS
19-23	RIVER PLACE (UPSTREAM) CROSS SECTIONS
24-27	SITE 5 WEST CROSS SECTIONS

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

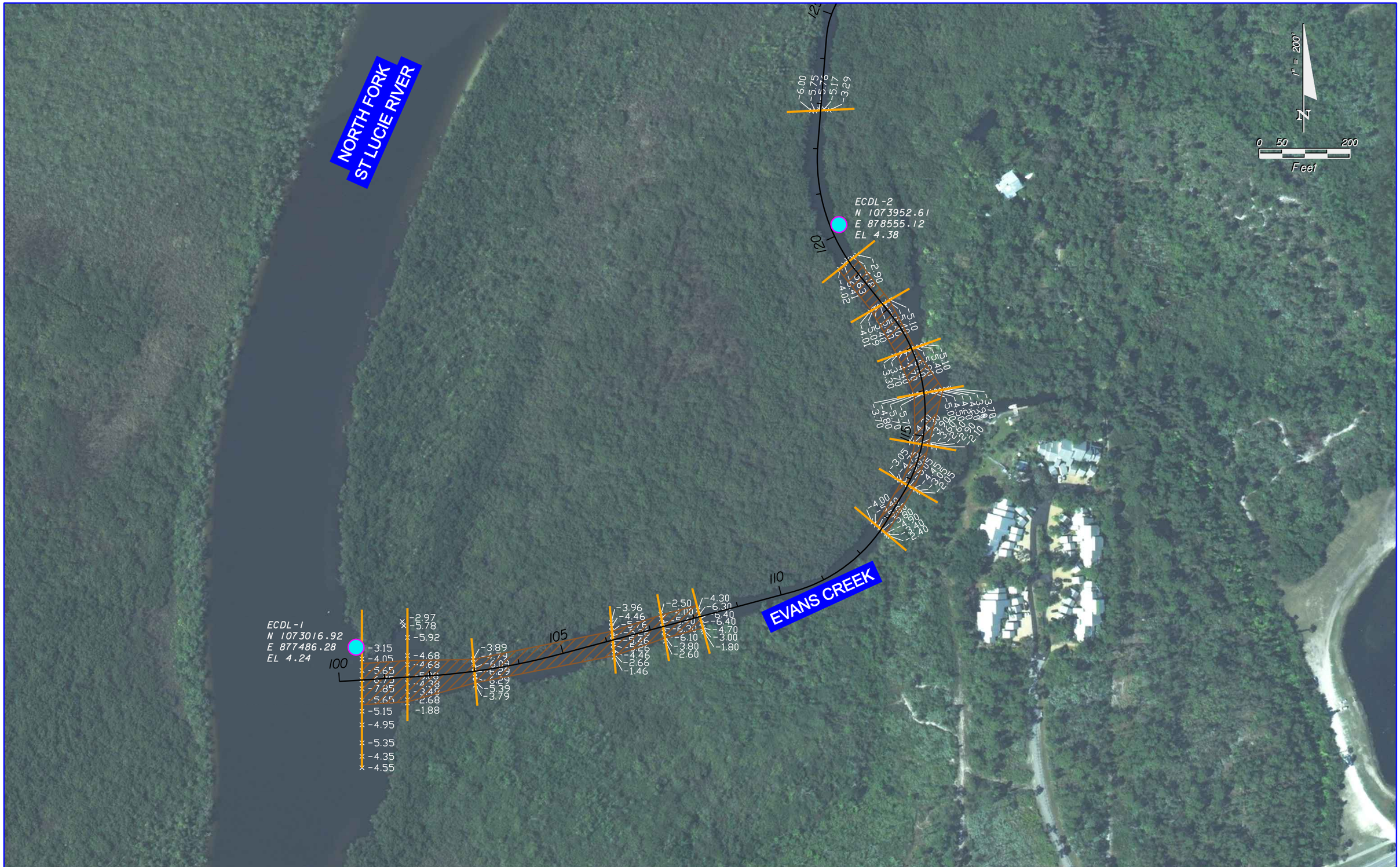
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

PROJECTS OVERVIEW

SHEET NO. 2



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

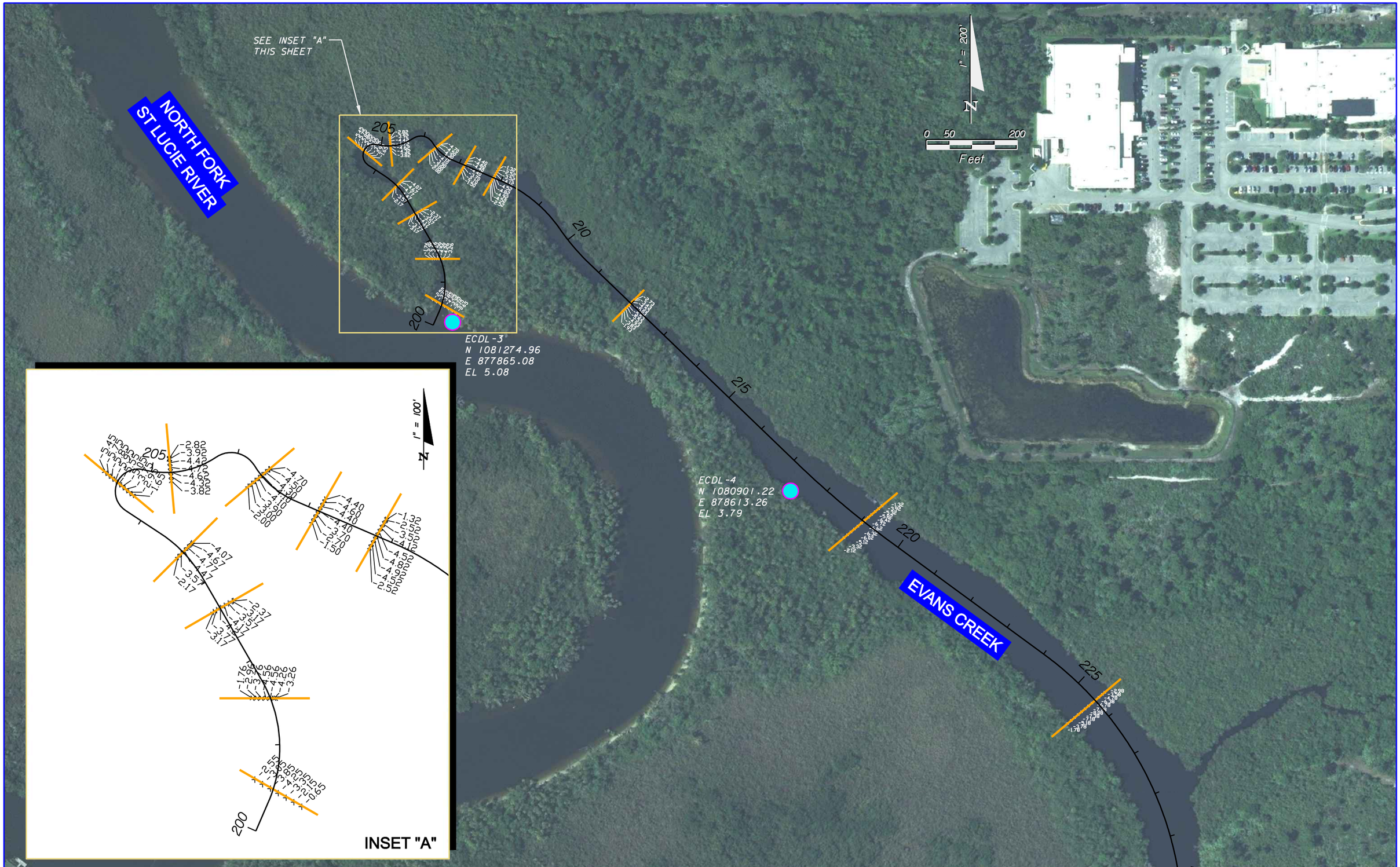
ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM)

SHEET NO. 3

USER: 51ntrld 6/21/2011 4:23:53 PM f:\project\5109648\cadd\drainage\PLANRD_EVANSCREEK_01.DGN



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

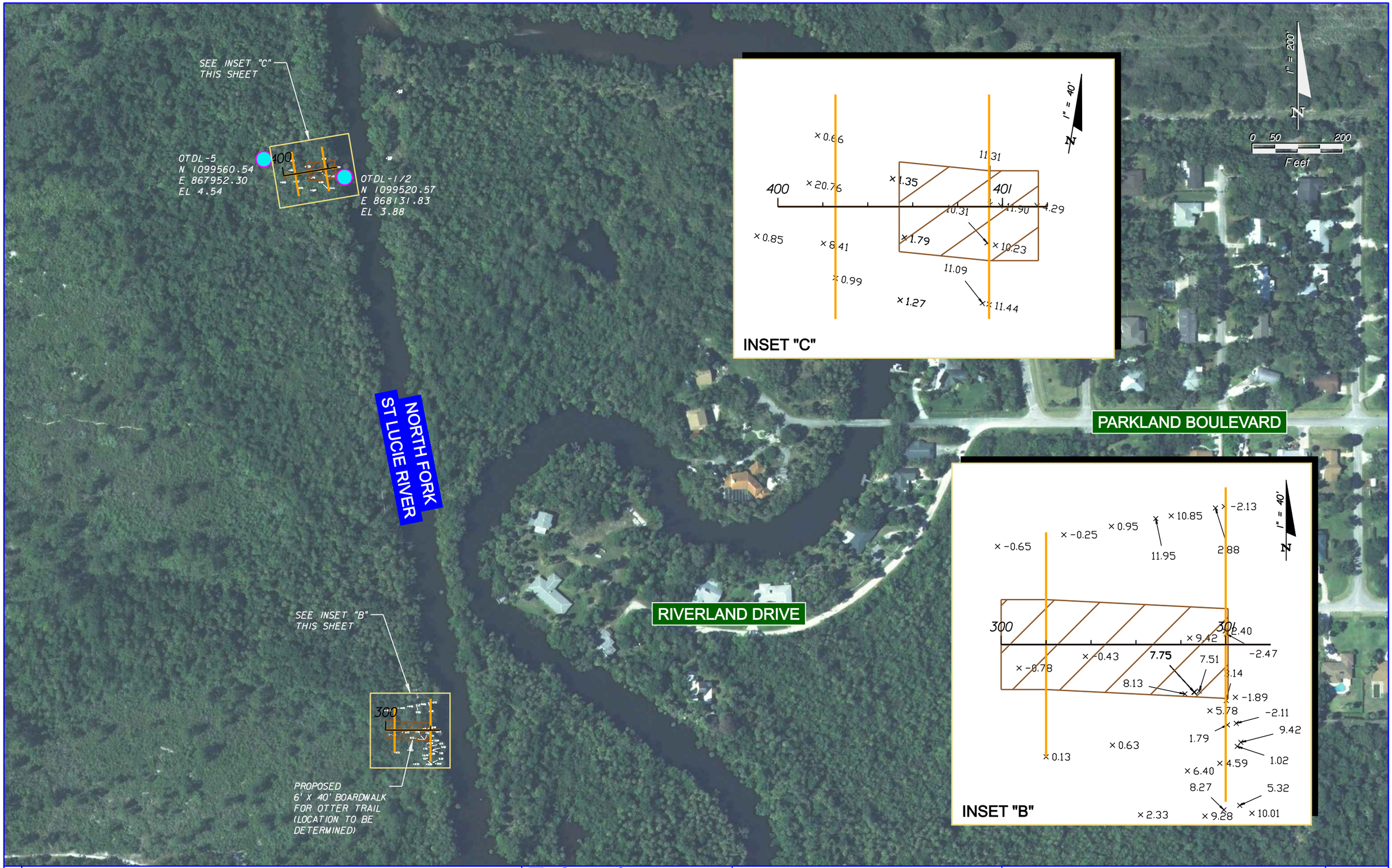
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM)

SHEET NO. 4



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

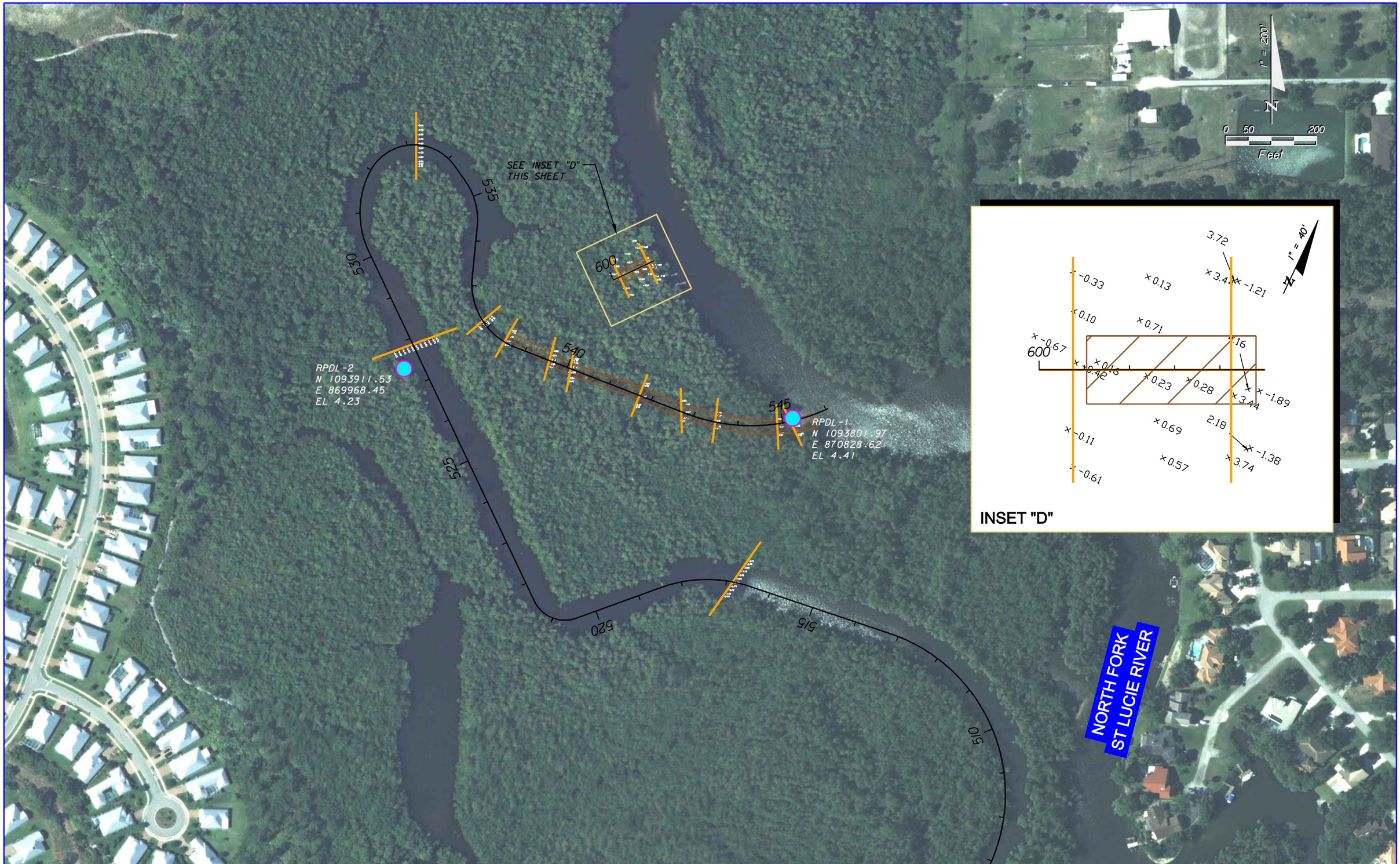
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL

SHEET NO. 5



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

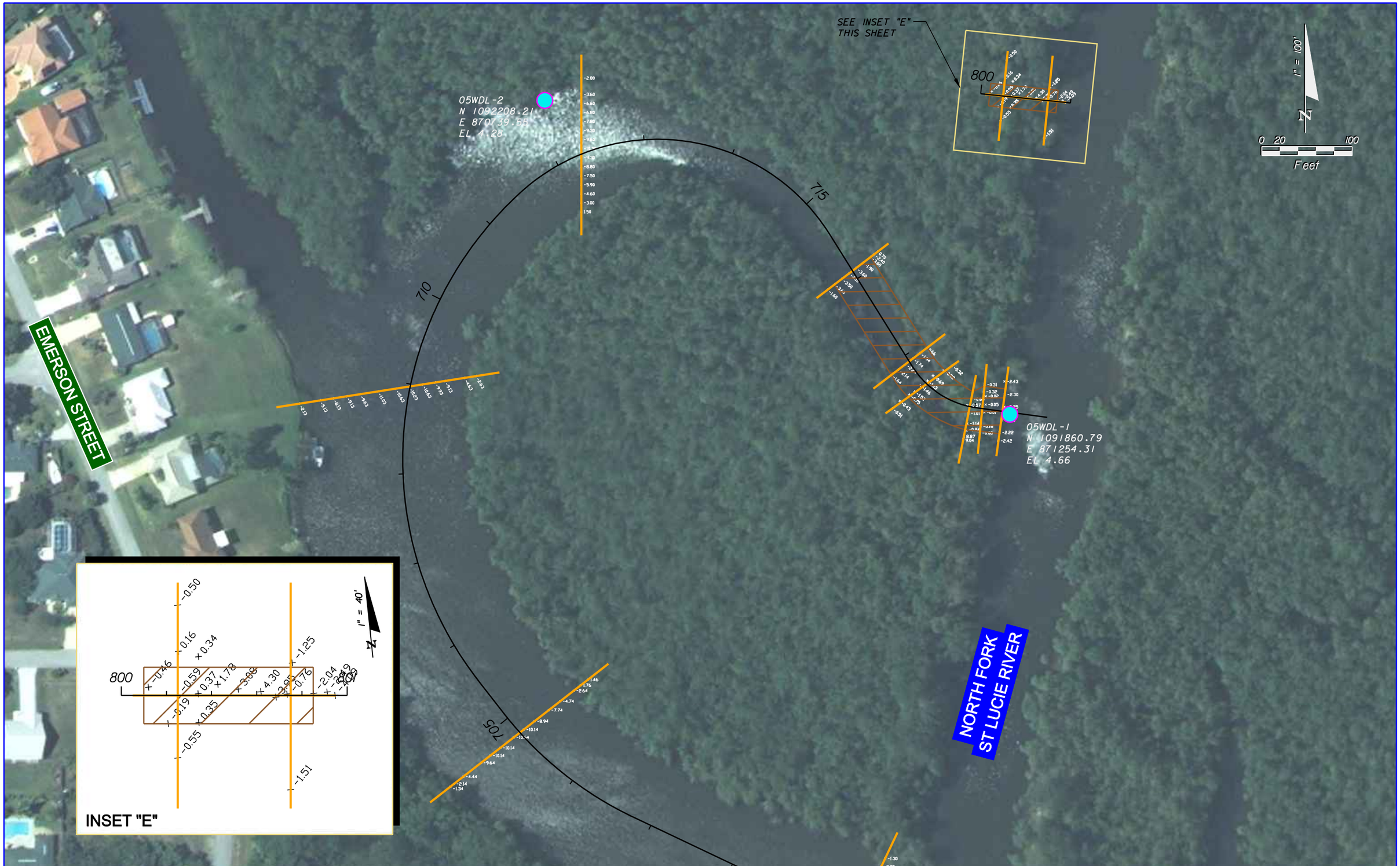
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM)

SHEET NO. 6



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

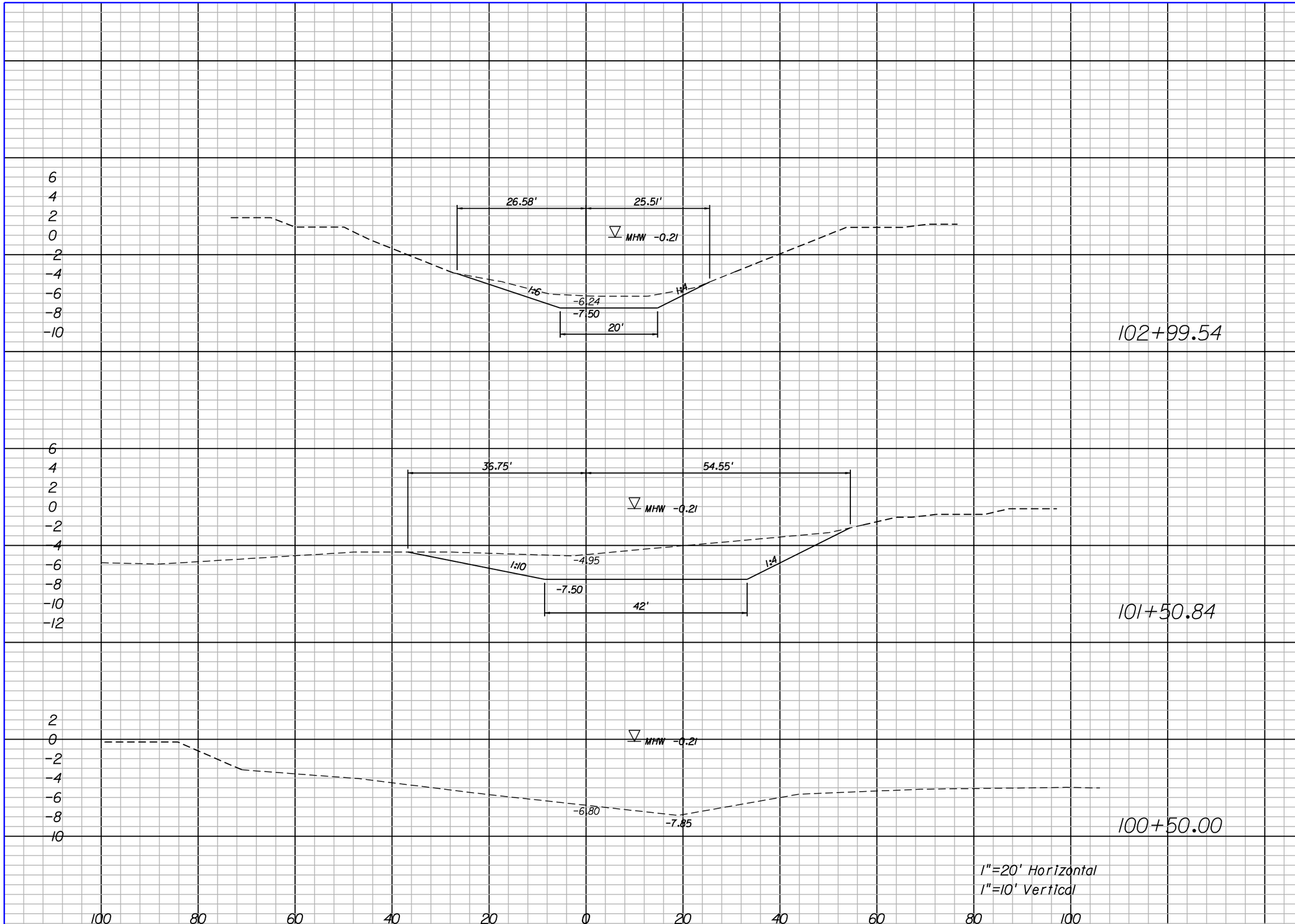
ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST

SHEET NO. 7

USER: 5lntrld 6/21/2011 4:24:20 PM f:\project\5109648\cadd\drainage\PLANRD_SITE5WEST_01.DGN



Channel Exc.		Embankment	
A	V	A	V
46	702	0	0
209	390	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

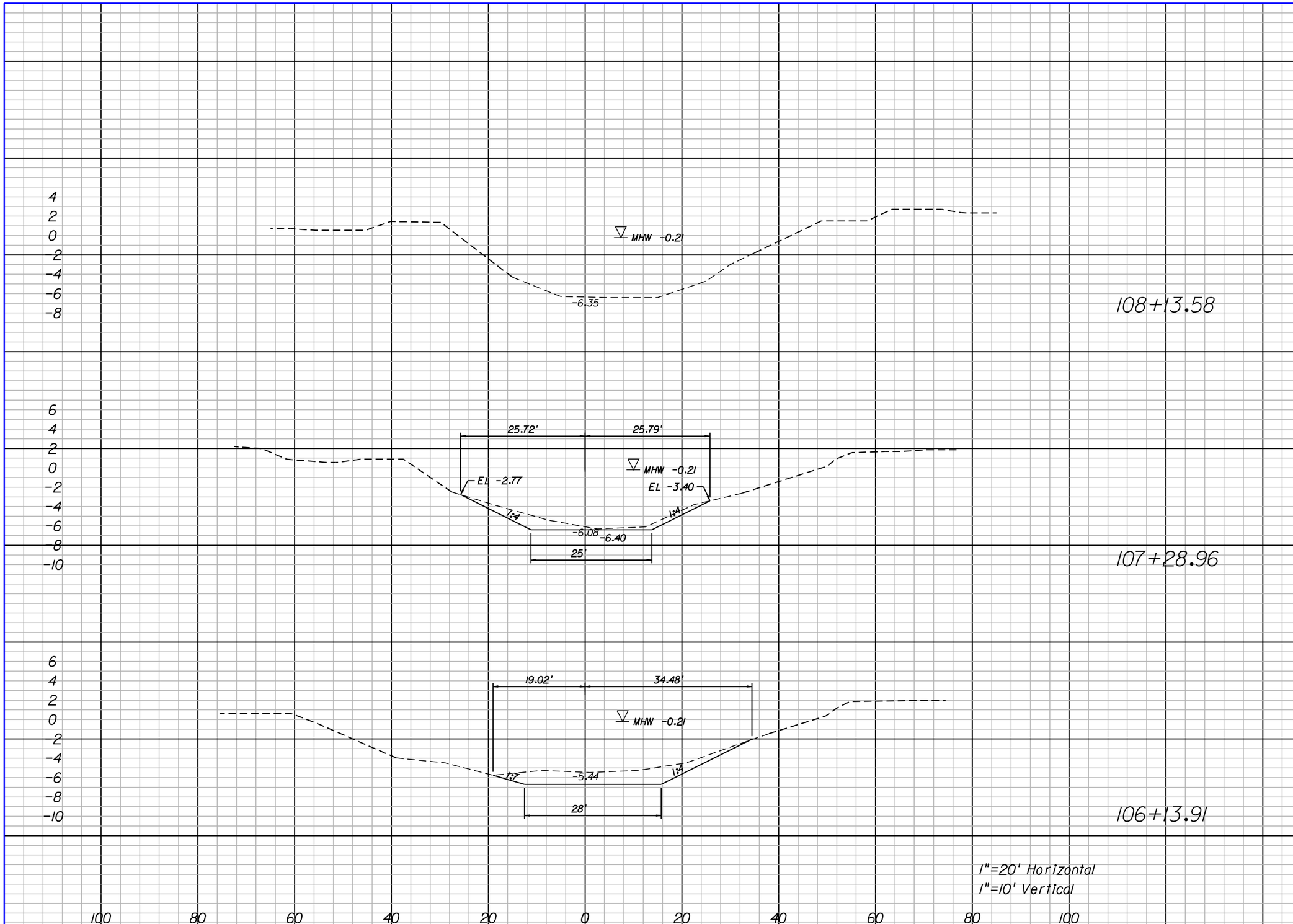
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 8



Channel Exc.		Embankment	
A	V	A	V
0	45	0	0
29	183	0	0
57	600	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

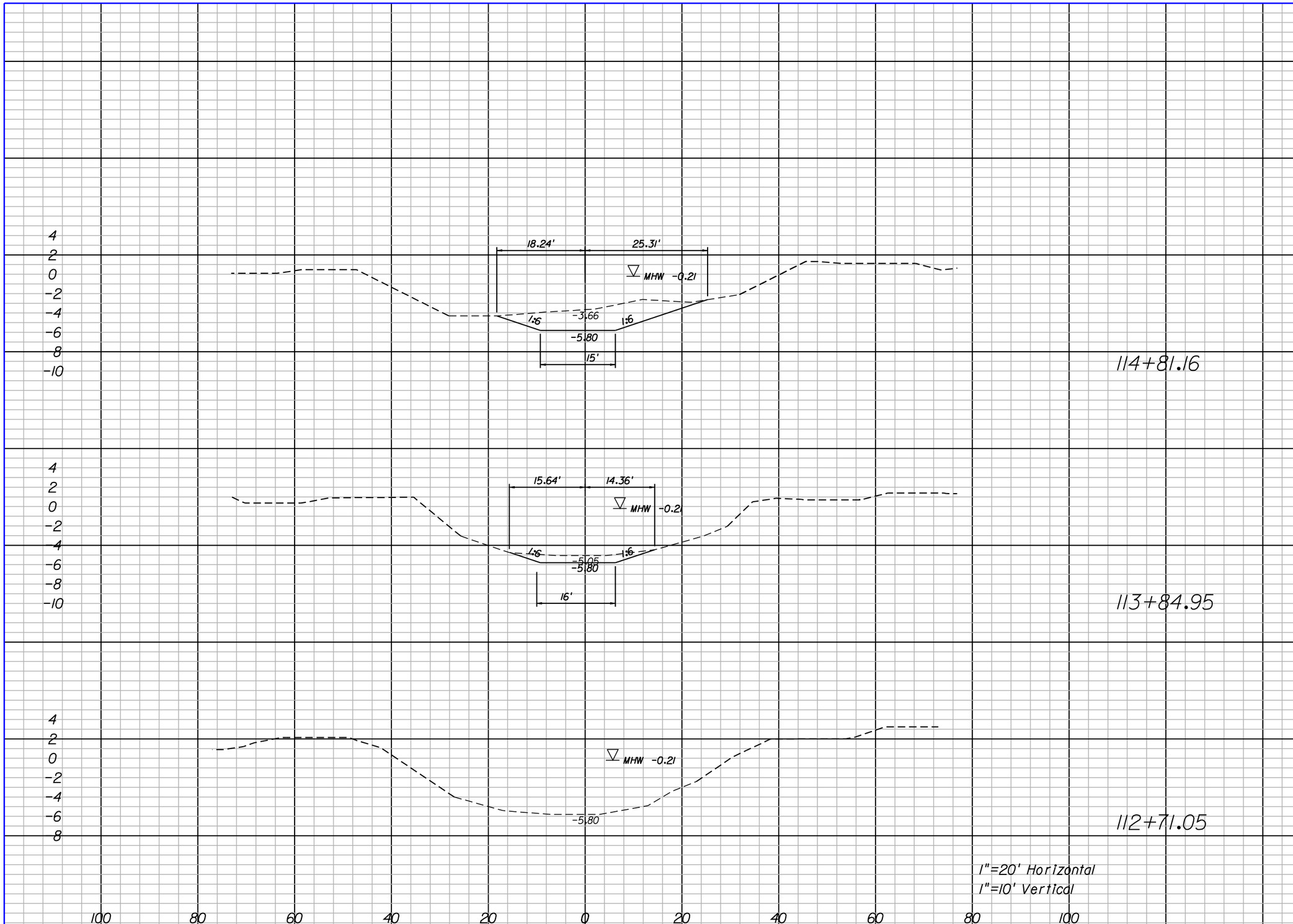
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 9



Channel Exc.		Embankment	
A	V	A	V
69	155	0	0
18	38	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

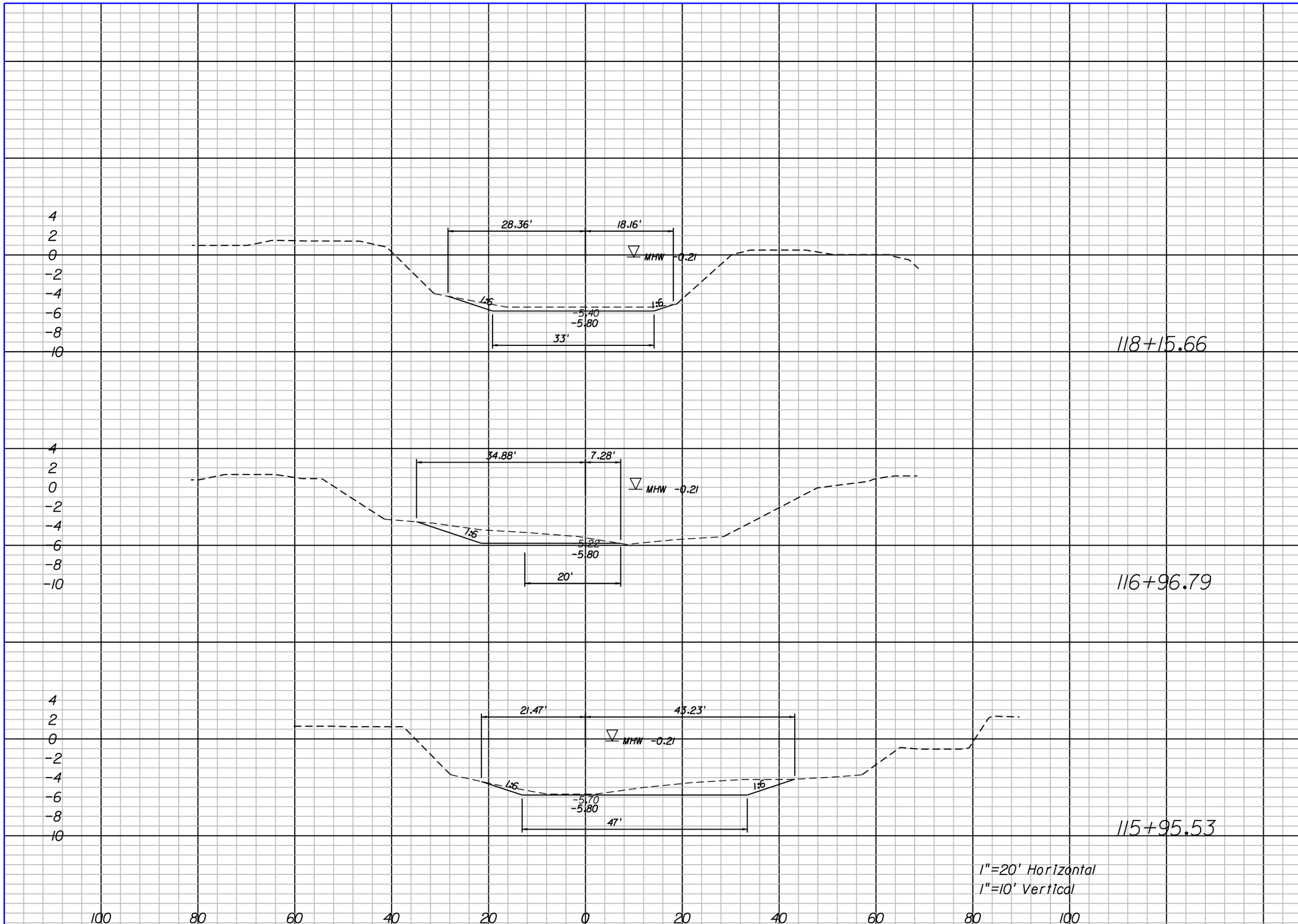
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 10



	Channel Exc.		Embankment	
	A	V	A	V
118+15.66	18	117	0	0
116+96.79	35	148	0	0
115+95.53	44	239	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

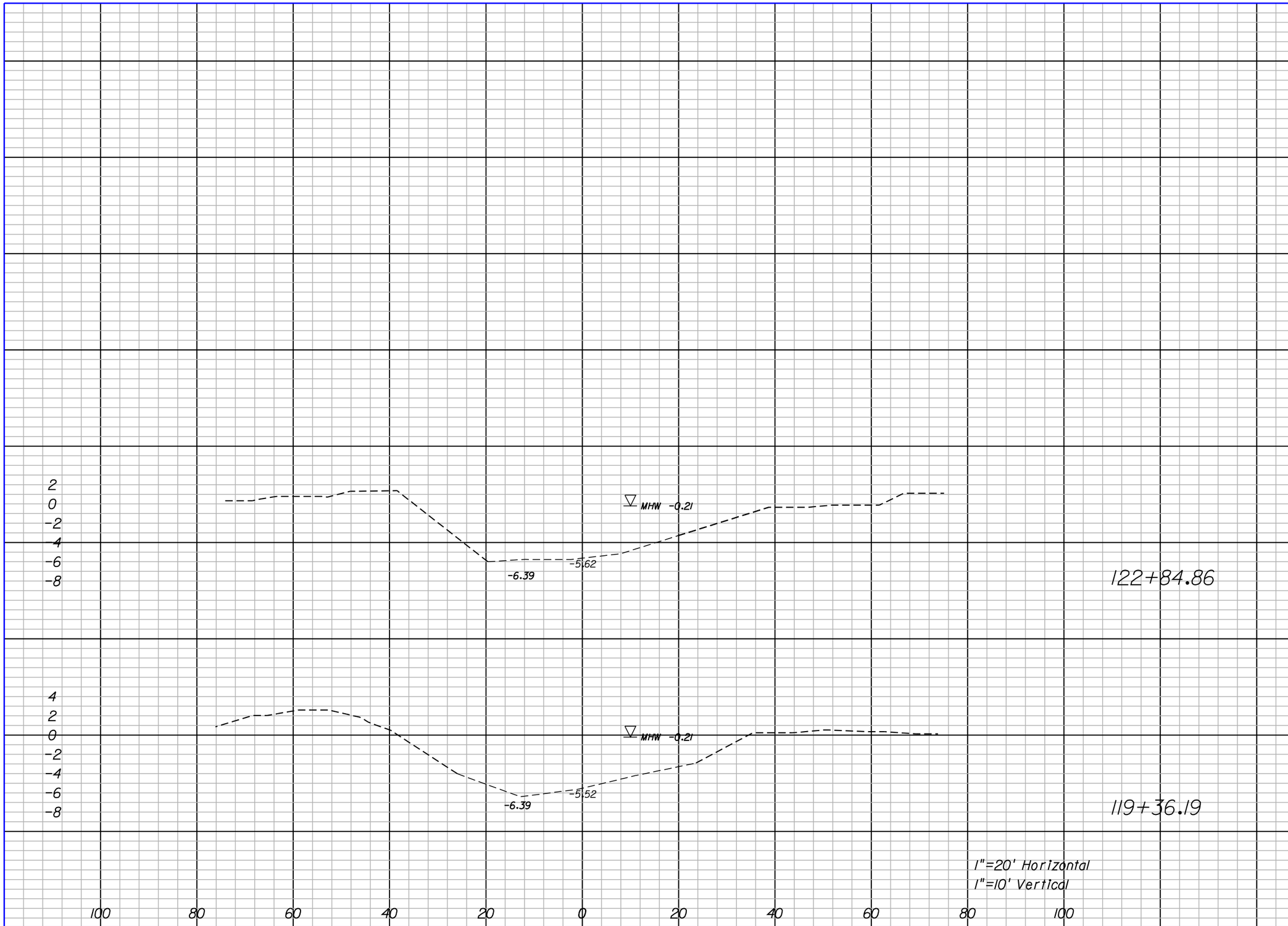
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 11



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	40	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

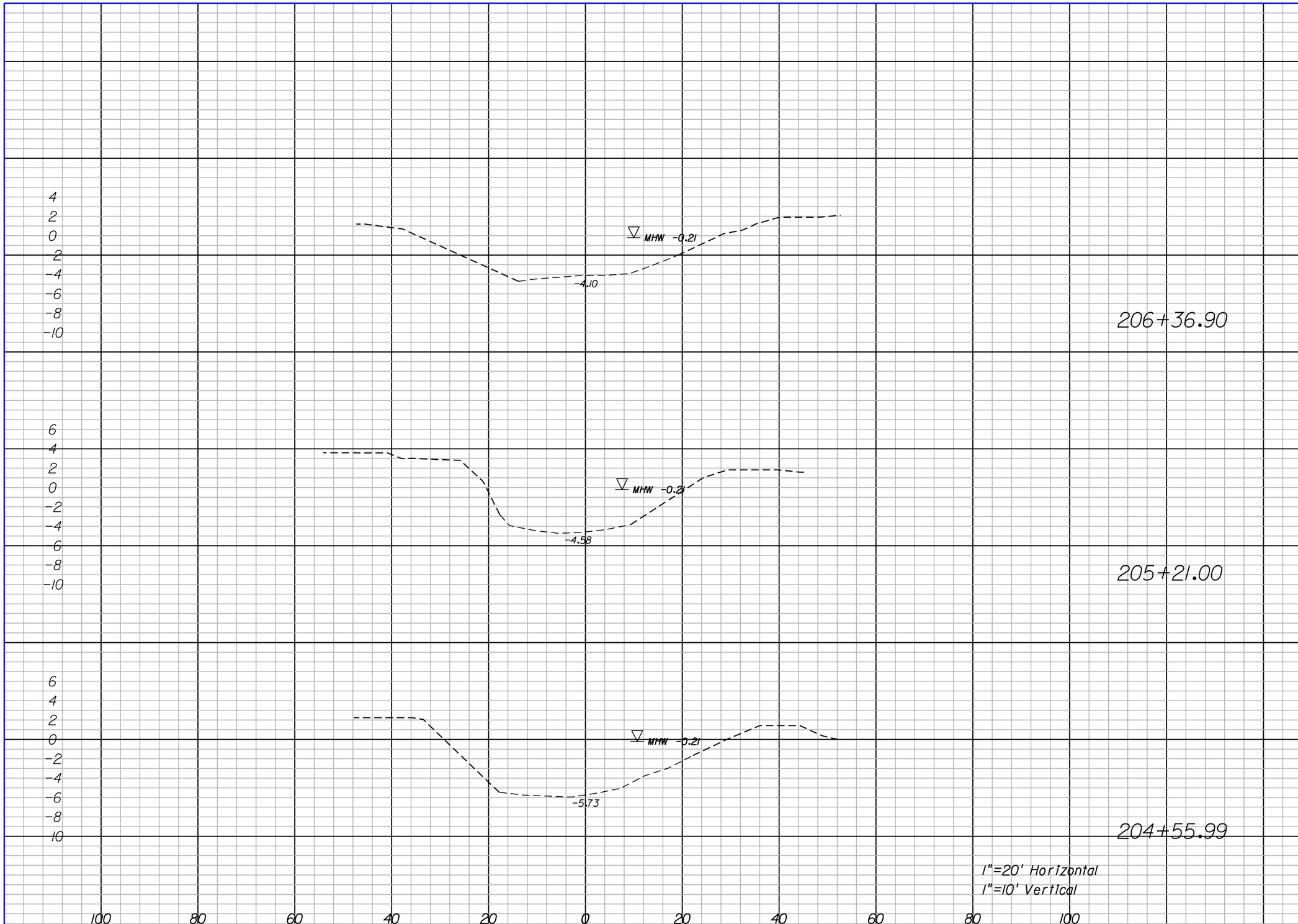
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 12



Channel Exc.		Embankment	
A	V	A	V

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

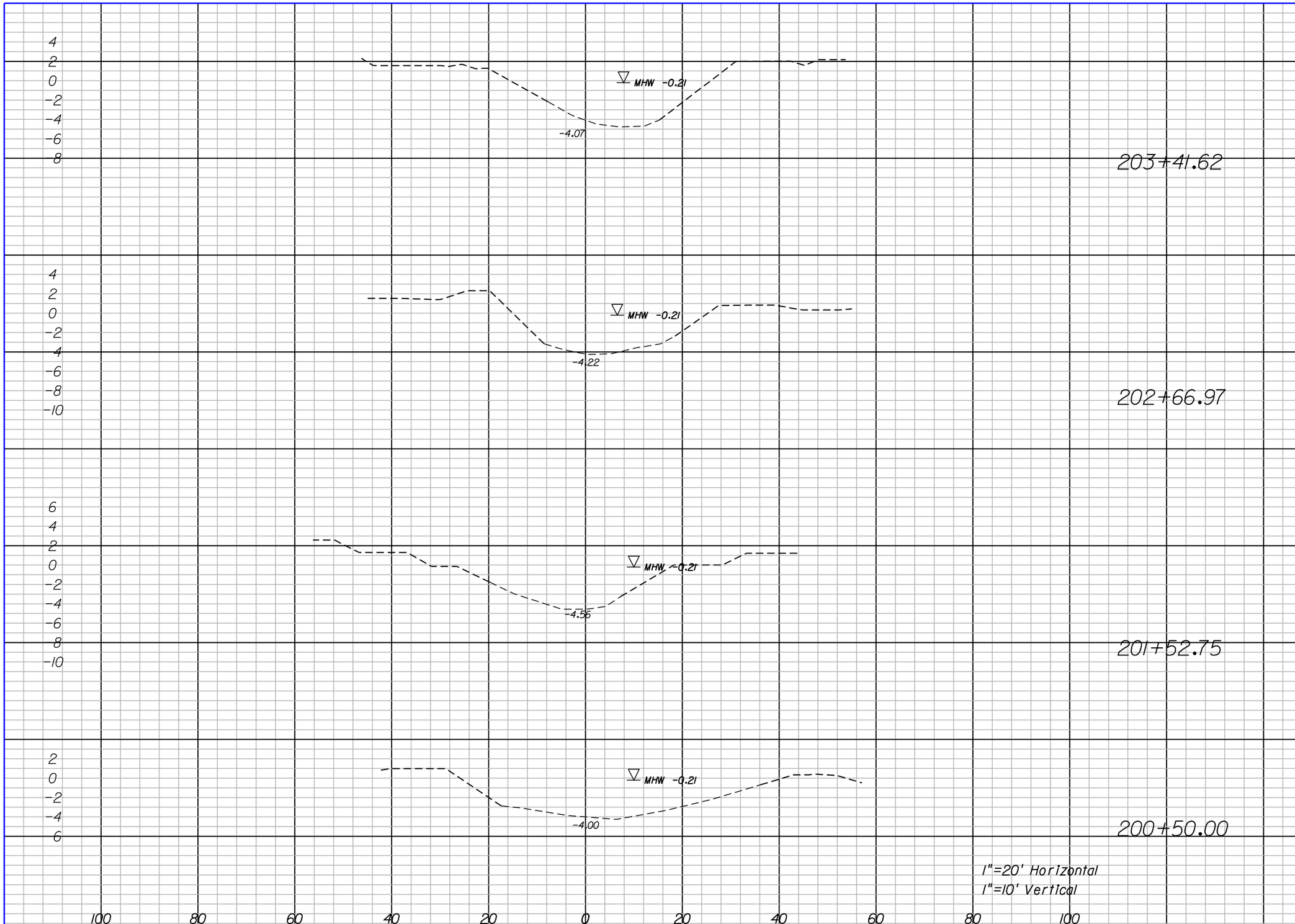
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 13



Channel Exc.		Embankment	
A	V	A	V

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

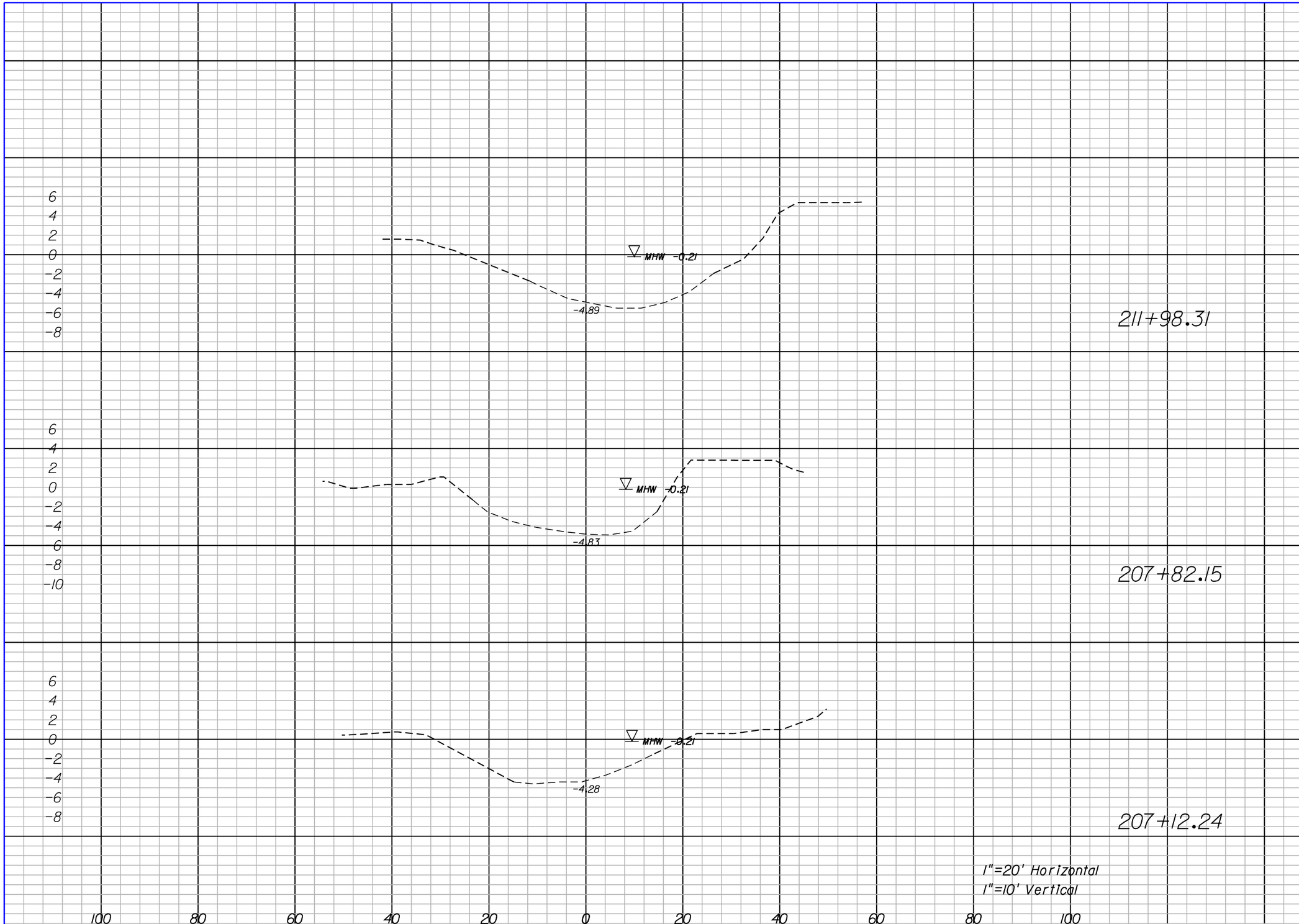
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 14



Channel Exc.		Embankment	
A	V	A	V

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

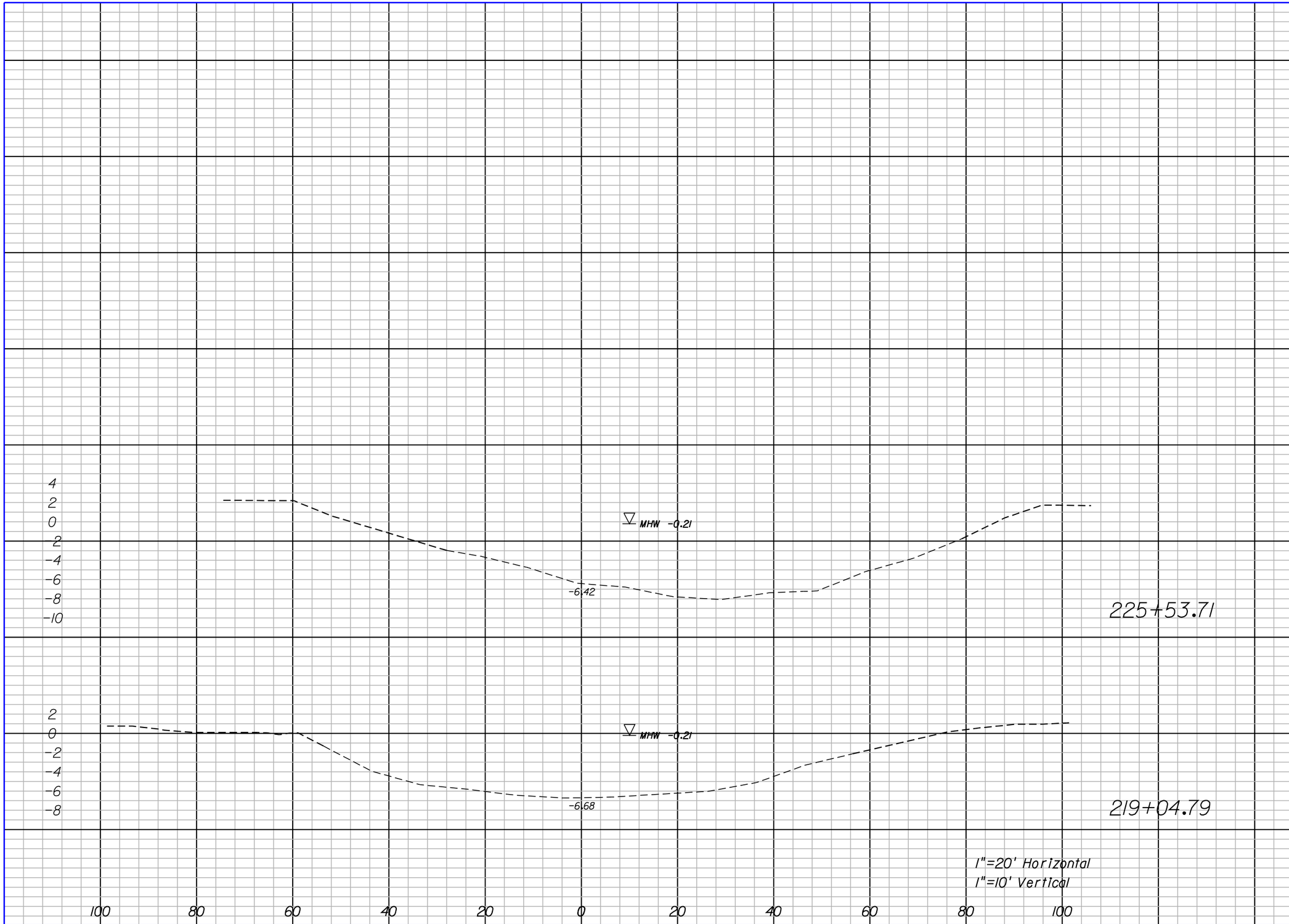
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 15



Channel Exc.		Embankment	
A	V	A	V

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

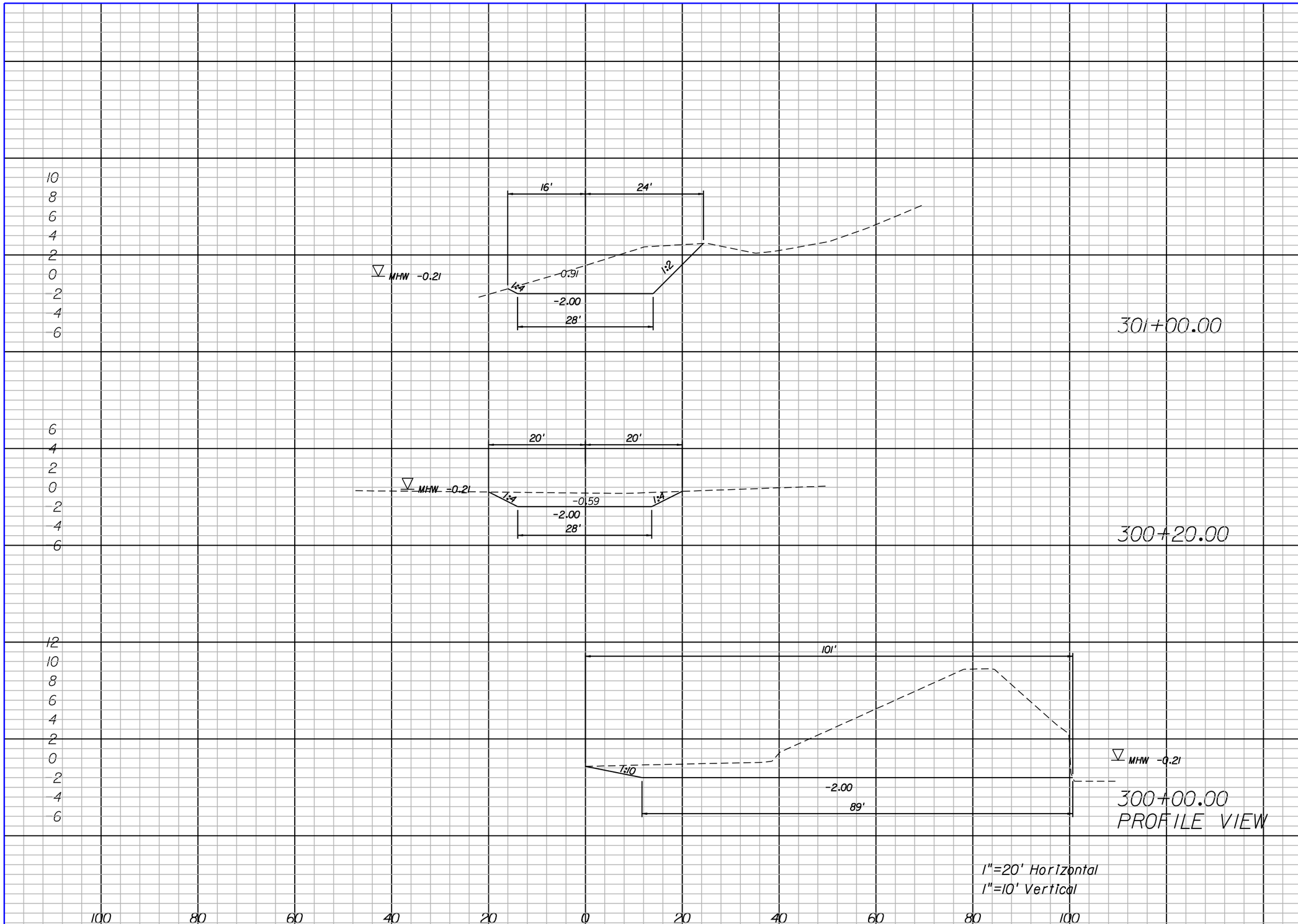
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 16



Regular Exc.		Embankment	
A	V	A	V
505	748	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

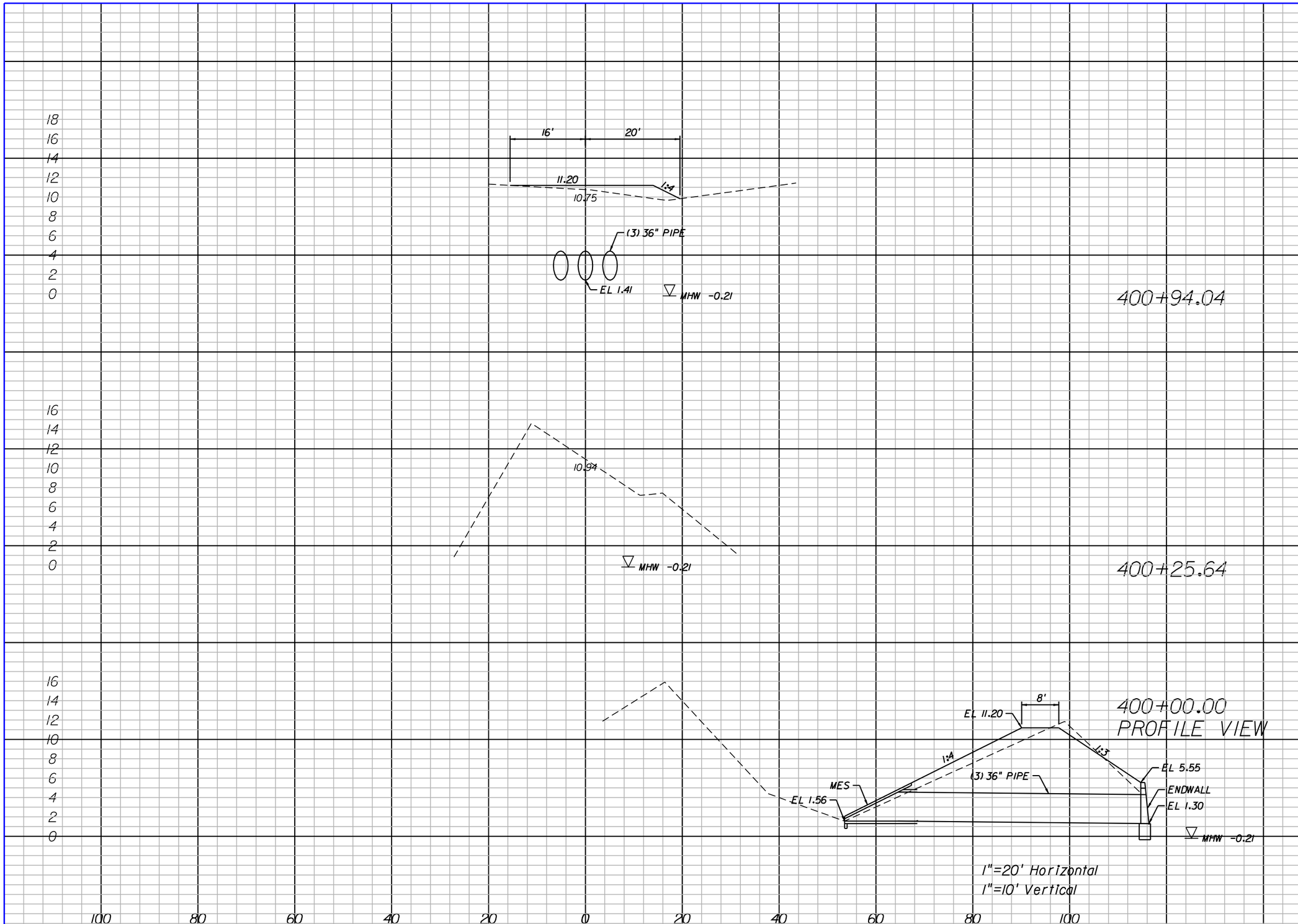
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL CROSS SECTIONS

SHEET NO. 17



Regular Exc.		Embankment	
A	V	A	V
6	8	33	44

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

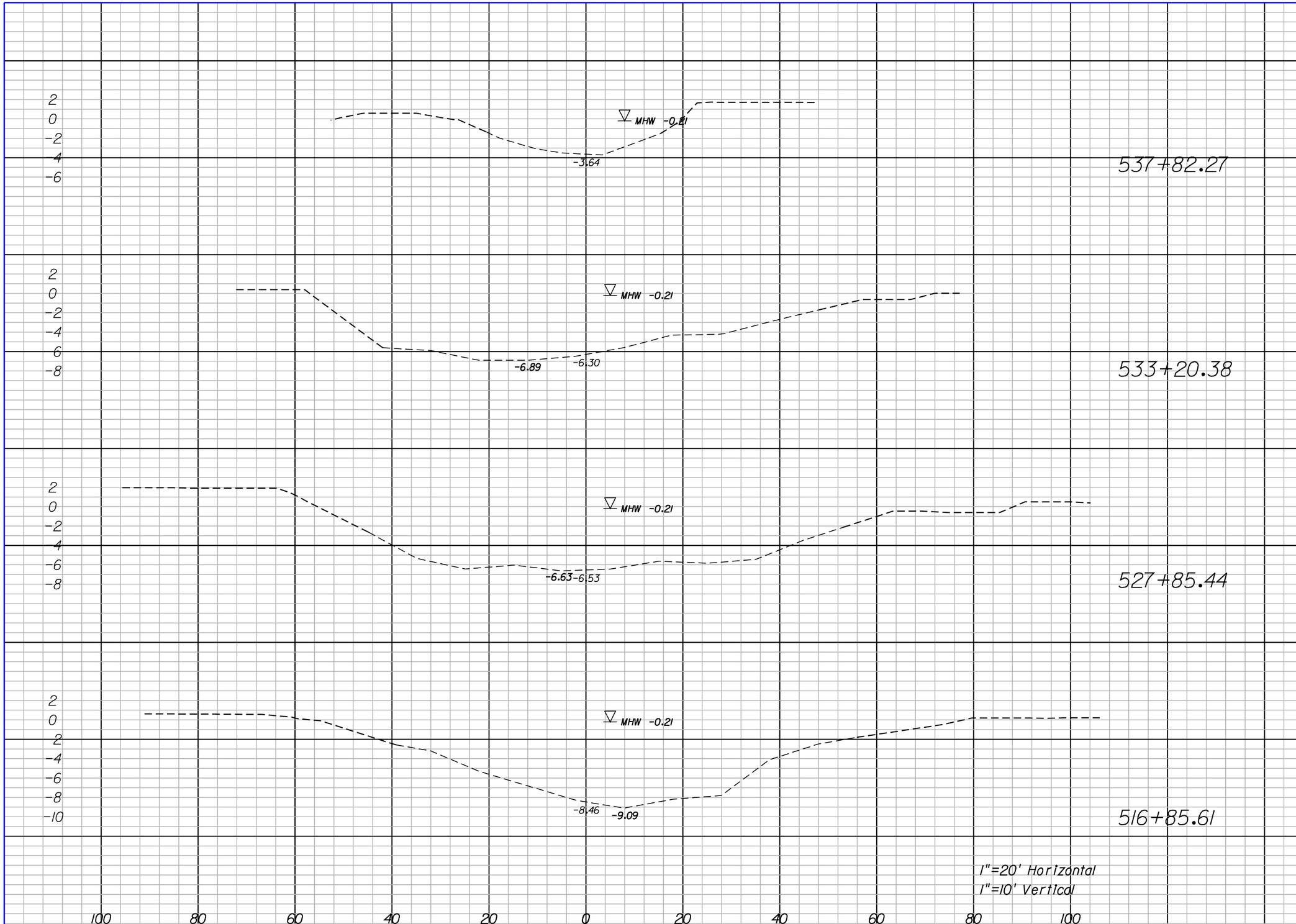
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL CROSS SECTIONS

SHEET NO. 18



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	0	0	0
0	0	0	0
0		0	

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

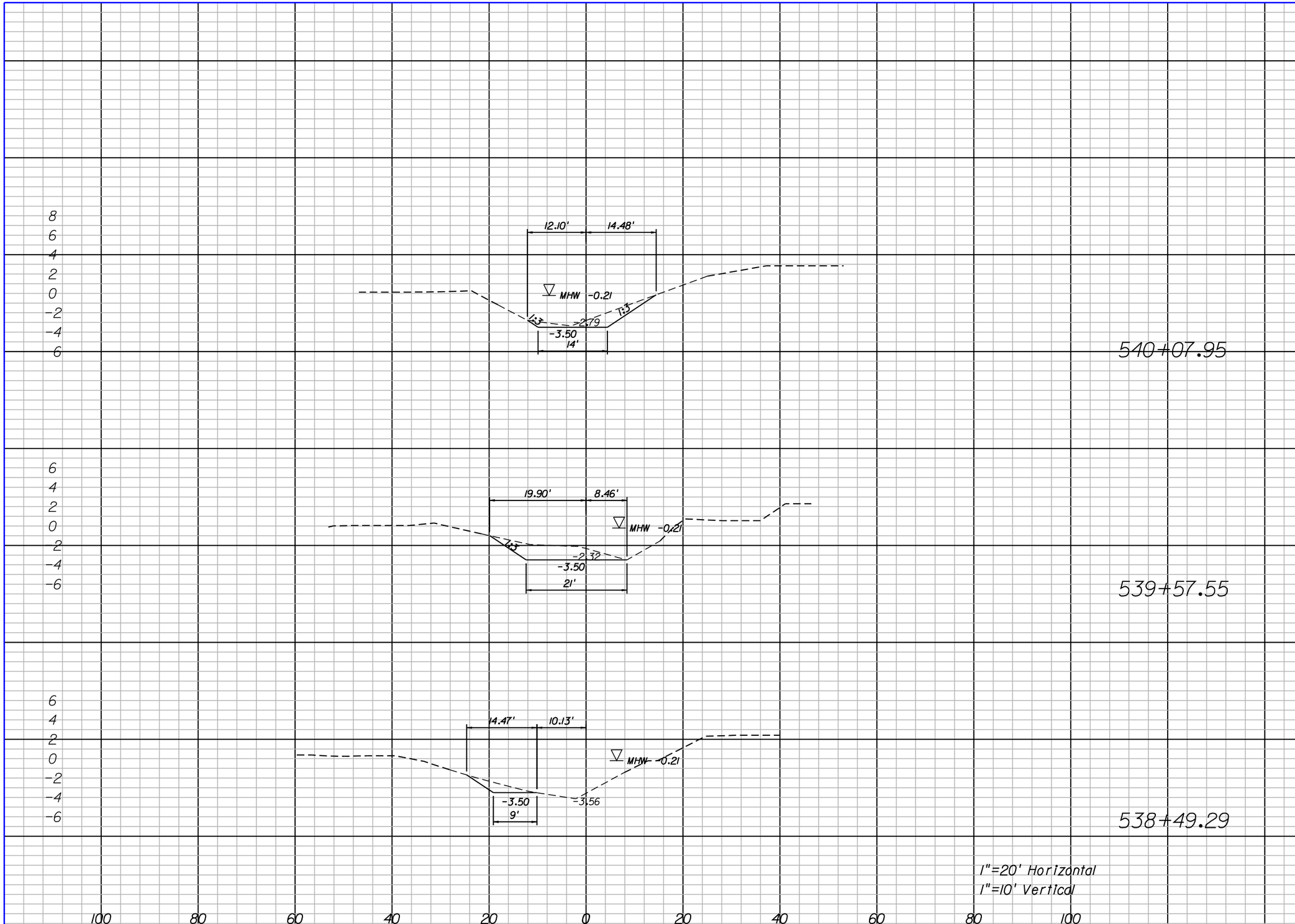
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 19



Channel Exc.		Embankment	
A	V	A	V
17	44	0	0
30	76	0	0
8	10	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

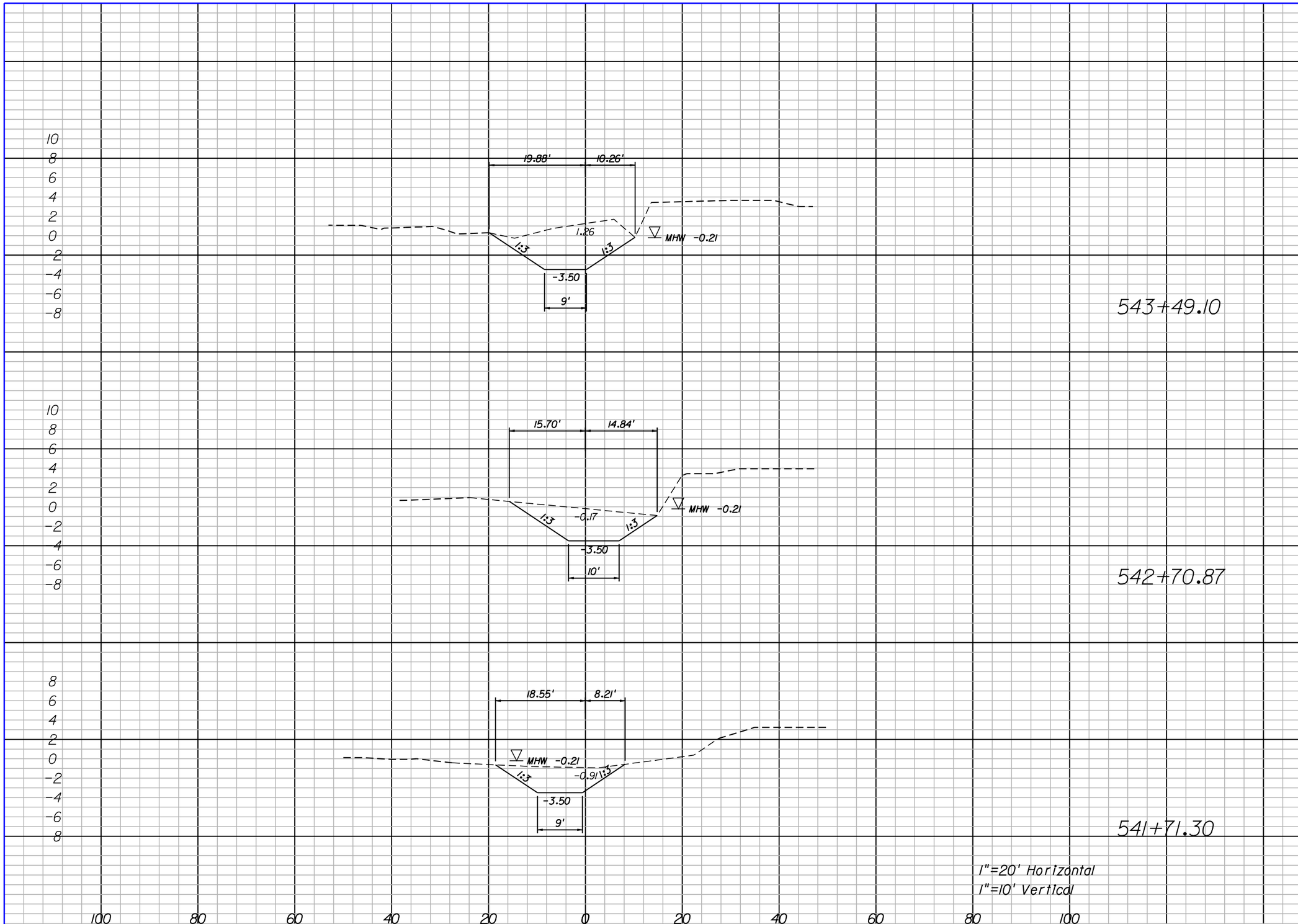
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 20



Channel Exc.		Embankment	
A	V	A	V
88	225	0	0
67	210	0	0
47	194	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

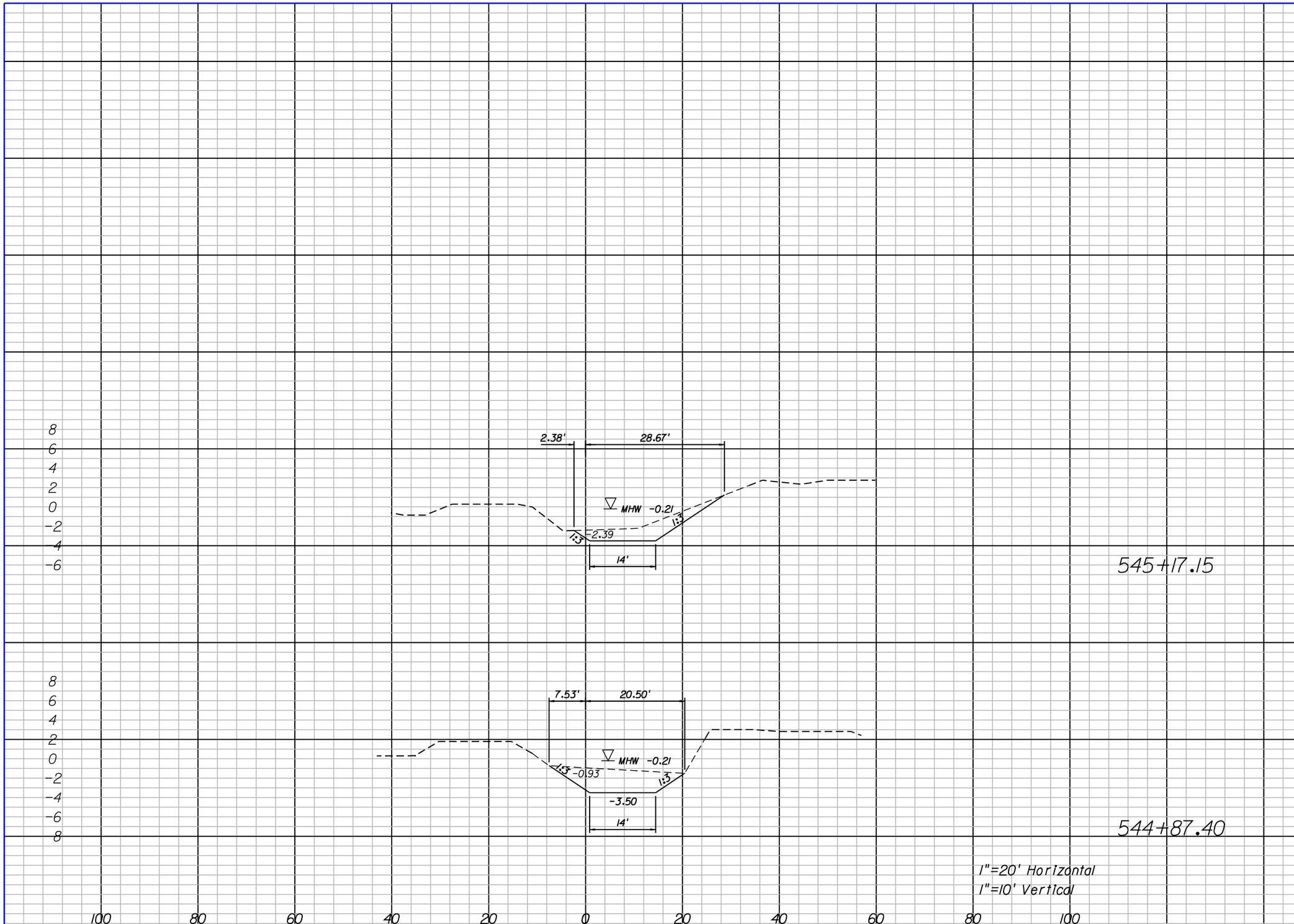
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 21



Channel Exc.		Embankment	
A	V	A	V
34	46	0	0
49	351	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

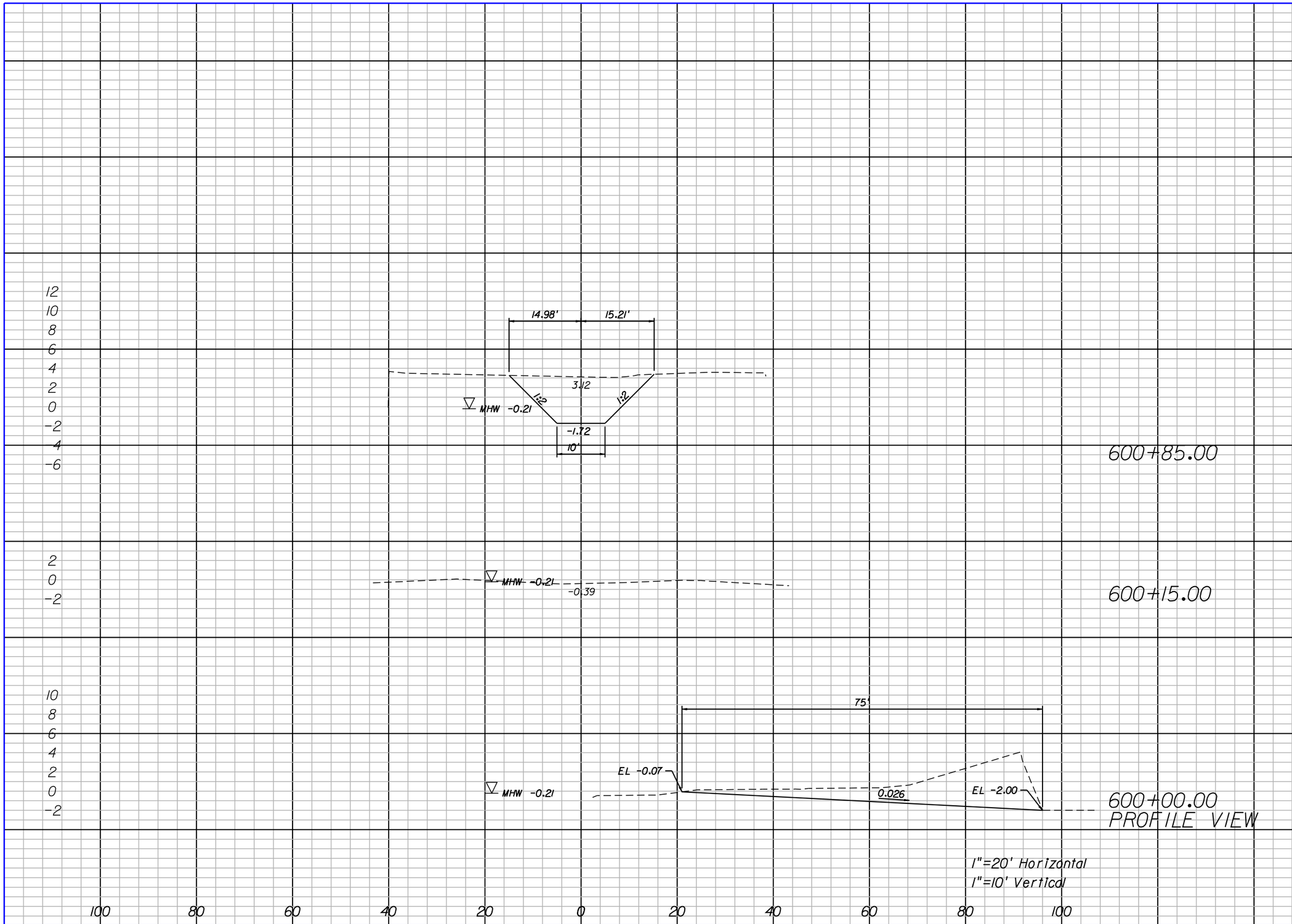
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 22



Regular Exc.		Embankment	
A	V	A	V
149	166	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

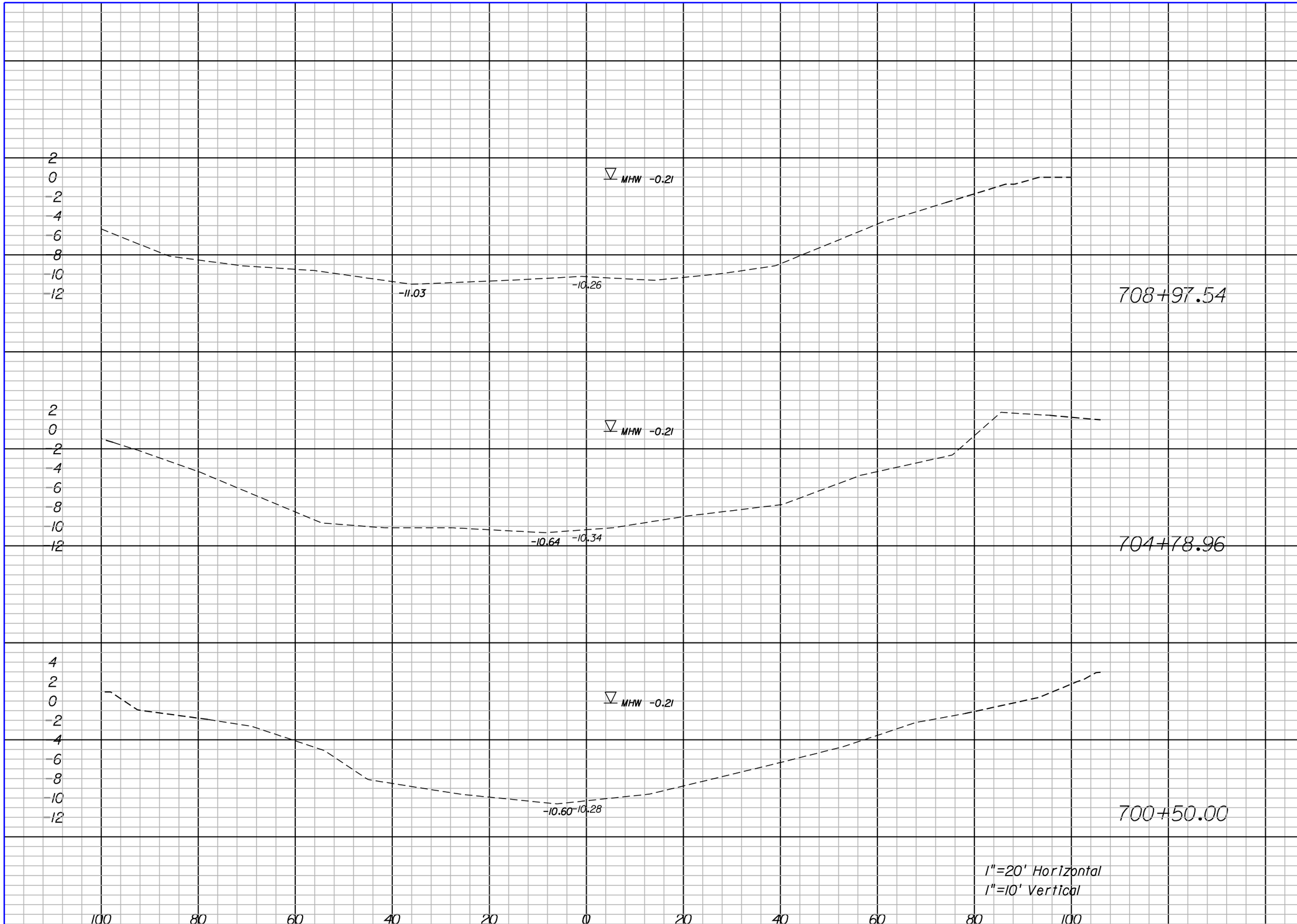
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 23



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	0	0	0
0	0	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

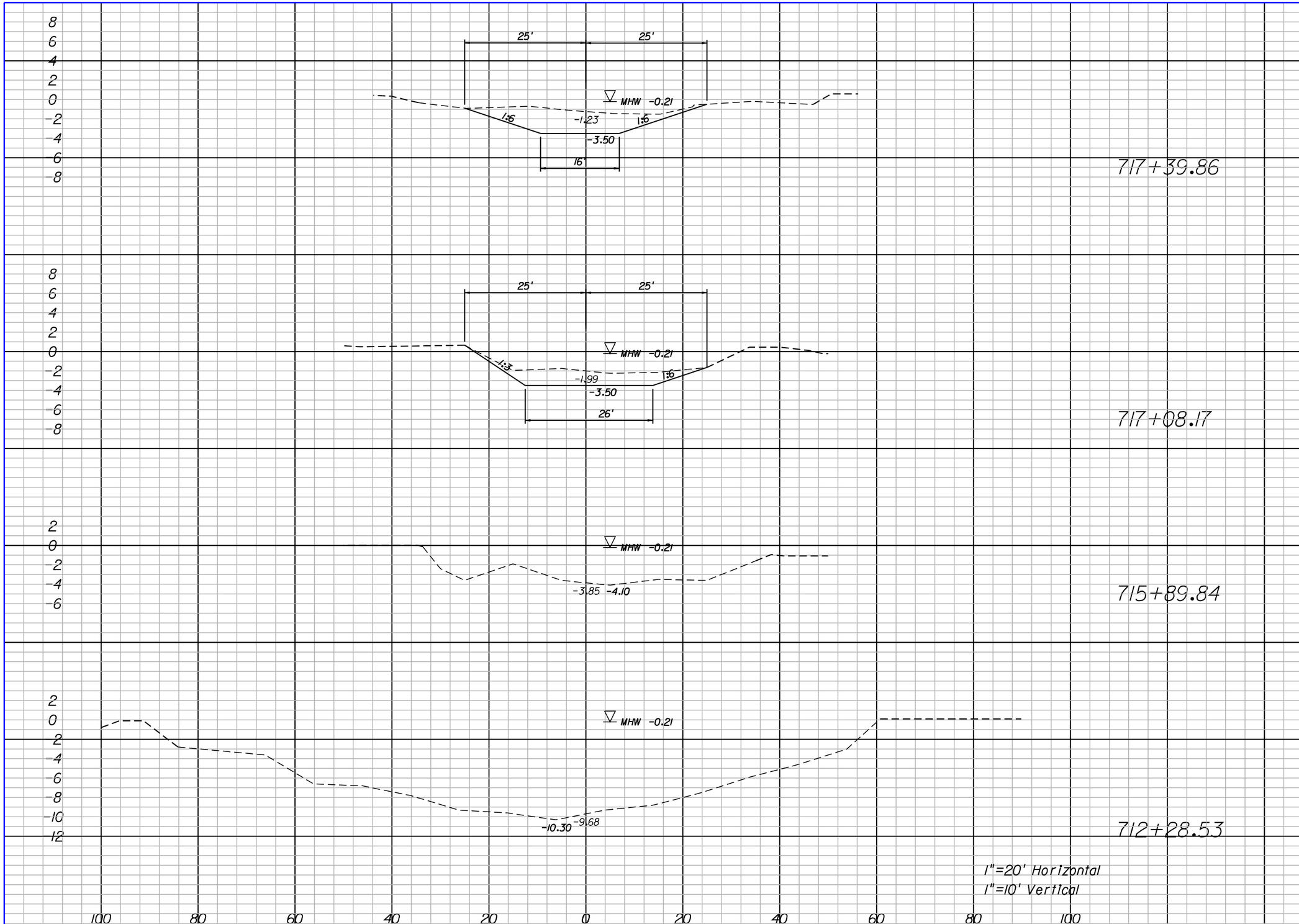
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 24



Channel Exc.		Embankment	
A	V	A	V
74	75	0	0
53	116	0	0
0	0	0	0
0	0	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

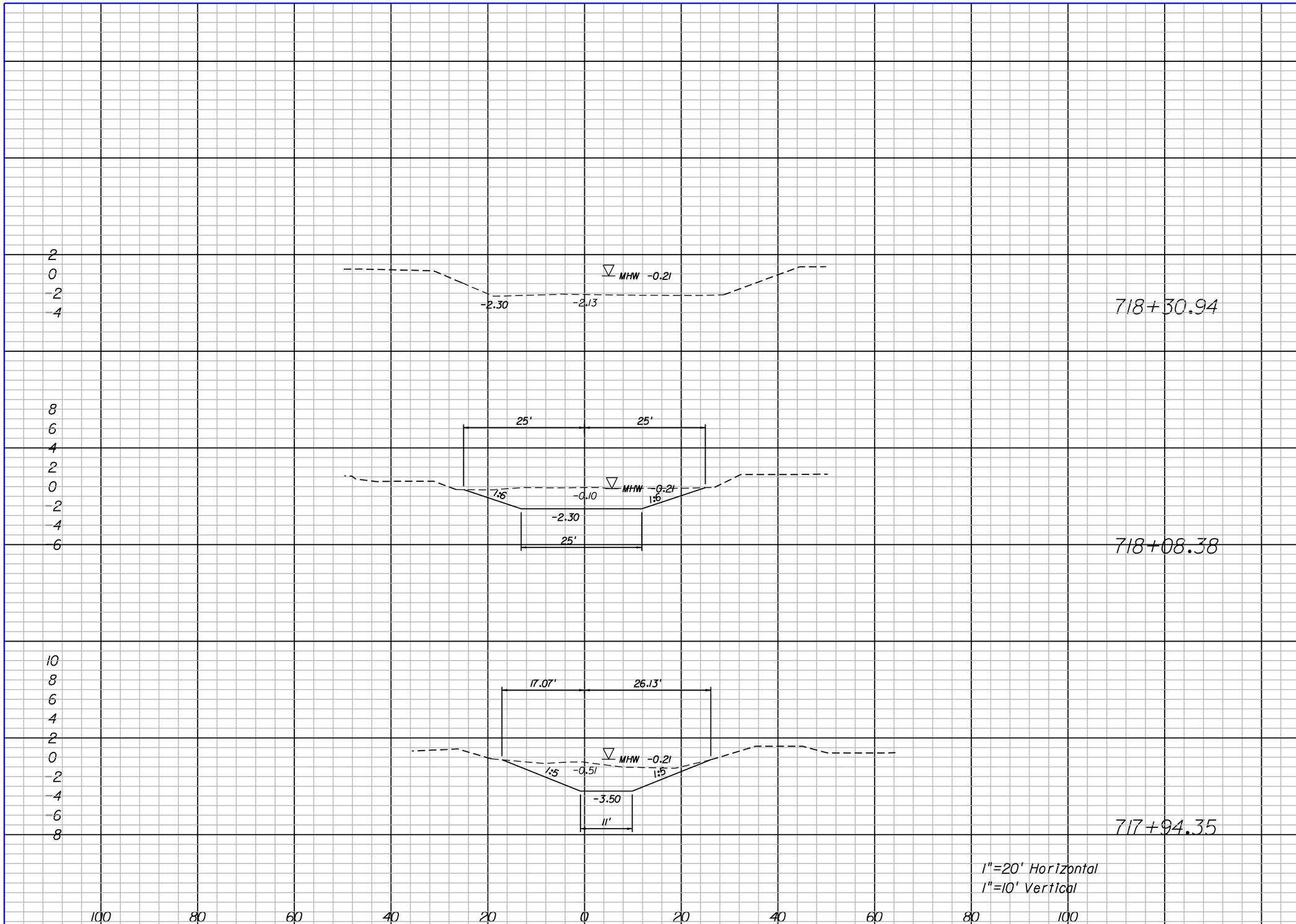
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 25



Channel Exc.		Embankment	
A	V	A	V
0	33	0	0
80	38	0	0
67	142	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

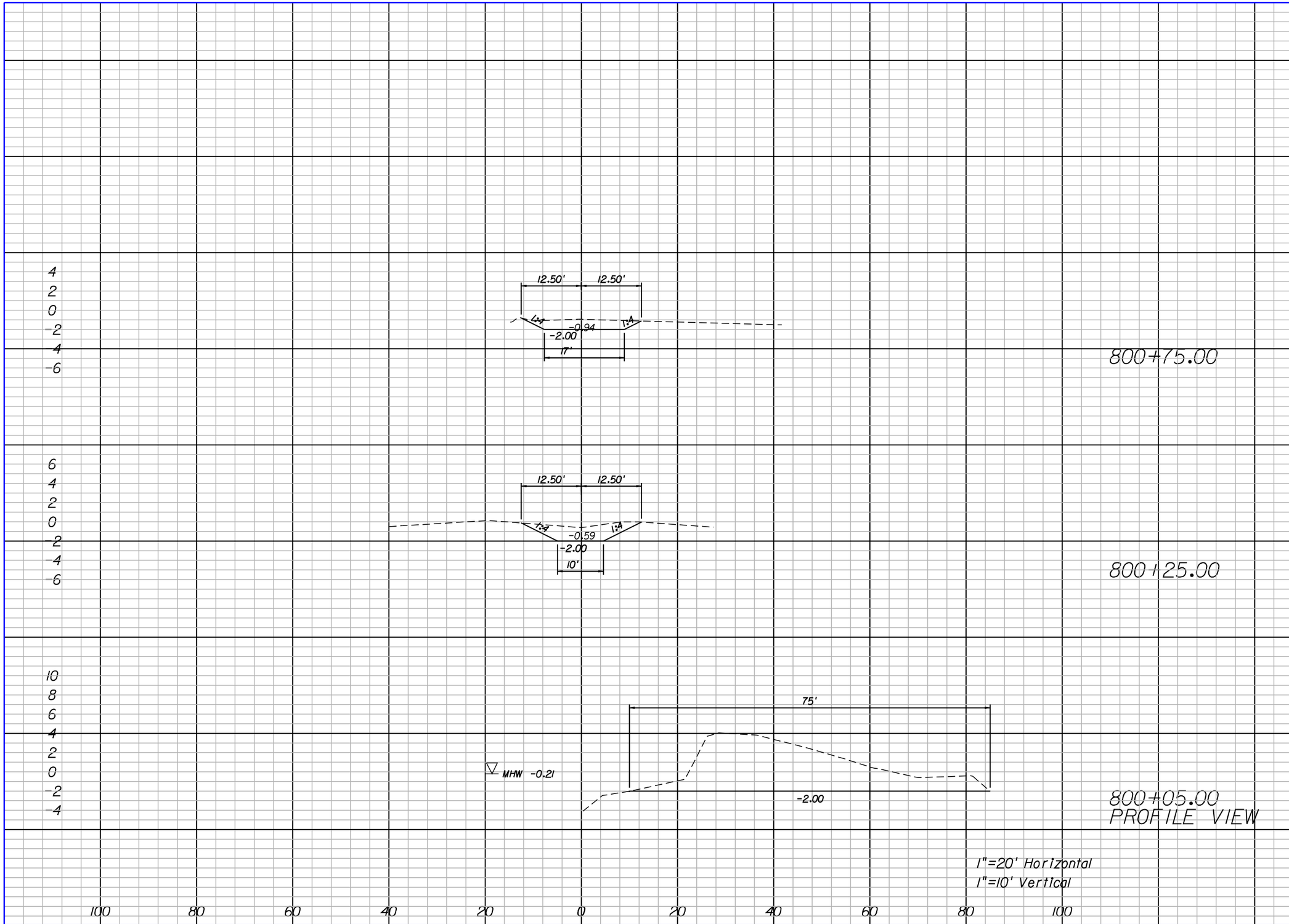
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 26



Channel Exc.		Embankment	
A	V	A	V
224	207	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST
CROSS SECTIONS

SHEET NO. 27

Attachment E

Preliminary Cost Estimate

Programming Document

Water Quality Improvement Projects

Preliminary Conceptual Cost Estimate (Construction Only)
Water Quality Projects

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
Evans Creek (Upstream & Downstream)					
110-1-1	Clearing and Grubbing	1.36	LS/AC	$5,575.35	$7,556.67
104-10-3	Sediment Barrier	2,952	LF	$0.90	$2,656.80
104-11	Floating Turbidity Barrier	750	LF	$6.24	$4,680.00
120-5	Channel Excavation	2,658	CY	$75.00	$199,355.44
				Evans Creek (Upstream & Downstream) Subtotal	$214,248.92
Otter Trail					
110-1-1	Clearing and Grubbing	0.15	LS/AC	$5,575.35	$834.51
104-10-3	Sediment Barrier	500	LF	$0.90	$450.00
104-11	Floating Turbidity Barrier	300	LF	$6.24	$1,872.00
120-1	Regular Excavation	756	CY	$3.15	$2,381.87
120-6	Embankment	44	CY	$3.29	$144.76
400-1-2	Concrete Class I, Endwalls	6.9	CY	$836.37	$5,787.68
430-984-138	Mitered End Section, Optional Round, 36" SD	3	EA	$2,257.25	$6,771.75
430-175-136	Pipe Culvert, Optional Material, Round, 36" S/CD	156	LF	$64.42	$10,049.52
--	Boardwalk (6 ft wide)	240	SF	$42.00	$10,080.00
				Otter Trail Subtotal	$38,372.09
River Place					
104-10-3	Sediment Barrier	1,700	LF	$0.90	$1,530.00
104-11	Floating Turbidity Barrier	450	LF	$6.24	$2,808.00
110-1-1	Clearing and Grubbing	0.41	LS/AC	$5,575.35	$2,268.03
120-1	Regular Excavation	166	CY	$3.15	$521.50
120-5	Channel Excavation	1,155	CY	$75.00	$86,619.75
				River Place Subtotal	$93,747.28
Site 5 West					
104-10-3	Sediment Barrier	750	LF	$0.90	$675.00
104-11	Floating Turbidity Barrier	450	LF	$6.24	$2,808.00
110-1-1	Clearing and Grubbing	0.31	LS/AC	$5,575.35	$1,720.22
120-1	Regular Excavation	207	CY	$3.15	$653.33
120-5	Channel Excavation	404	CY	$75.00	$30,334.89
				Site 5 West Subtotal	$36,191.44
Water Quality Projects Materials Subtotal					**$382,559.72**
				Contingency Cost (20%)	$76,511.94
				Mitigation Cost (50%)	$191,279.86
				Mobilization Cost (30%)	$114,767.92
Water Quality Projects Materials Total					**$765,119.44**
				Construction Engineering Inspection (5%)	$38,255.97
Water Quality Projects Total Construction Costs					**$803,375.41**

Assumptions and Notes:

1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Quantities for regular excavation, channel excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc. and LIDAR data obtained from FDEP.
3) Unit cost for boardwalk is based on FDOT pricing for a 6'-8' wide boardwalk and includes handrail.
4) Clearing and Grubbing quantity based on length of work limits times 20 feet per each side of work area converted to acres.
5) A 50% mitigation cost has been included in the estimate for sodding, plantings and mitigation costs that will be determined during the next design phase.

Preliminary Conceptual Cost Estimate (Construction Only)
Evans Creek

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
Evans Creek (Upstream & Downstream)					
110-1-1	Clearing and Grubbing	1.36	LS/AC	$5,575.35	$7,556.67
104-10-3	Sediment Barrier	2,952	LF	$0.90	$2,656.80
104-11	Floating Turbidity Barrier	750	LF	$6.24	$4,680.00
120-5	Channel Excavation	2,658	CY	$75.00	$199,355.44
	Evans Creek (Upstream & Downstream) Subtotal				$214,248.92
Evans Creek Materials Subtotal					**$214,248.92**
	Contingency Cost (20%)				$42,849.78
	Mitigation Cost (50%)				$107,124.46
	Mobilization Cost (30%)				$64,274.68
Evans Creek Materials Total					**$428,497.83**
	Construction Engineering Inspection (5%)				$21,424.89
Evans Creek Total Construction Costs					**$449,922.73**

Assumptions and Notes:

1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Quantities for regular excavation, channel excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc. and LIDAR data obtained from FDEP.
3) Clearing and Grubbing quantity based on length of work limits times 20 feet per each side of work area converted to acres.
4) A 50% mitigation cost has been included in the estimate for sodding, plantings and mitigation costs that will be determined during the next design phase.

Preliminary Conceptual Cost Estimate (Construction Only)
Otter Trail

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
Otter Trail					
110-1-1	Clearing and Grubbing	0.15	LS/AC	$5,575.35	$834.51
104-10-3	Sediment Barrier	500	LF	$0.90	$450.00
104-11	Floating Turbidity Barrier	300	LF	$6.24	$1,872.00
120-1	Regular Excavation	756	CY	$3.15	$2,381.87
120-6	Embankment	44	CY	$3.29	$144.76
400-1-2	Concrete Class I, Endwalls	6.9	CY	$836.37	$5,787.68
430-984-138	Mitered End Section, Optional Round, 36" SD	3	EA	$2,257.25	$6,771.75
430-175-136	Pipe Culvert, Optional Material, Round, 36" S/CD	156	LF	$64.42	$10,049.52
--	Boardwalk (6 ft wide)	240	SF	$42.00	$10,080.00
				Otter Trail Subtotal	$38,372.09
Otter Trail Materials Subtotal					**$38,372.09**
				Contingency Cost (20%)	$7,674.42
				Mitigation Cost (50%)	$19,186.04
				Mobilization Cost (30%)	$11,511.63
Otter Trail Materials Total					**$76,744.18**
				Construction Engineering Inspection (5%)	$3,837.21
Otter Trail Total Construction Costs					**$80,581.38**

Assumptions and Notes:

1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Quantities for regular excavation, channel excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc. and LIDAR data obtained from FDEP.
3) Unit cost for boardwalk is based on FDOT pricing for a 6'-8' wide boardwalk and includes handrail.
4) Clearing and Grubbing quantity based on length of work limits times 20 feet per each side of work area converted to acres.
5) A 50% mitigation cost has been included in the estimate for sodding, plantings and mitigation costs that will be determined during the next design phase.

Preliminary Conceptual Cost Estimate (Construction Only)
River Place

Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
River Place					
104-10-3	Sediment Barrier	1,700	LF	$0.90	$1,530.00
104-11	Floating Turbidity Barrier	450	LF	$6.24	$2,808.00
110-1-1	Clearing and Grubbing	0.41	LS/AC	$5,575.35	$2,268.03
120-1	Regular Excavation	166	CY	$3.15	$521.50
120-5	Channel Excavation	1,155	CY	$75.00	$86,619.75
				River Place Subtotal	$93,747.28
River Place Materials Subtotal					**$93,747.28**
				Contingency Cost (20%)	$18,749.46
				Mitigation Cost (50%)	$46,873.64
				Mobilization Cost (30%)	$28,124.18
River Place Materials Total					**$187,494.55**
				Construction Engineering Inspection (5%)	$9,374.73
River Place Total Construction Costs					**$196,869.28**

Assumptions and Notes:

1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Quantities for regular excavation, channel excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc. and LIDAR data obtained from FDEP.
3) Clearing and Grubbing quantity based on length of work limits times 20 feet per each side of work area converted to acres.
4) A 50% mitigation cost has been included in the estimate for sodding, plantings and mitigation costs that will be determined during the next design phase.

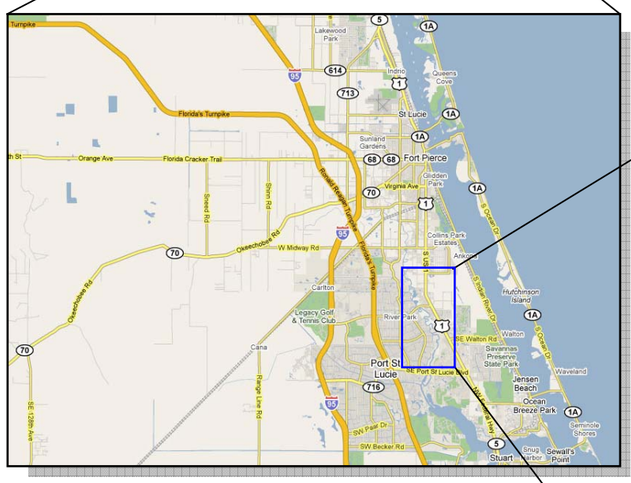
Preliminary Conceptual Cost Estimate (Construction Only)
Site 5 West

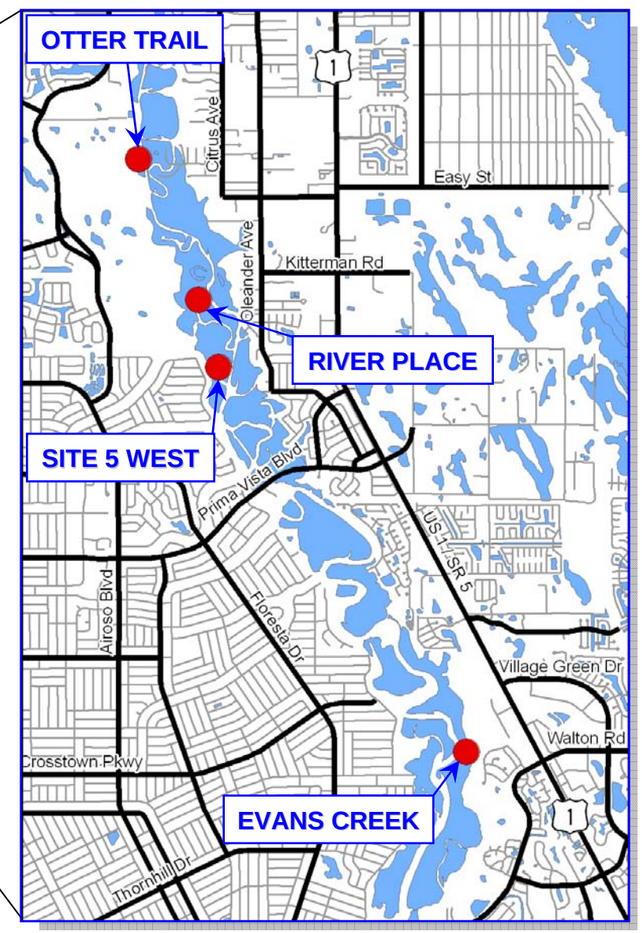
Pay Item Number	Description	Quantity	Unit	Unit Price	Amount
Site 5 West					
104-10-3	Sediment Barrier	750	LF	$0.90	$675.00
104-11	Floating Turbidity Barrier	450	LF	$6.24	$2,808.00
110-1-1	Clearing and Grubbing	0.31	LS/AC	$5,575.35	$1,720.22
120-1	Regular Excavation	207	CY	$3.15	$653.33
120-5	Channel Excavation	404	CY	$75.00	$30,334.89
				Site 5 West Subtotal	$36,191.44
Site 5 West Materials Subtotal					**$36,191.44**
				Contingency Cost (20%)	$7,238.29
				Mitigation Cost (50%)	$18,095.72
				Mobilization Cost (30%)	$10,857.43
Site 5 West Materials Total					**$72,382.88**
				Construction Engineering Inspection (5%)	$3,619.14
Site 5 West Total Construction Costs					**$76,002.02**

Assumptions and Notes:

1) Unit prices are from the FDOT Item Average Unit Costs for Statewide Costs from 1/1/2010 to 12/31/2010.
2) Quantities for regular excavation, channel excavation and embankment are based on cross section data obtained from topographical survey performed by Betsy Lindsay, Inc. and LIDAR data obtained from FDEP.
3) Clearing and Grubbing quantity based on length of work limits times 20 feet per each side of work area converted to acres.
4) A 50% mitigation cost has been included in the estimate for sodding, plantings and mitigation costs that will be determined during the next design phase.

Preliminary
Conceptual Design Plans
Crosstown Parkway Extension Project
Proprietary Mitigation Plan Projects
Water Quality Improvements





Preliminary –
Only for Conceptual
Proprietary Mitigation
(Subject to Revision)

Prepared For:

City of Port St. Lucie
121 S.W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984

Prepared By:

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409

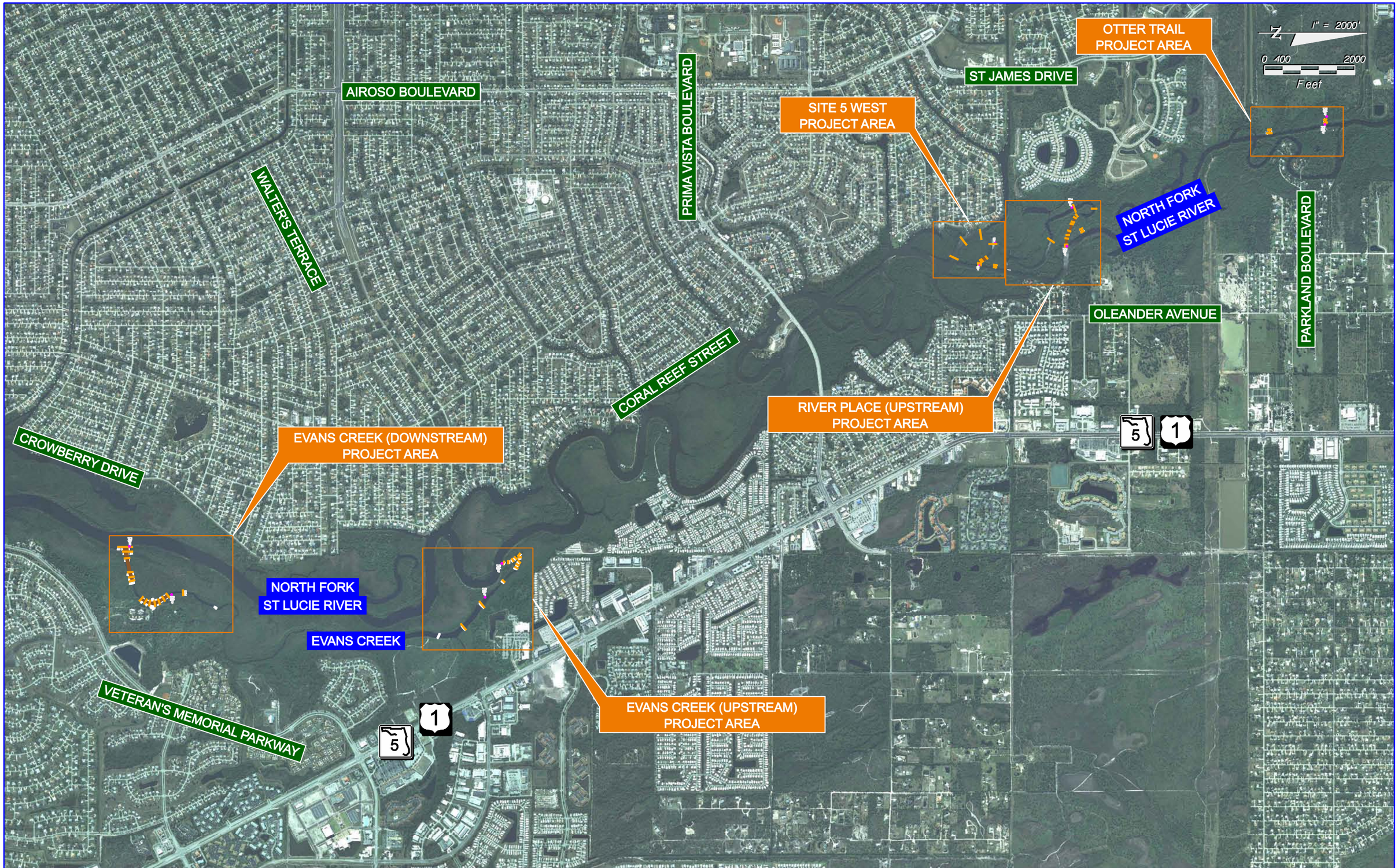
June 2011

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	PROJECTS OVERVIEW
3	EVANS CREEK (DOWNSTREAM)
4	EVANS CREEK (UPSTREAM)
5	OTTER TRAIL
6	RIVER PLACE (UPSTREAM)
7	SITE 5 WEST
8-12	EVANS CREEK (DOWNSTREAM) CROSS SECTIONS
13-16	EVANS CREEK (UPSTREAM) CROSS SECTIONS
17-18	OTTER TRAIL CROSS SECTIONS
19-23	RIVER PLACE (UPSTREAM) CROSS SECTIONS
24-27	SITE 5 WEST CROSS SECTIONS

NOTE:

PLAN SET FOR PURPOSE OF PRELIMINARY AND CONCEPTUAL MITIGATION DESIGN.



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

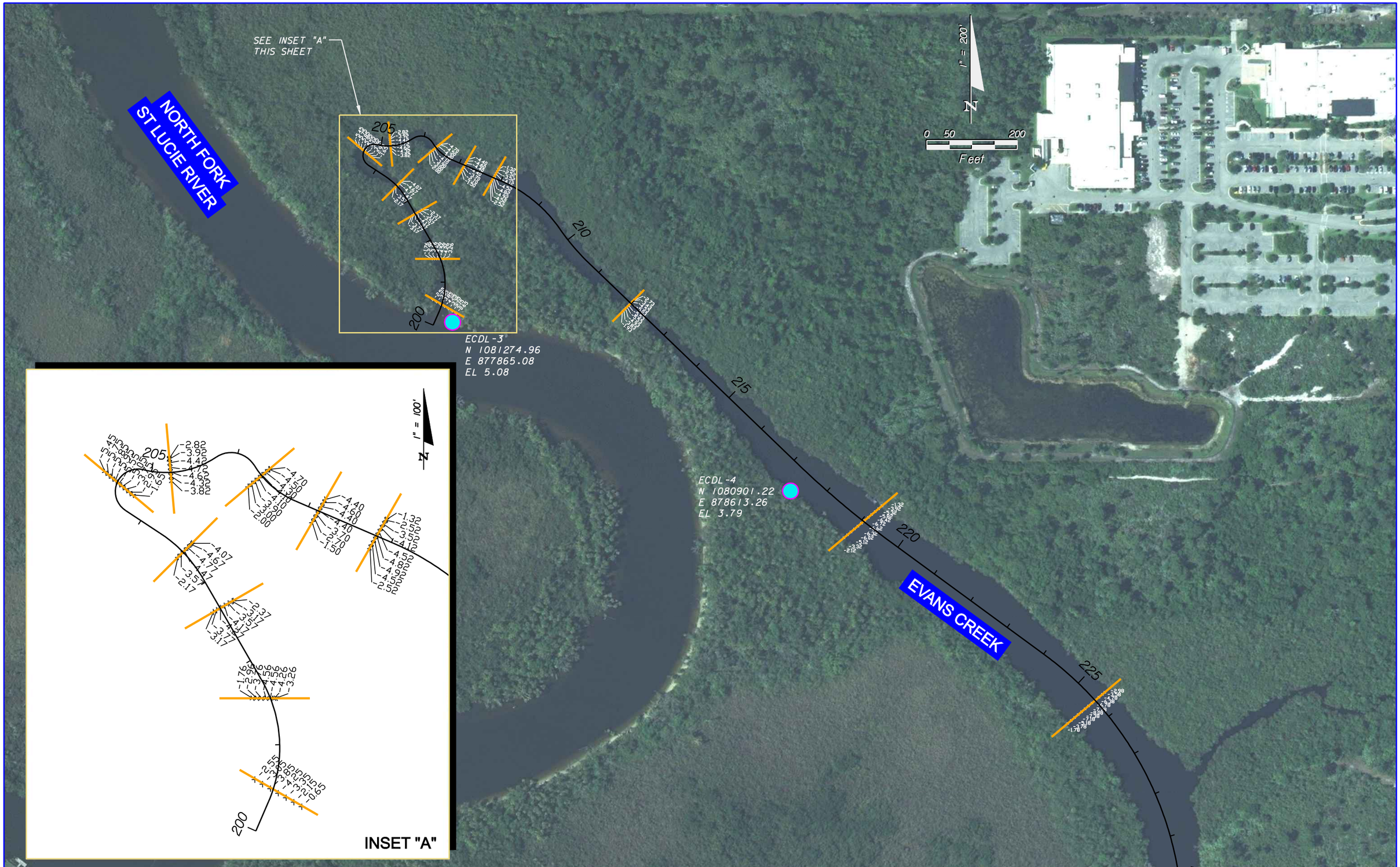
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

PROJECTS OVERVIEW

SHEET NO. 2



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

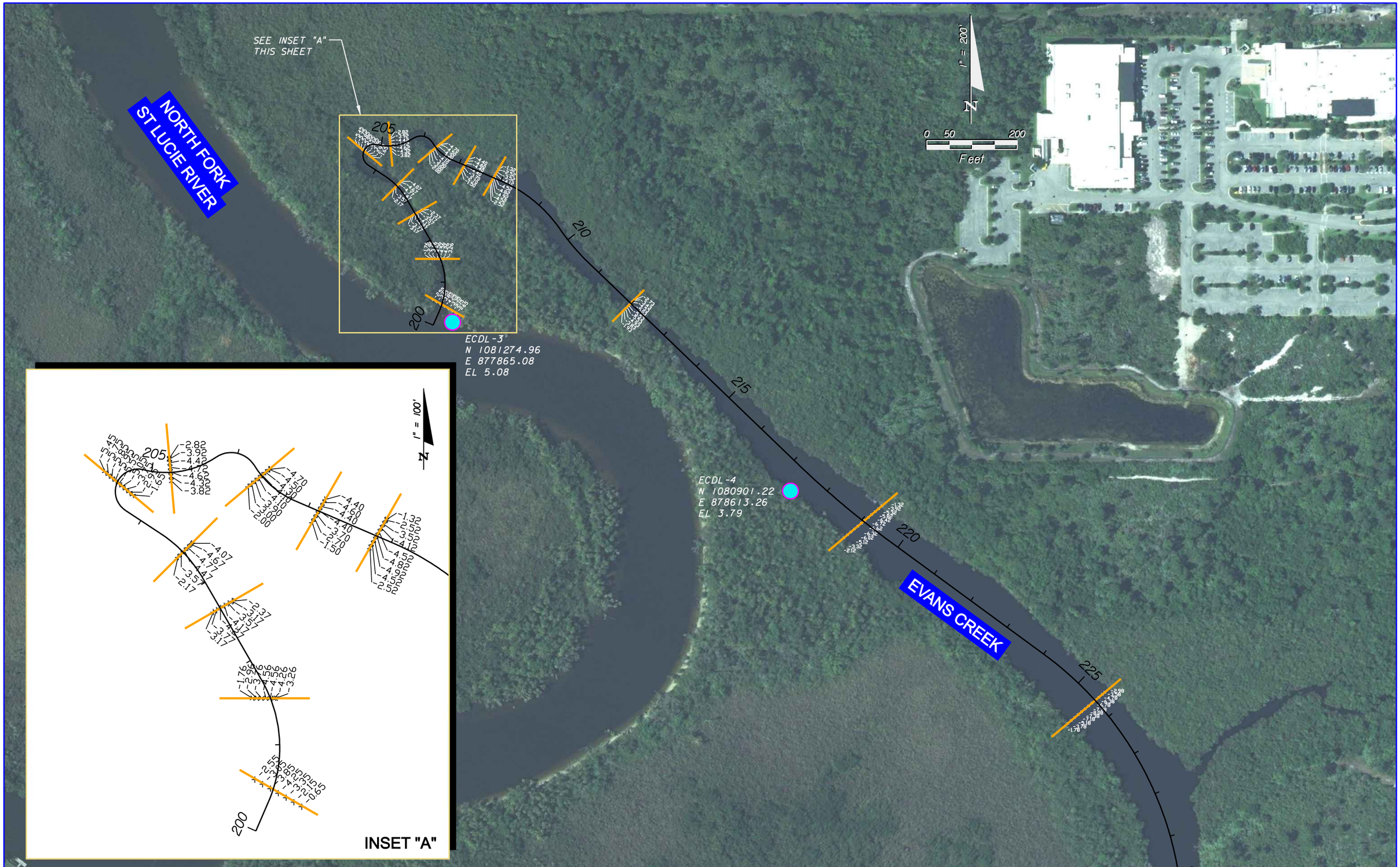
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM)

SHEET NO. 4



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

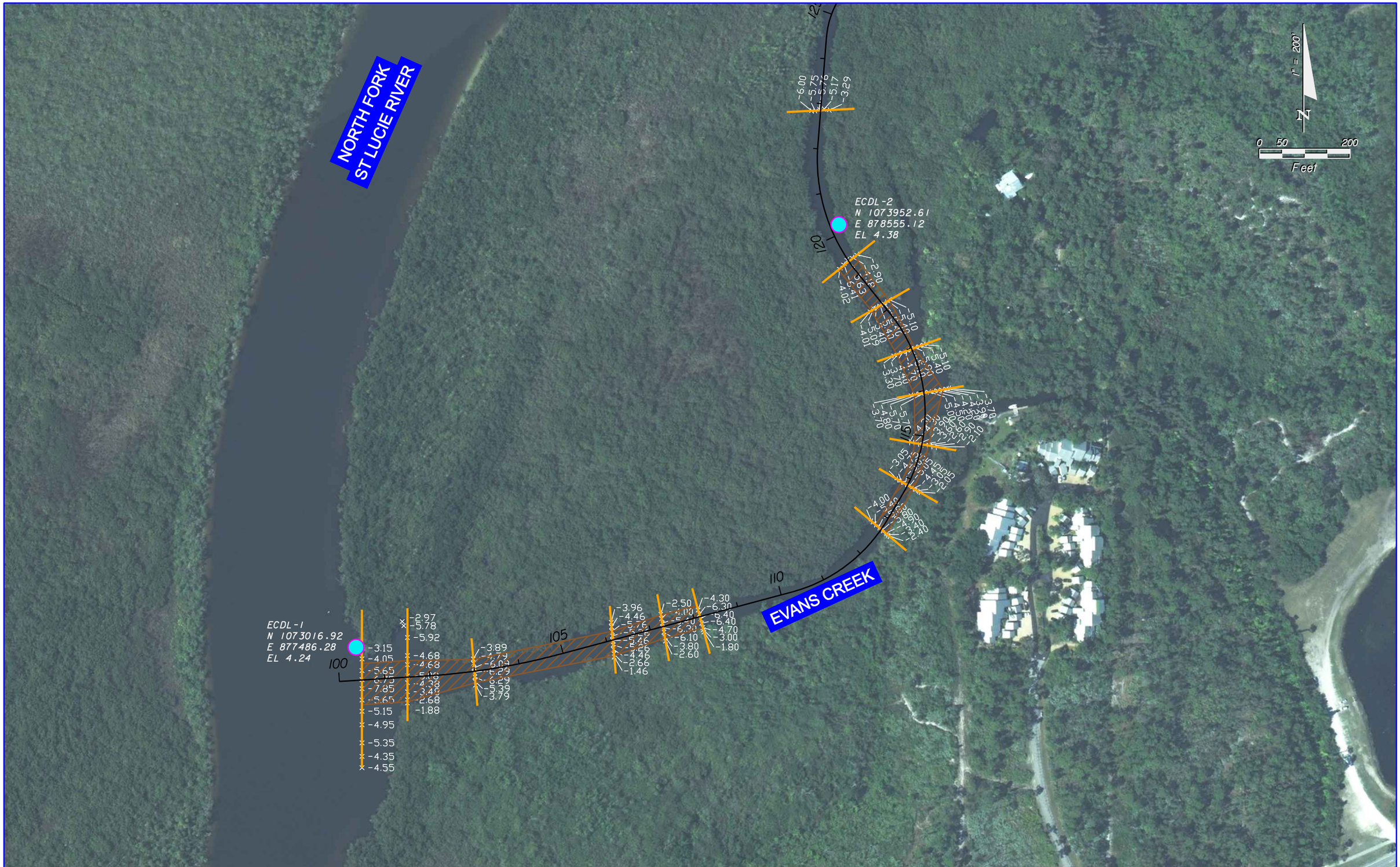
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM)

SHEET NO. 4



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

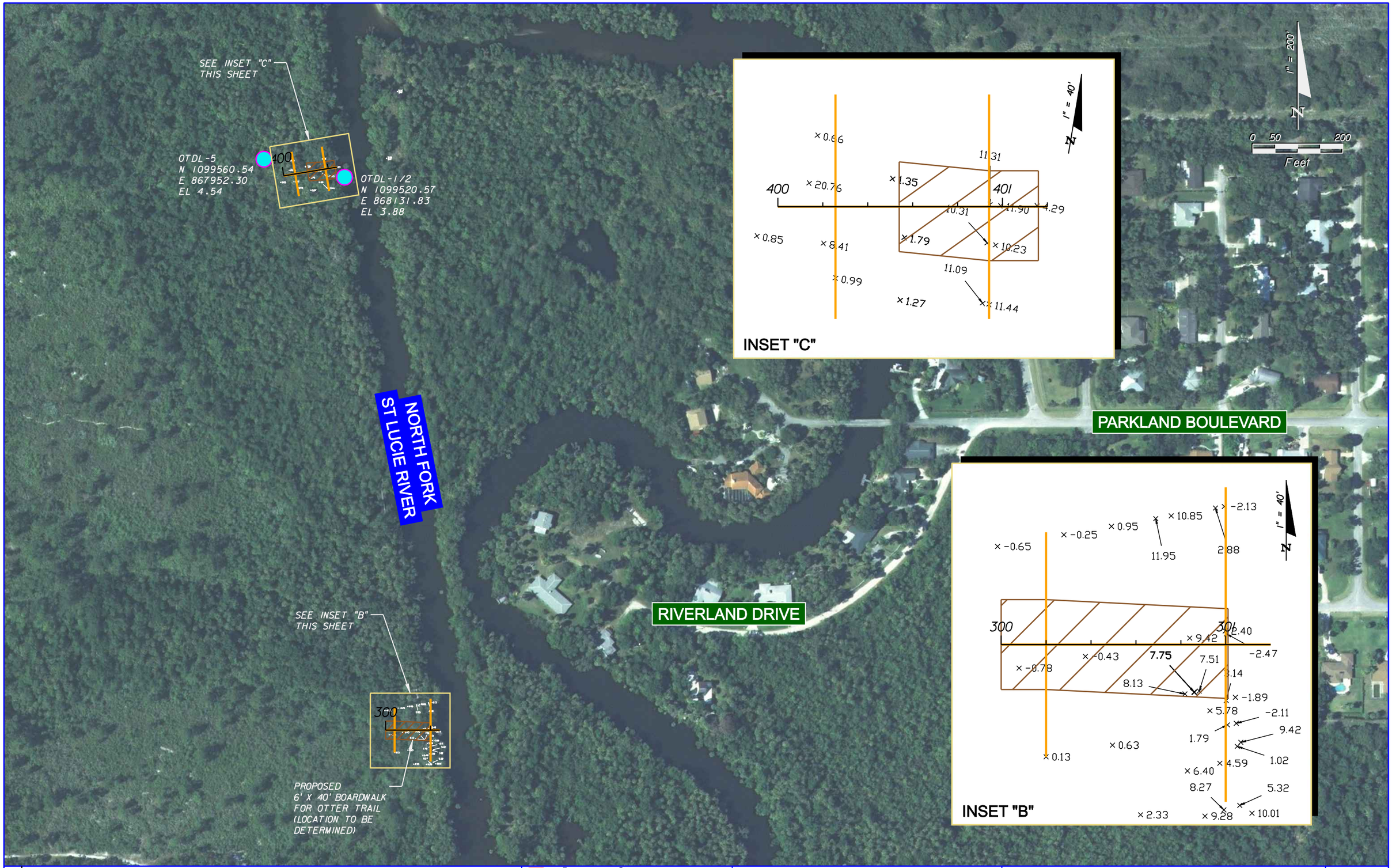
ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM)

SHEET NO. 3

USER: 51ntrld 6/21/2011 4:23:53 PM f:\project\5109648\cadd\drainage\PLANRD_EVANSCREEK_01.DGN



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

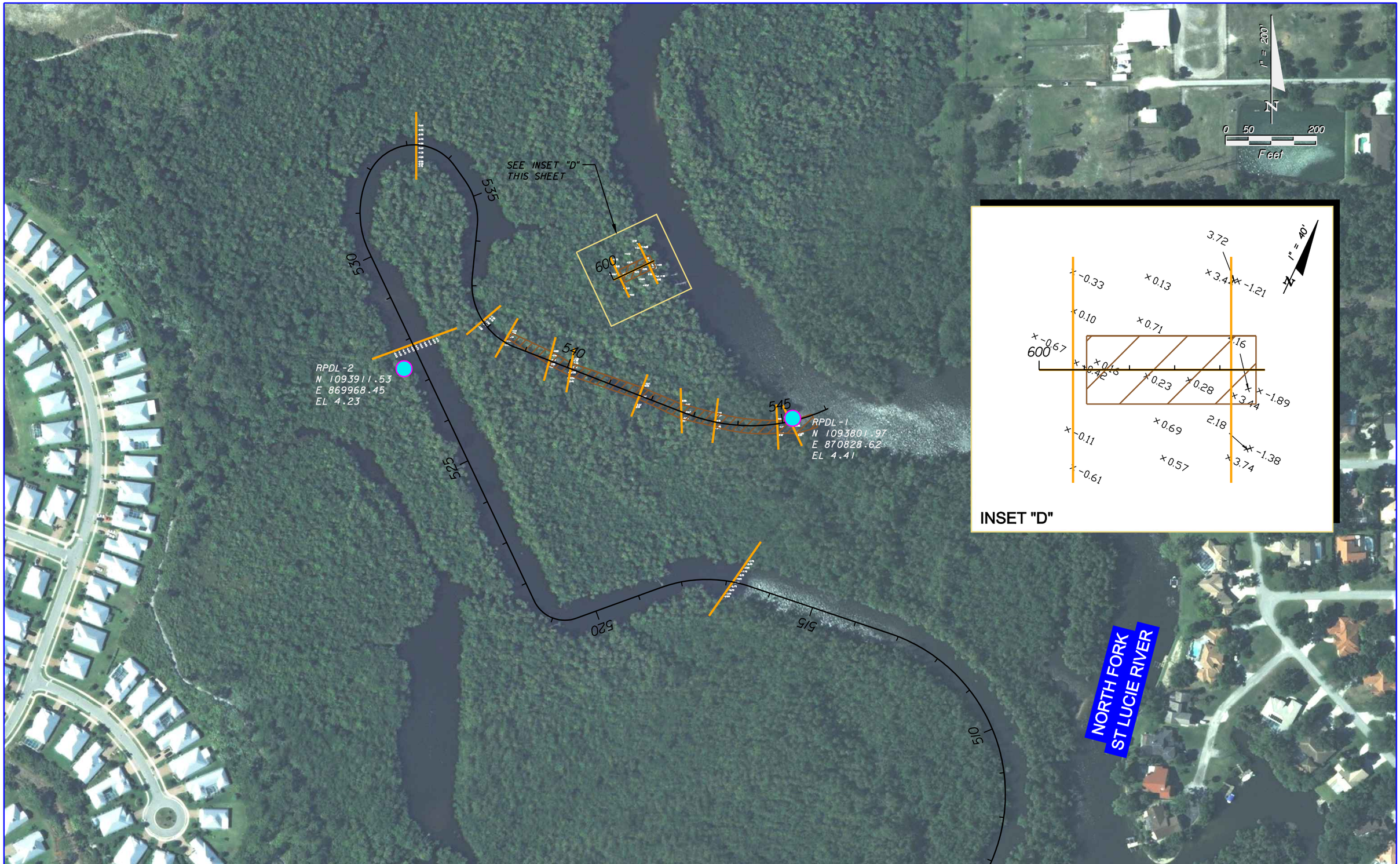
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL

SHEET NO. 5



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

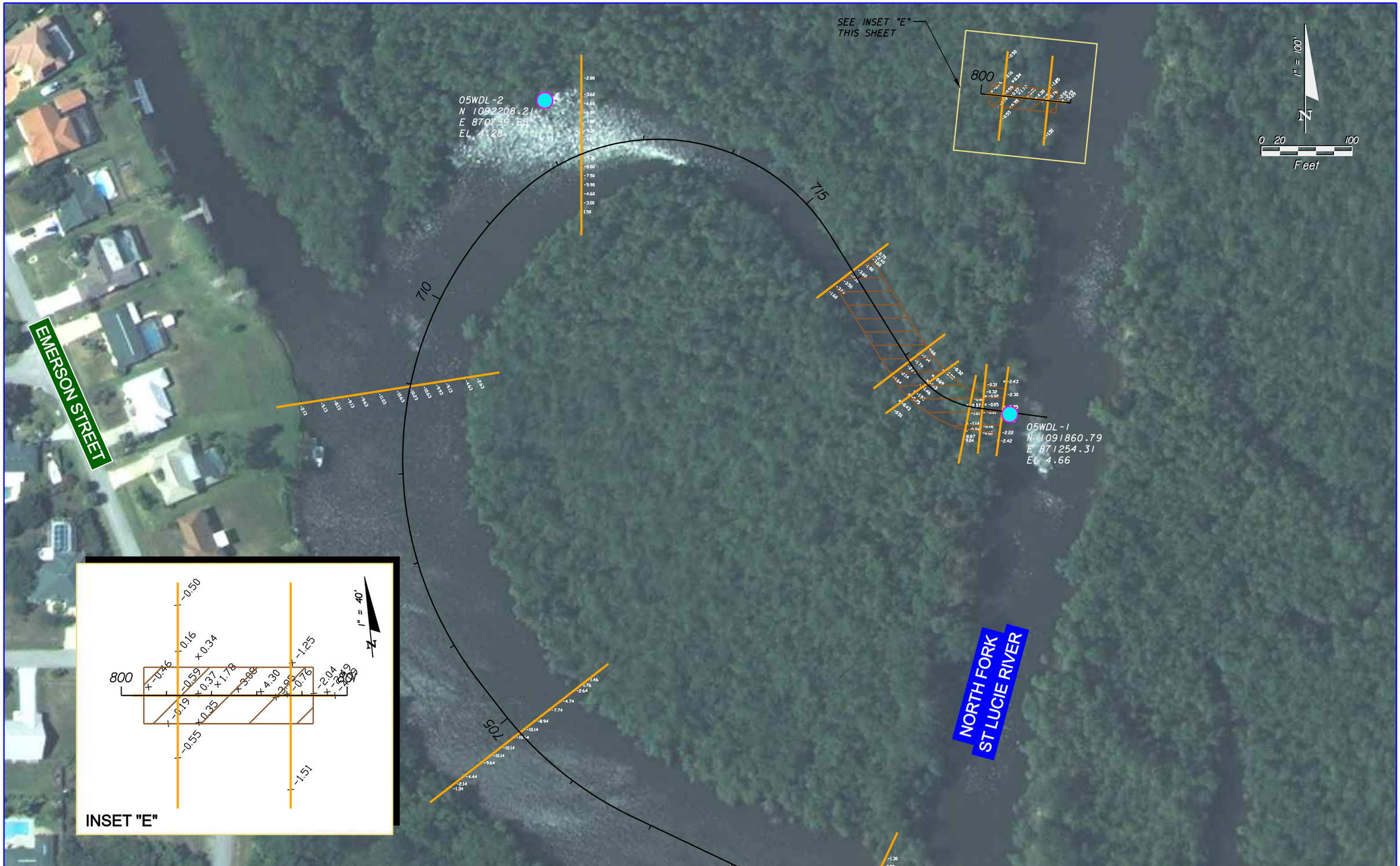
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM)

SHEET NO. 6



LEGEND

- CROSS SECTION PATTERN LINES (SURVEYED)
- EXCAVATION AREA
- DATA LOG LOCATION

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

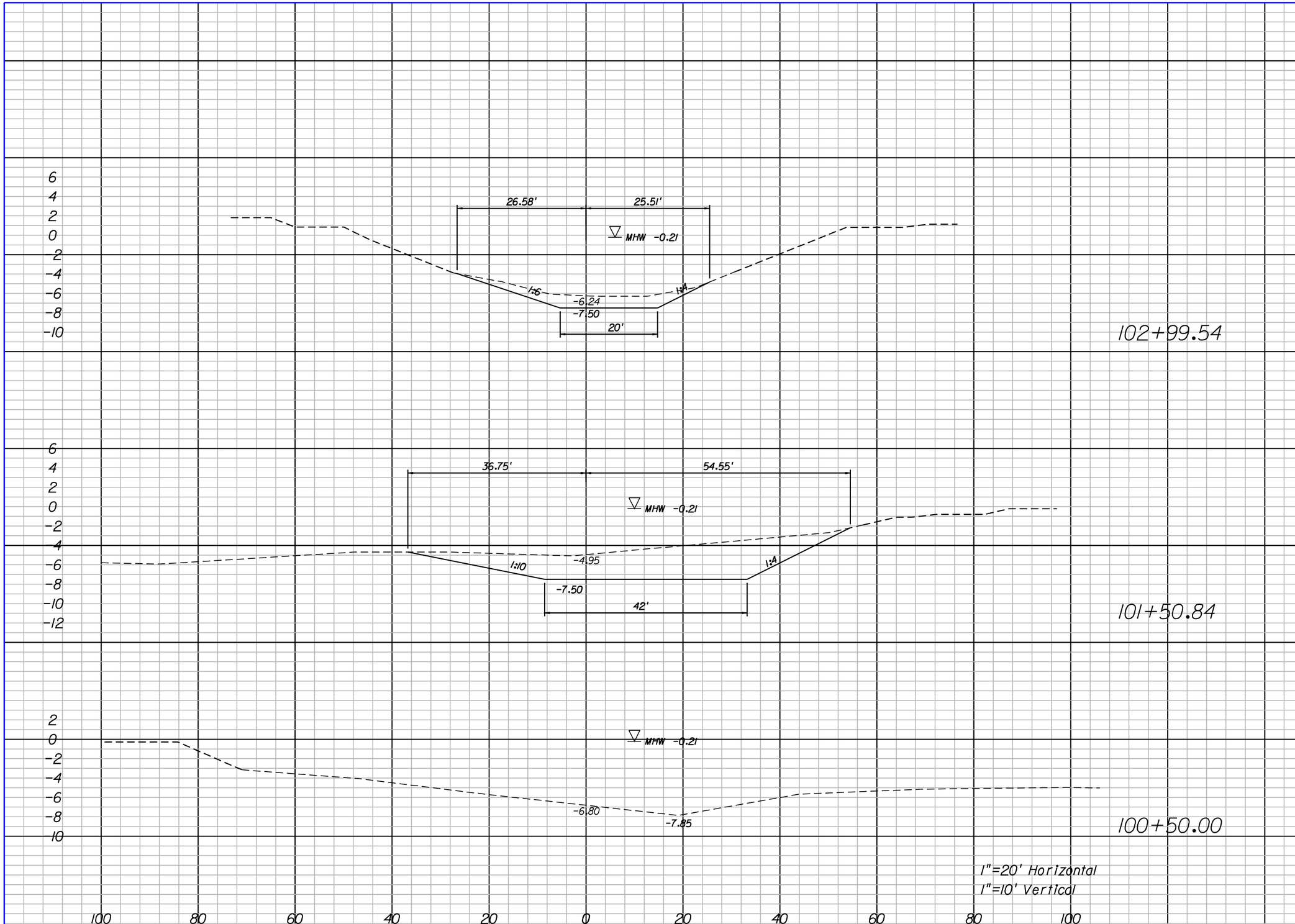
ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST

SHEET NO. 7

USER: 5lntrld 6/21/2011 4:24:20 PM f:\project\5109648\cadd\drainage\PLANRD_SITE5WEST_01.DGN



Channel Exc.		Embankment	
A	V	A	V
46	702	0	0
209	390	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

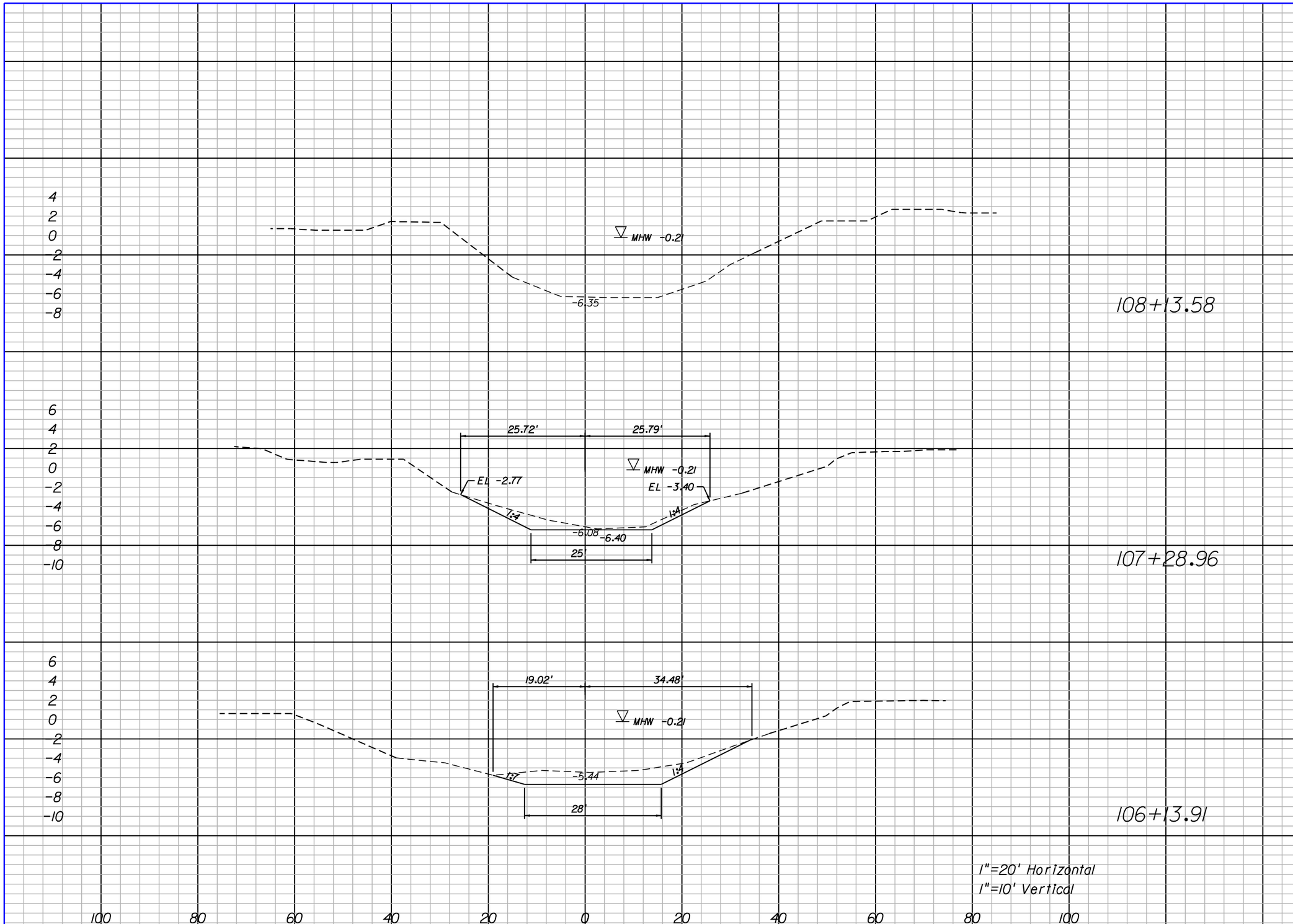
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 8



Channel Exc.		Embankment	
A	V	A	V
0	45	0	0
29	183	0	0
57	600	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

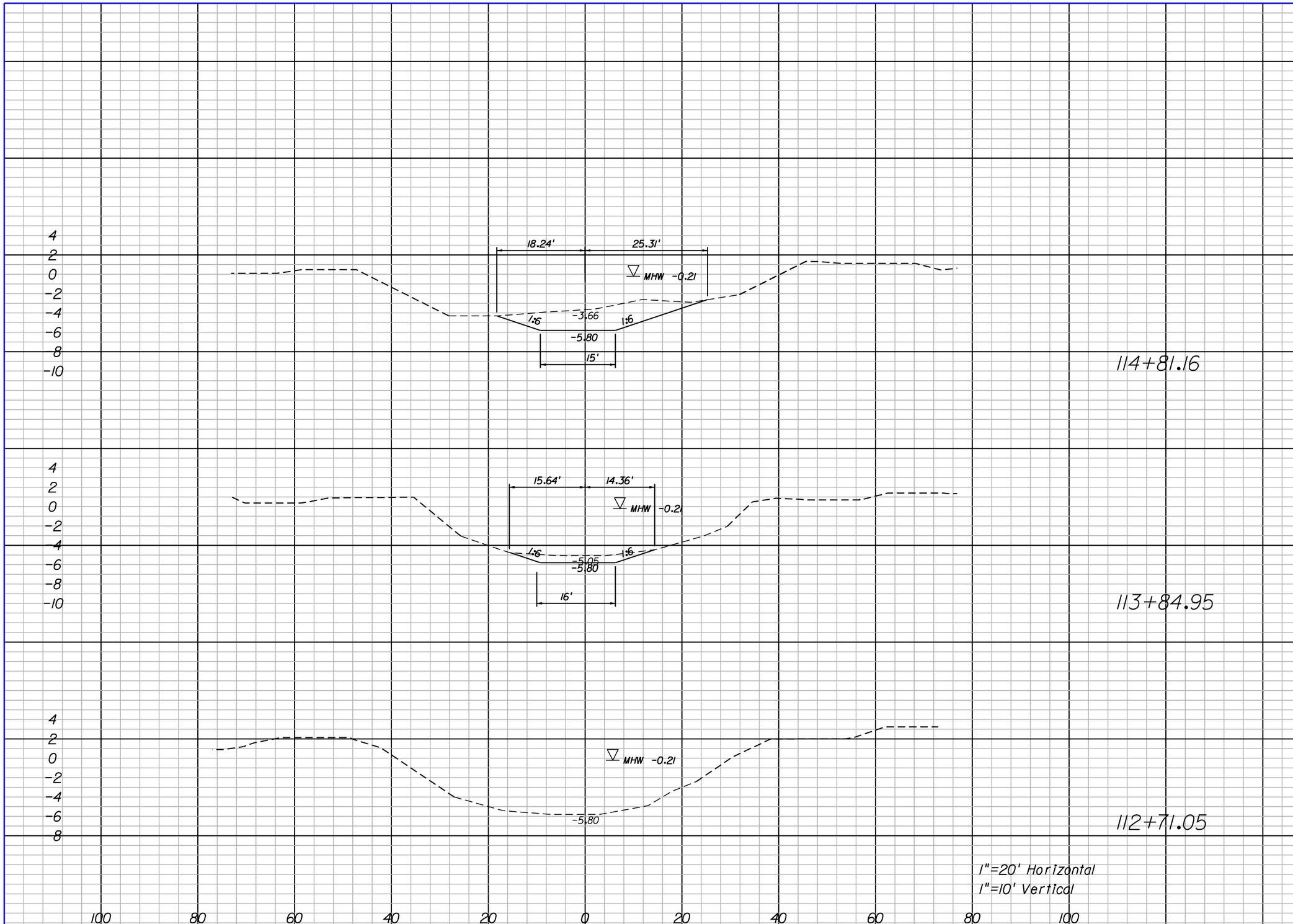
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 9



Channel Exc.		Embankment	
A	V	A	V
69	155	0	0
18	38	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

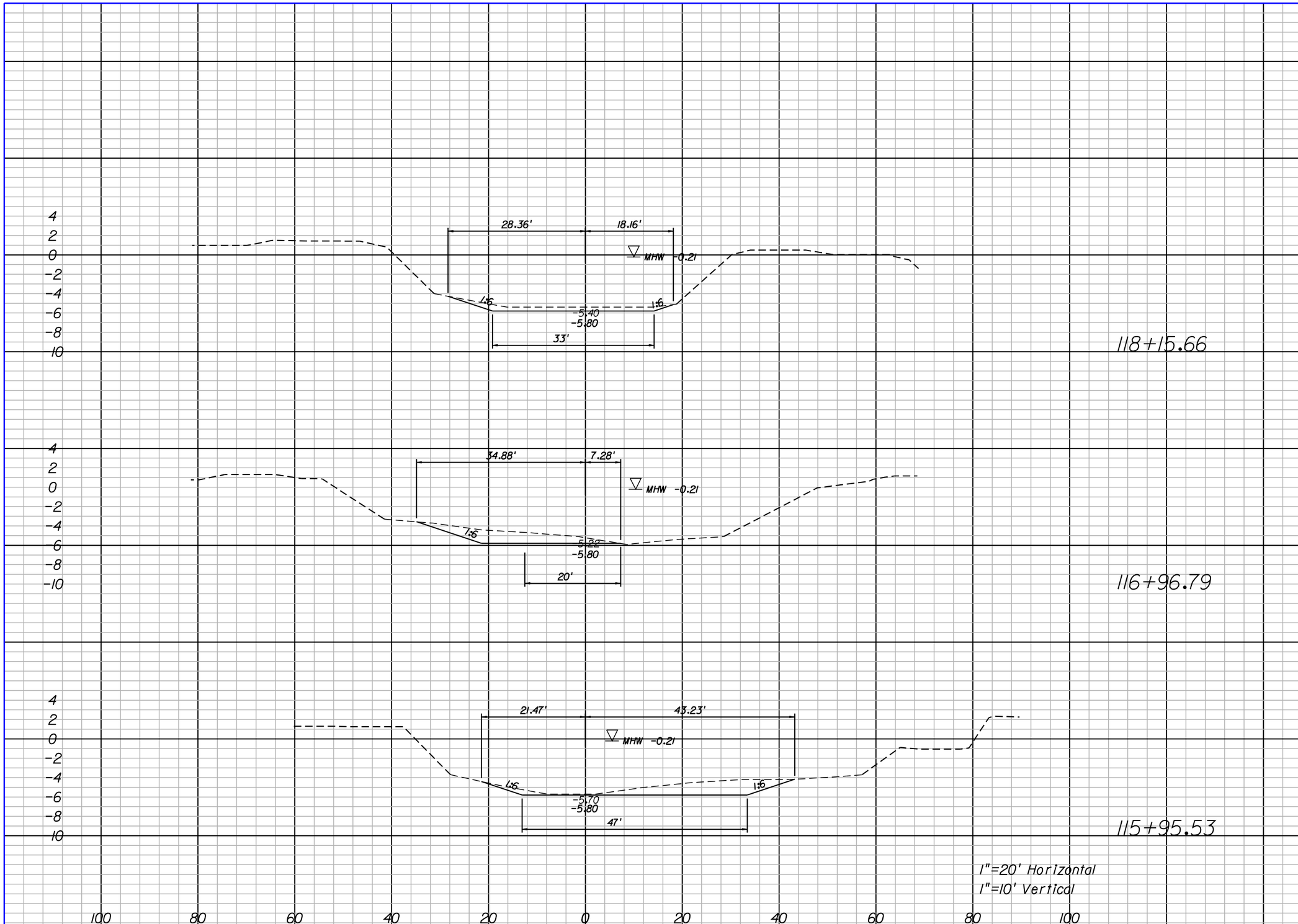
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 10



	Channel Exc.		Embankment	
	A	V	A	V
118+15.66	18	117	0	0
116+96.79	35	148	0	0
115+95.53	44	239	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

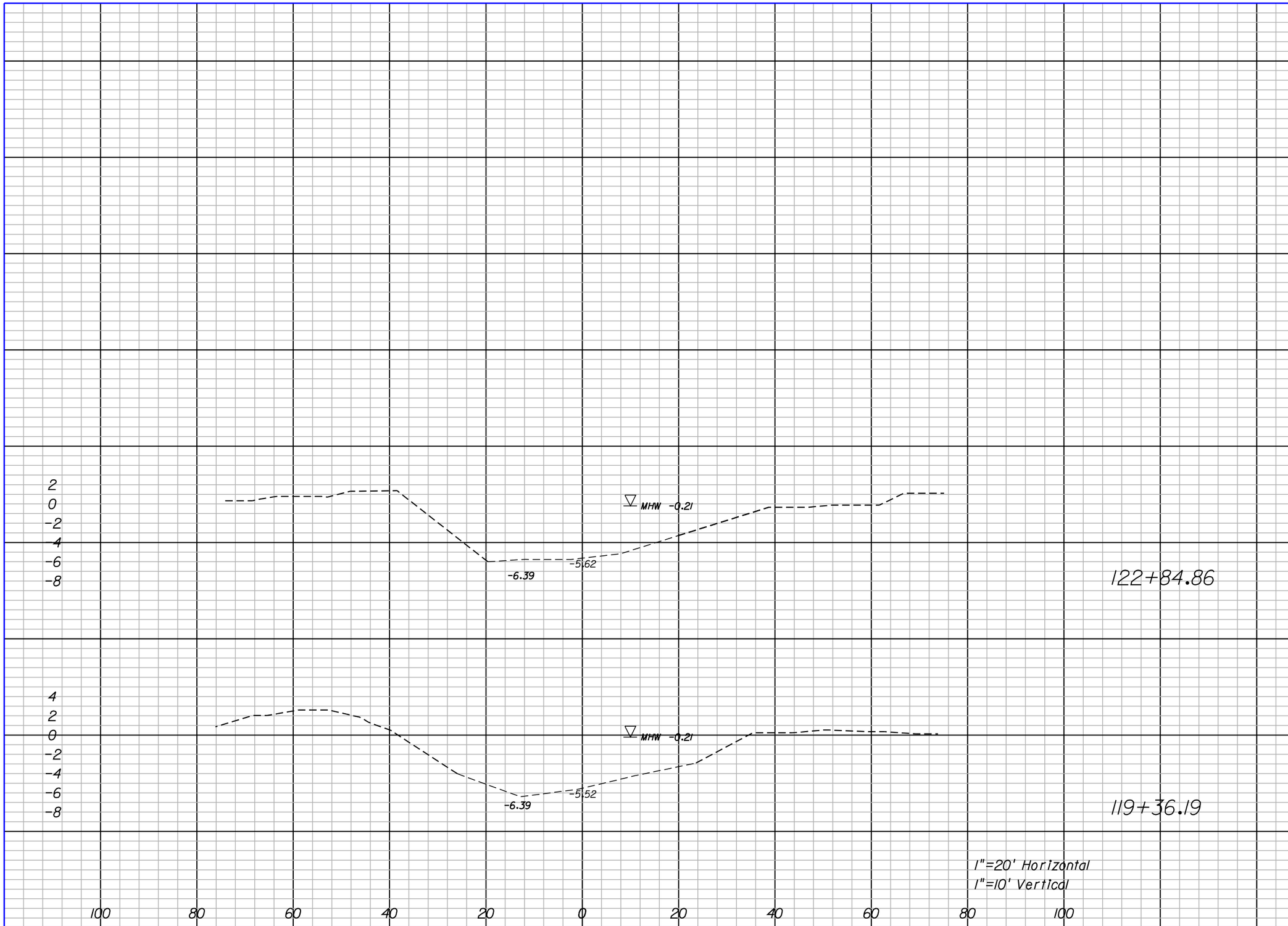
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 11



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	40	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

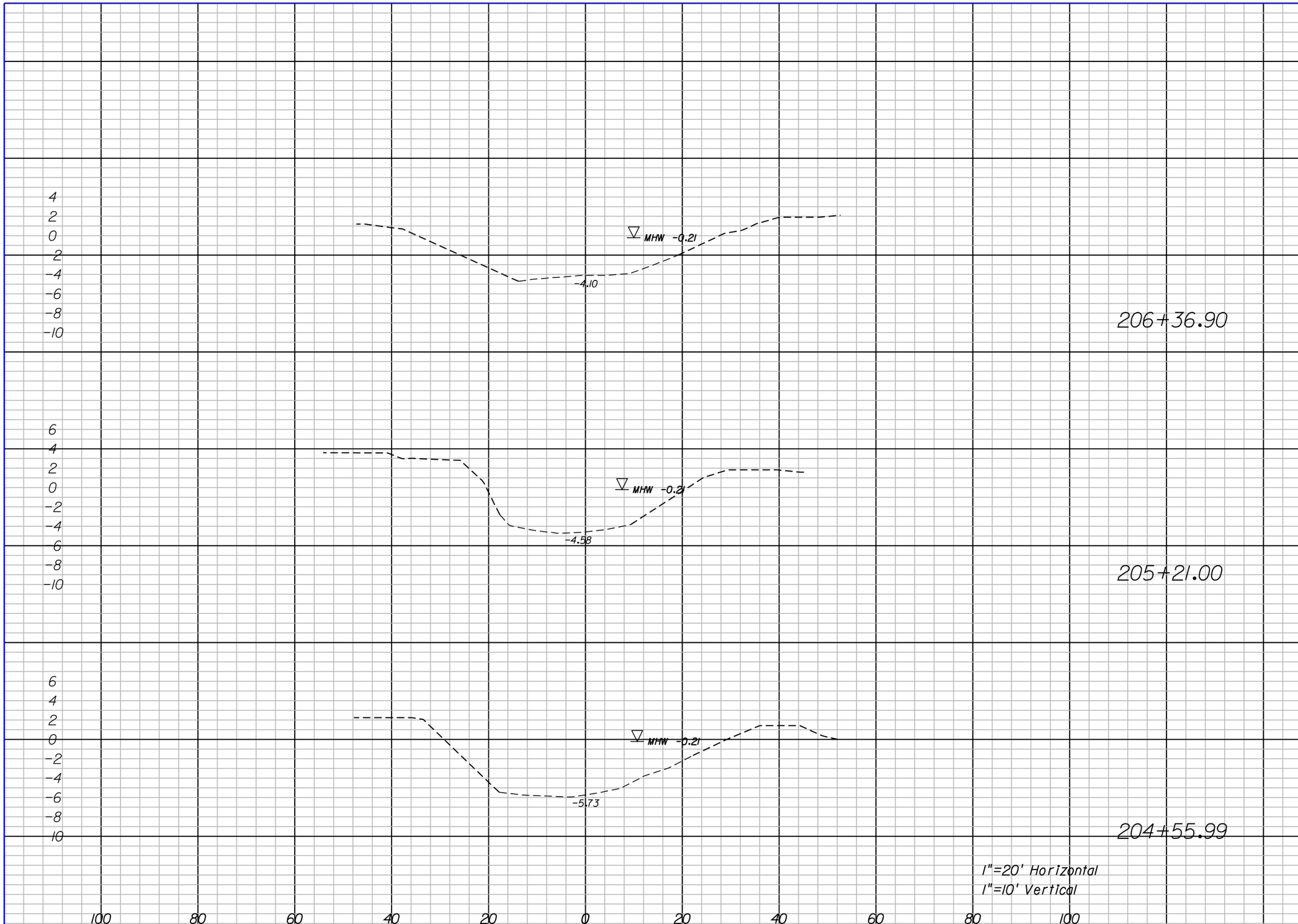
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (DOWNSTREAM) CROSS SECTIONS

SHEET NO. 12



Channel Exc.		Embankment	
A	V	A	V

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

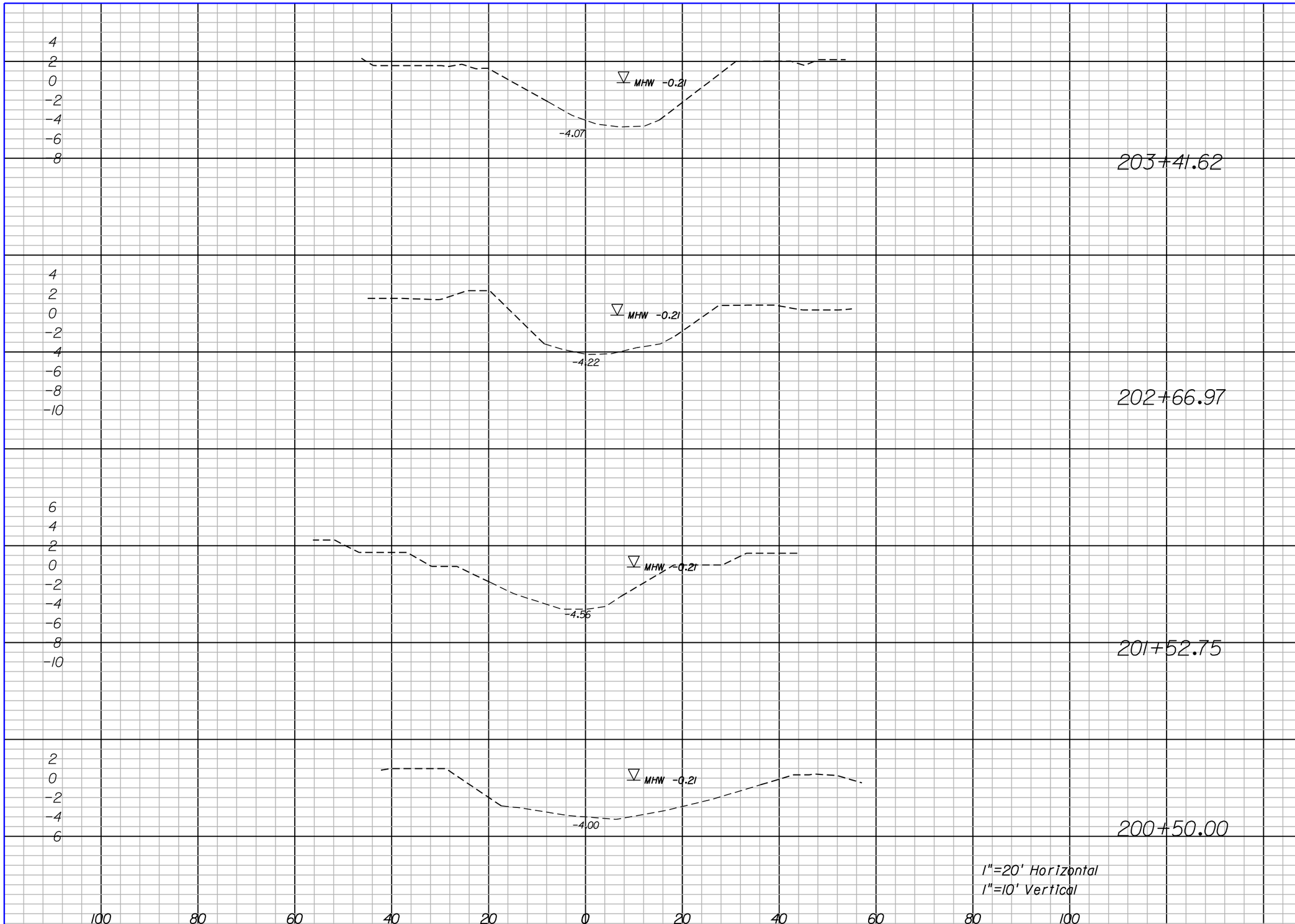
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 13



Channel Exc.		Embankment	
A	V	A	V

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

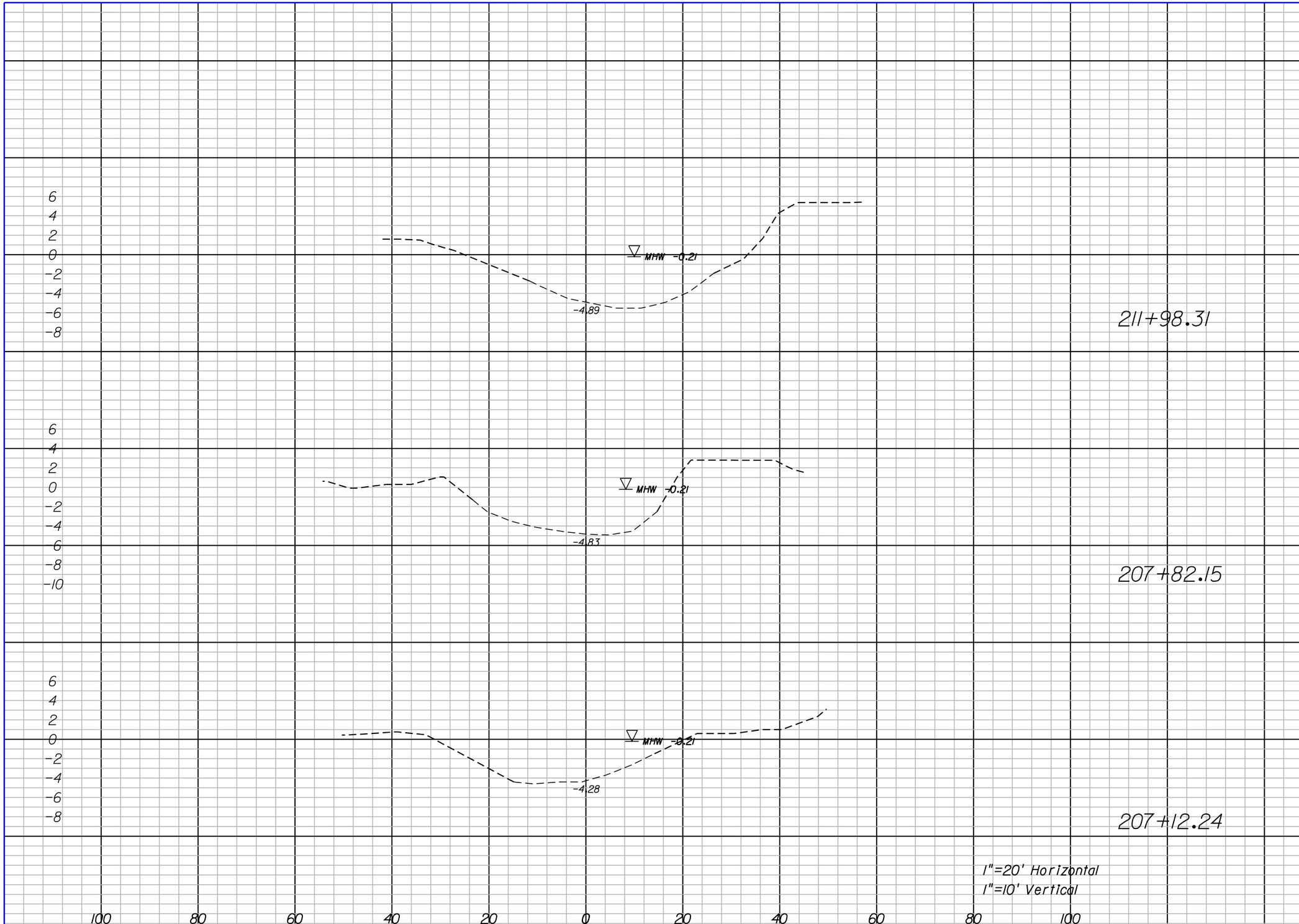
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 14



Channel Exc.		Embankment	
A	V	A	V

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

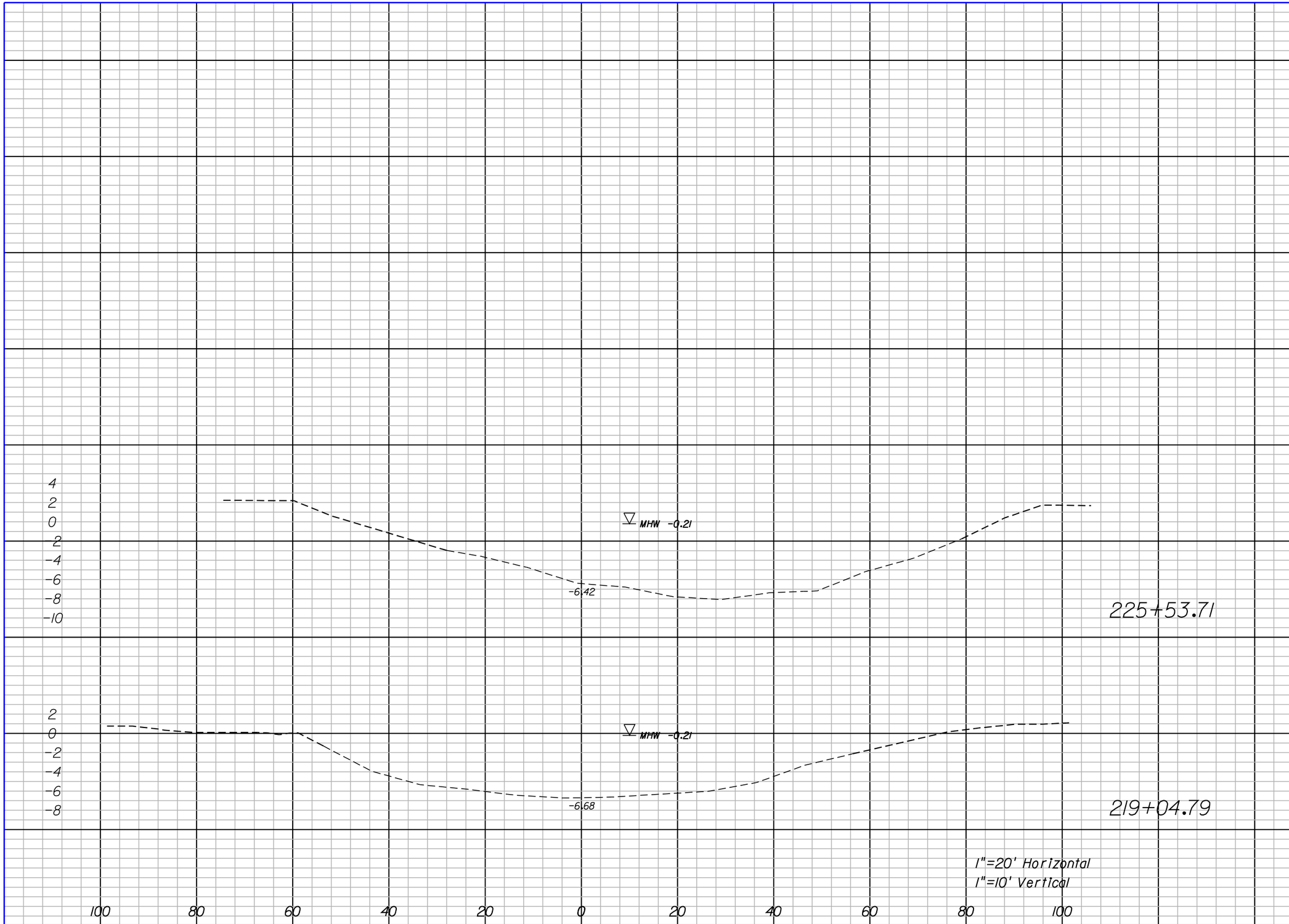
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 15



Channel Exc.		Embankment	
A	V	A	V

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

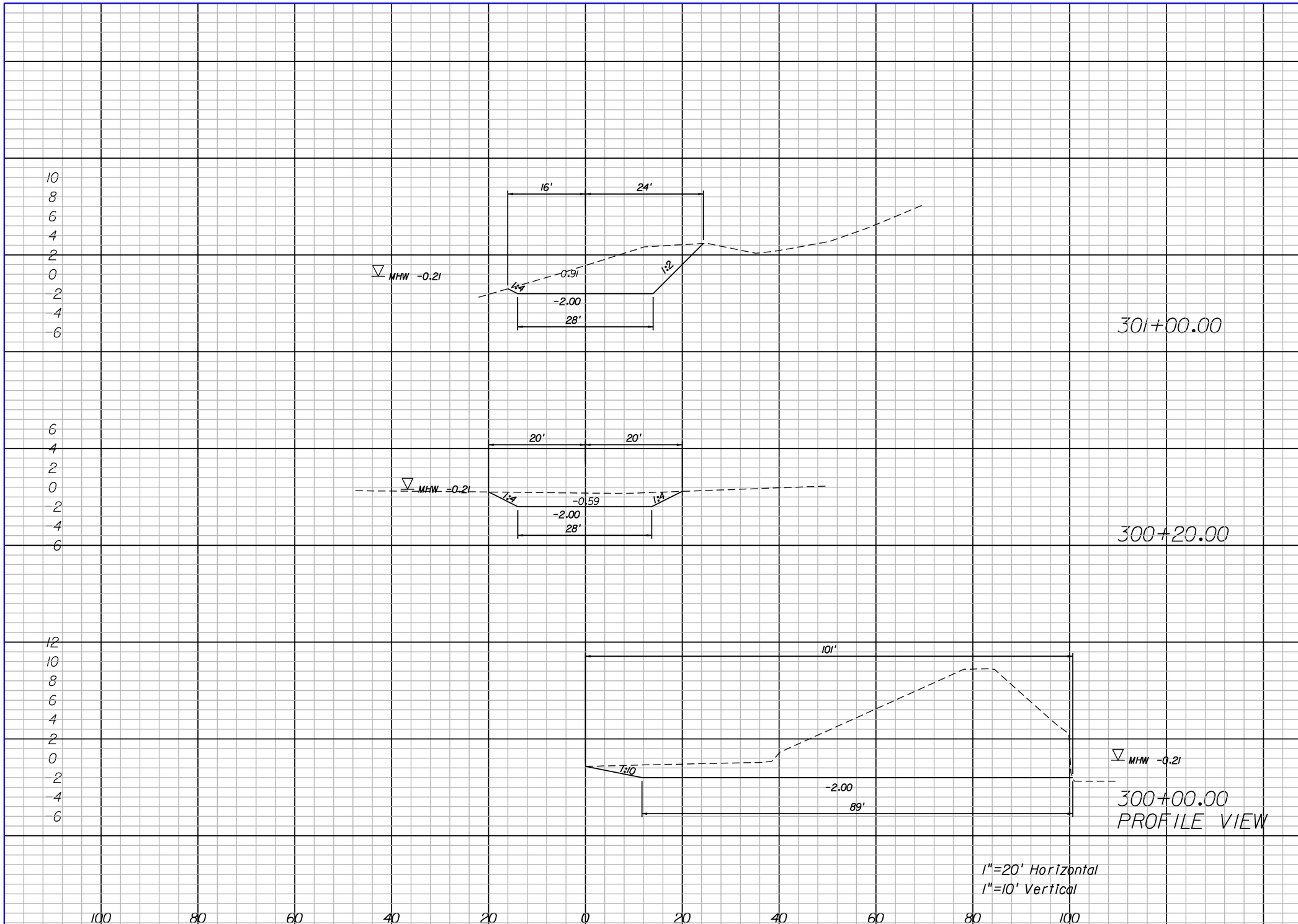
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

EVANS CREEK (UPSTREAM) CROSS SECTIONS

SHEET NO. 16



Regular Exc.		Embankment	
A	V	A	V
505	748	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

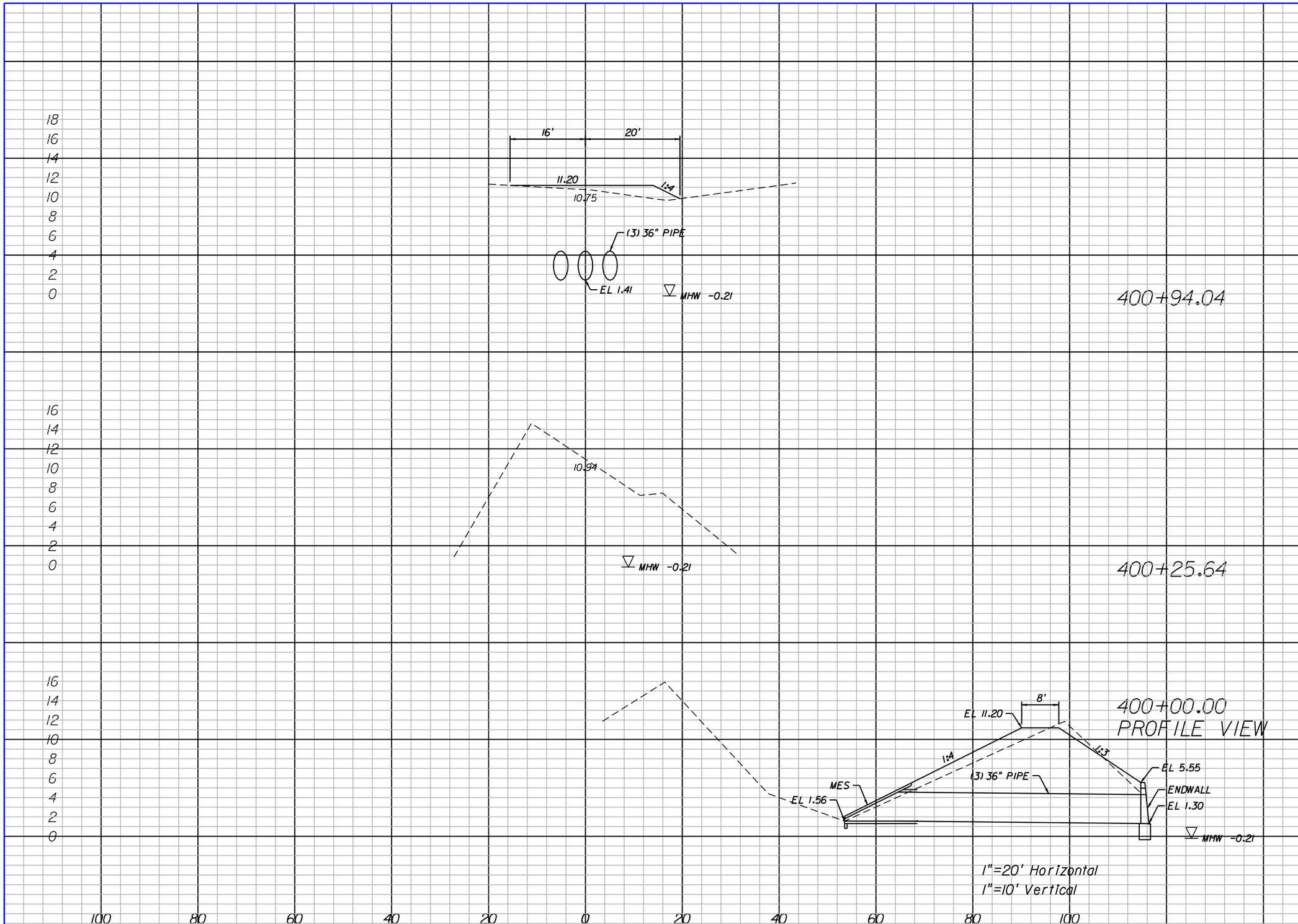
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL CROSS SECTIONS

SHEET NO. 17



Regular Exc.		Embankment	
A	V	A	V
6	8	33	44

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

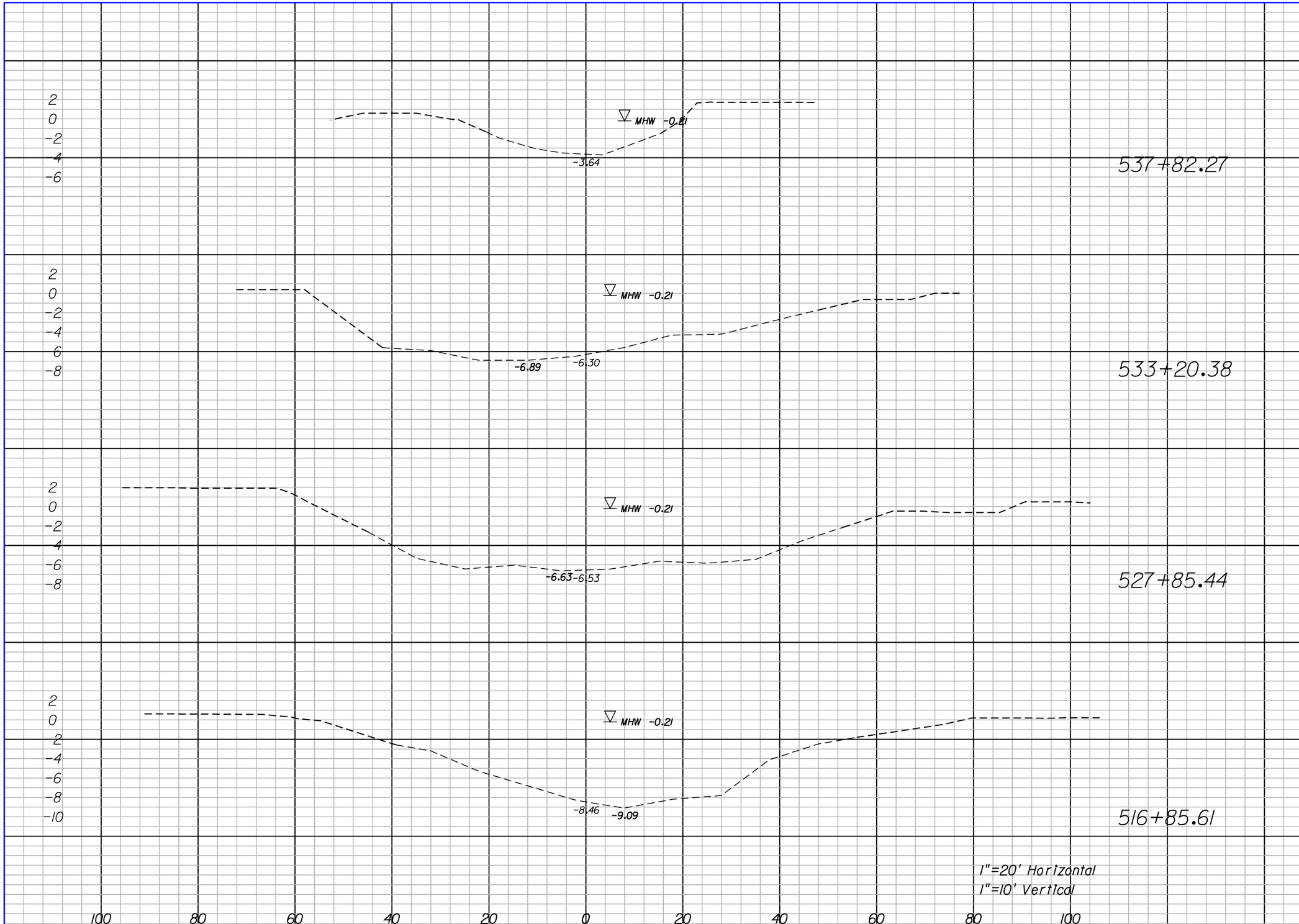
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

OTTER TRAIL CROSS SECTIONS

SHEET NO. 18



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	0	0	0
0	0	0	0
0		0	

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

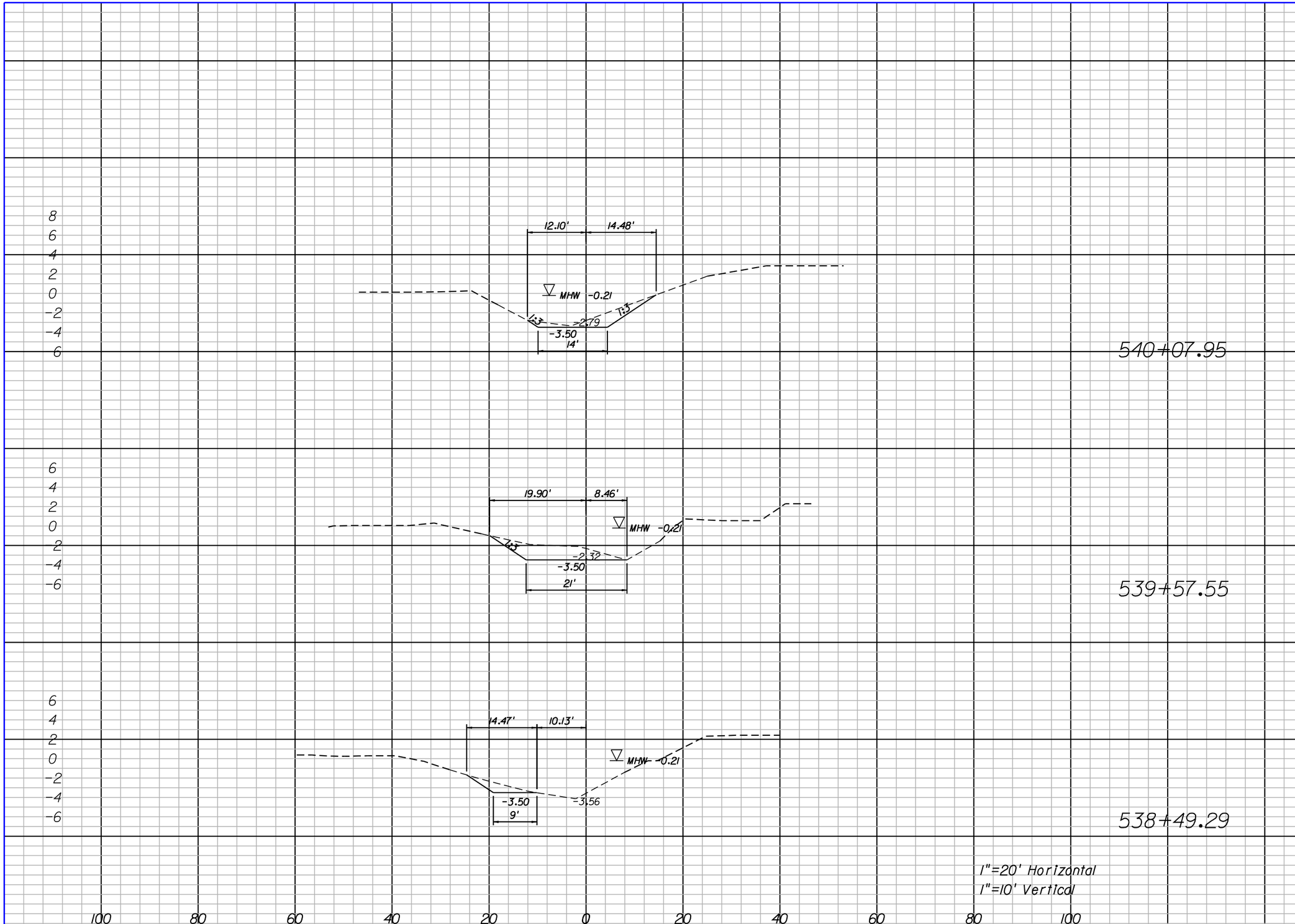
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 19



Channel Exc.		Embankment	
A	V	A	V
17	44	0	0
30	76	0	0
8	10	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

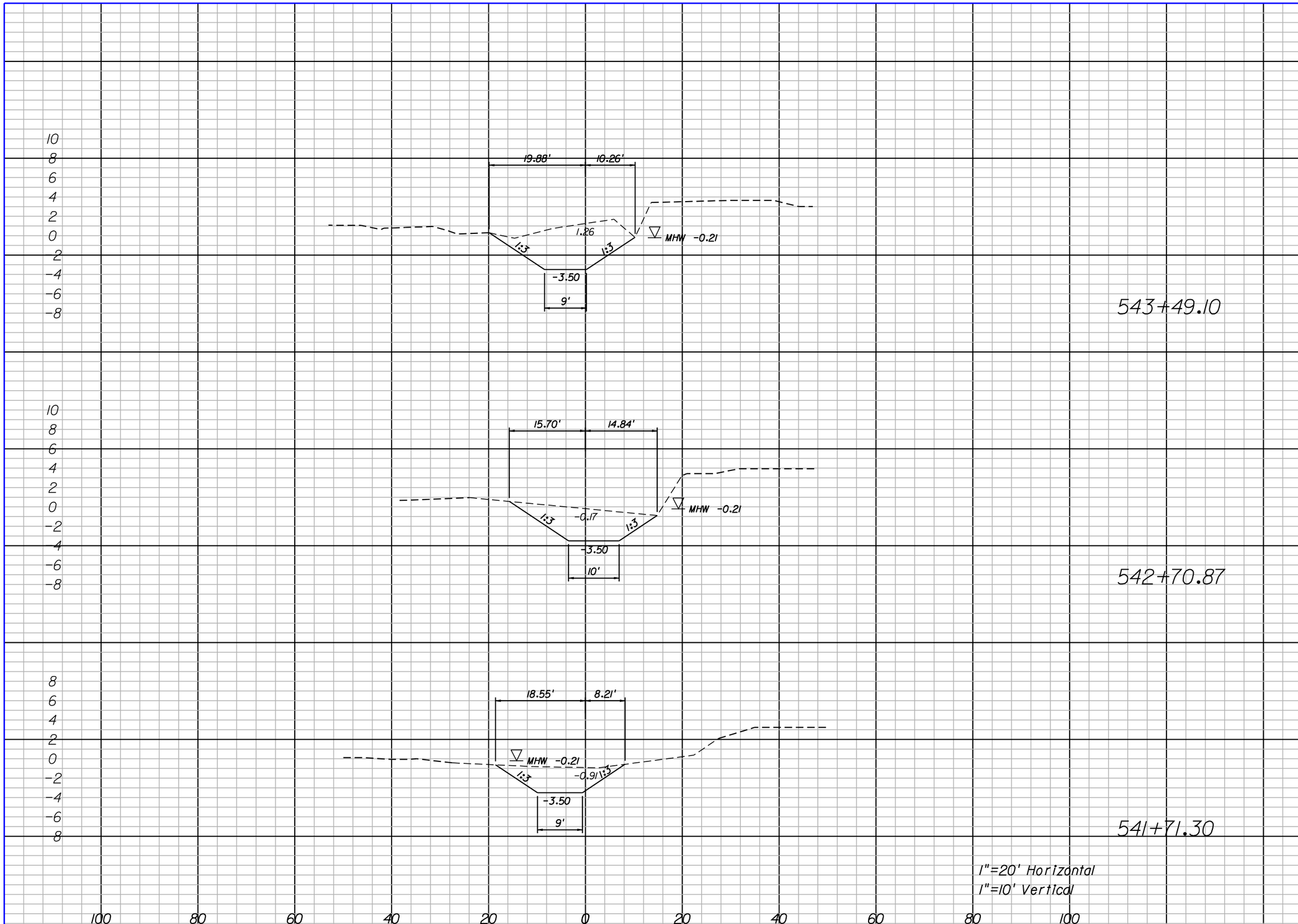
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 20



Channel Exc.		Embankment	
A	V	A	V
88	225	0	0
67	210	0	0
47	194	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

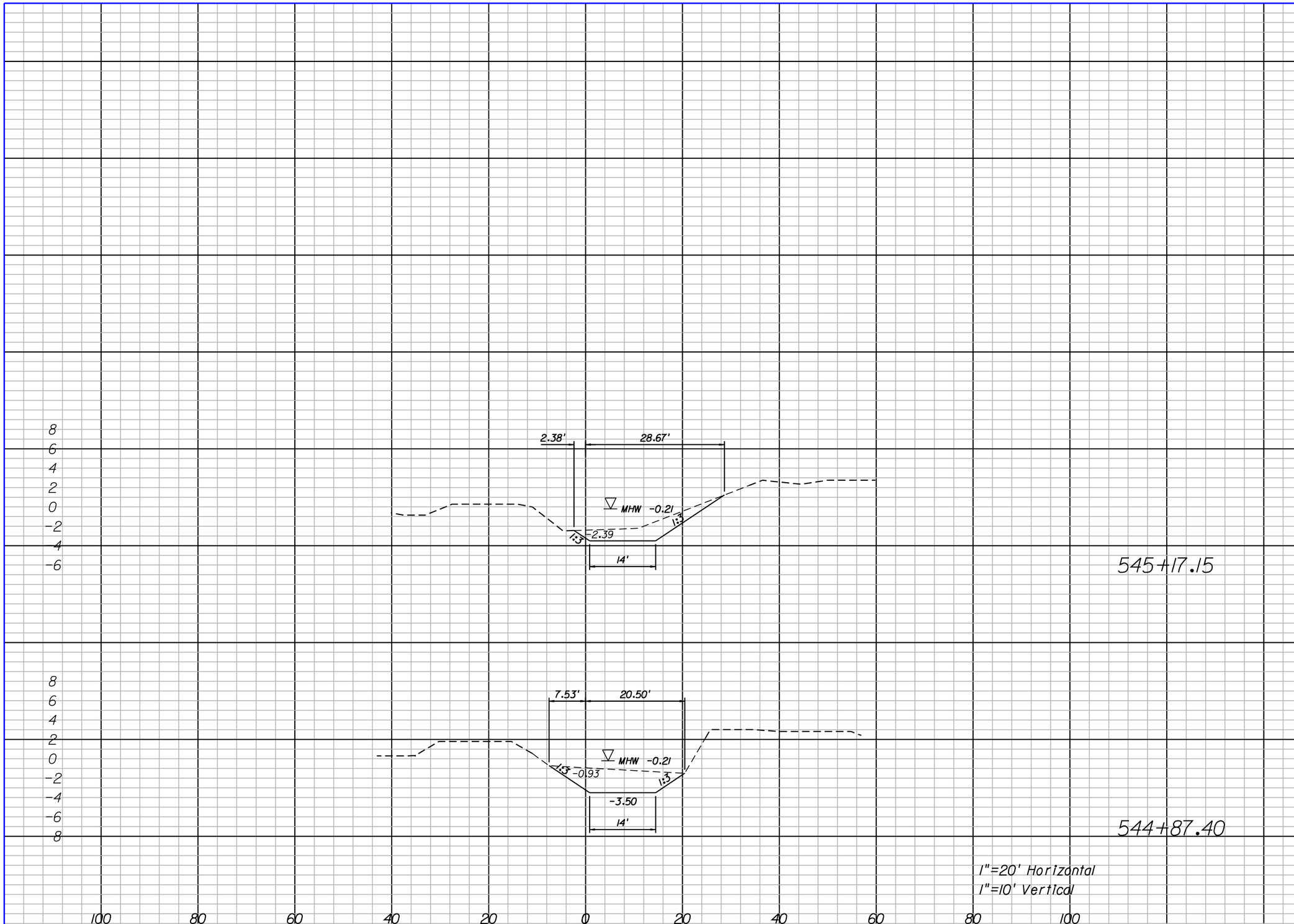
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 21



Channel Exc.		Embankment	
A	V	A	V
34	46	0	0
49	351	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

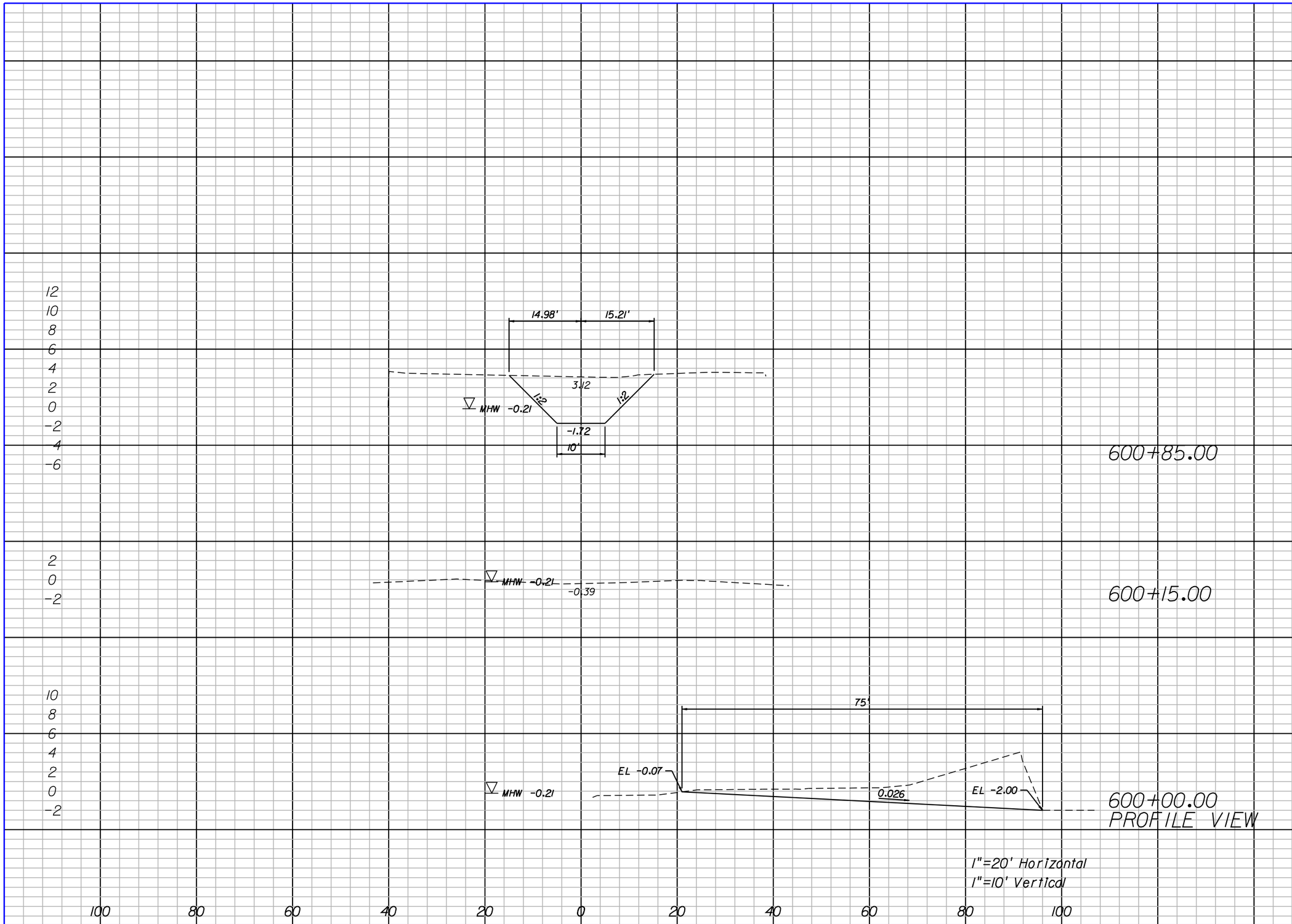
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 22



Regular Exc.		Embankment	
A	V	A	V
149	166	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

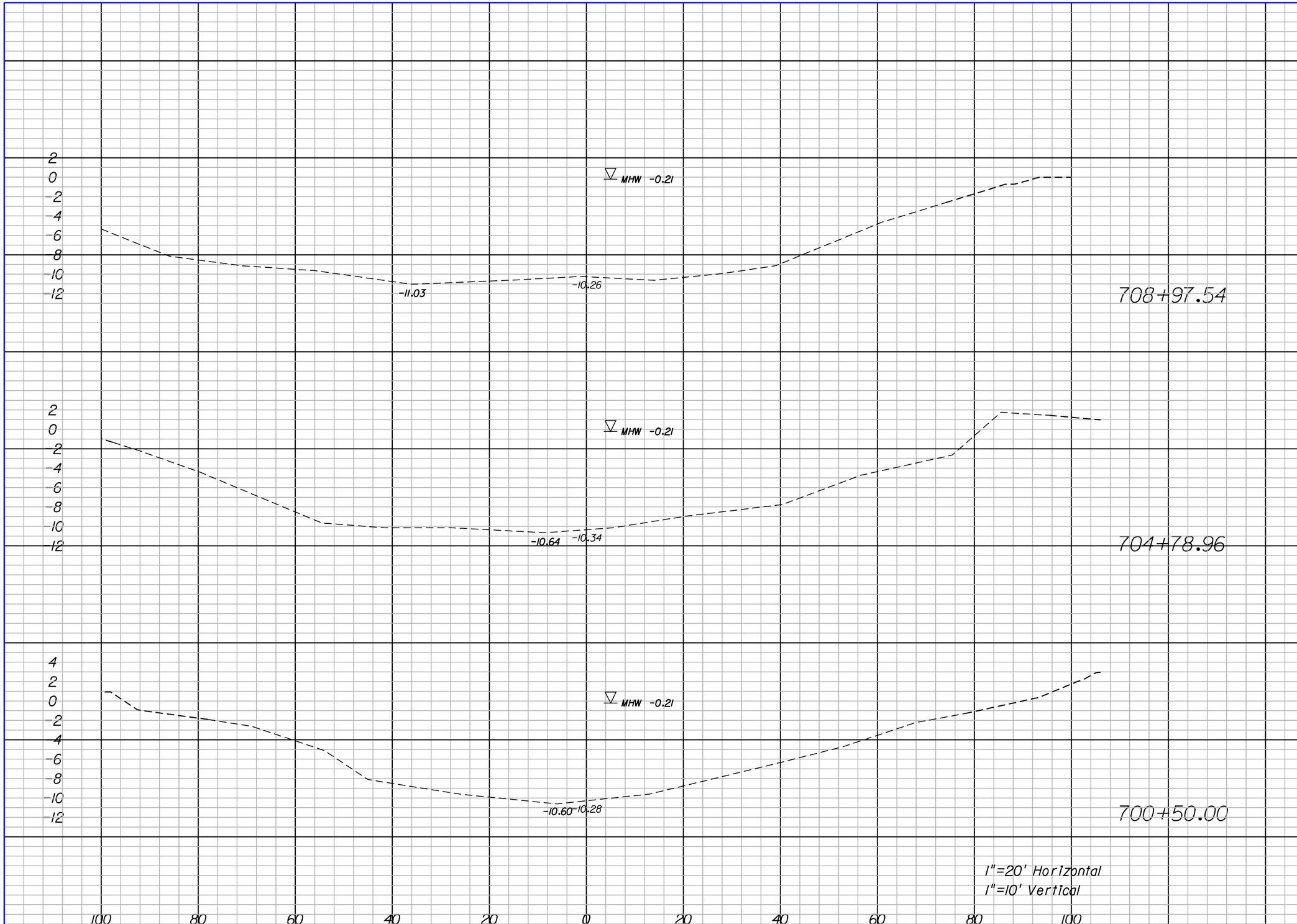
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

RIVER PLACE (UPSTREAM) CROSS SECTIONS

SHEET NO. 23



Channel Exc.		Embankment	
A	V	A	V
0	0	0	0
0	0	0	0
0	0	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

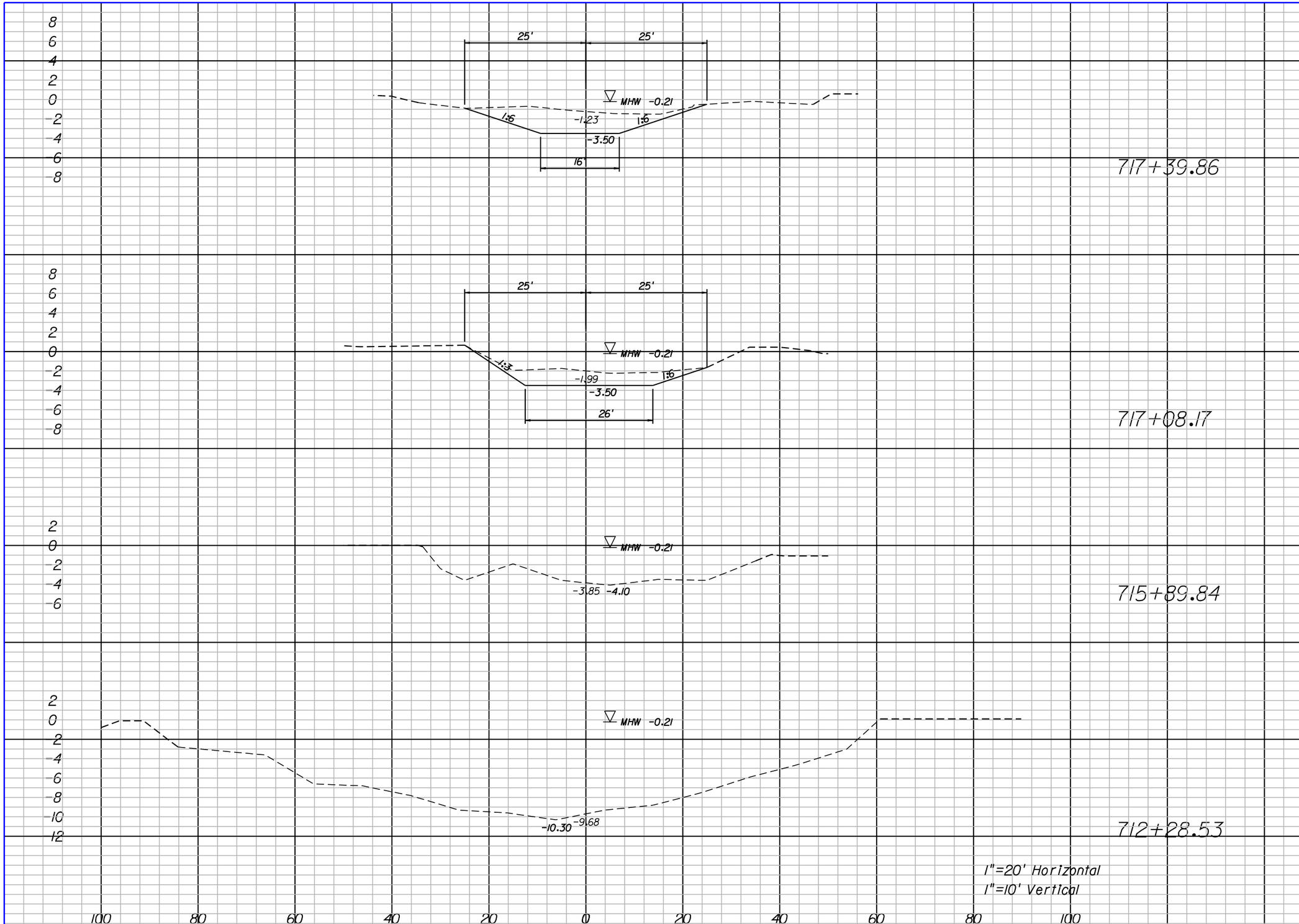
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 24



Channel Exc.		Embankment	
A	V	A	V
74	75	0	0
53	116	0	0
0	0	0	0
0	0	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

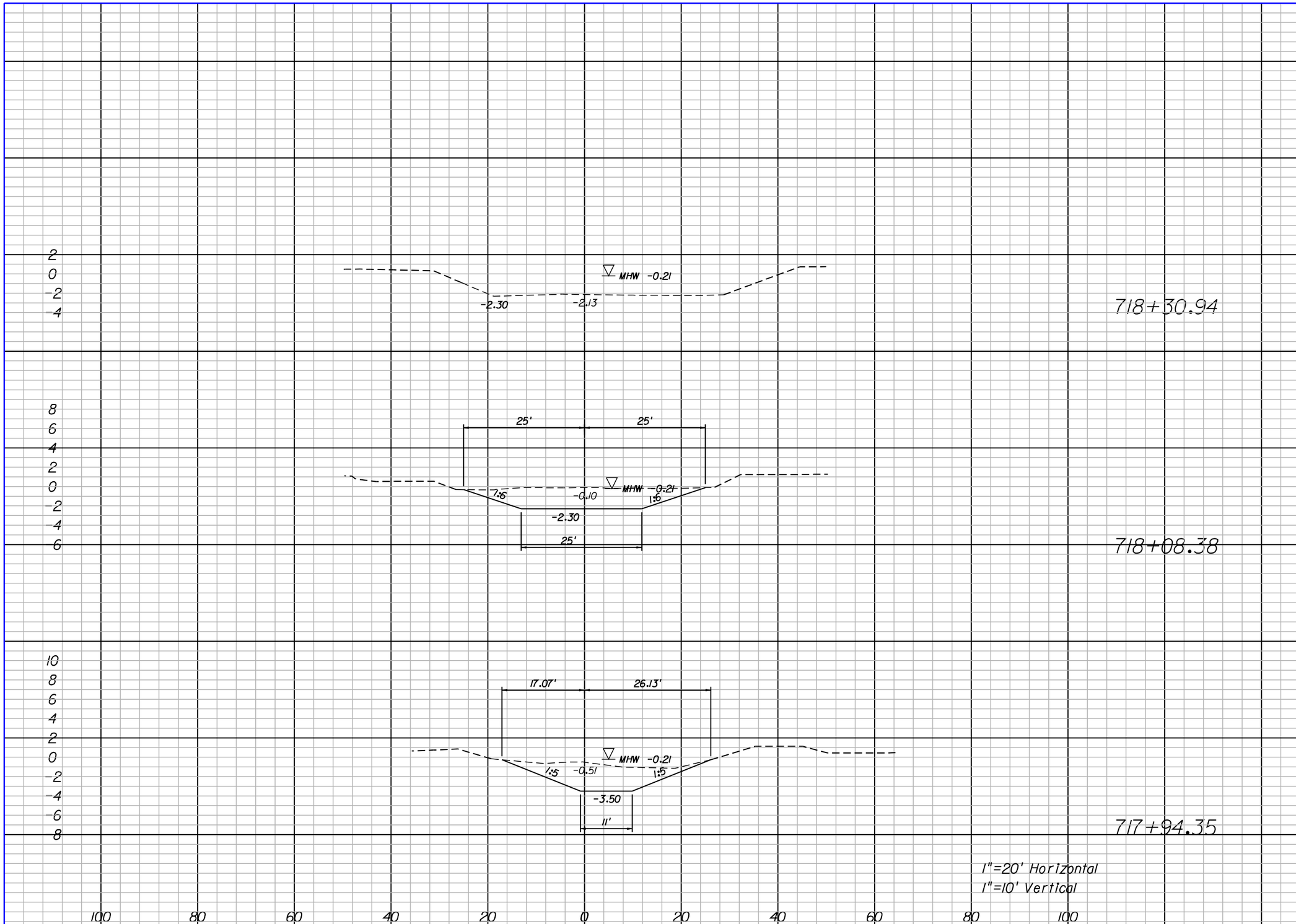
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 25



Channel Exc.		Embankment	
A	V	A	V
0	33	0	0
80	38	0	0
67	142	0	0

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

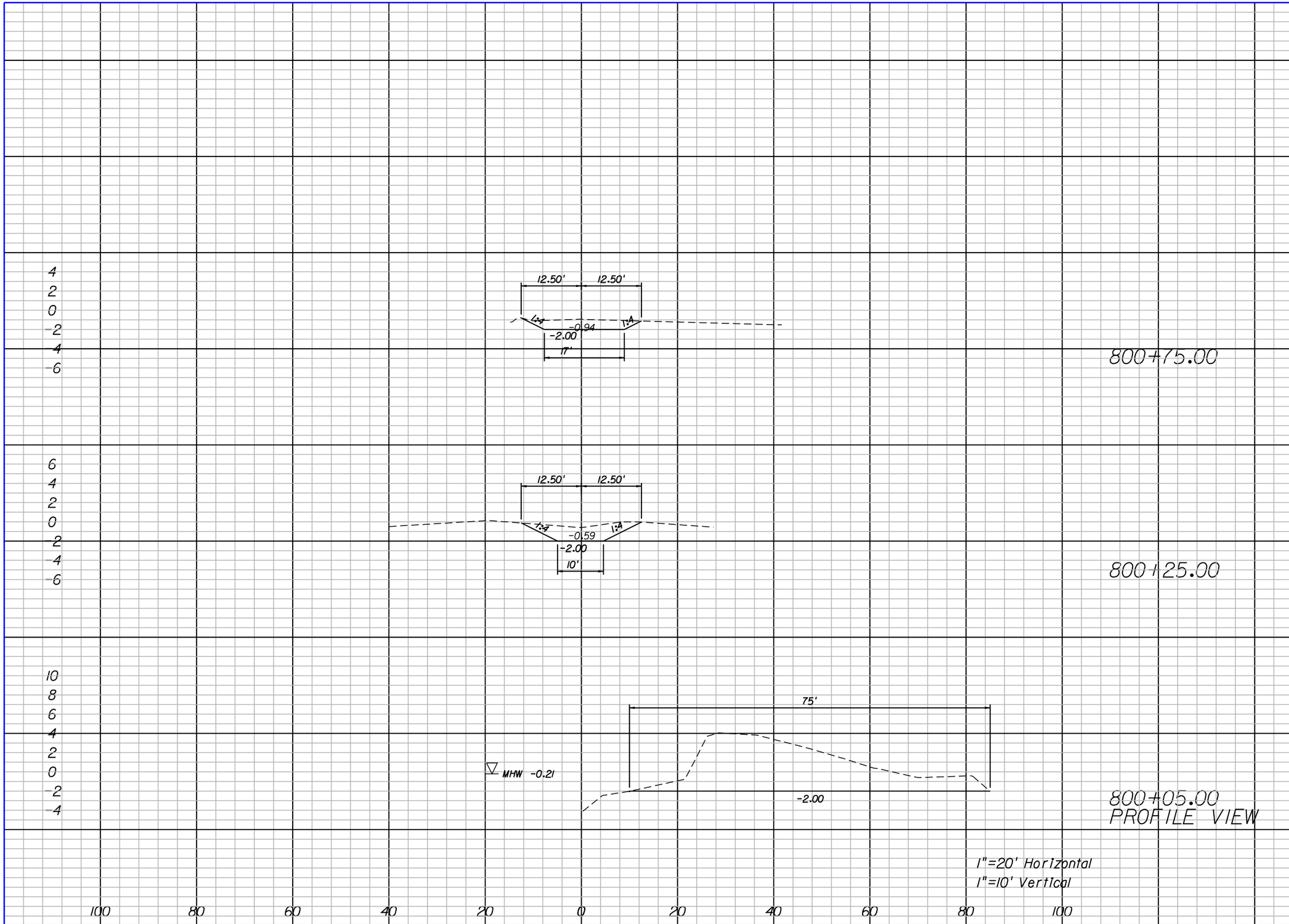
CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST CROSS SECTIONS

SHEET NO. 26



Channel Exc.		Embankment	
A	V	A	V
224	207	0	0

American
Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302
William L. Adams, P.E. No. 57950

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
N/A	ST. LUCIE

WATER QUALITY IMPROVEMENTS

SITE 5 WEST
CROSS SECTIONS

SHEET NO. 27

Acquisition and Restoration Council (ARC)
Public Hearing and Council Meeting

ARC Agenda

PUBLIC HEARING:	Thursday, December 10, 2009 and
COUNCIL MEETING:	Friday, December 11, 2009
TIME:	9:00 a.m.
LOCATION:	The Department of Environmental Protection Conference Room A, Marjory Stoneman Douglas Building, 3900 Commonwealth Boulevard, Tallahassee, Florida.

ITEM 1:

ANNOUNCEMENTS

ITEM 2: Consent Agenda **(Friday, December 11 2009 meeting only)**

CONSENT ITEMS: _____

( ) APPROVE
( ) NOT APPROVE

OLD BUSINESS

ITEM 3:

REQUEST: Consideration and approval of the October 8 and 9, 2009 and December 4, 2009, meeting summaries.

DSL Staff Remarks: None.

DSL STAFF RECOMMENDATION: Approve the October 8 and 9, 2009 and December 4, 2009 meeting summaries.

ARC RECOMMENDATION:

NEW BUSINESS

ITEM 4:

REQUEST: Consider the proposed 2010 ARC Calendar

DSL Staff Remarks: ARC members and staff were sent the proposed calendar by email on September 24, 2009, and a revised calendar on October 13, 2009. With the exception of one irreconcilable conflict in April, ARC members expressed no objections to the proposed meeting dates.

DSL STAFF RECOMMENDATION: Approve the proposed 2010 ARC calendar.

ARC RECOMMENDATION:

LAND ACQUISITION

ITEM 5:

REQUEST: Combine Seven Runs Creek (Walton County) and North Nokuse (Walton County) into a Single Florida Forever Project

DSL Staff Remarks: Staff has received a request from Mr. M. C. Davis, the sole owner of both Seven Runs Creek and North Nokuse Florida Forever projects, to combine the two projects into a single Florida Forever project to be called Seven Runs Creek. The two properties are adjacent to each other, and both are currently on the Florida Forever "A" list as less-than-fee (conservation easement) projects.

DSL STAFF RECOMMENDATIONS: Combine the projects into a single Florida Forever project called Seven Runs Creek.

ARC RECOMMENDATION:

ITEM 6:

REQUEST: Amend the boundary of the Corkscrew Regional Ecosystem Watershed (CREW) Florida Forever Project to remove approximately 794 acres with a tax assessed value of approximately $62,806,620.

LOCATION: Lee County

DSL Staff Remarks:
The South Florida Water Management District (SFWMD) requests the revision of the CREW project's southern boundary to delete approximately 794 acres. A revised southern boundary would mirror similar action taken by the SFWMD Governing Board in February, 2009 to amend its original 1999 Southern CREW Critical Project boundary to reflect the changing conditions in the project area.

The acreage recommended for removal was part of an approved boundary addition sponsored by SFWMD and the CREW Trust in 1999. Also, in 1999, the SFWMD Board approved its program's Southern CREW Critical Project whose stated purposes included: restoration of wetland hydrology and sheet flow, reduction of harmful freshwater discharges to Estero Bay, improvement of habitat for endangered species and other wildlife, reduction of nutrient and pollutant discharges to the Imperial River and Estero Bay and reduction of flooding to homes and private lands near the project area. It was anticipated that SFWMD and the Department would be partners in its acquisition. The result of the boundary addition was to create a more congruent CREW boundary between both programs.

To date, the SFWMD has completed the following components of its Southern CREW Critical Project:

- Imperial Bonita Estates Bridge has been removed;
- Kehl Canal Weir has been replaced;

- Exotic plants have been removed from 2,560 acres;
- Hydropattern restoration has occurred on 640 acres of wetland.

Since the 1999 approval of the Southern CREW Critical Project, several major developments have occurred in the east Bonita/south Lee County area. According to the SFWMD, changes to the region include:

- Incorporation of the City of Bonita Springs and the annexation of significant portions of the east Bonita area;
- Creation of the Density Reduction/Groundwater Recharge classification in the Lee County Land Use Regulations (DR/GR) overlying the region providing density restrictions to protect groundwater in the region;
- Establishment of the adjacent 28,540 acre Corkscrew Regional Ecosystem Watershed Trust for management of the CREW lands;
- Implementation of significant portions of the SLCWP and the improvement of conditions along the Imperial River west of I-75;
- Lee County Conservation 20/20's purchase and restoration of parcels adjacent to the Southern CREW Critical Project boundary;
- Development within the original footprint of the Southern CREW Critical Project;
- Alignment of County Route 951 south of the Kehl Canal;
- Development along Bonita Beach Road;
- Implementation to date of the Southern CREW Critical Project Recommended Plan as listed above.

All of the above noted changes led to a reassessment of the lands needed for implementation of SFWMD's Southern CREW Critical Project. In particular, the increase in land costs and significant development along Bonita Springs Road both in the current project boundary and adjacent to the boundary resulted in the reassessment and SFWMD's Governing Board revision to its Southern CREW Critical Project boundary on February 12, 2009, on the basis that "the overall project objectives can be achieved at significantly less cost to the public with reduced acquisition of private lands."

The entire boundary amendment area supports low density residential or commercial land use. Most of the land within the area recommended for removal is zoned for single-family residential. Two low-income mobile home parks would also be deleted as a result of approval of this boundary revision. Limited commercial development exists along Bonita Springs Road. Those parcels that are not developed have significant exotic plant infestation and are often used as illegal dump sites. The area is a part of the Lee County designated Density Reduction/Groundwater Recharge classification in the Lee County Land Use Regulations providing density restrictions to protect groundwater in the region.

The extension of County Road (CR) 951, first proposed in 2002 to connect Corkscrew and Bonita Beach roads parallel to Interstate 75, is on hold. This boundary revision would help facilitate the road extension if its construction is eventually funded. Lee County and the SFWMD have worked cooperatively together on road options and mitigation for possible impacts to the CREW project area. Scenarios include acquisition by Lee County of parcels owned by the Trustees of the Internal Improvement Trust Fund (TIITF) and/or TIITF and the SFWMD in sections proposed to be removed from the TIITF CREW boundary. Funds received by SFWMD would then be used to buy land elsewhere within the CREW project area. According to the SFWMD, this boundary revision and the exchange between SFWMD and the TIITF described in Item #15 would not negatively impact the CREW Florida Forever protection and restoration goals of either the ARC/TIITF or the SFWMD regardless of whether or not the extension of CR 951 is funded and built. It should be noted that objections were raised by the United State Fish and Wildlife Service (USF&WS) on 10/23/2007 (see attached for USF&W

comments and responses from Lee County DOT and SFWMD) on the "proposed reduction in scope of the southern CREW restoration project.").

In subsequent discussions and meetings with the SFWMD the USFWS determined that the boundary change was acceptable but they remained concerned about the alignment of the extension of CR 951. The SFWMD has submitted a boundary change request and land swap request to the USFWS associated with the grant funds that were used for the original land acquisition. The decision from USFWS is pending. See also attached the "2009 CR 951 Position Statement" signed by environmental organizations expressing concerns about potential negative environmental impacts of the extension of CR 951.

In 1999, according to SFWMD, the Division of Historical Resources determined that the Southern CREW Critical Project would have no effect on listed historic properties (letter dated August 23, 1999). It has further been determined by SFWMD that a Cultural Resources Assessment Survey is not needed for the removal of parcels from the Southern CREW Critical Project Boundary or resultant reduction in the CREW Florida Forever Project boundary. Removing these parcels within the ARC/TIITF CREW project boundary would reduce the overall acquisition cost while still maintaining the integrity of the ecosystem; and rehydrating the Southern CREW Critical Project area, according to SFWMD. It would also, again, align the southern CREW boundaries of both Florida Forever programs.

DSL STAFF RECOMMENDATION: Approve the boundary reduction.

ARC RECOMMENDATION:

ITEM 7:

REQUEST: Modifications to the Brevard Coastal Scrub Ecosystem Florida Forever project boundary.

LOCATION: Brevard County

DSL Staff Remarks:
The Office of Environmental Services received requests by certified letter that ownerships within the Brevard Coastal Scrub Ecosystem Florida Forever project in Brevard county be removed from the project's boundary. Pursuant to Paragraph 259.032(15), Florida Statutes, the board of trustees shall delete property from a project boundary if requested to do so by certified letter from a landowner whose property is in a Florida Forever project.

Mr. John S. Copanos and Mr. John D. Copanos, requested by certified letter that a parcel of 20 acres be removed from the project boundary. Mr. John Copanos, Sebastian Resources 400, LP, requested by certified letter that four parcels totaling 902.13 acres be removed from the project boundary. Mr. Nick Dionisio, Brevard Landvest, LLC, requested by certified letter that four parcels totaling 744.82 acres be removed from the project boundary. The acreage of the nine parcels, located within the Malabar Expansion and Valkaria/Micco Expansion (added in 2000) and Micco (added in 1994), totals 1,666.95 acres and has a 2009 market value of $2,645,120.00.

The Brevard Coastal Scrub Ecosystem Florida Forever project is being reevaluated to eliminate parcels that are no longer suitable for conservation. Because of the owner-requested deletions of these 1,666.95 acres, some additional lands will likely be recommended by staff for removal due to management considerations.

DSL STAFF RECOMMENDATION: Approve the changes to the project boundaries.

ARC RECOMMENDATIONS

ITEM 8:

REQUEST: Approve Revised Management Prospectus for Windover Archaeological Site

LOCATION: Brevard County

DSL STAFF REMARKS: The Windover Archaeological Site in Brevard County was recommended for inclusion on the Florida Forever List by ARC in June, 2009. Brevard County was the proposed manager, but the Brevard County Board of County Commissioners (Commission) had not yet approved accepting management of the site. The letter notifying the Commission of this vote for approval as a Florida Forever project noted that it was conditioned on the Commission's approval of the Brevard County Environmentally Endangered Lands (EEL) Program's prospective management of the site. The letter also stated that the ARC requested that the county clearly state its intention to provide public access and education should the site be acquired. For the proposal to be placed on the September Florida Forever list, the letter included a request that the county notify the Division of State Lands no later than August 7, 2009, of its approval of the management prospectus. Since the item was not voted on by the Commission until August 18, 2009, this project was not among the projects on the September, 2009 Florida Forever list. The revised prospectus that resulted from that meeting (see backup) has several stipulations to address concerns of the residents of Windover neighborhood.

The Pillsbury Mound management prospectus prepared by Manatee County's Conservation Lands Management Department and approved by their County Commission is provided for comparison. Pillsbury Mound has recently been acquired using Emergency Archaeological funds and is being recommended for removal as 100% complete.

In both cases, a county entity would manage the site. Neither prospectus includes the development of recreational amenities, and no revenue-generating potential was anticipated for either site. The Pillsbury Mound prospectus concentrates on securing the site with a suitable barrier and restoring it. One condition included in the Windover prospectus is that it would be designated a Category 3 Sanctuary, which would imply some level of security. Another condition notes that "staff and volunteers will be trained to ensure the archaeological integrity of the site is not impacted." No additional staff will be assigned for the management of either site. Both prospectuses make reference to educational use. The Pillsbury Mound prospectus includes the following: "Future plans may include extending the County's current cultural and environmental educational program to include the site." For Windover, "the public use of the site would be for educational or scientific purposes only" and "public use would be limited to supervised (guided) tours only."

Opportunities for learning more about Windover and for arranging to see the site would be arranged through the Enchanted Forest and the Brevard Museum of Natural History and Science. The interpretive signage for the Windover site is currently located at the natural history museum.

If the revised management prospectus for the Windover Archaeological Site is approved by the Council, the project will be included on the February, 2010 Florida Forever list. Any modifications to the prospectus by the Council will require that it be reconsidered by the Brevard County Board of County Commissioners.

DSL STAFF RECOMMENDATION: Approve the revised management prospectus for Windover Archaeological Site

ARC RECOMMENDATION:

ITEM 9: **[For December 10th meeting only]**

REQUEST: Receive public testimony on the two new proposals under consideration for addition to the February, 2010 Florida Forever priority list and the projects on the existing September, 2009 Florida Forever Priority List.

DSL Staff Remarks: Notice for receiving public testimony on the two new proposals and the 109 projects on the existing September, 2009 Florida Forever list was published in the following newspapers: Florida Today, Orlando Sun-Sentinel, Florida Times Union, Tallahassee Democrat, Pensacola news as well as the Florida Administrative Weekly through the Department of State. A public hearing was held on December 4, 2009 at the Brevard Commission Board Room, 2725 Judge Fran Jamieson Way, Bldg C, First Floor, Viera, FL 32940

ITEM 10:

REQUEST: Consider Project Evaluation Reports for new projects.

DSL Staff Remarks: Notice for receiving public testimony on the two new proposals and the projects on the existing September, 2009 Florida Forever list was published in five newspapers, as well as the Florida Administrative Weekly through the Department of State. An additional public hearing was held on December 4, 2009, at the Brevard County Commission Chambers in Viera, Florida at 6:00 p.m.

Project evaluation reports for the following two new 2009 Cycle 2 Florida Forever projects have been prepared for review by the Council:

1. Maytown Flatwoods, Less-than-fee acquisition, Brevard and Volusia counties
2. Shoal River Buffer, Fee-simple acquisition, Okaloosa County

DSL STAFF RECOMMENDATION: Approve the two evaluation reports.

ARC RECOMMENDATION:

ITEM 11:

REQUEST: Develop the August, 2009 Florida Forever Priority List

DSL Staff Remarks: (a) Vote to remove existing project(s) from the priority list, if any; (b) Vote to move existing projects from the 'A' group to the 'B' group and vice versa, if any; (c) Vote to select which of the new projects – Maytown Flatwoods (Brevard and Volusia counties) and the Shoal River Buffer (Okaloosa County) – to add to the Florida Forever list, and (d) Approve the revised priority list for submittal to the Board of Trustees of the Internal Improvement Trust Fund (multiple counties).

DSL STAFF RECOMMENDATIONS: Staff recommends removing two projects from the Florida Forever list. The Pillsbury Mound project (Manatee County) was purchased in its entirety in July, 2009. With the purchase of the 574 acres from The Nature Conservancy in August and November, 2009, the Yellow River Ravines project (Santa Rosa and Okaloosa counties) is

approximately 92 percent complete and can be removed from the list. Staff recommends removing both projects from the Florida Forever list. Staff recommends that no projects be moved from the 'A' group to the 'B' group or vice versa.

ARC RECOMMENDATION:

( ) Vote to remove existing project(s)_____
( ) Move existing projects from 'A" to 'B' and 'B to 'A'_____
( ) Vote to select new projects (see attached voting sheet)
( ) Approve recommended August 2009 Florida Forever Priority List

MANAGEMENT PLANS

ITEM 12:

REQUEST: Consider a Management Plan Amendment for the Yamato Scrub Natural Area

LOCATION: The Palm Beach County (County)

APPLICANT: The Palm Beach County

DSL STAFF REMARKS: The City of Boca Raton (City) has constructed segments of a multipurpose pathway to the north and south of the Yamato Scrub Natural Area (Lease No. 4176) and on a portion of the natural area that is owned jointly by City and County. This effort is part of the implementation of the City's bicycle, pedestrian, greenways and trails master plan. The City wants to construct the "missing link" to complete the pathway inside the western boundary of the portion of the site owned by the State because the Lake Worth Drainage District will not allow construction of that segment on the E-4 Canal right of way adjacent to the natural area.

The City has obtained federal transportation enhancement funding through the Florida Department of Transportation for the design and construction of this segment of the pathway. Because the 10-year update to the management plan for the natural area is not due to the Acquisition and Restoration Council (ARC) for review until 2011, the City's request for permission to construct the segment on the natural area needs to be considered at this time.

Background
The City applied to the Lake Worth Drainage District (LWDD), which owns the right-of-way for the E-4 Canal adjacent to the Yamato Scrub, for permission to construct that part of the pathway within the LWDD right-of-way. LWDD denied the City's request. The City then asked County, as the manager of the property, to ask permission from the State, as the landowner, for the pathway to be constructed on state-owned land inside the western perimeter of the natural area. The initial management plan for the natural area was approved by ARC on December 6, 2001, and the ten-year revision will be due in October 2011

The City and County would jointly oversee the construction of the pathway and the City would be responsible for the construction, management and maintenance of the pathway. Palm Beach County Department of Environmental Resources Management (ERM) staff has not observed any listed species present in the area that would be used for the construction of the western pathway. The majority of the route currently is used as a management road and firebreak and is clear of most vegetation. The new pathway would be used by the County as a management road. It would be designed to allow for passage of fully-loaded brush trucks to be used during prescribed burns and other management equipment. There are several listed plant

species present in the LWDD-owned E-4 Canal right-of-way that would be protected if the pathway is placed within the natural area. The locations of these species would be marked for protection of the individuals during construction of the pathway. Both County and City staff would conduct inspections of the proposed pathway location to ensure that any listed species present are protected in place and/or relocated if necessary. The City plans to plant native vegetation on the west-side of the pathway, to install benches for seating for users of the pathway, and to provide a temporary irrigation system to ensure the success of the plantings. The remainder of the cleared areas adjacent to the pathway would be allowed to revegetate naturally. The City would pay for and install split-rail fencing adjacent to the pathway to prevent access to the natural area from the pathway. A farm-type access gate for maintenance vehicles would be provided on the pathway at a location to be determined by County. Public access to the natural area would be provided only at the parking area, which is located in the Knight tract on the north-side of Clint Moore Road. Use of the pathway would be limited to the period between sunrise and sunset; therefore, no lighting is proposed for the pathway.

Public Involvement
The City's request was considered favorably at the September 18, 2009, public meeting of the County's Natural Areas Management Advisory Committee, which recommended that the request be forwarded to the State for review. State approval was granted in 2007, for a similar pathway, the Jupiter Riverwalk, on the Jupiter Ridge Natural Area. The revised management plan for that site was recently approved by ARC.

DSL STAFF RECOMMENDATION: Approve management plan amendment.

ARC RECOMMENDATION:

ITEM 13:

REQUEST: Consider a 10-year Management Plan for the East Central Regional Rail Trail

LOCATION: Brevard and Volusia Counties

APPLICANT: The Florida Department of Environmental Protection's ("DEP") The Office of Greenways & Trails ("OGT"), Volusia County, Brevard County

DSL STAFF REMARKS:
Background
This trail corridor traverses northern Brevard County and southern Volusia County. The common name for this property is the East Central Regional Rail Trail. The trail corridor spans 50.8 total miles, connecting the community of Enterprise in southwestern Volusia County to the City of Titusville in northern Brevard County, with an additional spur from the former community of Maytown to the City of Edgewater. Communities near the trail corridor include Enterprise, Deltona, Osteen, Scotts moor, Mims, Titusville, Edgewater and New Smyrna Beach. Passing through Enterprise and into Osteen, the trail crosses SR 415, continues east and passes under I-95 in Brevard County.

Purchase of the East Central Regional Rail Trail was explored for nearly 20 years. In late 2001, the East Central Florida Regional Planning Council assisted the counties of Volusia and Brevard in submitting an Application for Acquisition of Land to the Office of Greenways and Trails Acquisition Program under Florida Forever. The project was evaluated, ranked and placed on OGT acquisition work plan by the Florida Greenways and Trails Council. Next, DEP Division of State Lands, in coordination with OGT and the counties, began the process of surveying the corridor and having it appraised. Due to the nature of such a long-standing corridor, many title

issues had to be resolved. Although the railroad tracks were removed over 50 years ago in many places except in the Titusville/Mims area, where they were only removed two years ago, title to the corridor itself remained in the hands of the Florida East Coast Railway Company ("FEC"). With such a long history of ownership, the railroad right-of-way has been left off of title searches hence private buildings have encroached on the right-of-way. Negotiations will be conducted to resolve these encroachments.

Ultimately, nearly the entire corridor was purchased from FEC for $16 million using OGT's Florida Forever funds. Being the longest rail-to-trail acquisition in the State of Florida, the final corridor is 50.8 miles long and ranges from 35 to 200-feet-wide for a total of 668.35 acres. The purchase closed on December 31, 2007, with the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida ("Trustees") acquiring fee simple title. Once in public ownership, the trail corridor was leased to OGT for 50 years on April 25, 2008; in September 2008, OGT subsequently provided Volusia County and Brevard County 50-year subleases to develop and manage the proposed multi-use trail.

Public Involvement

The Advisory Groups held their organizational meetings on August 26, 2008, in Brevard County and August 28, 2008, in Volusia County. Subsequently, public meetings were held in September in both Brevard and Volusia Counties (September 17, 2008, and September 24, 2008, respectively). Both public meetings were well attended and gathered many interesting and useful comments. Advisory Group member list, advertisements, agendas, sign-in sheets, and a list of comments are attached as Appendix seven. In addition, participant contact information has been entered into a database so that they can be kept up-to-date on the progress of the Management Plan and the design and development of the trail segments. Additionally, the Management Plan was posted on the Volusia and Brevard County web sites for public comment and the Project Development & Environment ("PD&E") Study has allowed for additional public involvement with public workshops scheduled during the Spring and Fall of 2009.

All comments received from the Advisory Committee and the public were considered. No significant issues were raised by the Advisory Committee, and there were no areas of substantial disagreement with this plan.

Management Plan Overview

Management activities are prioritized as follows: (1) ensure the safety of all patrons; (2) provide equal access for patrons; (3) protect the surrounding environment; (4) present a clean, comfortable, and enjoyable experience; (5) encourage user feedback; (6) provide maps and brochures; (7) promote a "share the trail" ethic; and (8) celebrate successes. The current phase of the East Central Regional Rail Trail project is completion of the PD&E Study. In addition, a specific plan to address any arsenic contamination will be developed. Once these steps are completed, the paved, multi-use trail will be designed, constructed and open to the public in phases. The trail will be developed in segments to spread the fiscal impact over several years. Brevard County will be responsible for developing their segments (14.9+ miles) and Volusia County will develop their segments (35.9+ miles). Preliminary trailhead locations include Green Springs Park, two potential Deltona parcels, Osteen Civic Center, Gobblers Lodge, Chain of Lakes, and the Maytown Spur area.

Because of the former rail line, natural vegetation that has grown up on the rail bed itself is of recent origin. The western and eastern termini are located in the relatively urban areas of Deltona, Titusville, and Edgewater. However, the middle portion of the trail corridor travels through a very rural area with large open stands of natural vegetation and the expansive Farmton timber lands creating a canopy of trees over much of this section. Adjacent to the built-up rail bed are 24 different natural vegetative communities.

A land management review has not been conducted on this area.

DSL STAFF RECOMMENDATION: Approve management plan.

ARC RECOMMENDATION:

ITEM 14:

REQUEST: Consider a Management Plan Amendment for the Caloosahatchee Regional Park

LOCATION: Lee County

APPLICANT: Lee County

DSL STAFF REMARKS: A private company has approached Lee County (County) with the proposal of constructing and operating a zip line at the Caloosahatchee Regional Park (CRP). Before this proposal can go through the bid process, the management plan will need to be amended to allow this use. This private use would need to be competitively bid and the County must provide the state with proof of liability insurance and indemnification prior to this use of state owned lands.

If approved, design and siting criteria will include (at a minimum):

- Avoiding listed species habitat and impacts on listed species including but not limited to hand fern (*Ophioglossum palmatum*), Eastern indigo snake, Gopher tortoise, and Crested caracara.
- The corridor for the zip line shall be selected to minimize the need for clearing and avoid impact on mature (> 12" diameter at breast height) trees.
- Construction techniques shall be used that minimize soil disturbance and collateral clearing damage.
- The location shall minimize conflict with existing trails.
- The zip line company shall be responsible for controlling exotic plants in and around the zip line towers, platforms and any other infrastructure required to operate the zip line within guidelines provided by Lee County Parks and Recreation.
- The zip line shall be operated to emphasize developing a "sense of place" for CRP and shall be educational with emphasis on the culture, history and environment of the area.

This type of recreational activity has not been previously allowed on state conservation and recreation lands. Therefore a discussion of whether or not this qualifies as natural resource-based recreation may be appropriate. Staff recommends that if this use is approved that the lessee insures that the successful bidder provide: One. Proof of adequate liability insurance. two. That the structures be as aesthetically pleasing as possible, and three. That the structures be removed at no cost to the State if this use ceases.

Background

The Caloosahatchee Regional Park (CRP encompasses approximately 768 acres is located in Southwest Florida in northeastern Lee County on the north side of the Caloosahatchee River. It is approximately two miles west of the town of Alva and is divided by County Road 78 (North River Road).

CRP has been in public ownership since 1969. Seven hundred 18 acres of the site were purchased by Trustees of the Internal Improvement Trust Fund and leased to the Florida

Department of Natural Resources (now known as the Department of Environmental Protection), Division of Recreation and Parks. This entity had no immediate plans for the development of facilities and programs and consequently Lee County obtained a 50-year lease to the property for development of public, outdoor recreational facilities as a unit of the County's Regional Park System on June 14, 1989. The park was opened to the public in March 1999. Lee County obtained a lease from South Florida Water Management District on April 20, 2004, and is currently operating under Amendment two (second extension of lease) of this lease effective April 20, 2009, through April 19, 2014. The establishment of CRP fulfilled the need for a regional park in northeastern Lee County.

Public Involvement

A public hearing was held on October 20, 2009, to allow for input by an advisory group and the public pertaining to the proposed changes to the CRP Resource Management Plan [as required by Section 259.032(10)(b), F.S.]. This public meeting focused on the following items: the recent extension of mountain bike trails, the recent extension of a parking area to accommodate the public that utilizes mountain bike and equestrian trails, the new location of the Program Center/ Lodge and the proposal of a zip line.

DSL STAFF RECOMMENDATION: Approve management plan amendment.

ARC RECOMMENDATION:

ITEM 15:

REQUEST: Consider a Management Plan amendment and annual report for Huguenot Memorial Park

LOCATION: Duval County

DSL Staff Remarks: Huguenot Memorial Park encompasses 313 acres of coastal habitat, 161 of which is leased to the City of Jacksonville by the Board of Trustees, and 152 acres of federal land. It is located east of Interstate 95 and State Road 9-A, in Duval County. It is a large L-shaped peninsula bordered by the St. Johns River, Atlantic Ocean and Fort George Inlet and connected to the mainland at the park entrance on the western end. The park is managed by the City of Jacksonville (COJ), Recreation and Community Services Department.

The Acquisition and Restoration Council (ARC) recommended approval of the ten year management plan for this park on December 12, 2008. The approval was contingent on the COJ returning to the ARC at the December 2009, meeting and on providing a report on the status of implementation of the approved management plan. The COJ has provided the Division of State Lands (DSL) with the report and has also requested that the management plan be amended to include:

1. changes in the areas that pets are allowed;

2. clarification of the boundaries of the managed area;

3. clarification of the makeup of the stakeholders of the Shorebird Management Team;

4. and driving restrictions to the emergent shoals.

The specific changes to the plan are outlined in an attached letter from the COJ dated October 12, 2009. The annual report is attached as well as a revised conceptual plan map. An e-mail is also attached which outlines the changes made to the plan after the ARC

meeting and before it was approved by DSL (in January of 2009) based on comments at the December 2008, ARC meeting.

DSL STAFF RECOMMENDATION: Approve management plan Amendments.

ARC RECOMMENDATION:

OTHER LAND MANAGEMENT ISSUES

ITEM 16:

REQUEST: Consideration of (1) a determination that 77.62 net acres, consisting of an undivided interest in 34.50 acres, and a 100 percent interest in 60.77 acres, of Board of Trustees' land is no longer needed for conservation purposes pursuant to section 253.034(6), F.S., and; (2) an exchange of the 77.62 net acres for lands of equal value owned by the South Florida Water Management District within the Corkscrew Regional Ecosystem Watershed Florida Forever Project.

LOCATION: Lee County
Corkscrew Regional Ecosystem Watershed (CREW)

APPLICANT: South Florida Water Management District (SFWMD)

CONSIDERATION: As a net conservation benefit for this exchange, the Board of Trustees and SFWMD will consolidate their respective ownerships for more effective government, and the SFWMD can proceed with disposing of lots not needed for management as part of the Florida Forever project.

DSL STAFF REMARKS: The Division of State Lands (DSL) received a request from the SFWMD to exchange 77.62 net acres (undivided interest in 34.50 acres and 100 percent interest in 60.77 acres) of land owned by the Board of Trustees in the CREW project in Lee County for lands of equal value owned by the SFWMD elsewhere within the CREW boundary. The SFWMD is the designated manager of the CREW project.

HISTORY: The CREW project was established to conserve connections between three conservation areas; provide critical protection for rare wildlife; and protect the flow of water feeding the Florida Panther National Wildlife Refuge, Fakahatchee Strand, and other areas. A boundary amendment approved by the Acquisition and Restoration Council (ARC) in 2002 at the request of the SFWMD added the Imperial River Flowway (IRF).

The Board of Trustees' CREW project encompasses the SFWMD's Southern CREW Critical Project (Southern CREW). The SFWMD's interest in this area included replacement of the Imperial Bonita Estates Bridge; replacement of the Kehl Canal Weir and modifications to its operating schedule; the purchase of up to 4,670 acres of land located upstream of the Kehl Canal Weir; filling of agricultural ditches and removal of structures and roads; and acquisition of easements or other interests if needed to improve or preserve the IRF.

To date, several of the SFWMD's project goals have been achieved, including the replacement of the bridge, replacement of the weir and amended operating schedule, acquisition of easements or other interests needed for the IRF, and ditching of canals within the project. On February 12, 2009, the SFWMD approved a boundary amendment reducing its Southern CREW project boundary by approximately 701 acres along the southwestern boundary of the project. The area deleted from the project has been altered by the construction of roads, house pads, berms and ditches resulting in restriction of the historic sheetflow, unnatural water impoundment, and disruption of natural wetland functions. As a result of this development, acquisition costs soared and the SFWMD determined that it would be preferable to focus its efforts and maximize its acquisition funds on acquiring the scattered inholdings within the remaining project.

To implement its goals, the SFWMD has requested that all lands owned by the Board of Trustees in the IRF, and lands in the areas deleted from its Southern CREW boundary, be transferred to the SFWMD in exchange for SFWMD lands within the remaining project boundary. Acquisition in CREW is handled by the SFWMD on behalf of the Board of Trustees under a 161 Agreement; therefore, sole ownership of these lots by the SFWMD will facilitate their sale or exchange for inholdings.

Proposed Land Exchange

The parcels proposed for exchange with the SFWMD were acquired with Florida Forever and Preservation 2000 funds over a period of several years. The Board of Trustees will convey to the SFWMD 77.62 acres consisting of 12.78 acres within the IRF owned entirely by the Board of Trustees, 34.50 acres (16.85 net acres) within the CREW boundary in which the Board of Trustees and SFWMD share ownership, and 47.99 acres owned entirely by the Board of Trustees within the CREW boundary (77.62 acres = 12.78 acres IRF + 16.85 net acres shared ownership CREW + 47.99 acres CREW). The SFWMD will convey to the Board of Trustees 79.49 acres (SFWMD's undivided interest in 132.5 acres) located elsewhere in the CREW project boundary.

The Board of Trustees will also receive additional lands to be selected from lands owned entirely by the SFWMD within the CREW boundary as needed to ensure a value-for-value exchange. The exact location of these additional lands will not be known until such time as appraisals can be completed and the value difference between the known exchange parcels can be determined. Following the exchange, the SFWMD will focus its efforts on acquiring inholdings within the project boundary.

The lands proposed for exchange to the SFWMD are in an area under study for location of an expansion of County Road 951. There is opposition to the road expansion from local citizens' groups and environmental groups; however, regardless of the outcome of the road expansion project, ownership of these lands by the SFWMD for sale or exchange to acquire lands in the remaining project boundary is recommended.

STATUTORY REQUIREMENTS: Pursuant to section 253.034(6), F.S., and chapter 18-2.021, F.A.C., prior to any decision by the Board of Trustees to surplus conservation land, the Acquisition and Restoration Council shall make a determination that the land is no longer needed for conservation purposes and that the request is compatible with the resource values and management objectives for such lands.
The state-owned land is no longer needed for conservation purposes due to:

- Extensive development that has altered historic sheetflow and disrupted natural functions.
- The SFWMD, as the manager, has accomplished its goals in the IRF and has obtained the interests it needed in the project area for flood control.

Pursuant to chapter 18-2.021, F.A.C., when surplusing conservation lands as part of a land exchange, ARC shall also evaluate the lands being offered for exchange to determine if they are of equal value or greater conservation benefit than the state lands and whether the exchange would result in a net positive conservation benefit, regardless of appraised value.

The proposed exchange will provide a net positive conservation benefit because:

- the Board of Trustees will acquire undisturbed lands within the project area in exchange for lands in an area that has experienced significant private development including berms and ditches that have altered historic sheetflow and disrupted natural wetland functions;
- the SFWMD, as the manager, will be able to focus acquisition efforts and funding on acquiring inholdings elsewhere in the project area; and,
- vesting title to all the exchange lands in one governmental entity will facilitate sale or exchange of the surplus parcels and management of the remaining parcels by their respective owners.

DSL STAFF RECOMMENDATION: Approval

This request is contingent upon the Board of Trustees approval.

ARC RECOMMENDATION:

ITEM 17:

REQUEST: Consideration to ensure that a 50-year, 2.34±acre, 20-foot-wide public sidewalk trail easement within the Department of Environmental Protection, Division of Recreation and Parks (DRP), Tomoka State Park managed land is in compliance with the Board of Trustees' Linear Facilities Policy.

LOCATION: Volusia County
Section 42, Township 13S, Range 32E

APPLICANT: The City of Ormond Beach (City)

CONSIDERATION: City shall construct the public sidewalk trail and shall maintain the sidewalk trail for the life of the project. City shall also provide $3,800 worth of trash receptacles and $2,600 worth of benches along the sidewalk trail. If approved, easement condition will give the City one year to complete construction from the date of execution.

DSL STAFF REMARKS: The concept of this project was developed by the Volusia County Metropolitan Planning Organization, Tomoka State Park (Park) and City to provide a connection from Inglesa Avenue to the Tomoka River Bridge. This connection will expand the

proposed Ormond Scenic Loop and Trail. This project is a cooperative effort between the Florida Department of Transportation (DOT), DRP and City. The proposed easement is for a public sidewalk trail and is within property managed by DRP that was acquired by Florida Board of Forestry for outdoor recreation and historic and related purposes June 11, 1937, to expand opportunities for outdoor recreation. Mature mesic hammock appears to be the only vegetation within the proposed easement area and the area's current use is a public park.

The Acquisition and Restoration Council's review is requested to ensure compliance with the Board of Trustees' Linear Facilities Policy.

AVOIDANCE: City has provided a site analysis for the proposed project demonstrating there are no other practical alternatives. City and DRP personnel have made a conscious effort in planning to locate the proposed public sidewalk trail within the area of least impact to the state lands. There appears to be no imperiled or other wildlife species located within proposed easement area and no historical or archeological resources.

MINIMIZING IMPACTS: The development of the proposed public sidewalk trail thru the Park rather than along Beach Street was to minimize the impact on the Park and the tree canopy along Beach Street. The proposed easement will have minimal impacts to the state lands as it will be paralleling North Beach Street and terminating at the main entrance of the Park. The designated path was selected with the assistance of the Park personnel and will provide pedestrians, joggers and cyclists a safe route to the park instead of using North Beach Street which has no shoulder. The area is bounded on the east by the Halifax River and by the Tomoka River to the west. There is only one street (Beach Street) that runs north and south in this area. This section of the state land is not adjacent to any larger conservation lands.

COMPENSATION: City shall construct the public sidewalk trail and shall maintain the sidewalk trail for the life of the project. City shall also provide $3,800 worth of trash receptacles and $2,600 worth of benches along the sidewalk trail. Pedestrian crossing and warning signs will be installed by the City.

DSL STAFF RECOMMENDATION: Approval

ITEM 18:

REQUEST: Consideration to ensure that a 50-year, 0.86±acre, 15-foot-wide utility easement within the Department of Environmental Protection, Division of Recreation and Parks (DRP) managed land, Okeechobee Battlefield Historic State Park, is in compliance with the Board of Trustees' Linear Facilities Policy.

LOCATION: Okeechobee County
Sections 25 and 36, Township 37S, Range 35E

APPLICANT: Okeechobee Utility Authority (OUA)

CONSIDERATION: OUA shall install/connect the water and wastewater services to the proposed park using a one-inch meter upon construction of the park facilities at a cost not to exceed $34,600 as the additional compensation for the impacts to state lands. OUA will credit the amount listed above will be credited to an existing account for the facility located within the Okeechobee Battlefield Historic State Park and a monthly statement will be provided to DRP for balance history.

DSL STAFF REMARKS: The proposed easement is within property managed by DRP that was acquired with Florida Forever funding in November 2006, for the conservation and

protection of natural and historical resources and resource-based public outdoor recreation. The proposed easement is for a public utility sewer force main. Grass and weeds appear to be the only vegetation within the proposed easement area and its current use as a public park is limited since the park is not developed. There appears to be no imperiled or other wildlife species located within proposed easement. This section of the state lands is not adjacent to any larger conservation lands.

The Acquisition and Restoration Council's review is requested to ensure compliance with the Board of Trustees' Linear Facilities Policy.

AVOIDANCE: OUA has provided a site analysis for the proposed project demonstrating there are no other practical alternatives. A total of eight properties were reviewed as possible sites for the proposed utility sewer force main. It appears from the research that other options are not available due to the significant increase in static loss and maximum distance. OUA has made a conscious effort to locate the proposed utility sewer force main at the furthest boundary of the state owned land to have the least impact to state lands. OUA will restore the area back to pre-construction condition once construction is complete.

MINIMIZING IMPACTS: OUA shall avoid using above ground facilities that might impact the scenic view and will place the sewer force main underground in the proposed easement area Since this area is known to have historical resources, a certified archeologist must be on site during any ground excavation and OUA has also agreed to return the area back to pre-construction condition once construction is complete.

COMPENSATION: OUA shall install/connect the water and wastewater services to the park using a one-inch meter upon construction of the park facilities at a cost not to exceed $34,600 as the additional compensation for the impacts to state lands. OUA shall remove all invasive exotic plant species within the proposed easement area at their own expense (if any are found).

DSL STAFF RECOMMENDATION: Approval

ARC RECOMMENDATION:

<u>ITEM 19:</u>

REQUEST: Consideration to ensure that a one year, 0.46±acre, 10-foot-wide temporary construction easement within Florida Fish and Wildlife Conservation Commission (FWCC) managed land, Hilochee/Green Swamp Wildlife Management Area, is in compliance with the Board of Trustees' Linear Facilities Policy.

LOCATION: Polk County
Section 02, Township 27S, Range 24E

APPLICANT: Florida Gas Transmission Company (FGT)

CONSIDERATION: Easement fee based on appraised market value plus $500 worth of goods and services provided by applicant to a private contractor specified by the FWCC.

DSL STAFF REMARKS: The proposed temporary construction easement is within property managed by FWCC. The property was acquired with Florida Forever funding in July 2001, for conservation and protection of natural and historic resources and resource-based outdoor recreation. The proposed temporary construction easement will house construction materials and equipment while FGT replaces an existing natural gas line. Pasture and cutover basin

swamp are currently within the proposed easement area, and its current use is a conservation area closed to the public. There appears to be no imperiled or other wildlife species located within proposed easement and no historical or archeological resources are known to be within the area. This section of the state lands is not adjacent to any larger conservation lands.

The Acquisition and Restoration Council's review is requested to ensure compliance with the Board of Trustees' Linear Facilities Policy.

AVOIDANCE: FGT has made a conscious effort to locate the proposed temporary space needed in areas that will have the least impact to state lands. FGT has stated the majority of their construction will be within the existing easement area, but during construction they will require additional area parallel to their existing easement to place material and equipment. Therefore, other alternatives are not available. FGT will restore the area back to preconstruction condition once construction is complete.

MINIMIZING IMPACTS: FGT has selected areas that are currently disturbed to use for the temporary placement of materials and equipment. FGT has agreed to return area back to pre-construction condition once construction is complete. In the event any trees need to be removed from the proposed temporary easement area, FGT will replace an equal number of like trees within the FWCC managed area.

COMPENSATION: Easement fee based on appraised market value plus $500 worth of goods and services provided by applicant to a private contractor specified by the FWCC.

DSL STAFF RECOMMENDATION: Approval

ARC RECOMMENDATION:

ITEM 20:

REQUEST: Consideration of (1) a determination that a 3.7-acre parcel of state-owned property that is part of the Beker South Fork Unit and is currently under the management of the Florida Department of Environmental Protection, Division of Recreation and Parks is no longer needed for conservation purposes, pursuant to section 253.034(6), F.S., and (2) an exchange between Cecil S. Harrell and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida for 3.7 acres of state-owned land for ten acres of land owned by Harrell Groves, Inc., a Florida corporation.

LOCATION: Manatee County
Sections 7 and 18, Township 33S, Range 21E

APPLICANT: Cecil S. Harrell

CONSIDERATION: Value for value exchange and, if necessary, cash boot from Cecil S. Harrell to equalize values.

DSL STAFF REMARKS: The Division of State Lands (DSL) received a request from Mr. Cecil S. Harrell to exchange ten acres of undeveloped lands owned by Harrell Groves, Inc. (Harrell) for 3.7 acres of state-owned lands currently under the management of the Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) as part of the Beker, South Fork Unit (South Fork).

HISTORY: The 3.7-acre state parcel was acquired as part of 1,124 acres donated to the Board of Trustees in 1988 as the result of a Chapter 11 settlement. Both tracts for the proposed

exchange are located in Manatee County. The parcel was accepted without any restrictions or conditions. Approximately 80 percent of the Harrell western property line abuts South Fork. The fencing along the parcel adjacent to the grove was one of the encroachments that was accepted when the entire donation was made. Assuming their boundary was correct the previous owners of the Harrell parcel planted the grove and used the property right up to the fence line in the southwest portion of the shared property line. A 1988 aerial of the property shows that the 3.7-acre strip of state-owned land was already disturbed. Over the years as part of maintaining the grove, the 3.7-acre strip of state-owned land has been used for turning equipment, burning dead trees and passage around the edge of the grove. As a result, the state parcel has been altered from its natural condition and has lost its sandhill scrub characteristics.

STATUTORY REQUIREMENTS: Pursuant to section 253.034(6), F.S. and chapter 18-2.021, F.A.C., prior to any decision by the Board of Trustees to surplus conservation land the Acquisition and Restoration Council (ARC) shall make a determination that the land is no longer needed for conservation purposes and that the request for surplus is compatible with the resource values and management objectives for such lands.

The state-owned land is no longer needed for conservation purposes due to:

- the parcel consists of ruderal uplands and would require extensive time and money to restore.
- the parcel is a linear parcel about 60-feet-wide on the park boundary that does not provide access and is no longer needed for park purposes.

The request for surplus is compatible with the management objectives and resource values for the surrounding conservation lands and the state parcel that is being conveyed has not contributed to the objectives or purpose of South Fork nor has it been managed as part of South Fork.

Pursuant to Chapter 18-2.021, F.A.C., when surplusing conservation lands as part of a land exchange, ARC shall also evaluate the lands being offered for exchange to determine if they are of equal or greater conservation benefit than the state lands and whether the exchange would result in a net-positive conservation benefit, regardless of appraised value.

The proposed exchange will provide a net positive conservation benefit because the state will receive:

- a parcel which is two times larger than the state-owned parcel;
- wetland and adjacent slope along the south fork of the Little Manatee River;
- land that contains superior intact natural resources that buffer the creek and its acquisition will act to smooth out the eastern boundary of South Fork;
- land that will bring South Fork Creek into the park boundary and add some protected buffer along the banks;
- approximately eight acres of bottomland forest, 1.5 acres of scrub/scrubby flatwoods, and less than an acre of blackwater stream and ruderal area; and
- a net positive gain of 6.3 acres

Mr. Cecil S. Harrell has also agreed to pay all costs of the exchange including, but not limited to, surveys, appraisals, title work, environmental site assessment (ESA), etc. A letter in support of the proposed exchange has been received from the DRP.

DSL STAFF RECOMMENDATIONS: Approval

This request is contingent upon the Board of Trustees approval.

ARC RECOMMENDATION:

ITEM 21:

REQUEST: Consideration of (1) a determination that a 2.2 +/- acre parcel of state owned property currently part of the Chassahowitzka Wildlife Management Area and managed by Florida Fish and Wildlife Conservation Commission, is no longer needed for conservation purposes, pursuant to section 253.034(6); and (2) an exchange between the Nativity Lutheran Church and the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida for the 2.2 +/- acre of state-owned land for a 2.6 +/- acres of land owned by the Nativity Lutheran Church.

COUNTY: Hernando County (County)

APPLICANT: The Nativity Lutheran Church (Church)

CONSIDERATION: 2.6 +/- acres

DSL Staff Remarks: The Division of State Lands (DSL) and the Fish and Wildlife Conservation Commission (FWCC) received a request from the Church to exchange 2.2 +/- acres of land currently owned by the Board of Trustees (State Parcel) for 2.6 +/- acres of land owned by the Church (Church Parcel).

History: The State Parcel was originally purchased in 1995 with Preservation 2000 funds as part of the Chassahowitzka Wildlife Management Area (CWMA) and is currently managed by FWCC. The CWMA was established to conserve unique or significant ecosystems, conserve habitat critical to imperiled species of fauna and flora, protect aquifer recharge areas, protect the watershed floodplain of the Chassahowitzka estuary and to provide resource based public outdoor recreation compatible with the protection and conservation of the natural resources found there.

Proposed Land Exchange: The two parcels proposed for the exchange are located in Hernando County near the southeast boundary of the CWMA. The Church Parcel abuts the eastern and southern boundary of CWMA, as well as the northern boundary of land managed by the Southwest Florida Water Management District (SWFWMD) as part of the Weeki Wachee Preserve, to the south. The State Parcel is a narrow strip of land, approximately 1000-feet-long and 100-feet-wide surrounded on two sides by private ownership and abuts US 19 along its eastern boundary.

Due to the configuration of the two parcels, the proposed exchange would result in greater habitat integrity and manageability. This would translate to an enhanced capability to maintain extant plant and animal species, and enhanced potential to provide and manage public recreation. From a natural resource management perspective, this exchange would provide enhanced resource and operational management attributes to the State. The Church parcel offers a more contiguous and uniform boundary with lands currently managed by the State. The current State parcel distorts the uniformity in the boundary to the degree that management by FWCC is impeded and impractical. The improved connectivity with SWFWMD conservation lands and operational boundary improvement would likely facilitate the long-term management of upland wildlife, including gopher tortoise.

The Church plans to use the parcel they would receive in the exchange to enhance access to the Church and to increase the number of parking spaces at the Church. The Church has

indicated that their current access is unsafe due to the lack of adequate turn lanes and poor visibility from US Highway 19 to the Church.

FWCC has concluded that the planned Church facilities will not impede long-term resource and operational management or fish and wildlife based public recreational opportunities. The Church will also grant FWCC access to the parcel, through the Church parking lot.

STATUTORY REQUIREMENTS: Pursuant to section 253.034(6), F.S., and chapter 18-2.021, F.A.C., prior to any decision by the Board of Trustees to surplus conservation land, the Acquisition and Restoration Council (ARC) shall make a determination that the land is no longer needed for conservation purposes and that the request is compatible with the resource values and management objectives for such lands.

The state-owned land is no longer needed for conservation purposes due to:

- the parcel is a long narrow sliver approximately 100-feet-wide, surrounded on two sides by private ownership and abuts US 19 along its eastern boundary creating a parcel that is extremely difficult to manage; and
- the parcel is currently under management by FWCC as part of CWMA but is not utilized for access or for fish and wildlife based public recreational opportunities.

The request for surplus is compatible with the resource values and management objectives for the surrounding conservation lands as the state parcel that will be conveyed has contributed limited capability to meet the objectives or purposes of the CWMA and, FWCC has concluded that the planned Church facilities will not impede long-term resource and operational management or fish and wildlife based public recreational opportunities.

Pursuant to Chapter 18-2.021, F.A.C., when surplusing conservation lands as part of a land exchange, ARC shall also evaluate the lands being offered for exchange to determine if they are equal or greater conservation benefit than the state lands and whether the exchange would result in a net-positive conservation benefit, regardless of appraised value.

The proposed exchange will provide a net positive conservation benefit because:

- It will improve the overall resource and operation management of CWMA;
- the state will receive a net gain in wildlife habitat;
- the state will receive a net gain in boundary integrity for CWMA;
- the exchange will provide increased potential for public recreation access and opportunities
- it would allow for better management by reducing patrol time and maintaining fence and fire lines during prescribed burning;
- the exchange would result in greater habitat integrity and manageability;
- the exchange would provide enhanced capability to maintain extant plant and animal species;
- the exchange would create approximately 80 meters of additional shared boundary between FWCC and SWFWMD managed lands; and
- the state will receive a net positive gain of 0.4 +/- acres.

DSL STAFF RECOMMENDATIONS: Approval

This request is contingent upon the Board of Trustees approval.

ARC RECOMMENDATION:

ITEM 22:

REQUEST: Consideration (1) of a determination that a 0.60-acre± parcel of state-owned property currently part of the West Orange Trail and managed by Orange County, is no longer needed for conservation purposes pursuant to section 253.034(6), F.S., and chapter 18-2.021 F.A.C.; (2) of a request for the surplus and sale of an approximate 0.60-acre parcel to Orange County (County); (3) to ensure that a 50 year 1.19± acre, 60-foot-wide construction and drainage easement is in compliance with the Board of Trustees' Linear Facilities Policy.

LOCATION: Orange County

APPLICANT: Orange County

CONSIDERATION: Appraised value for the surplus parcel and replacing the existing trail by realigning and reconstructing the trail on property owned by Orange County.

DSL STAFF REMARKS: The Department of Environmental Protection's Division of State Lands (DSL) and the Office of Greenways and Trails (OGT) received a request from Orange County (County) to buy an approximate 0.60 acres of land currently owned the Board of Trustees (Surplus Parcel) currently managed as part of the West Orange Trail (WOT). DSL and OGT also received a request from County for a construction and drainage easement over 1.19 acres of Board of Trustees land which adjoins the surplus parcel to the north (Easement Parcel).

HISTORY: The proposed surplus property and proposed easement area were acquired in 1994 with Preservation 2000 (P2000) funds as part of the Rails-to-Trails program. The Rails-to-Trails program was created by a resolution of the Governor and Cabinet on March 4, 1986, and enacted into law by the Florida Legislature in 1987 with a purpose of acquiring and developing abandoned railroad corridors for public recreational trail use. The parcels are traversed by a 14-foot-wide multi-use paved trail and are currently leased to OGT and subleased to County for management (development, operations, and maintenance).

REQUEST: The County is in the process of widening the Clarcona-Ocoee Road from a two lane rural section to a four lane divided urban roadway. Due to the widening of the Clarcona-Ocoee Road, the WOT is being realigned to the north of the existing trail.

Surplus - With the realignment of the trail, the Surplus Parcel would be abandoned and no longer used as part of the WOT. Thus this parcel would no longer be needed for conservation purposes.

Easement - The easement will be for realignment/reconstruction of the trail and for a storm water drainage pipe and appurtenances, required as part of the road improvements and expansion of Clarcona-Ocoee Road. The trail realignment/reconstruction language within the easement will terminate three years from the date the easement is issued.

The vegetation on the parcels consists of predominately mowed bahia grass. A 2009 environmental survey indicated the presence of Gopher tortoises near the area of the project limits. The County will be conducting an environmental survey on the subject parcels. In the event that any Gopher tortoises are identified on the subject parcels, County will work with the Florida Fish and Wildlife Conservation Commission to acquire all necessary permits for relocation of the Gopher tortoises. During the design phase of the project, an archeological study was completed and no known historical or archeological resources were found.

STATUTORY REQUIREMENTS: SURPLUS PARCEL - Pursuant to section 253.034(6), F.S. and chapter 18-2.021, F.A.C., prior to any decision by the Board of Trustees to surplus conservation land, the Acquisition and Restoration Council (ARC) shall make a determination that the land is no longer needed for conservation purposes and that the request for surplus is compatible with the resource values and management objectives for such lands.

The state-owned land is no longer needed for conservation purposes because the newly realigned trail will bypass this parcel and reconnect to the trail north of this parcel. As is common with rail-trail corridors, the only conservation value that the subject parcel has is for outdoor recreation as part of the WOT. Since this portion of the trail will be abandoned and no longer used as part of the WOT, its intended conservation value will cease to exist.

The request for surplus is compatible with the management objectives and resource values of the WOT as a state-owned conservation property. The WOT will continue to be used for a recreational trail and will not lose any connectivity. Therefore, the proposed surplus is consistent with the purpose for which the state parcel was originally purchased.

EASEMENT REQUIREMENTS: ARC's review is requested to ensure compliance with the Board of Trustees' Linear Facilities Policy.

AVOIDANCE: OGT and County have jointly agreed that the proposed easement is the most practicable route and the least environmentally disruptive.

MINIMIZING IMPACTS: The County has agreed to realign that portion of the WOT located within the easement area, to the satisfaction of OGT, and to return the remaining easement area to preconstruction condition, once construction is complete. The County has also agreed to provide continuous uninterrupted access to the trail during construction of the stormwater piping.

COMPENSATION: The County will pay appraised value for the surplus parcel and will replace the existing trail by realigning and reconstructing the trail on property owned by County.

This request is contingent upon the Board of Trustees approval.

DSL STAFF RECOMMENDATIONS: Approval

ARC RECOMMENDATION:

ITEM 23:

REQUEST: Consideration to ensure that each of the following easements would comply with the Board of Trustees' Incompatible Use of Natural Resource Lands Policy and/or the Board of Trustees' Linear Facilities Policy if granted. These multiple easement applicants are seeking similar approvals for the use of state owned land and are being presented together as recommended by the Acquisition and Restoration Council (ARC) at its April 11, 2008, meeting.

1.) .15 ± acre, 30-foot-wide, 50-year private access and utility easement.

LOCATION: Volusia County

APPLICANT: Coen Gilmore

MANAGER/SITE: Department of Environmental Protection, Office of Greenways and Trails (OGT) – East Central Regional Rail Trail.

CONSIDERATION: Easement fee based upon a comparative sales analysis plus $500 worth of goods and/or services benefiting the East Central Regional Trail.

Remarks: The proposed easement is within property managed by OGT. Upon review, it was determined that the applicant's property is bordered to the west by state land that separates their property from the nearest public road. The surrounding state land was acquired for conservation and recreational activities including biking and hiking in 2007, under the Florida Forever program. Some of the natural communities are coniferous pine, mixed wetland hardwoods, and cypress. Native species consist of Florida Mouse, gopher tortoise, Eastern Indigo Snake and Florida Scrub Jay within the state land. Public use of the state land is not yet open to the public for recreational use. An archeological survey was not performed; however, the proposed easement is an old railway corridor and no buildings within or immediately adjacent to the site are listed on the National Register of Historic Places. Language will be inserted into easement making the applicant aware that prescribed burning may occur within the proposed easement. Applicant has stated there are no other property owners to request an easement from to gain access to their property; therefore, other alternatives are not available. (This request corresponds to delegation request numbers two and six of Item 11 on the April 10-11, 2008, ARC agenda.)

2.) <u>.25 ± acre, ± 30-foot-wide, 50-year private access and utility easement.</u>

LOCATION: Dixie County

APPLICANT: David K. Crapps

MANAGER/SITE: Florida Fish and Wildlife Conservation Commission (FWCC) Big Bend Wildlife Management Area

CONSIDERATION: Easement fee based on comparative sales analysis plus $500 worth of goods and services provided by applicant to a private contractor specified by FWCC.

Remarks: The proposed easement is within property managed by FWCC that was acquired for conservation purposes under the Conservation and Recreation Lands Program. The proposed easement is for access and utilities. Mixed coastal salt marsh and upland pinelands with a sprinkling of cypress swamp are currently within the proposed easement area and its current use is open to public hunting, resource-based recreation, camping, hiking and picnicking. There appears to be Scott's Seaside Sparrow, Eastern Diamondback Rattlesnake, Black Rail Snake and Gulf Salt Marsh Snake wildlife species located within proposed easement. Specific area has no historical or archeological resources known to be within the area. The proposed easement will have minimal impact to the state lands as it will remain in its current state. Considering the state lands surrounding applicant's property, no other alternatives for access to applicant's property are available. (This request corresponds to delegation request numbers two and six of Item 11 on the April 10-11, 2008, ARC agenda.)

DSL STAFF RECOMMENDATION: Approval

ARC RECOMMENDATION:

ITEM 24:

REQUEST: Consideration to ensure a right-of-way easement that will serve one of six potential bridge crossings within the North Fork St. Lucie River Buffer Preserve, which is part of the Savannas Preserve State Park managed by the Department of Environmental Protection, Division of Recreation and Parks, is consistent with the Board of Board of Trustees' Linear Facilities Policy.

LOCATION: St. Lucie County

APPLICANT: City of Port St. Lucie

CONSIDERATION: No easement fee is required for a public transportation easement. As net positive benefit for the impact of any of the proposed bridge crossings, the City of Port St. Lucie (City) will conduct four hydrologic restoration projects to enhance the water quality of the preserve; purchase 110± acres of land and convey fee simple title to the Board of Trustees; design, permit and construct the Savannas Recreation Area Trail; and, conduct three recreation construction projects to replace the Halpatiokee Canoe Access, to construct improvements to the existing Savannas Preserve State Park Education Center, and make improvements to Savannas Preserve State Park Canoe/Kayak Launch.

DSL STAFF REMARKS: The City is proposing to construct a transportation facility known as the Crosstown Parkway Extension at one of six potential locations to provide an efficient transportation link between the approved developments west of I-95 and the employment areas of U.S. 1. This corridor will provide east-west mobility needed for economic growth and to improve emergency response and hurricane evacuation. The City will need to obtain a right-of-way easement over state-owned conservation lands within the North Fork St. Lucie Buffer Preserve which is part of the Savannas Preserve State Park. The lands were acquired using Preservation 2000 funds and are managed by the Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) under Lease No. 4178.

The Acquisition and Restoration Council review is requested to ensure compliance with the three components of the Board of Trustees' Linear Facilities Policy which are avoidance, minimization of impact and compensation.

PROJECT OVERVIEW:

The South Florida Water Management District (SFWMD) is currently reviewing the City's application for a Conceptual Environmental Resource Permit (ERP) and Sovereignty Submerged Lands (SSL) easement for the proposed Crosstown Parkway extension and associated bridge over the North Fork St. Lucie River. The SFWMD's review is based on a "hybrid" bridge alignment that reflects the most intense impacts that each of the six alignments under consideration could have on state resources such as wetlands, state-owned recreation and conservation lands, and the North Fork St. Lucie River Aquatic Preserve. The SFWMD has requested additional information from the City to complete the application. When review of the application has been completed, the SFWMD staff will submit a recommended agency action to the SFWMD Governing Board. A conceptual ERP will not authorize construction. The DEP has provided the City with information on the potential resource impacts for each of the six alternative alignments under review.

In addition to the conceptual permitting process, the City – in consultation with the Department of Transportation (DOT) and United State Department of Transportation, Federal Highway Administration (FHWA) – has been conducting a Project Development and Environment (PD&E) Study to evaluate the six alignment alternatives for crossing the river, as well as a "no build" alternative. To be eligible for FHWA funding, federal staff determined that an Environmental

Impact Statement (EIS) would be required to analyze the potential impacts of the river crossing. A draft EIS is currently being developed for submission to the FHWA. The City and its consultants have been coordinating closely with resource and regulatory agencies throughout the PD&E study to identify ways to avoid, minimize and mitigate for all potential impacts. The objective of the EIS is to select and secure approval of a preferred alternative and to obtain FHWA funding for construction. Prior to construction, the applicant must submit to the SFWMD an application for an Individual ERP/SSL to construct the chosen alignment.

A. Impact Avoidance

Based upon the analyses undertaken for the ongoing Crosstown Parkway Extension PD&E Study and EIS, it has been determined that the Crosstown Parkway Extension Corridor is the only viable corridor to meet the City of Port St. Lucie's local and regional transportation needs.

Need for River Crossing

The City's existing transportation infrastructure across the North Fork of the St. Lucie River (NFSLR) consists of two bridge crossings which provide a vital link between the populated residential part of the City west of the river and the primarily commercial, regional corridor of U.S. 1 on the east side of the river. The two existing crossings are Port St. Lucie Boulevard to the south and Prima Vista Boulevard to the north with 6-lane and 4-lane cross sections, respectively. The adopted traffic Level of Service (LOS) standard for each bridge is LOS D for Port St. Lucie Boulevard and LOS E for Prima Vista Boulevard. Based on the FDOT Quality/Level of Service (Q/LOS) Handbook the existing bridges have a combined capacity of 89,200 daily vehicles (53,500 along Port St. Lucie Boulevard and 35,700 along Prima Vista Boulevard). The combined daily volume in 2008 across the two existing bridges is 104,680 vehicles (66,330 along Port St. Lucie Boulevard and 38,350 along Prima Vista Boulevard). As such, the two existing crossings are currently operating at a failing daily Level of Service (LOS F). Additionally, major sections of the existing Port St. Lucie Boulevard and Prima Vista Boulevard corridors within the project vicinity, including the intersections at the approaches to the existing bridges, currently operate below the adopted level of service standards during the AM and PM peak traffic hours.

The need for the proposed project has long been recognized by the City of Port St. Lucie and St. Lucie County as evidenced by the project's inclusion in the following planning documents:

- The City of Port St. Lucie Comprehensive Plan;
- The St. Lucie County Metropolitan Planning Organization's (MPO) 2025 Long Range Transportation Plan;
- The 2030 Regional Long Range Transportation Plan (RLRTP) for Martin and St. Lucie County MPOs, updated June 2007;
- The 2002 Martin and St. Lucie County Regional Land Use Study; and
- The 2004 Urban Land Institute - Port St. Lucie, Florida Panel Report;

The current adopted RLRTP forecasted the 2030 population for St. Lucie County to be over 610,000 which exceeds the Bureau of Economic and Business Research (BEBR) projection of 450,000. The higher rate of growth takes into consideration the Western Annexation Area in the City of Port St. Lucie. Over the next 20 years, the Western Annexation Area will add 30,000 homes and over 18,000,000 square-feet of employment space. Figure one is an aerial of the region depicting the approved development in the area, and its relation to the project Study Area. This planned growth will place an even greater burden on the two existing crossings which are already operating at capacity. Based on the traffic modeling conducted for the EIS, assuming a build condition consistent with the Long Range Transportation Plan (three bridge

crossings) the forecasted demand across the river exceeds 150,000 daily vehicles. A summary of the traffic forecasts for the various alternatives is noted in Table 1 below:

Table 1 – 2037 Travel Demand Forecasts for the Crosstown Parkway Extension Alternatives

	2008	2037		2037 BUILD ALTERNATIVES					
	BASE YEAR	NO BUILD	WIDENING	2A	2D	1C	1F	6B	6A
Daily Traffic Crossing the River									
Prima Vista Blvd	38,350	48,400	54,600	27,300	27,700	23,000	17,000	17,000	22,300
Crosstown Pkwy	N/A	N/A	N/A	59,700	57,100	62,300	64,600	64,600	59,700
Port St. Lucie Blvd	66,330	89,600	101,200	68,600	70,200	71,000	73,700	73,700	75,300
Total Daily Volumes	104,680	138,000	155,800	155,600	155,000	156,300	155,300	155,300	157,300
Total Capacity (C)	89,200	89,200	121,300	142,700	142,700	142,700	142,700	142,700	142,700
Total V/C	1.17	1.55	1.28	1.09	1.09	1.10	1.09	1.09	1.10
Traffic Volume Exceeding Capacity	15,480	48,800	34,500	12,900	12,300	13,600	12,600	12,600	14,600
Traffic Diversion from Prima Vista (%)	N/A	N/A	N/A	44%	43%	52%	65%	65%	54%
Traffic Diversion from Port St. Lucie (%)	N/A	N/A	N/A	23%	22%	21%	18%	18%	16%

Future growth along the existing corridors will only exacerbate the existing congested condition, and will threaten the safety and long-term viability of these corridors.

The proposed project is needed because of the inability of the existing bridges to meet the existing and projected travel demand between the communities west and east of the NFSLR. The high degree of projected traffic congestion cannot be alleviated by localized intersection improvements or improvements to the existing bridges. As noted in Table 1 above, even if both existing bridges were widened, the demand would still far exceed the capacity.

DSL STAFF RECOMMENDATION: Approval

ARC RECOMMENDATION:

ITEM 25:

REQUEST: Consideration to ensure that a 50-year 5.18± acre dredged material management area easement to the Sebastian Inlet District Commission within the Sebastian Inlet State Park (State Park) managed by the Division of Recreation and Parks (DRP) is in compliance with the Board of Trustees' Incompatible Use of Natural Resource Lands Policy.

LOCATION: Brevard County
Section 20, Township 30S, Range 39E

APPLICANT: Sebastian Inlet District Commission (District)

CONSIDERATION: As net positive benefit for the proposed easement, District shall provide $500,000 worth of goods and services to contractor specified by DRP for projects directly benefitting state park. District has dredged area around public boat ramp within state park in the amount of $14,000. District shall excavate tide pool area within the state park in the amount determined to be $100,000. District shall also provide $132,300 for calculated land value of the proposed easement area. District also intends to release 2.24± acres from their existing dredged material management area (DMMA) easement back to the Board of Trustees.

DSL STAFF REMARKS: In 1990 the Board of Trustees granted an easement to the District for a spoil disposal area within the park. Subsequent to that time, the District determined that the area was too small for the intended purpose and a larger area was needed. The District has

been negotiating with the DRP since 2005 to determine a mutually acceptable location and configuration for the expanded DMMA within the state park. The District currently has an existing easement of which they intend to release 2.24± acres back to the Board of Trustees since the area is no longer large enough for their project if the proposed easement is approved. As part of its discussion with DRP, the District has performed a Gopher Tortoise survey and has done an evaluation of the relocation options. In consultation with DRP, the District has evaluated relocation options and has agreed to relocate all Gopher Tortoises within the proposed easement area to Lake Louisa State Park at their expense. All relocation work will be done in compliance with the requirements and procedures of the Florida Fish and Wildlife Conservation Commission and other regulatory agencies. The area of the proposed easement was created by early inlet migration which occurred prior to the blasting of the inlet channel to bedrock (historic aerial pictures provided as back up information) so it would appear the area does not have any historical or archeological resources; however, DRP recommends the District submit the project for compliance review to the State of Florida's Division of Historical Resources before undertaking any ground disturbing activities. Lands surrounding the inlet that are suitable for a DMMA, necessary to maintain the inlet system, are extremely limited due to the abundance of estuarine marsh environment.

Council review is requested to ensure compliance with the four conditions of the Board of Trustees' Incompatible Use of Natural Resource Lands Policy.

Public Interest: The proposed easement will provide a localized storage facility for emergency inlet dredging and other small scale planned maintenance dredge projects in and around the inlet. Each of these projects directly benefits the public recreational use of the state park. The proposed easement will provide a more efficient dredging process for state park recreational resources such as the tide pool, inlet marina channel and the inlet itself.

Use is Not Incompatible: The use is not incompatible since the District shall provide $500,000 worth of goods and services to contractor specified by DRP for projects directly benefitting state park. District has dredged area around public boat ramp within state park in the amount of $14,000. District shall excavate tide pool area within the state park in the amount determined to be $100,000. District shall also provide $132,300 for calculated land value of the proposed easement area. District also intends to release 2.24± acres from their existing dredged material management area (DMMA) easement back to the Board of Trustees. The combined total from each of the listed projects to the state park is $746,300.

No Practicable Alternative: Lands surrounding the inlet that are suitable for a DMMA, necessary to maintain the inlet system, are extremely limited due to the abundance of estuarine marsh environment. The District has evaluated other location with the assistance of DRP and has determined this location to be the most suitable and practicable. Alternatives such as barging dredged material proved a much greater cost. The dredged materials are intended for future beach renourishment projects.

Net Positive Benefit: As net positive benefit for the proposed easement, District shall provide $500,000 worth of goods and services to contractor specified by DRP. District has dredged area around public boat ramp within state park in the amount of $14,000. District shall excavate tide pool area within the state park in the amount determined to be $100,000. District shall also provide $132,300 for calculated land value of the proposed easement area. District also intends to release 2.24± acres of their dredged material management area (DMMA) easement back to the Board of Trustees. DMMA will also facilitate the maintenance of critically eroded beaches throughout the state park by storing beach quality sand to protect shorelines and sea turtle nesting habitat.

DSL STAFF RECOMMENDATION: Approval.

ITEM 26:

REQUEST: Consideration of Guidelines and Procedures for the Implementation of HB7157—Real Property Used for Conservation Purposes

DSL STAFF REMARKS:

Background: The 2009 Legislature, in its implementing legislation for Constitutional Amendment four, provided for exemptions from ad valorem taxation for lands used for conservation purposes. Section 196.26(2), F.S. states that:

"Land that is dedicated in perpetuity for conservation purposes and that is used exclusively for conservation purposes is exempt from ad valorem taxation." 'Dedicated in perpetuity' is defined as 'land encumbered by an irrevocable, perpetual conservation easement.'

Section 196.26(4), F.S. goes on to state that "Land that comprises less than 40 contiguous acres does not qualify for the exemption provided in this section unless in addition to meeting the other requirements of this section, the use of the land for conservation purposes is determined by the Acquisition and Restoration Council (ARC) created in s. 259.035 to fulfill a clearly delineated state conservation policy and yield a significant public benefit. In making its determination of public benefit, ARC must give particular consideration to land that:

(a) Contains a natural sinkhole or natural spring that serves a water recharge or production function;
(b) Contains a unique geological feature;
(c) Provides habitat for endangered or threatened species;
(d) Provides nursery habitat for marine and estuarine species;
(e) Provides protection or restoration of vulnerable coastal areas;
(f) Preserves natural shoreline habitat; or
(g) Provides retention of natural opens space in otherwise densely built-up areas.

- Any land approved by ARC under this subsection must have a management plan and a designated manager who will be responsible for implementing the management plan." The statute further requires that the conservation easement that serves as the basis for the exemption must include baseline documentation as to the natural values to be protected on the land, and that structures and other improvements situated on lands receiving the exemption and the land immediately surrounding such buildings and improvements must be assessed separately.

Finally, s. 196.26(9), F.S. states that "The Acquisition and Restoration Council, created in s. 259.035, shall maintain a list of nonprofit entities that are qualified to enforce the provisions of a conservation easement."

No provision was made in the legislation for the creation of a process of application to the state, and no rulemaking authority given to the Department. Additionally, there were no definitions or limits provided for the criteria for which 'particular consideration' must be given by ARC.

Proposed procedures for (1) Application to the Acquisition and Restoration Council and (2) ARC determination that an easement fulfills a clearly delineated state conservation policy and yields a significant public benefit:

(1) To have a conservation easement considered by the Council for determination of whether or not an easement under 40 acres in size fulfills a clearly delineated state conservation policy and yields a significant public benefit, applicants must submit the following:

- copy of the conservation easement as recorded in their county's official records,
- baseline documentation report (as described on the application form)
- management plan that also identifies who will manage the land
- an explanation showing which clearly delineated state conservation policy(ies) is (are) fulfilled by the easement and how the easement yields a significant public benefit.

The application materials will be provided to the Council in electronic format to reduce the significant amount of paper that would be needed to provide paper copies.

(2) The Division of State Lands interprets the intent language in the Florida Forever Act (Chapter 259, F.S.) as summarizing a clearly delineated state conservation policy. Staff proposes to use both the Florida Forever measures from s. 259.105(4) and those specifically stated in HB 7157 as representing the relevant criteria to be weighed in determining the fulfillment of that policy. Therefore, to meet the test that a conservation easement under 40 acres in size fulfills a clearly delineated state conservation policy, the property as described in the baseline documentation report and as managed in accordance with the management plan, must meet at least one of the following requirements.

1. Contains a natural sinkhole or spring;
2. Contains a unique geological feature;
3. Located within a significant strategic habitat conservation area;
4. Provides nursery habitat for marine and estuarine species;
5. Provides for protection or restoration of fragile coastal areas;
6. Provides habitat for endangered or threatened species;
7. Provides habitat for imperiled species;
8. Contributes to a significant landscape, landscape linkage or conservation corridor;
9. Contains an underrepresented native ecosystem;
10. Protects natural floodplain functions;
11. Protects surface waters of the state;
12. Protects fragile coastal resources;
13. Protects functional wetlands;
14. Protects critically eroding beaches;
15. Provides groundwater recharge critical to springs, sinks, aquifers or other natural systems;
16. Provides retention of natural open space within densely built-up areas or urban service areas.
17. Other state conservation policy existing in Florida Statutes or Florida Administrative Code

To meet the test that a conservation easement under 40 acres in size must yield a significant public benefit, ARC must determine that the property as described in the baseline documentation report and as managed in accordance with the management plan would provide a meaningful, noticeable or measurable effect on one or more of the natural resources listed above.

If the property in question is adjacent to or surrounded by other lands that are permanently protected for conservation purposes, enhanced ability to protect and manage the natural resources of the existing conservation lands may be considered when determining whether a property yields a significant public benefit.

Proposed criteria for inclusion on the List of Nonprofit Entities Qualified to Enforce Conservation Easements

Because it is normally the easement grantee, or holder of the conservation easement, who is responsible for enforcing the provisions of an easement, the Division of State Lands interprets this provision to refer to nonprofit entities whose purpose is the conservation of land and who either hold conservation easements or plan to do so in the future. Staff has contacted land trusts and NGO's around the state to determine their interest in being included on the list of qualified entities. The list will be posted for the public on the State Lands website, and the organization may be contacted by landowners seeking an organization to which they could donate an easement to take advantage of the property tax exemption. Division of State Lands staff will be responsible for maintaining the list using the criteria approved by the Council.

To qualify for inclusion on this list, a nonprofit must be:

1. Organized for charitable and educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code for the purposes of protecting natural, scenic, or open space values of real property, assuring its availability for agricultural, forest, recreational, or open space use, or protecting natural resources.
2. In good standing with the IRS, the state in which it is organized and the state of Florida.

To demonstrate that nonprofits are qualified for inclusion on the list, they must initially submit to the Council a copy of their most recent IRS Form 990, a copy of corporate documentation (articles of incorporation, bylaws) indicating the purpose of their existence, a certificate of good standing from their state of organization, and a certificate of good standing from the Florida Secretary of State.

To remain on the list, nonprofits must, on an annual basis, submit their most recent IRS Form 990 and either a resolution from their governing body that their corporate documentation is unchanged or, if it has changed, an amended corporate documentation, and a current certificate of good standing from its state of organization and the Florida Secretary of State.

It is important to note the following:

1. Inclusion on the list does not create any obligation to agree to a particular donation of a conservation easement.
2. Inclusion on the list does not create any obligation by the Acquisition and Restoration Council to find that an easement held by a nonprofit fulfills a clearly delineated state conservation policy and yields a significant public benefit.
3. The list, posted on the Division of State Lands website, will contain a caution that donation of a conservation easement to an entity on the list does not assure that the donation will qualify as a charitable donation under the Internal Revenue Code or assure that the donation will qualify for an ad valorem tax exemption or reduction. Interested parties will be urged to consult with their tax advisors about those issues.

Reminder: DSL Policy on Conservation Easement Donations to the State of Florida: The Division of State Lands will not accept donations of conservation easements unless (1) they fall within the boundaries of an existing Florida Forever project, (2) the parcel proposed for donation is large enough to provide adequate protection to its natural and/or cultural resources, (3) the resources on the site do not require active management that could best be accomplished through fee-simple ownership *and* (4) the designated manager of that Florida Forever project or the Division's conservation easement monitoring team indicate a willingness to assume monitoring of the easement. A donation to the State of Florida may not in and of itself qualify as a charitable donation under the Internal Revenue Code or assure that the donation will qualify

for the ad valorem tax deduction. Persons interested in making a donation to the State of Florida are urged to consult their tax advisors concerning these issues.

DSL STAFF RECOMENDATION: Approve the proposed policies and procedures for implementation of HB 7157

INFORMATION / DISCUSSION

ITEM 27:

REQUEST: Discussion of Guidelines and Procedures for the Implementation of Capital Improvement Spending Requirements.

DSL STAFF REMARKS:
Background: The 2008 Legislature, in its legislation extending and revising the Florida Forever Program, provided that "at least three percent, but no more than ten percent, of the funds annually allocated pursuant to paragraph 259.105(3)(b) shall be spent on capital project expenditures that meet land management planning activities necessary for public access." The cited section of Chapter 259 above refers to the 35 percent annual allocation of dollars to the Department for land acquisition. The minimum of three percent could reach $3,150,000 in a year in which Florida Forever is fully funded, while ten percent could reach $10.5 million.

Existing Chapter 18-24, F.A.C. already requires Acquisition and Restoration Council (ARC) to review and prioritize proposed capital improvement and restoration projects and provides for ARC to submit two ranked capital improvement project lists to the Board of Trustees (BOT) annually, one for restoration and one for 'other." However, both the statute and current rule are silent on guidelines and procedures for distributing the capital improvement allocation among participating agencies or entities.

Proposed guidelines and procedures: For FY 08-9 DSL has held a total of $3,150,000 in reserve for capital improvement expenditures from its Florida Forever allocation, which represents three percent, with none held back for FY 09-10 due to lack of Florida Forever funding. In future years, to be able to cover both those capital improvements related to activities necessary for public access and those related to restoration and other needs, Division of State Lands (DSL) proposes reserving the full ten percent allowed by statute.

Further, DSL proposes that the capital improvement allocation be divided equally among the six land managing entities, since all have areas that could benefit from increased public access. Each year (with the exception of FY 09-10), no later than August 30, agencies would submit two sets of prioritized capital improvement projects proposed for funding (one for public access projects and one for restoration and other) to DSL for review by ARC. At its October meeting, the ARC would review and combine the proposed capital improvement projects from all the entities into two prioritized lists for submittal to the BOT, one for public access and one for restoration and other related capital improvements. Each agency's priority lists for capital projects would be delivered to the BOT along with the acquisition project rankings in January/February of the following year.

- Each entity should submit projects totaling potential expenditure of up to 1.5 times the entity's anticipated allocation in order to allow some flexibility in expenditures once the lists are approved.

- Each entity would have until March 1 of the following year (12 months from the time of BOT approval of the list) to obligate their capital improvement funds. (Obligation of funds is defined as being under contract.)
- Unobligated funds would revert to the general pot of funds reserved for capital improvement projects to be equally re-allocated the following fiscal year.

For this year only, participating entities would be asked to submit their capital improvement project lists for enhanced public access only in advance by January 30, 2010, preferably in priority order. ARC would review and create a capital improvement project list for presentation to the Board of Trustees at their February meeting. This one-time only procedure is intended to allow for distribution and expenditure of the funds totaling $3,150,000 already held in reserve by DSL from the FY08-09 allocation.

DSL STAFF RECOMENDATION: Discuss proposed policies and procedures and provide feedback to Department of Environmental Protection staff.

ITEM 28:

Management plans for properties smaller than 160 acres, minor amendments to management plans and emergency items approved since the August, 2009 ARC meeting.

Management Plan for Property Smaller than 160 Acres:

The following management plan for a property under 160 acres in size was posted on our website for at least two weeks. The Division of State Lands intends to approve the management plan. No action is required by the Council.

Ocean Park Management Plan (1.75 acres, Town of Melbourne Beach)

Minor Amendment to Management Plan:

The following minor amendment to a management plan was posted on our website for at least two weeks. The Division of State Lands intends to approve this request. No action is required by the Council.

Amendment to add a multi-purpose trail to the Guana Tolomato Matanzas National Estuarine Research Reserve management plan (Office of Coastal and Aquatic Managed Areas).

GENERAL ISSUES

ITEM 29:

REQUEST: Receive public comment on general land acquisition and management issues not included on this agenda.

DSL STAFF REMARKS: None.

DSL STAFF RECOMMENDATION: Receive public comment.

PUBLIC HEARING:	Thursday, December 10, 2009 and
COUNCIL MEETING:	Friday, December 11, 2009
TIME:	9:00 a.m.
LOCATION:	The Department of Environmental Protection Conference Room A, Marjory Stoneman Douglas Building, 3900 Commonwealth Boulevard, Tallahassee, Florida.

ITEM 24:

REQUEST: Consideration to ensure a right-of-way easement that will serve one of six potential bridge crossings within the North Fork St. Lucie River Buffer Preserve, which is part of the Savannas Preserve State Park managed by the Department of Environmental Protection, Division of Recreation and Parks, is consistent with the Board of Board of Trustees' Linear Facilities Policy.

LOCATION: St. Lucie County

APPLICANT: City of Port St. Lucie

CONSIDERATION: No easement fee is required for a public transportation easement**.** As net positive benefit for the impact of any of the proposed bridge crossings, the City of Port St. Lucie (City) will conduct four hydrologic restoration projects to enhance the water quality of the preserve; purchase 110± acres of land and convey fee simple title to the Board of Trustees; design, permit and construct the Savannas Recreation Area Trail; and, conduct three recreation construction projects to replace the Halpatiokee Canoe Access, to construct improvements to the existing Savannas Preserve State Park Education Center, and make improvements to Savannas Preserve State Park Canoe/Kayak Launch.

DSL STAFF REMARKS: The City is proposing to construct a transportation facility known as the Crosstown Parkway Extension at one of six potential locations to provide an efficient transportation link between the approved developments west of I-95 and the employment areas of U.S. 1. This corridor will provide east-west mobility needed for economic growth and to improve emergency response and hurricane evacuation. The City will need to obtain a right-of-way easement over state-owned conservation lands within the North Fork St. Lucie Buffer Preserve which is part of the Savannas Preserve State Park. The lands were acquired using Preservation 2000 funds and ae e managed by the Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) under Lease No. 4178.

The Acquisition and Restoration Council review is requested to ensure compliance with the three components of the Board of Trustees' Linear Facilities Policy which are avoidance, minimization of impact and compensation.

PROJECT OVERVIEW:
The South Florida Water Management District (SFWMD) is currently reviewing the City's application for a Conceptual Environmental Resource Permit (ERP) and Sovereignty Submerged Lands (SSL) easement for the proposed Crosstown Parkway extension and associated bridge over the North Fork St. Lucie River. The SFWMD's review is based on a "hybrid" bridge alignment that reflects the most intense impacts that each of the six alignments under consideration could have on state resources such as wetlands, state-owned recreation and conservation lands, and the North Fork St. Lucie River Aquatic Preserve. The SFWMD has requested additional information from the City to complete the application. When review of the application has been completed, the SFWMD staff will submit a recommended agency action to the SFWMD Governing Board. A conceptual ERP will not authorize construction. The DEP has provided the City with information on the potential resource impacts for each of the six alternative alignments under review.

In addition to the conceptual permitting process, the City – in consultation with the Department of Transportation (DOT) and United State Department of Transportation, Federal Highway Administration (FHWA) – has been conducting a Project Development and Environment (PD&E) Study to evaluate the six alignment alternatives for crossing the river, as well as a "no build" alternative. To be eligible for FHWA funding, federal staff determined that an Environmental Impact Statement (EIS) would be required to analyze the potential impacts of the river crossing. A draft EIS is currently being developed for submission to the FHWA. The City and its consultants have been coordinating closely with resource and regulatory agencies throughout the PD&E study to identify ways to avoid, minimize and mitigate for all potential impacts. The objective of the EIS is to select and secure approval of a preferred alternative and to obtain FHWA funding for construction. Prior to construction, the applicant must submit to the SFWMD an application for an Individual ERP/SSL to construct the chosen alignment.

A. Impact Avoidance

Based upon the analyses undertaken for the ongoing Crosstown Parkway Extension PD&E Study and EIS, it has been determined that the Crosstown Parkway Extension Corridor is the only viable corridor to meet the City of Port St. Lucie's local and regional transportation needs.

Need for River Crossing

The City's existing transportation infrastructure across the North Fork of the St. Lucie River (NFSLR) consists of two bridge crossings which provide a vital link between the populated residential part of the City west of the river and the primarily commercial, regional corridor of U.S. 1 on the east side of the river. The two existing crossings are Port St. Lucie Boulevard to the south and Prima Vista Boulevard to the north with 6-lane and 4-lane cross sections, respectively. The adopted traffic Level of Service (LOS) standard for each bridge is LOSD for Port St. Lucie Boulevard and LOSE for Prima Vista Boulevard. Based on the FDOT Quality/Level of Service (Q/LOS) Handbook the existing bridges have a combined capacity of 89,200 daily vehicles (53,500 along Port St. Lucie Boulevard and 35,700 along Prima Vista Boulevard). The combined daily volume in 2008 across the two existing bridges is 104, 680 vehicles (66,330 along Port St. Lucie Boulevard and 38, 350 along Prima Vista Boulevard). As such, the two existing crossings are currently operating at a failing daily Level of Service (LOS F). Additionally, major sections of the existing Port St. Lucie Boulevard and Prima Vista Boulevard corridors within the project vicinity, including the intersections at the approaches to the existing bridges, currently operate below the adopted level of service standards during the AM and PM peak traffic hours.

The need for the proposed project has long been recognized by the City of Port St. Lucie and St. Lucie County as evidenced by the project's inclusion in the following planning documents:

- The City of Port St. Lucie Comprehensive Plan;
- The St. Lucie County Metropolitan Planning Organization's (MPO) 2025 Long Range Transportation Plan;
- The 2030 Regional Long Range Transportation Plan (RLRTP) for Martin and St. Lucie County MPOs, updated June 2007;
- The 2002 Martin and St. Lucie County Regional Land Use Study; and
- The 2004 Urban Land Institute - Port St. Lucie, Florida Panel Report;

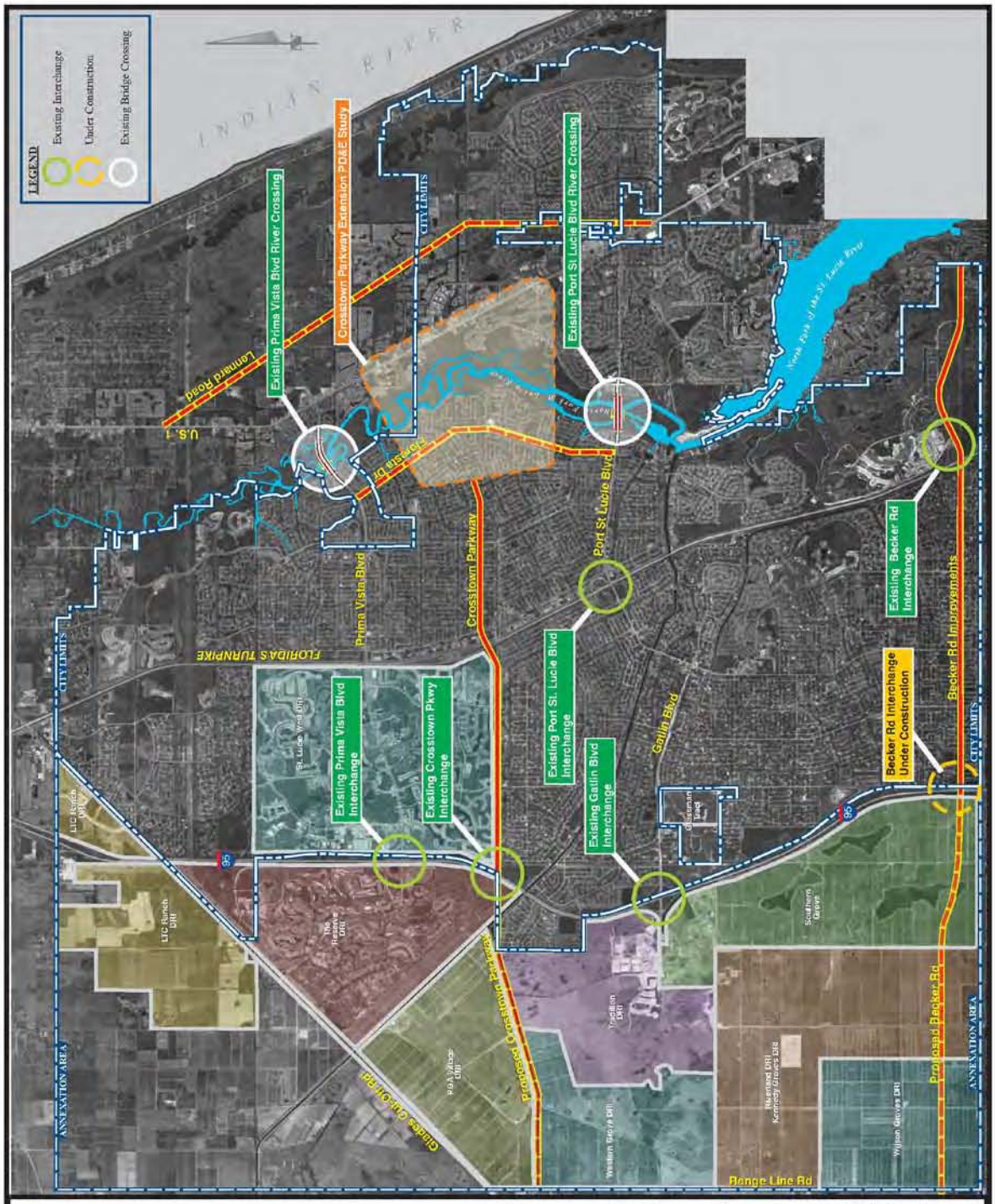
The current adopted RLRTP forecasted the 2030 population for St. Lucie County to be over 610,000 which exceeds the Bureau of Economic and Business Research (BEBR) projection of 450,000. The higher rate of growth takes into consideration the Western Annexation Area in the City of Port St. Lucie. Over the next 20 years, the Western Annexation Area will add 30,000 homes and over 18,000,000 square-feet of employment space. Figure one is an aerial of the region depicting the approved development in the area, and its relation to the project Study Area. This planned growth will place an even greater burden on the two existing crossings which are already operating at capacity. Based on the traffic modeling conducted for the EIS, assuming a build condition consistent with the Long Range Transportation Plan (three bridge crossings) the forecasted demand across the river exceeds 150,000 daily vehicles. A summary of the traffic forecasts for the various alternatives is noted in Table 1 below:

Table 1 – 2037 Travel Demand Forecasts for the Crosstown Parkway Extension Alternatives

	2008	2037		2037 BUILD ALTERNATIVES					
	BASE YEAR	NO BUILD	WIDENING	2A	2D	1C	1F	6B	6A
Daily Traffic Crossing the River									
Prima Vista Blvd	38,350	48,400	54,600	27,300	27,700	23,000	17,000	17,000	22,300
Crosstown Pkwy	N/A	N/A	N/A	59,700	57,100	62,300	64,600	64,600	59,700
Port St. Lucie Blvd	66,330	89,600	101,200	68,600	70,200	71,000	73,700	73,700	75,300
Total Daily Volumes	104,680	138,000	155,800	155,600	155,000	156,300	155,300	155,300	157,300
Total Capacity (C)	89,200	89,200	121,300	142,700	142,700	142,700	142,700	142,700	142,700
Total V/C	1.17	1.55	1.28	1.09	1.09	1.10	1.09	1.09	1.10
Traffic Volume Exceeding Capacity	15,480	48,800	34,500	12,900	12,300	13,600	12,600	12,600	14,600
Traffic Diversion from Prima Vista (%)	N/A	N/A	N/A	44%	43%	52%	65%	65%	54%
Traffic Diversion from Port St. Lucie (%)	N/A	N/A	N/A	23%	22%	21%	18%	18%	16%

Future growth along the existing corridors will only exacerbate the existing congested condition, and will threaten the safety and long-term viability of these corridors.

The proposed project is needed because of the inability of the existing bridges to meet the existing and projected travel demand between the communities west and east of the NFSLR. The high degree of projected traffic congestion cannot be alleviated by localized intersection improvements or improvements to the existing bridges. As noted in Table 1 above, even if both existing bridges were widened, the demand would still far exceed the capacity.



CITY of PORT ST. LUCIE

Crosstown Parkway Extension PD&E Study and Environmental Impact Statement

Planned Roadways and Approved Developments

Figure No. 1

A new crossing within the Crosstown Parkway Extension Corridor would connect the existing Crosstown Parkway to U.S. 1, resulting in improved traffic patterns, relief to parallel roadway sections along Port St. Lucie Boulevard and Prima Vista Boulevard, and significantly increase the capacity of the corridors crossing the North Fork of the St. Lucie River. This would provide the east-west mobility needed for economic growth, improved emergency response, and improved hurricane evacuation. As part of the Draft EIS, six alternatives for crossing the river within the Crosstown Parkway Extension Corridor are being evaluated.

Avoidance Alternatives (Corridor Analysis)

Although the City's Comprehensive Plan and the St. Lucie County 2025 Long Range Transportation Plan identified a new crossing between Port St. Lucie Boulevard and Prima Vista Boulevard, additional analysis was conducted to assess where the best location for a crossing would be to address the need identified by the above mentioned plans. The additional analysis was detailed in the study titled *Analysis of Potential River Crossing Alternatives (To Reduce Traffic Congestion in the City of Port St. Lucie) - Part I of II.* There were five corridors that were developed and analyzed as explained below, and as depicted on Figure 2:

- Corridor 1 – The Widening of Existing Bridges: This corridor assumed that the existing Port St. Lucie Boulevard and Prima Vista Boulevard bridges were widened by two lanes each to eight- and six-lane cross sections, respectively;

- Corridor 2 – The Gatlin Road Corridor: This corridor assumed Gatlin/Savage Boulevard was extended eastward across Florida's Turnpike to US-1 via Westmoreland Boulevard;

- Corridor 3 – The Paar Drive Corridor: This corridor assumed Paar Drive was extended eastward across Florida's Turnpike to US-1 via Britt Road;

- Corridor 4 – The Becker Road Corridor: This corridor assumed Becker Road was extended east to US-1 north of the Roosevelt bridge in Martin County; and

- Corridor 5 – The Crosstown Parkway Extension Corridor: This corridor assumed the extension of Crosstown Parkway to US-1 at a crossing between Port St. Lucie Boulevard and Prima Vista Boulevard.

The results of the corridor analysis concluded that widening of the existing bridges would not alleviate the congestion across the existing bridges, nor would any corridor that was located south of Port St. Lucie Boulevard. The only corridor that provided additional capacity to address the planned growth, and which alleviated congestion across the existing bridges, was the Crosstown Parkway Extension.

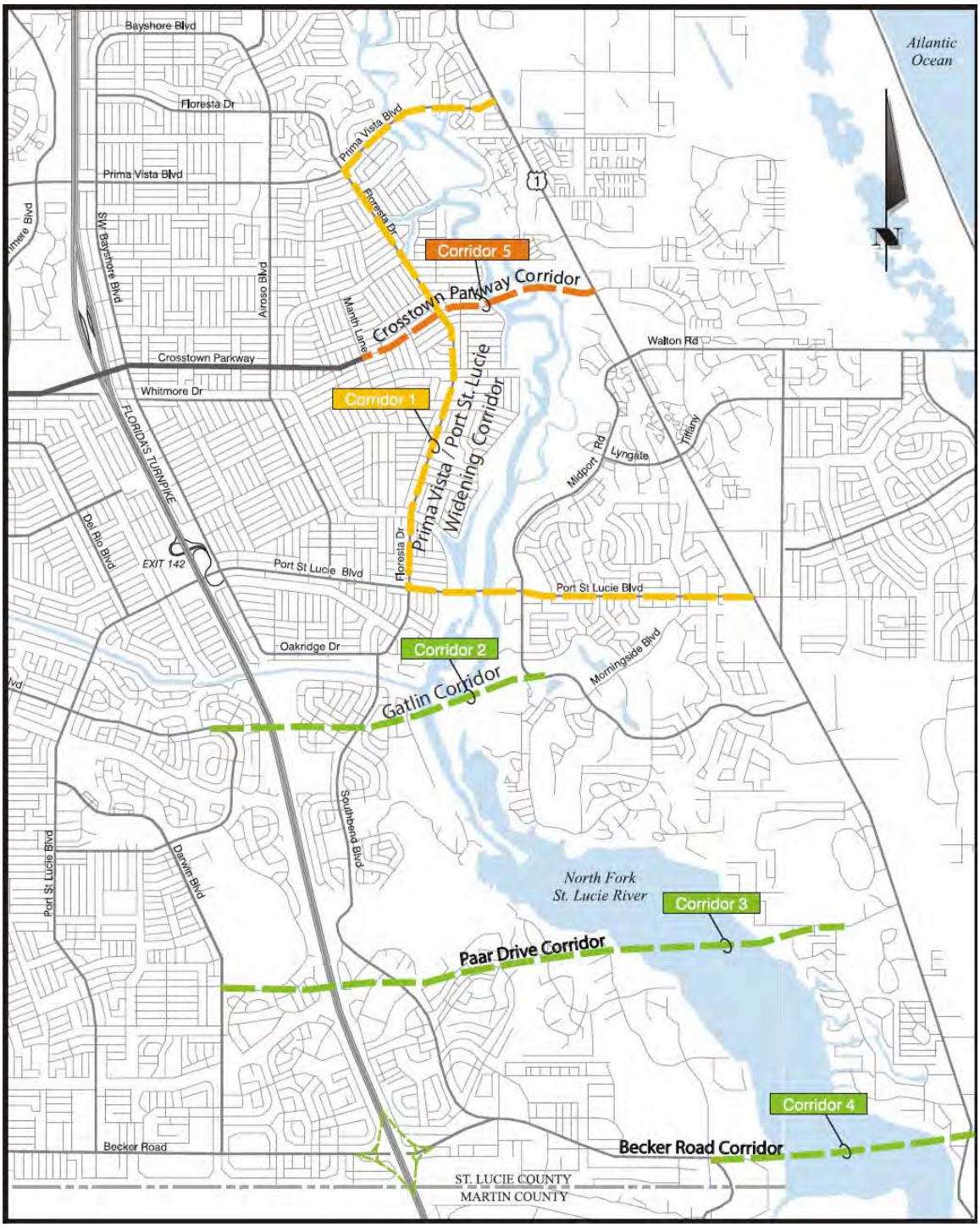


Figure 2 - Potential Corridors Studied

Crosstown Parkway Extension Corridor Alternatives

To further avoid impacts, numerous alternatives within the Crosstown Parkway Extension corridor were developed and analyzed to develop the universe of viable alternatives to be studied in the EIS. The results of that analysis were detailed in the report titled *Crosstown Parkway Extension Corridor Alternatives Report - Part II of II.* That study concluded that there were six viable alternatives, as well as a No-Build alternative, to be studied as part of the EIS as detailed below, and as depicted in Figure 3.

- Alternative 2A - Connects Crosstown Parkway via Walters Terrace west of the NFSLR to Veterans Memorial Parkway (formerly known as Midport Road) east of the NFSLR, and ultimately connects with U.S. 1 at the intersection of Walton Road;

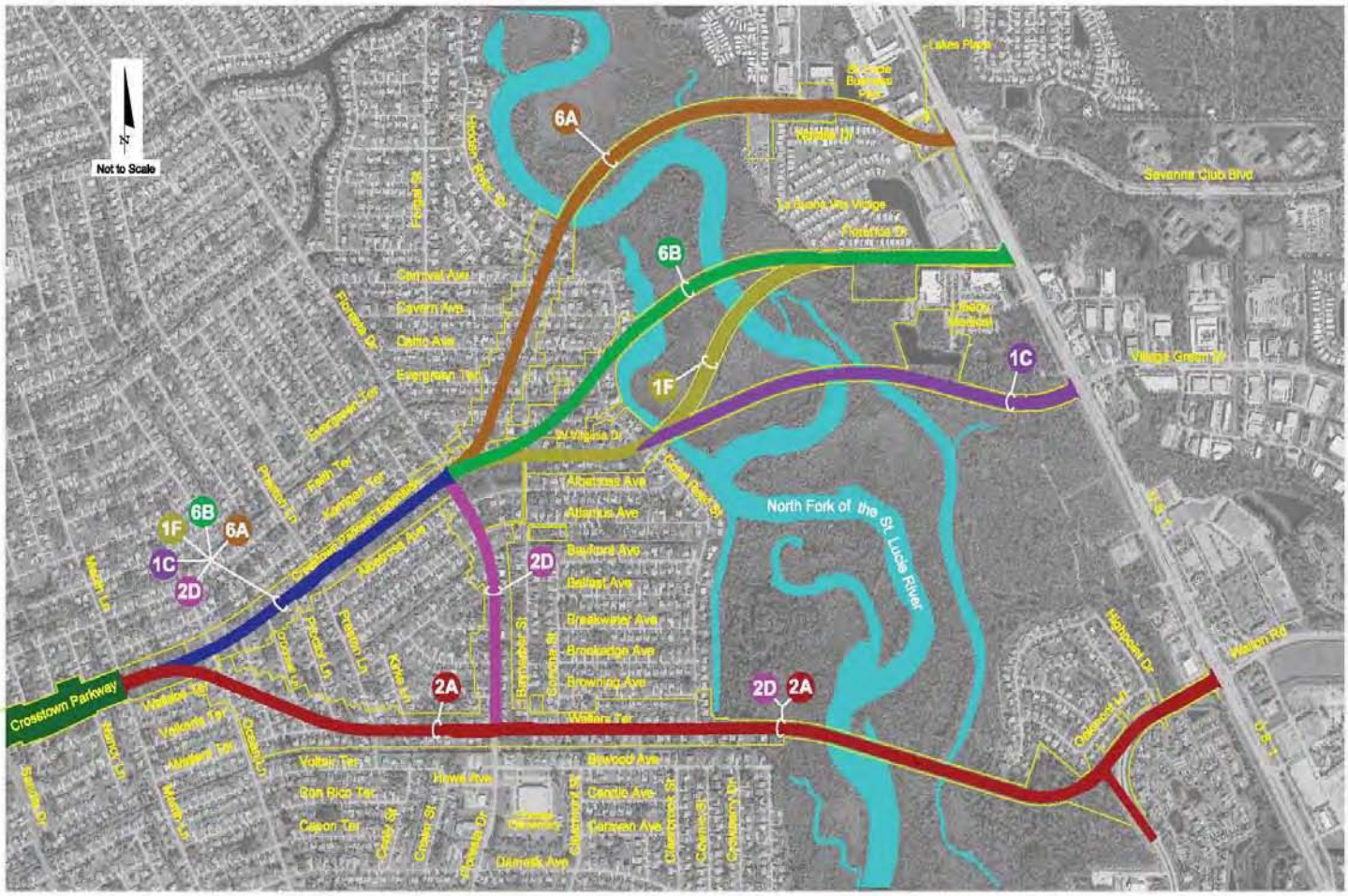
- Alternative 2D – Extends Crosstown Parkway along West Virginia Drive to Floresta Drive, then connects to Walters Terrace via Floresta Drive. Traffic would be required to make right and left turn movements at the two intersections along Floresta Drive to make the connection to U.S. 1;

- Alternative 1C - Connects Crosstown Parkway along West Virginia Drive west of the NFSLR to the existing intersection of U.S. 1 and Village Green Drive;

- Alternative 1F – Extends Crosstown Parkway along West Virginia Drive, then curves northeast between the river banks, and connects with U.S. 1 at a new intersection between Village Green Drive and Savanna Club Boulevard;

- Alternative 6B – Similar to 1F, this alternative extends Crosstown Parkway along West Virginia Drive to Floresta Drive. However, it curves northeast beginning at Floresta Drive, and crosses the NFSLR north of Alternative 1F. It connects with U.S. 1 at a new intersection between Village Green Drive and Savanna Club Boulevard; and

- Alternative 6A – Extends Crosstown Parkway along West Virginia Drive to Floresta Drive. From there it curves north and then east across the NFSLR to the existing intersection of U.S. 1 and Savanna Club Boulevard



CITY of PORT ST. LUCIE

Crosstown Parkway Extension PD&E Study and Environmental Impact Statement

Study Alternatives

Figure No. 3

B. Impact Minimization

All build alternatives will impact wetlands within the North Fork of the St. Lucie River and the aquatic preserve. Five of the six alternatives under consideration impact state park lands. Alternative 6A is outside of the state park, though does cross the aquatic preserve. If the Land Acquisition Priority 2 property, as identified in the letter from DEP dated May 2009, is purchased as part of the proprietary mitigation plan, then all 6 alternatives under consideration will impact state park lands. The Evaluation Matrix below summarizes the impacts to state lands for each alternative.

Numerous measures to minimize impacts to natural resources, including state lands have been considered and implemented. Stormwater from the bridge will be collected and conveyed away from the Aquatic Preserve to retention ponds. Currently, three pond sites are being considered for each alternative under evaluation. Conceptual pond locations have been modified to minimize impacts to state park lands to the extent possible. No impacts to state lands will occur from stormwater ponds for Alternatives 1C, 1F, 6A, and 6B. Once design begins, the proposed pond sites will be re-evaluated again to determine if they can be modified further to avoid or minimize impacts to state lands.

Design modifications will be incorporated into the design of all build alternatives to reduce impacts to state lands. Impacts to the aquatic preserve and state lands will be minimized by bridging the project from west of Coral Reef Street to west of U.S. 1. The bridge crosses all open water, wetlands, and undeveloped uplands. Though it is acknowledged that habitat under the bridge will be affected, this approach minimizes, to the extent practicable, the habitat loss. In addition, the bridge typical width was reduced to lower impacts under the bridge. The spans of the proposed bridge were also lengthened to reduce the number of piers and piles in the surface waters and wetlands. Once the preferred alternative is chosen through the EIS process, additional design modifications to minimize impacts will be explored.

Construction techniques to minimize impacts, such as top down construction, will also be considered. This method allows for maximum span lengths and minimizes the numbers of piles in the aquatic preserve as well as avoiding placement of temporary fill material in wetland areas. Barges may be required in the main channel.

ALTERNATIVES EVALUATION MATRIX

Tier 2 Alternatives

	Alternatives																	
	1C			1F			2A			2D			6A			6B		
Analysis Using Full impact of R.O.W. (Worst Case Impacts. Does not account for bridging)	Road & Bridge	Prop. Ponds	Sub-totals	Road & Bridge	Prop. Ponds	Sub-totals	Road & Bridge	Prop. Ponds	Sub-totals	Road & Bridge	Prop. Ponds	Sub-totals	Road & Bridge	Prop. Ponds	Sub-totals	Road & Bridge	Prop. Ponds	Sub-totals
Natural Environment (Updated by American Consulting Engineers except T&E Species)																		
Public Land Impacts (ac)																		
Wetland Habitats	10.28	0.00	**10.28**	5.74	0.00	5.74	5.87	0.70	6.57	5.87	0.70	6.57	6.80	0.00	**6.80**	2.88	0.00	**2.88**
Upland Habitats	3.65	0.09	3.74	1.20	0.00	1.20	5.06	3.23	**8.29**	5.06	3.23	**8.29**	0.00	0.00	**0.00**	0.14	0.00	0.14
Total Direct State Park Lands	13.93	0.09	**14.02**	6.94	0.00	**6.94**	10.93	3.93	**14.86**	10.93	3.93	**14.86**	6.80	0.00	**6.80**	3.02	0.00	**3.02**
Aquatic Preserves	1.60	0.00	1.60	1.17	0.00	1.17	2.20	0.00	**2.20**	2.20	0.00	**2.20**	0.79	0.00	**0.79**	1.72	0.00	1.72
Total Public Lands	15.53	0.09	**15.62**	8.11	0.00	**8.11**	13.13	3.93	**17.06**	13.13	3.93	**17.06**	7.59	0.00	**7.59**	4.74	0.00	**4.74**
TIITF Land Impacts (ac)																		
TIITF Easement Area	**13.93**	0.09	14.02	6.94	0.00	6.94	10.93	3.93	14.86	10.93	3.93	14.86	6.80	0.00	6.8	3.02	0	3.02
Area Under Safe Upland Elevation Line (SSL)	**1.6**	0.00	1.6	1.17	0.00	1.17	2.20	0.00	2.2	2.20	0.00	2.2	0.79	0.00	0.79	1.72	0	1.72

Source: American Consulting Engineers of Florida, LLC; and Table 8.1 from Crosstown Parkway Corridor Extension Alternatives Report - June 2008 by Keith and Schnars

10/1/2009

Sovereignty submerged land is not considered conservation land and is not included in the table.

C. Impact Compensation

The City will compensate for the impacts of whichever of the six proposed corridors is selected by completing all of the following four projects. The projects were agreed upon by the DEP and the City in a Memorandum of Understanding (MOU) based on the corridor that would pose the greatest upland and wetland impact. DEP staff has reviewed this compensation proposal and recommends that ARC find that the four completed projects should adequately compensate for any one of the proposed corridors' impacts.

1. Water Quality Improvements : The City agrees to complete four restoration projects agreed upon by DEP. These four projects are outlined in the Aquatic Preserve Management Plan dated August 2009. The projects agreed upon are Evans Creek, Site 5 West, Riverplace Upstream and Otter Trail. DEP prefers the Roberts Upstream project to be included in the four restoration projects. However, it is on private property and may not be available for purchase. If however, Robert Upstream becomes accessible, the City will complete this project rather than the Otter Trail restoration project.

   These water quality improvements will be completed by reconnecting oxbows and isolated floodplains and deepening the upstream and downstream ends of Evans Creek. Restoration efforts shall include dredging shoals and berms, widening or deepening portions of the waterway and other items agreed upon by the City and DEP. All of the restoration projects are not to exceed a combined total of $2,000,000. If so, the City will come up with some other alternative agreed to by DEP allowing the total cost incurred to be under the $2,000,000 threshold.

2. Land Acquisition : The City agrees to purchase approximately 110 acres of wetlands and uplands and convey marketable fee simple title to the Board of Trustees subject only to such encumbrances as are acceptable to the Board of Trustees. The conveyance shall comply with Rule 18-1.013, Florida Administrative Code. The City has entered into negotiations with property owners based on a priority list approved by DEP and has an option to purchase the 49.81-acre Evans parcel which was determined to be the number one acquisition priority. The removal of exotics will take place for five years after the City transfers the properties to the Board of Trustees. The cost for seasonal maintenance and the removal of exotics for a five year term is not to exceed $700,000.

3. Recreational Opportunities –Trails: The City will design, permit, construct and give inspection services for the Savanna Recreation Area Trail. This is to be to the satisfaction of both DEP and St. Lucie County. The City is to pave a multi-use trail of approximately 2. 5 miles long with a minimum width of 10-feet. Five (5) boardwalks will be constructed over low and wetland areas. This proposed trail will serve as part of a multi-state trail known as the East Coast Greenway which connects Calais, Maine to Key West, Florida. Likewise, it will serve the St. Lucie North-South Trail connecting to the Green River Parkway Trail. The total cost to design, permit, construct and inspect this segment is not to exceed $1,500,000.

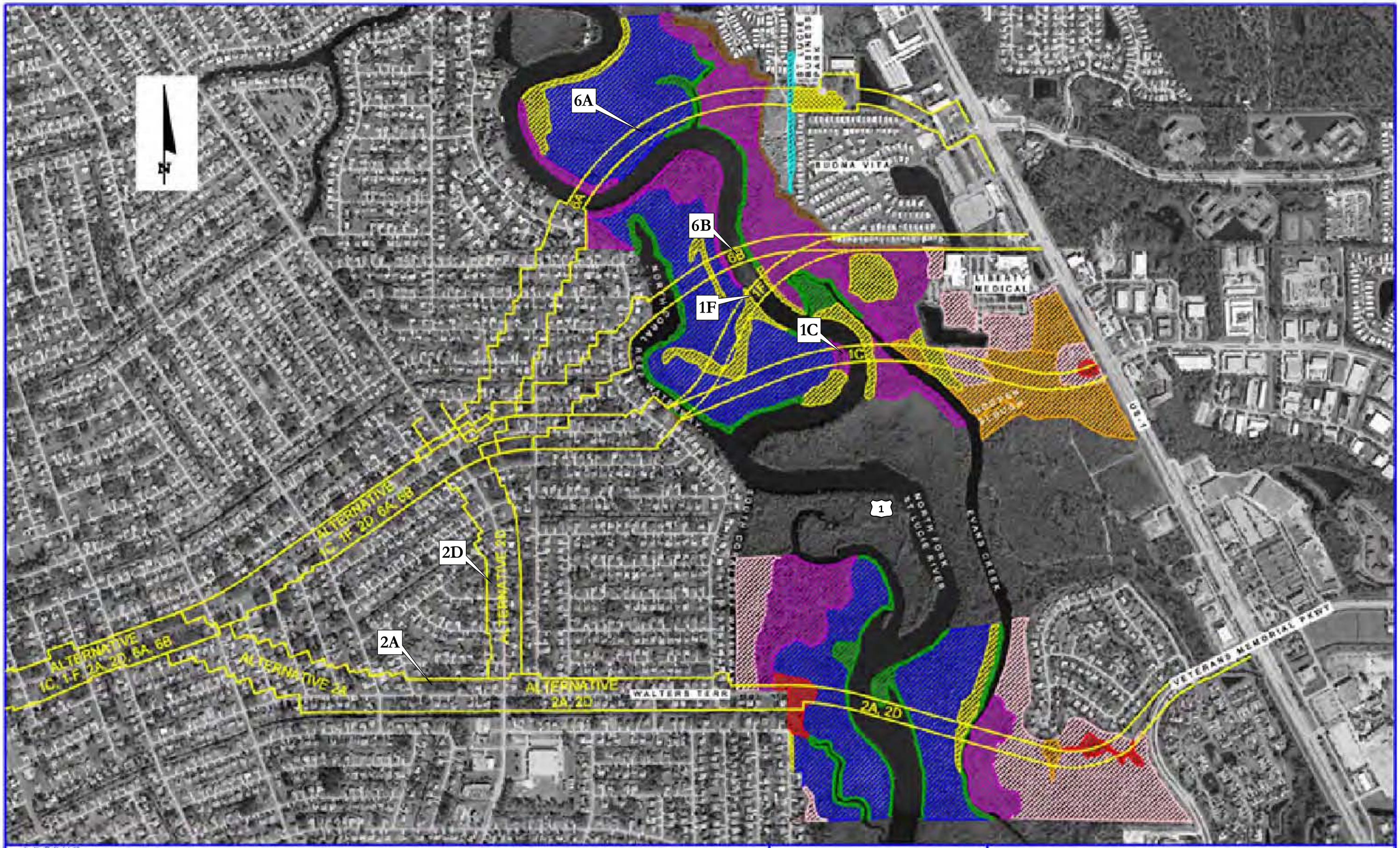
4. Recreational Opportunities – Other: The City agrees to construct the following three recreational projects as long as the total cost to construct does not exceed $2,000,000.

    a. Halapatiokee Canoe Access Replacement – The City will construct a new canoe and kayak launch, a 200-foot by 10-foot wide boardwalk, pavilion, restroom, interpretive kiosk, paved parking and entrance and road signage.
    b. Improvements to Savannas Preserve State Park Education Center – The City will construct a 3,000 square-feet addition to the existing center, a 200-foot by 6-foot-wide boardwalk with observation platform to replace the existing path.
    c. Improvements to Savannas Preserve State Park Canoe/Kayak Launch – The City will construct an entrance road, parking area, composting restroom, roadside information and entrance signs.

DSL STAFF RECOMMENDATION: Approval

ARC RECOMMENDATION:

( ) APPROVE
( ) APPROVE WITH MODIFICATIONS: _____
( ) DEFER
( ) WITHDRAW
( ) NOT APPROVE
( ) OTHER: _____



Florida Land Use, Cover, and Forms Classification (FLUCCS)

Florida Department of
Environmental Protection

Revised Memorandum

TO: **Michael W. Sole, Secretary**

FROM: **Lauren P. Milligan, Environmental Manager**
Office of Intergovernmental Programs

VIA: **Sally B. Mann, Director**
Office of Intergovernmental Programs

DATE: **February 1, 2007**

SUBJECT: **Florida Department of Transportation – Third East-West Crossing of North Fork St. Lucie River (Crosstown Parkway Extension) – St. Lucie County ETDM # 8247, SAI # FL200307143088C**

History of Related Projects Review

1985 – 1990 City of Port St. Lucie proposes a third bridge crossing the Indian River Lagoon. The proposed project was withdrawn because of environmental controversy and lack of state financial support.

1997 St. Lucie County Metropolitan Planning Organization's Unified Planning Work Program describes a proposal to connect I-95 to Hutchinson Island across both the North Fork St. Lucie Aquatic Preserve and the Indian River Lagoon. The MPO proposes a $500,000 feasibility study for a toll bridge across the lagoon.

July 28, 1998 FDOT letter to the City of Port St. Lucie concluding that the proposed extension of the West Virginia Corridor across the North Fork St. Lucie Aquatic Preserve would not alleviate traffic congestion within the City of Port St. Lucie.

Jan. 26, 1999 City of Port St. Lucie applies (to DSL) for right-of-way easement through the North Fork St. Lucie Aquatic Preserve and Buffer Preserve to alleviate traffic.

Mar. 3, 1999 FDOT Secretary Barry letter to Representative Pruitt, indicating that funds would be available from the right-of-way acquisition and bridge construction bond program,[1] provided that ". . . the department's legislative package increasing the right-of-way acquisition and bridge construction bonding cap is passed during the 1999 session."

---

[1] This fund is a conglomerate of all such projects within the state and is not subject to a line-item veto, *i.e.*, the Governor would have to veto the entire funding amount.

Nov. 5, 1999 Letter from FDOT outlining requirements for state-funded projects to document environmental impacts pursuant to state requirements and those of the National Environmental Policy Act (NEPA).

Feb. 1, 2000 The St. Lucie County Expressway and Bridge Authority submits an Advance Notification to the Florida State Clearinghouse for agency review, proposing a new bridge from Walton Road over the Indian River Lagoon to Hutchinson Island. The state identification number (SAI) assigned to the project by the Clearinghouse was SAI # FL200002020057.

Mar. 29. 2000 The Clearinghouse responds to the Advance Notification and forwards the concerns of the DEP, DCA, FWC, SFWMD, and Treasure Coast Regional Planning Council (TCRPC) regarding the potential environmental impacts of constructing a bridge over the Indian River Lagoon Aquatic Preserve and Savannas Preserve State Park. All environmental agencies requested evaluation of primary and secondary impacts along the entire corridor from I-95 to Hutchinson Island, as required by NEPA, FDOT's PD&E Manual, and Federal Highway Administration (FHA) policies. Attached is a copy of DEP's letter to the Clearinghouse dated March 28, 2000.

Sept. 26, 2000 Resolution from City of Port St. Lucie objecting to DEP's linkage of the West Virginia Drive Corridor Project and the St. Lucie County Expressway and Bridge Authority's proposed bridge to Hutchinson Island.

Oct. 20, 2000 Letter from Kirby Green (as Deputy Secretary of DEP) to Donald B. Cooper, City Manager of Port St. Lucie, outlining the Department's concerns about the Hutchinson Island bridge, the City's easement application for crossing the North Fork St. Lucie Aquatic Preserve, and the West Virginia Drive corridor. A copy of the letter is attached.

Jan. 2, 2001 Department awaits receipt of an environmental impact statement on the bridge to Hutchinson Island. DEP Division of State Lands awaiting information from the City to demonstrate the need for the project to cross the North Fork St. Lucie River Aquatic Preserve and Buffer Preserve, and on potential impacts anticipated from bridge construction and operation. No documents received to date.

July 17, 2001 St. Pete Times reports that Senator Pruitt has withdrawn his support of the Hutchinson Island Bridge and is steering the $25 million appropriated to the City's proposal for a third east-west crossing of the North Fork St. Lucie River, the proposed bridge project still under review.

Third East-West Crossing of the North Fork St. Lucie River

The City of Port St. Lucie is developing an east-west transportation corridor extending from I-95 to U.S. 1, with each segment progressing on a different timeline. The *Third East-West Crossing of the North Fork St. Lucie River* is the eastern-most segment of the proposed corridor. The City's consultants have been evaluating potential corridors for the last few years, but a Notice of Intent to prepare an environmental impact statement (EIS) has not yet been issued. The EIS would evaluate the need for a third east-west crossing over the North Fork of the St. Lucie River, the potential environmental impacts resulting from the proposed improvements, and ways to avoid or minimize those impacts. The EIS would evaluate several alignments, as well as a no-build alternative.

The timeline for the project is as follows:

July 14, 2003 FDOT District 4 and the City of Port St. Lucie submit an Advance Notification for the Third East-West Crossing of the St. Lucie River to the Clearinghouse for review (SAI # FL200307143088C). The City's preferred route across the river would begin at West Virginia Drive. The Department has objected to the City's preferred alignment, as well as the three main alternatives. The northern-most alternative (6A) would impact the least amount of state lands. A map showing the alternatives currently under review is attached.

Sept. 26, 2003 The Clearinghouse responds to the Advance Notification for the Third East-West Crossing, and included comments from DEP, SFWMD, and TCRPC regarding the potential environmental impacts likely resulting from a third bridge over the river, the North Fork St. Lucie Aquatic Preserve, and the North Fork St. Lucie River State Buffer Preserve (now part of the Savannas Preserve State Park).

Apr. 27, 2004 Secretary Castille sends a letter to Representative Gayle Harrell, saying that the Representative and Senator Pruitt have "made a strong case that the West Virginia Drive corridor project should be considered separate and apart from the previously considered Walton Road bridge project. You have stated that the latter is not a viable project at this time, nor is it anticipated to be viable in the future. Based on those assurances, I have instructed Department staff to consider the proposals as separate projects for purposes of cumulative impact analysis."

2004 – 2006 The City of Port St. Lucie and its consultants met with DEP, FWC, USFWS, SFWMD, TCRPC and other interested parties on several occasions to review and discuss alternative alignments for the river crossing.

Aug. 16, 2006 FDOT District 4 posted the Third East-West River Crossing (Crosstown Parkway Extension) project on the FDOT's ETDM website for federal, state, and local agency review, ETDM # 8247.

Oct. 1, 2006 ETDM Review Completed. The interagency team reviewers posted comments on the ETDM website regarding the potential environmental impacts of three alternative corridors on the St. Lucie River, North Fork St. Lucie Aquatic Preserve, and Savannas Preserve State Park. The DEP, FWC, and USFWS assigned a "Dispute Resolution" degree-of-effect (the highest level of concern) on the following ETDM categories: Recreation Lands (public conservation lands), Secondary and Cumulative Effects, Water Quality and Quantity, Wetlands, and Wildlife and Habitat.

When reviewing agencies assign "Dispute Resolution" to their comments, the proposed project cannot proceed to the Project Development Phase of FDOT's Project Development and Environment (PD&E) Study process. **The issues must be resolved by all the agencies before the project can be advanced to the Project Development Phase for purposes of preparing technical studies and preliminary design work necessary to resolve the agencies' objections. In this case, the studies and preliminary design work will take the form of an EIS.**

Dec. 5, 2006 FDOT initiated an informal dispute resolution process at an interagency meeting in Port St. Lucie, with a presentation by the City's consultants of a draft report on alignment alternatives. The resource agencies described their ongoing concerns and requested additional information from the City.

Dec. 20, 2006 The City of Port St. Lucie forwarded an update of the Crosstown Parkway Corridor Extension Alternatives Report to the Federal Highway Administration (FHWA), DEP, FWC, and USFWS for review.

Jan. 30, 2007 The DEP Division of State Lands is currently reviewing the BOT agenda and deed records to determine whether the City retained title to any lands along the St. Lucie River for three bridge sites – as claimed by the City pursuant to a 1991 letter to Ed Kuester, DEP Bureau of Land Acquisition. The 1992 BOT Agenda Item and Certification indicate that conveyance of the Northfork [sic] St. Lucie River CARL project property from the City to the state was unconditional with no known encumbrances.

Feb. 15, 2007 Deadline for the Department to submit information and comments to FDOT on whether the City retained any "bridge-crossing" rights when it conveyed certain conservation lands along the North Fork St. Lucie River to the Board of Trustees.

Based on the information provided by the City to date, the DEP, FWC, and USFWS have not reduced their ETDM "Dispute Resolution" responses to a lesser degree-of-effect on the two southern-most alignments (1C and 2A). The next step will likely be continuation of the current EDTM informal dispute resolution process (see attached description). If the current team of agency representatives cannot resolve the issues, the dispute would be bumped to regional agency heads. If they cannot resolve the issues, the Agency Heads may be asked to do so.

Federal and State $$ – The FDOT/City requested a total of $37 million in federal funding during the 2003 Advance Notification stage. The FHWA has indicated that approximately $3,050,000 has been allocated for the PD&E Study process to this point. The consultant's report indicates that the preliminary construction costs for the three alternative bridge corridors range between $104,800,000 and $119,400,000. The City will provide a major percentage of funding, and may be prepared to pay the entire cost.

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is entered into this _____ day of _____, 2009, between the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION ("DEP") and the CITY OF PORT ST. LUCIE ("CITY").

WHEREAS, the CITY is currently pursuing the preparation of an Environmental Impact Statement ("EIS") and the issuance of a Conceptual Environmental Resource Permit ("Conceptual ERP") for the Crosstown Parkway Extension Project ("Crosstown Parkway Extension"), which includes the evaluation of a bridge across the North Fork St. Lucie River ("NFSLR") to complete a major east-west arterial extending from I-95 to US 1 in the City of Port St. Lucie; and

WHEREAS, the new bridge will require crossing state-owned uplands in the Savannas Preserve State Park ("State Park") and the North Fork St. Lucie River Aquatic Preserve ("Aquatic Preserve") and sovereignty lands; and

WHEREAS, DEP manages the State Park and the Aquatic Preserve; and

WHEREAS, the CITY is working on the EIS for the Crosstown Parkway Extension in cooperation with the Federal Highway Administration ("FHWA") and the State of Florida Department of Transportation ("FDOT"); and

WHEREAS, six build alternatives and a no-build alternative are being evaluated in the EIS, and selection of a preferred alternative will be made through the EIS process with FHWA's final approval; and

WHEREAS, the CITY's application for a Conceptual ERP is currently being processed by the South Florida Water Management District ("SFWMD") as suggested by DEP Secretary Michael W. Sole in a letter to Senator Ken Pruitt dated March 22, 2007 (Exhibit "A"); and

WHEREAS, to address the requirements of the Conceptual ERP, the CITY and SFWMD have agreed that SFWMD will review a hybrid corridor developed by the CITY that represents a composite of the greatest impacts from each of the six build alternatives being evaluated in the EIS and, in turn, the hybrid corridor will be used to define the impacts and regulatory mitigation requirements; and

WHEREAS, the CITY must obtain easements from the Governor and Cabinet who sit as the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida ("TRUSTEES") for the use of state-owned uplands and sovereignty lands prior to the CITY's commencement of construction of the Crosstown Parkway Extension; and

WHEREAS, the Acquisition and Restoration Council ("ARC") is required to review the proposed easement over state-owned uplands and make a recommendation to the TRUSTEES; and

WHEREAS, the CITY and DEP have reviewed the impacts that may be created by the proposed hybrid corridor and have formulated and agreed to certain proprietary mitigation projects identified below for the impacts to state lands; and

WHEREAS, DEP and the CITY desire to enter into this MOU for the purpose of setting forth the responsibilities of the parties hereto regarding the Crosstown Parkway Extension.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CITY agrees as follows:

1. Because the Crosstown Parkway Extension will impact state lands, the CITY shall complete the following proprietary mitigation projects ("Proprietary Mitigation Projects"):

   A. **Water Quality Improvements**: The CITY agrees to complete four restoration projects as agreed upon by the CITY and DEP. The four restoration projects, outlined in the Aquatic Preserve Management Plan dated August 2009, are Evans Creek, Site 5 West, Riverplace Upstream, and Otter Trail. The location and information on the restoration projects are shown in the attached Exhibit "B." Although DEP prefers that the CITY implement the Roberts Upstream project (shown in Exhibit "C") as one of the four restoration projects, the project is on private property and may not be accessible. If the Roberts Upstream project can be implemented, the CITY will complete the Roberts Upstream project in place of the Otter Trail project.

      The water quality improvements will be achieved by reconnecting oxbows and isolated floodplains and deepening the upstream and downstream ends of Evans Creek to improve flushing. Restoration efforts will include dredging shoals or berms, widening or deepening portions of the waterway, and other work identified by DEP and agreed upon by the CITY. The four restoration projects will be conducted under a single contract. The CITY will complete the four restoration projects to the satisfaction of DEP. The costs incurred by the CITY for the design, permitting, construction, and inspection of the four restoration projects shall not exceed $2,000,000. If the cost is expected to exceed that amount, the CITY will work with DEP to identify a replacement project that will allow the total costs incurred to remain under $2,000,000.

   B. **Land Acquisition:** The CITY agrees to purchase approximately 110 acres of wetlands and uplands and convey marketable fee simple title to the TRUSTEES subject only to such encumbrances as are acceptable to the TRUSTEES. The conveyance shall comply with the requirements of Rule 18-

1.013, Florida Administrative Code, and shall require that the property conveyed be in compliance with all state and federal laws concerning the emission, discharge, seepage, release or threatened release of any contaminant, solid waste, hazardous waste, pollutant, irritant, petroleum product, waste product, radioactive material, flammable or corrosive substance, carcinogen, explosive, polychlorinated biphenyl, asbestos, hazardous or toxic substance, material or waste of any kind into the environment. The CITY will enter into negotiations with the property owners in order of priority shown on Exhibit "D". Priorities 1 and 2 have been identified by DEP as the entire Evans property (Parcel ID: 3414-501-4005-000-1) shown in Exhibit "E," and the available undeveloped portions of the Wynne property (Parcel ID: 3427-111-0002-000-5) shown in Exhibit "F." The residents currently living on the Evans property may be granted a life estate as a condition of the sale, subject to the approval of the TRUSTEES. If the Evans and/or Wynne properties cannot be purchased, properties with similar vegetative communities and comparable appraised values will be purchased, as identified in the DEP letter dated May 2009 (Exhibit "G"). All land purchased by the CITY for the TRUSTEES will be enhanced through the removal of exotics for a consecutive period of 5 years after the CITY transfers the property to the TRUSTEES. Removal of exotics can be conducted through mechanical or chemical means from the ground, whichever is most cost-effective. The CITY is responsible for all costs associated with the acquisition and transfer of the property to the TRUSTEES, including, but not limited to, title insurance, survey, and environmental site assessments and cleanup. The costs incurred by the CITY for the removal of exotics and seasonal maintenance shall not exceed $700,000 for the 5-year period. If the removal of exotics and maintenance of exotics is expected to exceed that amount, the scope of work for the removal and maintenance of exotics will be reduced so as not to exceed $700,000.

C. **Recreational Opportunities - Trails**: The CITY agrees to design, permit, construct and provide inspection services for the Savannas Recreation Area Trail (the "Trail") to the satisfaction of DEP and St. Lucie County. The Trail is located within the Savannas Recreation Area between Savannah Road and Midway Road (Exhibit "H"). The Trail is to be a paved multi-use trail approximately 2.5 miles long and a minimum width of 10 feet with five (5) boardwalk crossings over low, wet areas and drainage ditches with no appreciable elevation above the Trail surface. The Trail will serve as a segment within the East Coast Greenway, a multi-state trail that connects Calais, Maine, to Key West, Florida, and will also be a segment of the St. Lucie North-South Trail that connects to the Green River Parkway Trail. The costs incurred by the CITY for the design, permitting, construction, and inspection of the Trail shall not exceed $1,500,000. If the cost is expected to exceed that amount, the scope of work for the trail project will be reduced so as not to exceed $1,500,000.

D. **<u>Recreational Opportunities – Other</u>**: The CITY agrees to construct three recreation projects identified by DEP and shown and outlined on the attached Exhibit "I" to the satisfaction of DEP. The three projects are referred to as the Halpatiokee Canoe Access Replacement, Improvements to Existing Savannas Preserve State Park Education Center, and Improvements to Savannas Preserve State Park Canoe/Kayak Launch. The costs incurred by the CITY for the design, permitting, construction, and inspection of the three recreational projects described below shall not exceed $2,000,000. If the cost is expected to exceed that amount, the scope of work for the projects will be reduced so as not to exceed $2,000,000.

a. *Halpatiokee Canoe Access Replacement* consists of a new canoe and kayak launch south of the existing launch, a 200-foot boardwalk, pavilion, restroom, interpretive kiosk, paved parking for 20 vehicles, paved entrance road approximately 0.25 miles long, and road signage. The boardwalk will be 10 feet wide.

b. *Improvements to the Existing Savannas Preserve State Park Education Center* consists of a 3,000-square-foot addition to the existing structure for classrooms and a laboratory, and a 200-foot boardwalk with observation platform to replace the existing path. The boardwalk will be 6 feet wide. The CITY will not be responsible for providing any ADA upgrades to the existing facility.

c. *Improvements to Savannas Preserve State Park Canoe/Kayak Launch* consists of an entrance road, parking area, composting restroom, roadside information, and entrance signs.

2. The CITY is obligated to undertake the commitments set forth in this MOU only if a build alternative is approved by FHWA through the EIS process and all necessary permits required to authorize said alternative are granted. All work described herein will commence by the CITY immediately upon approval of the EIS by FHWA and receipt of any necessary permits for the Proprietary Mitigation Projects. With the exception of the exotic removal, the CITY will complete all of the Proprietary Mitigation Projects prior to the commencement of construction of the Crosstown Parkway Extension across the NFSLR.

3. The CITY commits to the completion of the Proprietary Mitigation Projects regardless of which build alternative is chosen as the preferred alternative through the EIS process, even if the impacts from the preferred alternative are less than the proprietary mitigation stipulated in this MOU.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is expected that DEP would agree as follows:

1. DEP will take all six build alternatives (easements) that are depicted on Exhibit "J" to ARC for its review and recommendation to the TRUSTEES prior to the actual easement location being determined through the EIS process and FHWA approval.

2. The easements granted by the TRUSTEES together with the environmental resource permit issued by SFWMD shall authorize the construction of the Crosstown Parkway Extension in its entirety, including the bridge, roadway and stormwater management facilities.

3. If the TRUSTEES grant the requested easements and concur with the Proprietary Mitigation Projects, the CITY will complete the Proprietary Mitigation Projects prior to commencement of construction of the Crosstown Parkway Extension across the NFSLR. If the TRUSTEES do not grant the easements, the CITY will not be required to complete the Proprietary Mitigation Projects.

4. The easements granted by the TRUSTEES will comply with all applicable statutory and administrative rule requirements and contain those general and special easement conditions that are approved by the TRUSTEES.

5. The term of the easement over sovereignty lands shall not exceed the life of the Crosstown Parkway Extension or amortization of the improvements. The term of the easement over state-owned uplands shall not exceed the existing or planned life cycle or amortization of the improvements, except the TRUSTEES may grant an easement in perpetuity if the improvement is a transportation facility.

6. Should the no-build alternative be selected as the preferred alternative, the CITY will not be required to complete the Proprietary Mitigation Projects, and the CITY will not require the easements.

The parties hereto have caused this MOU to be executed through their duly authorized signatories on the day and year first above written.

"DEP"

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

By: _____
Bob Ballard, Deputy Secretary, Land and Recreation

"CITY"

CITY OF PORT ST. LUCIE

By: _____(SEAL)

_____
Print/Type Name

Title:_____
(OFFICIAL SEAL)

Florida Department of
Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

March 22, 2007

RECEIVED
MAR 23 2007
City Manager's Office

The Honorable Ken Pruitt
President, The Florida Senate
Room 312, Senate Office Building
404 South Monroe Street
Tallahassee, FL 32399-1100

Dear Mr. President:

Over the last couple of years, the City of Port St. Lucie (City) and its consultants have conducted corridor studies for a third east-west crossing of the North Fork St. Lucie River and the surrounding public and private conservation lands. Throughout that process, the Department met several times with City officials, the City's consultants, the Florida Department of Transportation (FDOT), the Federal Highway Administration (FHWA), and other state and regional agencies to discuss concerns with the various alternative alignments proposed by the City.

Project Status

On August 16, 2006, FDOT posted the City's proposed alignments on FDOT's ETDM[1] website for review by federal, state and local agencies. That "programming" review was completed on October 1, 2006, when interagency team reviewers posted comments on the potential environmental impacts of three proposed alternatives on the St. Lucie River, the North Fork St. Lucie Aquatic Preserve, and the Savannas Preserve State Park. The Department, the Florida Fish and Wildlife Conservation Commission (FWC) and the U.S. Fish and Wildlife Service (USFWS) assigned a "dispute resolution" degree-of-effect (the highest level of concern available under ETDM review) on the following resource categories: Recreation Lands (public conservation lands), Secondary and Cumulative Effects, Water Quality and Quantity, Wetlands, and Wildlife and Habitat.

Under the ETDM process, when a reviewing agency assigns "dispute resolution" as its level-of-concern, the project cannot proceed to FDOT's Project Development Phase other than for the purpose of preparing technical studies and preliminary design work

[1] Efficient Transportation Decision Making.

necessary to resolve the agencies' objections. On December 5, 2006, FDOT initiated an informal dispute resolution process at an interagency meeting in Port St. Lucie. At that meeting, the City's consultants presented a draft report on alignment alternatives, and the reviewing agencies described their concerns and requested additional information. On December 20, 2006, the City forwarded an update of the Crosstown Parkway Corridor Extension Alternatives Report to the FHWA, DEP, FWC and USFWS for review.

At the December 5th meeting, the City asserted that it had "reserved" bridge landing sites along the river when it conveyed certain conservation lands along the North Fork St. Lucie River to the Board of Trustees in 1992. DEP Division of State Lands' records indicate, however, that conveyance of the conservation lands was unconditional and unencumbered.

On February 27, 2007, FDOT advised the Department that the City has decided to pursue formal dispute resolution under ETDM, and that it would send an official notification of that election to the Department. To date, I have not yet received any such communication from the City. Under the ETDM manual, the next step in the formal dispute resolution process will be the preparation of positions papers by the City and reviewing agencies.

Proposed Alternative Approach

To address resource questions that arose during interagency review of the proposed alternative alignments, the Department suggests that the City consider applying for a Conceptual Approval Permit from the South Florida Water Management District – the agency having environmental resource permitting (ERP) jurisdiction for the project. While a conceptual approval does not authorize construction or operation of the project, it would provide resource agencies with technical data and analysis from which the agencies could determine whether the project is permittable. Until specific, detailed information is submitted to and reviewed by the resource agencies, they will not be able to definitively state whether any of the proposed alignments will be able to meet federal and state permitting requirements.

The application process for a conceptual permit is generally the same as the process for an individual ERP, except that it does not require the same detailed, signed-and-sealed engineering calculations and drawings, or environmental impact analysis necessary for an ERP. While the minute details of siting and mitigation would not be required until later in the project permitting process, the City would have to delineate wetlands and provide reasonable assurance that:

- All practicable impact avoidance and minimization options have been explored;
- Sufficient area is available for construction of the staging areas and stormwater treatment ponds;
- A public easement could be granted on state-owned uplands and sovereignty submerged lands; and
- The conceptual mitigation plan will offset the direct, secondary and cumulative impacts of the project.

The City would apply to the SFWMD for both the conceptual ERP and a sovereignty submerged lands (SSL) authorization at the same time (concurrent review). In addition, the City would also apply to the DEP Division of State Lands, Bureau of Public Land Administration for a public easement or lease over the Savannas Preserve State Park. As a major linear facility, the proposed easement or lease must be reviewed by the Acquisition and Restoration Council (ARC), which then issues a recommendation to the Board of Trustees (Governor and Cabinet), which makes the final decision on the granting of an easement or lease across state-owned submerged lands and uplands.

The end result of the conceptual approval process would be a conceptual permit (ERP) for siting the project and establishment of the basic regulatory requirements for future construction. The advantage of a conceptual ERP is that the City would not have to spend as much money up-front to determine whether the bridge is permittable. The disadvantage is that the City must thereafter obtain an individual ERP for the actual construction and operation of the project.

Regardless of the City's decision on whether to pursue formal dispute resolution under ETDM or submit an application for a conceptual approval permit, the Department remains available for further discussion of available options and alternatives.

Sincerely,

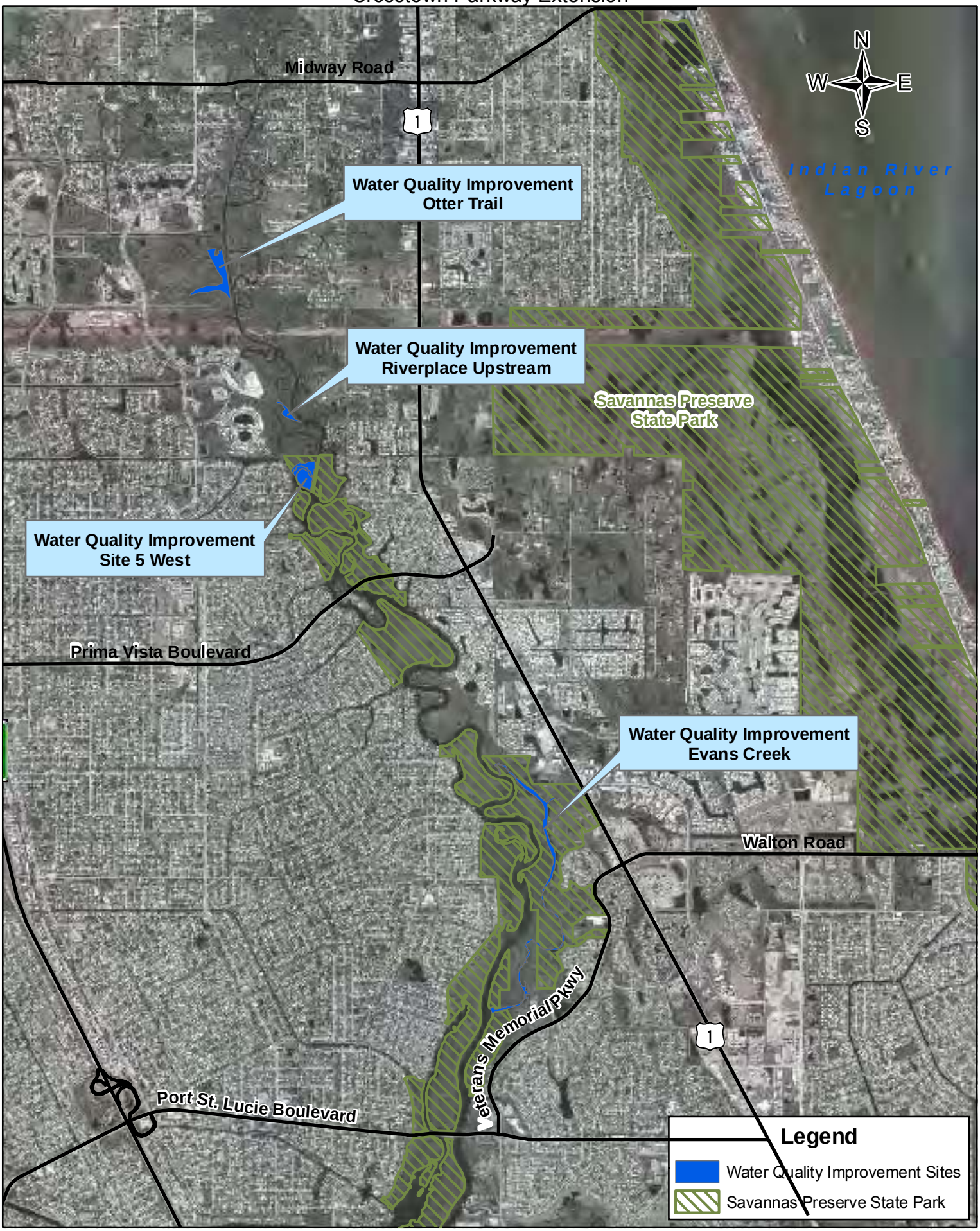
Michael W. Sole
Secretary

MWS/sm

cc: Stephanie Kopelousos, Interim DOT Secretary
Carol Wehle, Executive Director, South Florida Water Management District
Bob Ballard, DEP Deputy Secretary for Land and Recreation

Exhibit "B", Page 1 of 2

Proprietary Mitigation Water Quality Improvement Sites
Crosstown Parkway Extension

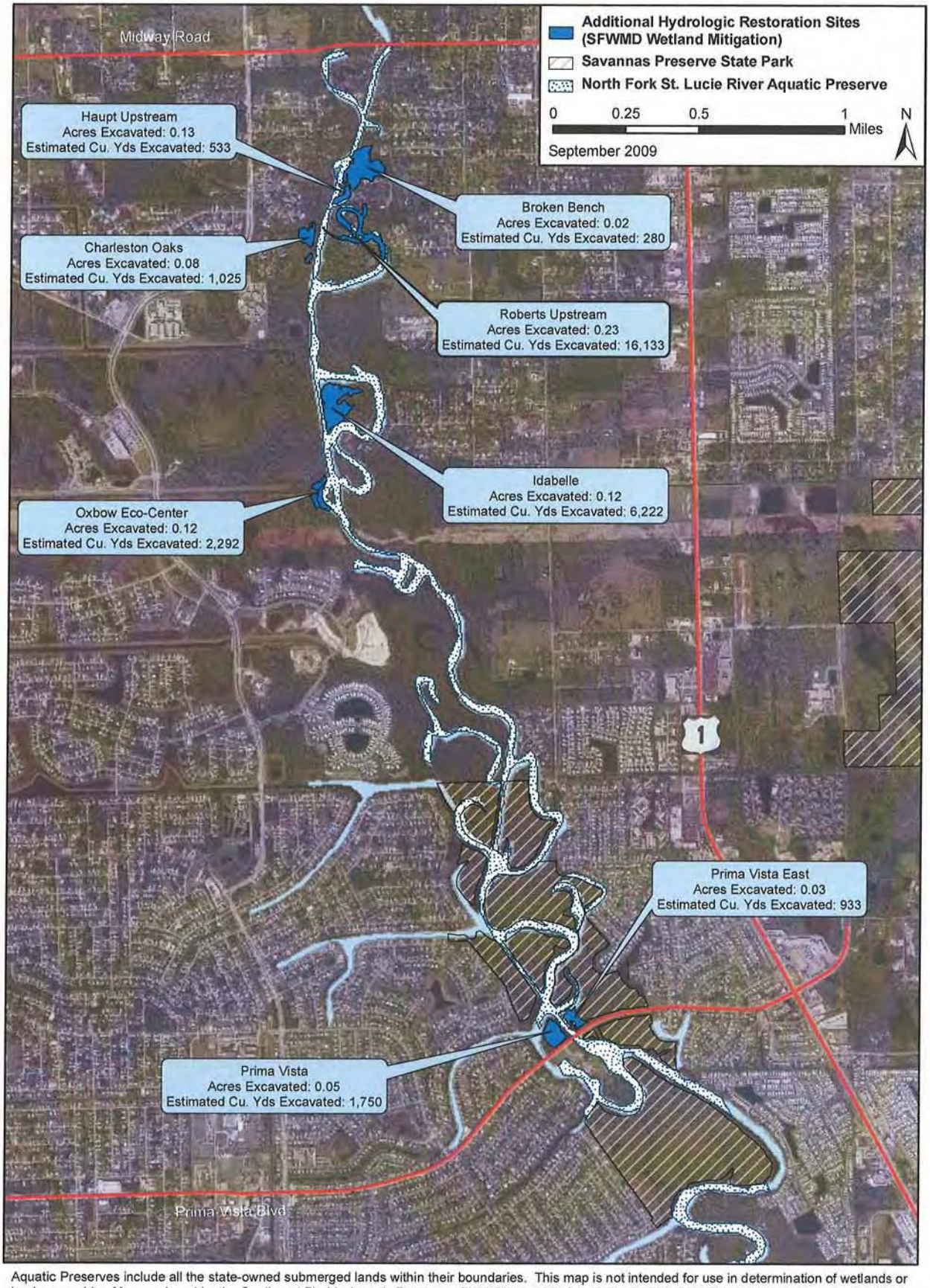


Crosstown Parkway Aquatic Preserve Mitigation and Public Interest Projects

Hydrologic Restoration Site	Land Owner	Acres Excavated	Open Water Acres Improved	Wetland Acres Reconnected	Estimated Cubic Yards Excavated
Evans Creek	Board of Trustees	2.26*	18.68	0.00	20,000
Site 5 West	Board of Trustees	0.13	1.83	9.74	3,667
Riverplace Upstream	River Place on the St. Lucie CDD	0.74	1.65	3.83	10,000
Otter Trail	SFWMD & City of Port St. Lucie	0.10	0.00	14.48	15,777
	Total	**3.23**	**22.16**	**28.05**	**49,444.00**

* Denotes Acres Dredged

Florida Department of Environmental Protection Recommended Non-Proprietary Wetland Mitigation Options for Port St. Lucie's Proposed Crosstown Parkway Extension Project



Aquatic Preserves include all the state-owned submerged lands within their boundaries. This map is not intended for use in determination of wetlands or land ownership. Map produced by the Southeast Florida Aquatic Preserves Field Office, 3300 Lewis St., Ft. Pierce, Florida (772) 429-2995.

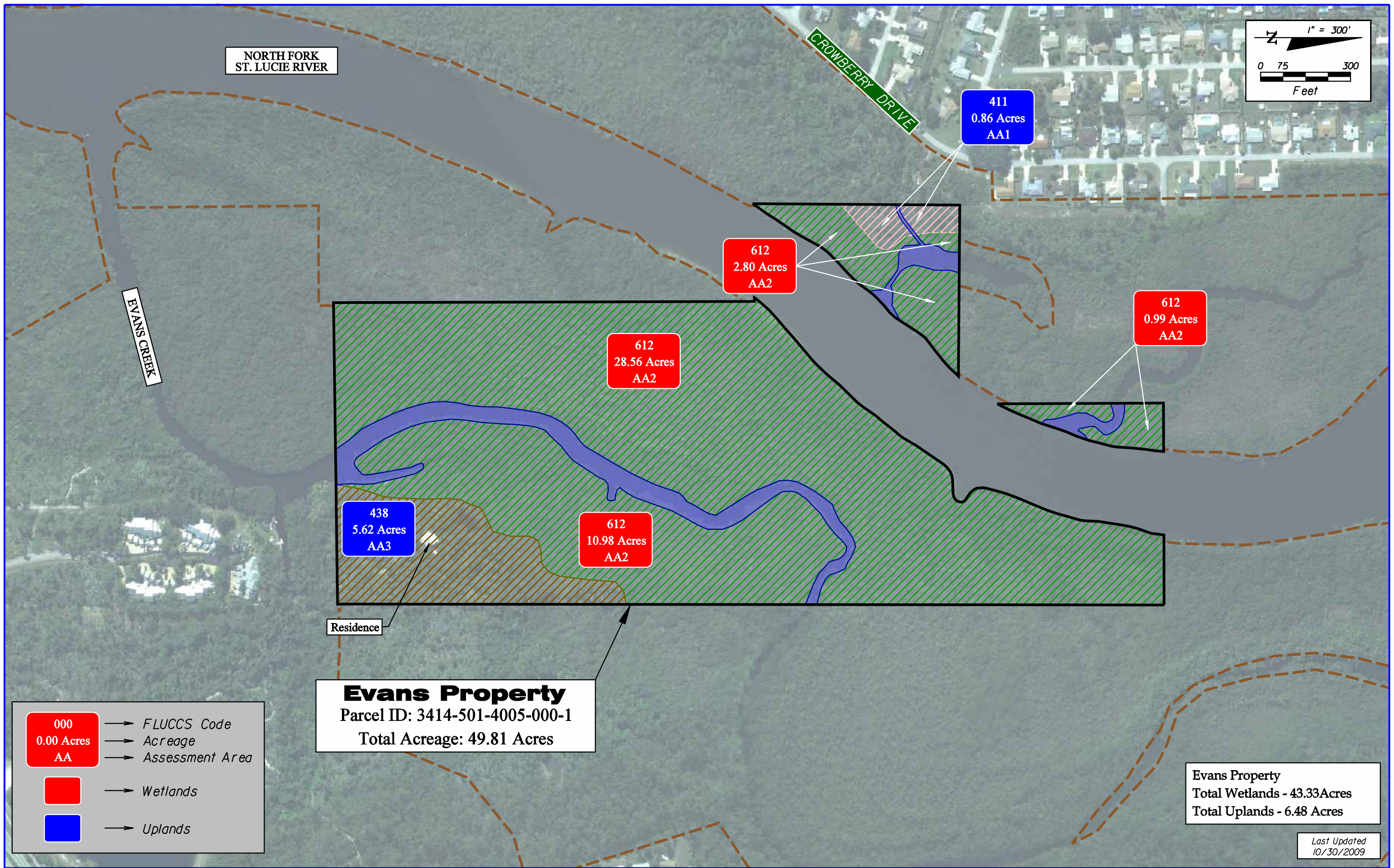
Crosstown Parkway Non-Proprietary Wetland Mitigation Project Recommendations

Hydrologic Restoration Site	Land Owner	Acres Excavated	Open Water Acres Improved	Wetland Acres Reconnected	Estimated Cubic Yards Excavated
Broken Bench	Private with Confidential Listing	0.02	0.00	7.41	280
Haupt Upstream	Board of Trustees	0.13*	1.17	0.00	533
Roberts Upstream	Justine P. Roberts (Roberts Tree Farm) and Board of Trustees	0.23	5.35	0.00	16,133
Charleston Oaks	J. Hal Roberts Jr. & Janice P. Roberts and James P. Terpening, Jr. & Sherry Terpening	0.08	0.00	2.21	1,025
Idabelle	St. Lucie County	0.12	0.00	7.56	6,222
Oxbow Eco-Center	Port St. Lucie (west) and SFWMD (east) and Board of Trustees (SSL)	0.12	1.05	1.26	2,292
Prima Vista	St. Lucie County & Trust for Public Land	0.05	0.00	2.98	1,750
Prima Vista East	Board of Trustees	0.03	0.00	1.70	933
	Total	**0.78**	**7.57**	**23.12**	**29,168.00**

* Denotes Acres Dredged

Exhibit "D"

Proprietary Mitigation Land Acquisition Sites
Crosstown Parkway Extension



LEGEND

- Property Lines
- Savannas State Preserve Limits
- 411 Pine Flatwoods
- 438 Mixed Hardwoods
- 612 Mangrove Swamps
- SW Surface Water

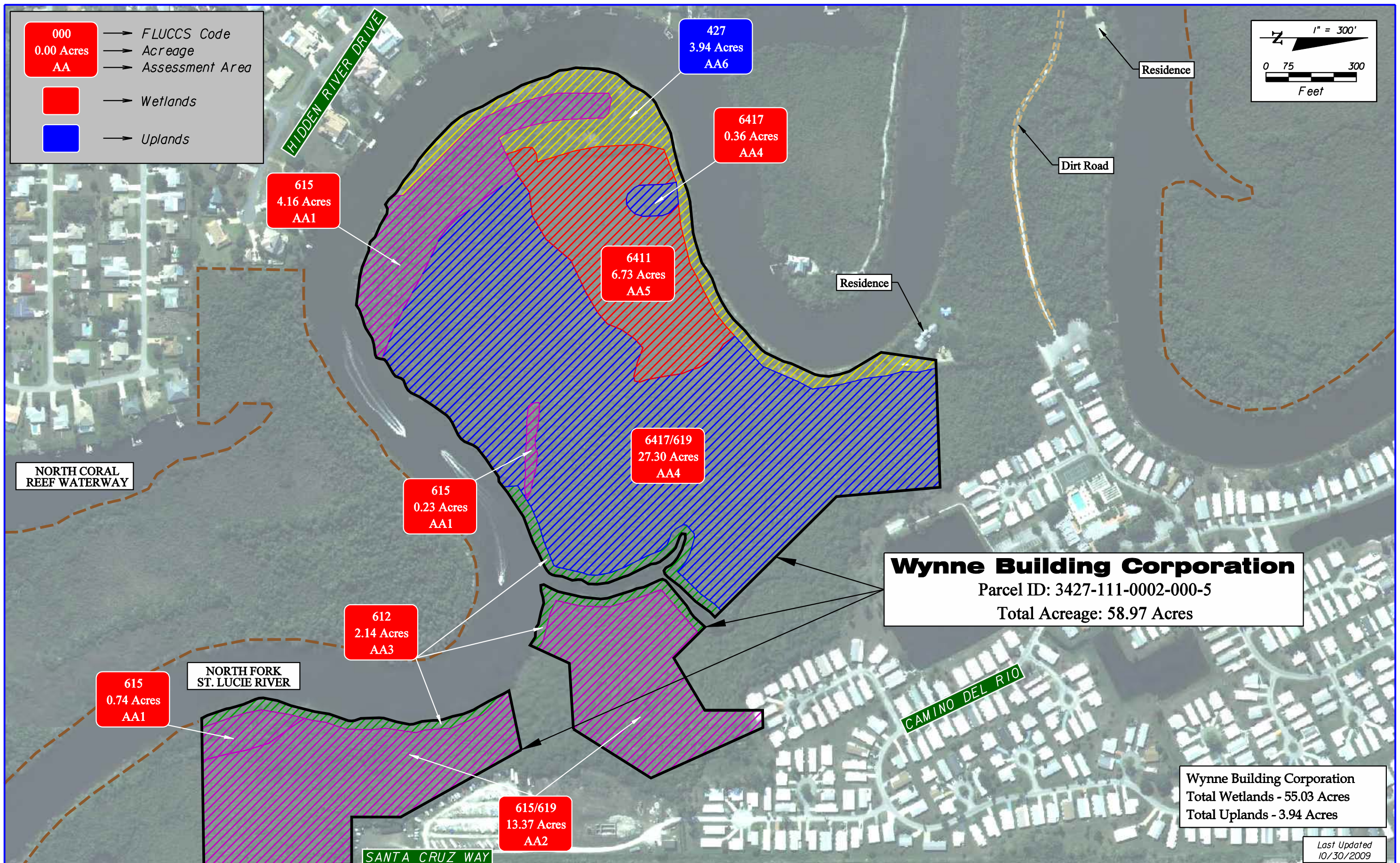
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "E"
EVANS PROPERTY
ASSESSMENT AREA MAP

USER: 5intrld 10/30/2009 1:46:43 PM F:\PROJECT\5079986\CADD\roadway\PARCEL_PI_Areas.dgn



LEGEND

- Property Line
- Savannas State Preserve Limits
- 427 Live Oak
- 612 Mangrove Swamps
- 615 Stream and Lake Swamps
- 6411 Freshwater Marsh
- 6417 Freshwater Marsh With Shrubs, Brush, and Vines

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "F"
WYNNE BUILDING CORPORATION ASSESSMENT AREA MAP

USER: 5intrld 10/30/2009 1:55:43 PM F:\PROJECT\5079986\CADD\roadway\PARCEL_P6_Areas.dgn

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

May 29, 2009 *Via Electronic Mail*

Mr. Walter B. England, P. E.
City Engineer
City of Port St. Lucie
121 S. W. Port St. Lucie Blvd.
Port St. Lucie, FL 34984-5099

RE: Crosstown Parkway Extension
Mitigation for Impacts to State Lands

Dear Mr. England:

The Department would like to respond to your letter to Bob Ballard and me dated April 6, 2009. For your convenience, our comments will generally follow the order mentioned in your letter. As the City continues to refine information upon which the environmental impact statement and conceptual environmental resource permit will be based, the Department remains committed to providing the City with resource information and technical assistance.

As noted in your letter, the City of Port St. Lucie (City) is currently engaged in two ongoing efforts related to the construction of a third east-west crossing of the North Fork St. Lucie River:

- Compliance with the requirements of the National Environmental Policy Act (NEPA) and the directives of the Federal Highway Administration (FHWA), which include preparation of an environmental impact statement (EIS), and

- Obtaining a conceptual environmental resource permit (ERP) from the South Florida Water Management District (SFWMD or District).

As noted in your letter, the final bridge alignment will be determined through the NEPA process, and the City anticipates submitting a draft environmental impact statement to FHWA and the Florida State Clearinghouse for review by the end of 2009 or early 2010.

The amount and location of "regulatory" mitigation required to offset environmental impacts of the project (*i.e.,* adverse impacts to wetlands and other surface waters) will be determined by the SFWMD during the conceptual permitting process. The City's application for authorization to use state-owned (sovereignty) submerged lands will also be processed by the District, concurrent with the conceptual ERP application. The final determination regarding use of state-owned lands (whether submerged or uplands) will be made by the Governor and Cabinet, sitting as the Board of Trustees of the Internal Improvement Trust Fund (the Board of Trustees).

The parties have also used the word "mitigation" to describe compensation that the City would have to pay to the state for converting the use of public lands to other uses, such as removing the public's access to and use of state-owned recreation lands that may be required for construction of the bridge. For purposes of clarity, the Department will hereafter use the phrase "proprietary mitigation" to describe potential actions or acquisitions that the City could provide to offset its proposed use of state-owned lands.

As mentioned above, the Board of Trustees will determine whether the City's proposed use of state-owned lands meets the requirements of law and, if so, the amount and location of proprietary mitigation required from the City.

With those distinctions in mind, the Department wishes to clarify the following statements contained in the first paragraph on page two of your April 6th letter:

> Once all of the agencies agree on a mitigation plan for the impacts to state lands, this mitigation plan would be committed to by the City. If a build alternative is selected as the preferred alternative, the City would anticipate DEP's support for the issuance of the necessary easement to construct the preferred corridor alternative.

The phrase "mitigation plan for the impacts to state lands" refers only to the *proprietary* mitigation requirements for the project's conversion of state lands. It does <u>not</u> include *regulatory* mitigation required to offset environmental impacts. The City should prepare a proprietary mitigation plan for each alignment, because the acquisition or restoration projects to be used as proprietary mitigation should be tailored to the particular resources impacted by that alignment and located within the same management area.

Regarding the second statement, the Division of State Lands – as staff to the Acquisition and Restoration Council (ARC) and to the Board of Trustees – will gather information about the lease or easement being requested and provide it to those bodies. At this time, the Department has not yet been provided with all the information necessary to support the issuance or denial of an easement or lease of state-owned lands.

The Bureau of Coastal and Aquatic Managed Areas (CAMA) has submitted a draft management plan for the North Fork St. Lucie River Aquatic Preserve to ARC staff for review; the draft plan will be presented to the ARC at its June meeting. A paper copy of the proposed management plan (dated April 9, 2009) was provided to the City in early April, receipt of which was acknowledged by the City at the April 16th monthly team meeting. The draft plan is also available at http://www.dep.state.fl.us/coastal/downloads/management_plans/aquatic/NorthFork_Draft_090409.pdf.

The City has asked the Department to provide a list of prioritized acquisition and restoration projects that could serve as potential proprietary mitigation sites for impacts to state lands. Attached please find a map depicting the location and ranking of three land acquisition "packages," as well as four of the highest priority hydrologic restoration sites within the North Fork St. Lucie River Aquatic Preserve. Detailed information collected at each of the four restoration sites (including photographs, LiDAR images and copies of field datasheets) is available from the Southeast Florida Aquatic Preserves Field Office upon request.

Of the three land acquisition packages, the highest priority is the Evans parcel, together with a small adjacent parcel to the south. The second land acquisition priority is the Wynne parcel, and the third is comprised of several smaller parcels that, collectively, would be as beneficial to the Department as the larger "cornerstone" parcels (colored orange on the attached map).

Although three land acquisition packages and four hydrologic restoration projects have been suggested by the Department, the City may be responsible for the purchase of additional parcels or for completing more than one hydrologic restoration project. The SFWMD has stated that the City will be responsible for mitigating the worst-case resource impact scenario as determined by data supplied for the conceptual permit, regardless of the corridor alignment chosen through the EIS process.

In addition to land acquisition and hydrologic restoration, the Department also requires removal of all non-native vegetation on parcels the City acquires as part of a proprietary mitigation plan. Each parcel acquired must be maintained in its enhanced state until the official transfer of management authority to the Savannas Preserve State Park.

With regard to the list of potential proprietary mitigation sites submitted with the City's letter, Department staff evaluated the location of the identified parcels, as well as other properties in the area that would facilitate natural resource protection and management. Sites that appear to be suitable for proprietary mitigation are shown on the attached map.

The following additional information is needed for each of the potential proprietary mitigation sites identified by the City's consultants in the April 6th letter:

1. Total acreage of the parcel;
2. Delineation and calculated area of each natural area type;
3. Delineation, identification, and calculated area of non-native species; and
4. Identification and abundance of listed species located onsite.

Upon submission of that information, staff will ground-truth the parcels to confirm the information provided by the consultants and provide follow-up requests for any additional information that may be necessary.

The Division of State Lands does not have "a list of preferred restoration and enhancement projects" within the Savannas Preserve State Park or a "formula for determining secondary effects to state lands and for determining mitigation required for direct impacts to state lands."

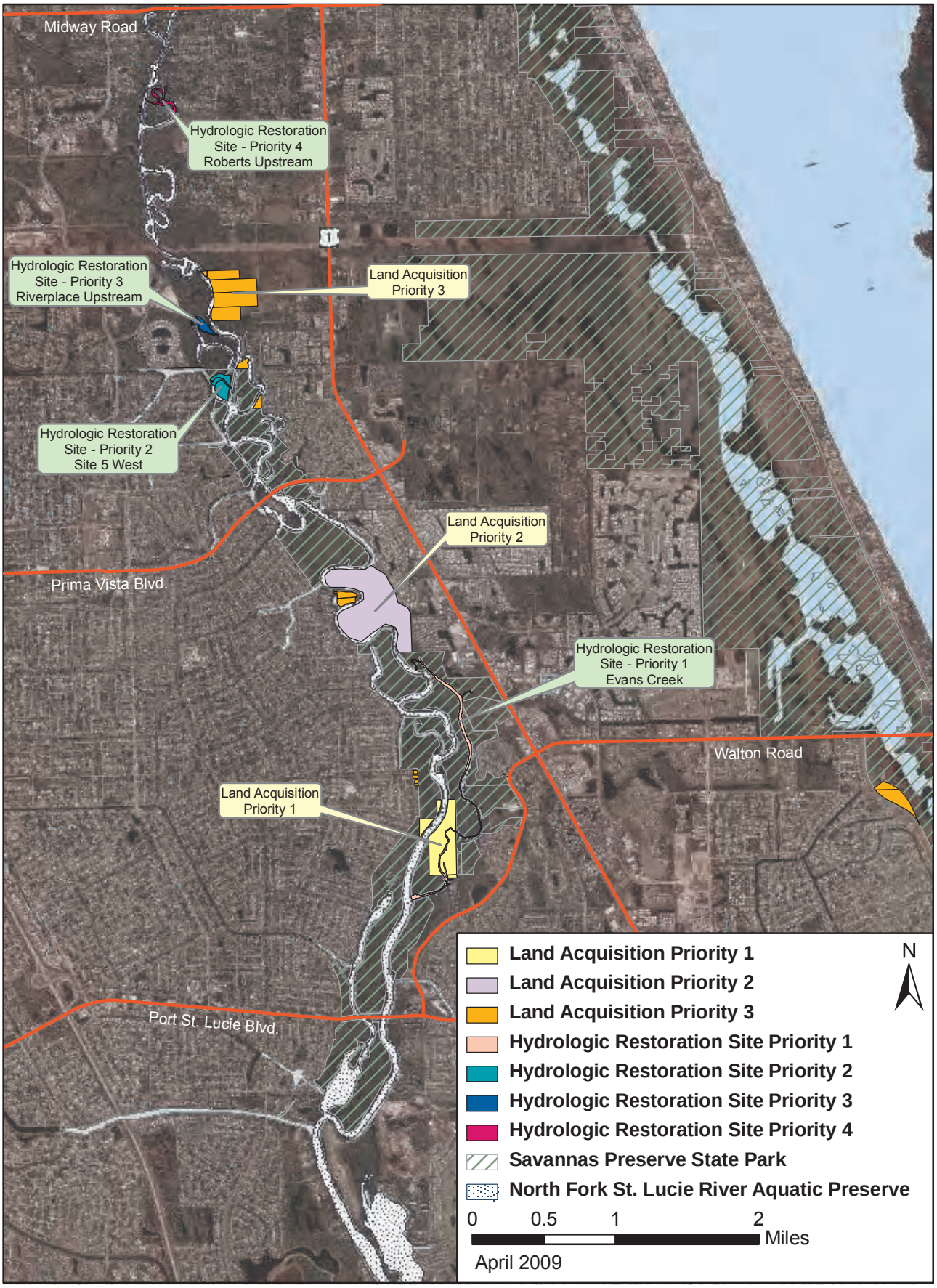
Should you have any questions or require additional information, please do not hesitate to contact Deputy Secretary Ballard or me.

Best regards,

Sally B. Mann, Director
Office of Intergovernmental Programs

Enclosure
cc: Bob Ballard, Deputy Secretary for Lands and Recreation
Lee Edmiston, Director, Office of Coastal and Aquatic Managed Areas
Greg Brock, Division of State Lands
Albert Gregory, Office of Park Planning
Scott Woolam, Public Land Administration
Lauren Milligan, Office of Intergovernmental Programs
Laura Herran, North Fork St. Lucie River Aquatic Preserve
Dan Griffin, Savannas Preserve State Park
Paul Rice, Savannas Preserve State Park
Mindy Parrott, South Florida Water Management District

Florida Department of Environmental Protection Recommended Proprietary Mitigation Options for Port St. Lucie's Proposed Crosstown Parkway Extension Project



Aquatic Preserves include all the state-owned submerged lands within their boundaries. This map is not intended for use in determination of wetlands or land ownership. Map produced by the Southeast Florida Aquatic Preserves Field Office, 3300 Lewis St., Ft. Pierce, Florida (772) 429-2995.

Crosstown Parkway Mitigation Project, Greenways and Trails

Provided by the *FDEP Office of Greenways & Trails* and staff of the *St. Lucie Urban Area Transportation Planning Organization*

Project Name

Savannas Recreation Area Trail

Project Location

Within Savannas Recreation Area (county owned park), between Savannah Road and Midway Road

Project Description

Paved multi-use trail (approximately 2.5 miles long) with 5 recreational bridges

Connectivity/Recreational Benefit

State and National: This multi-use trail is within Florida's planned Statewide Multi-Use Trail Network and will also serve as a segment within the East Coast Greenway, a multi-state trail that connects Calais, Maine to Key West, Florida

Local: The trail is a segment of the St. Lucie North-South Trail which connects to the Green River Parkway Trail

Estimated Cost for Construction

Paved trail based on approximately 2.5 miles x minimum 10 ft width = $500,000 to $750,000

5 recreational bridges/boardwalk based on 750 linear feet x 10 ft width = $300,000 to $375,000

Project Construction Total = Ranging from $800,000 to $1.125 million

Exhibit "H", Page 2 of 2

Proprietary Mitigation Recreational Opportunities - Trails

Crosstown Parkway Extension

Port St. Lucie Crosstown Parkway
Potential Net Benefit Projects

Halpatiokee Canoe Access Replacement	**Estimated Cost***
• Canoe/kayak launch	
• Boardwalk (10 ft. x 200 ft.)	
• Pavilion	
• Restroom	
• Interpretive kiosk	
• Paved parking (20 vehicles)	
• Paved road (0.25 mi.)	
• Road signs	
Subtotal	**$430,000**

Improvements to Existing Savannas Preserve State Park Education Center

Education Center Improvements	
• Boardwalk to marsh (6 ft. x 200 ft.) w/ observation platform (replaces natural surface path for improved accessibility)	$66,000
• Classroom and laboratory addition to support existing demand for K-12 classes with equipment and exhibits	$700,000
Subtotal	**$766,000**

Improvements to Savannas Preserve State Park Canoe/Kayak Launch

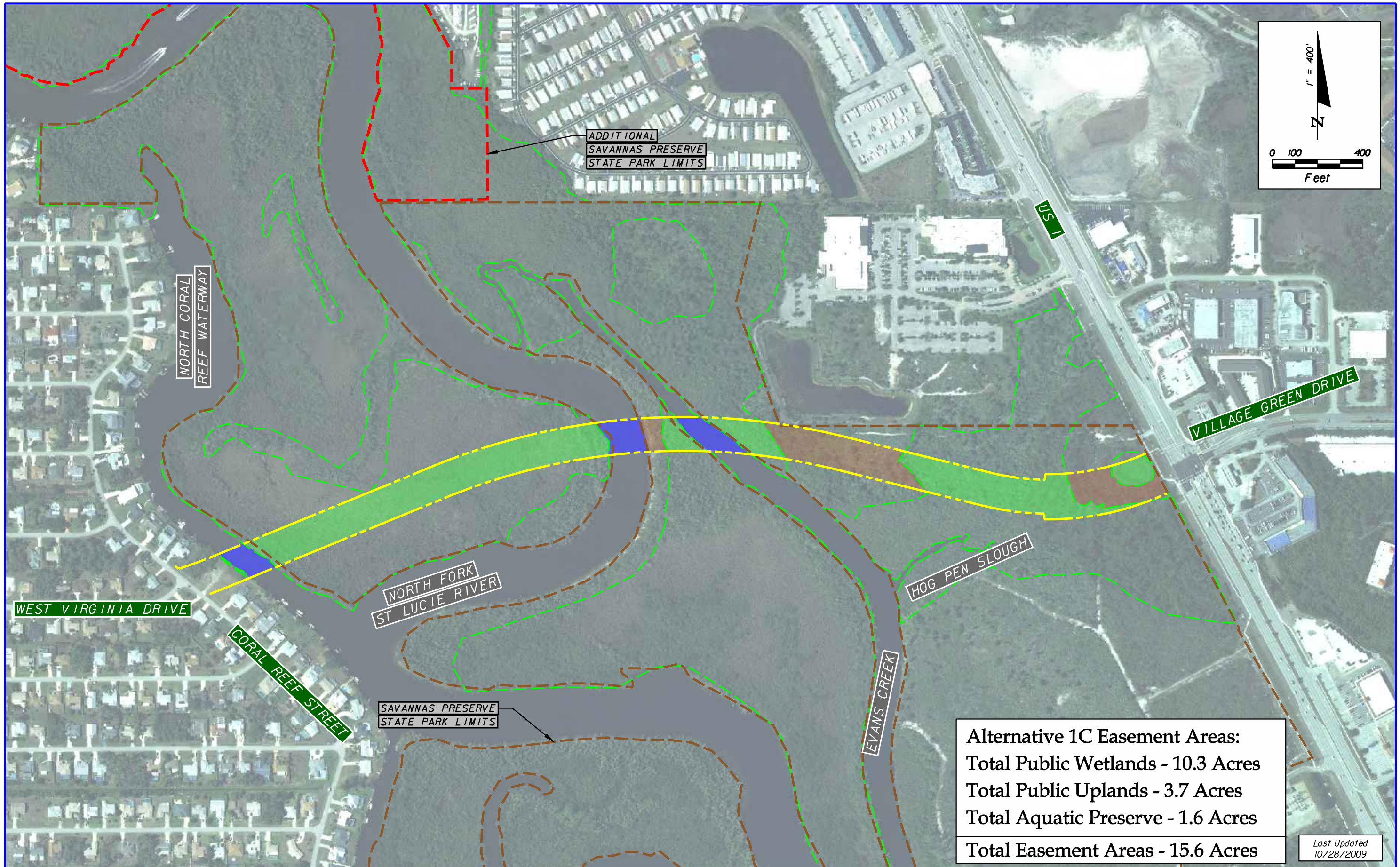
• Canoe/kayak launch road, parking, composting restroom, roadside information and entrance signs	
Subtotal	**$265,000**
Total	**$1,461,000**

* Includes standard cost plus design and permitting costs and contingency

Exhibit "I", Page 2 of 2

Proprietary Mitigation Recreational Opportunities - Other

Crosstown Parkway Extension



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

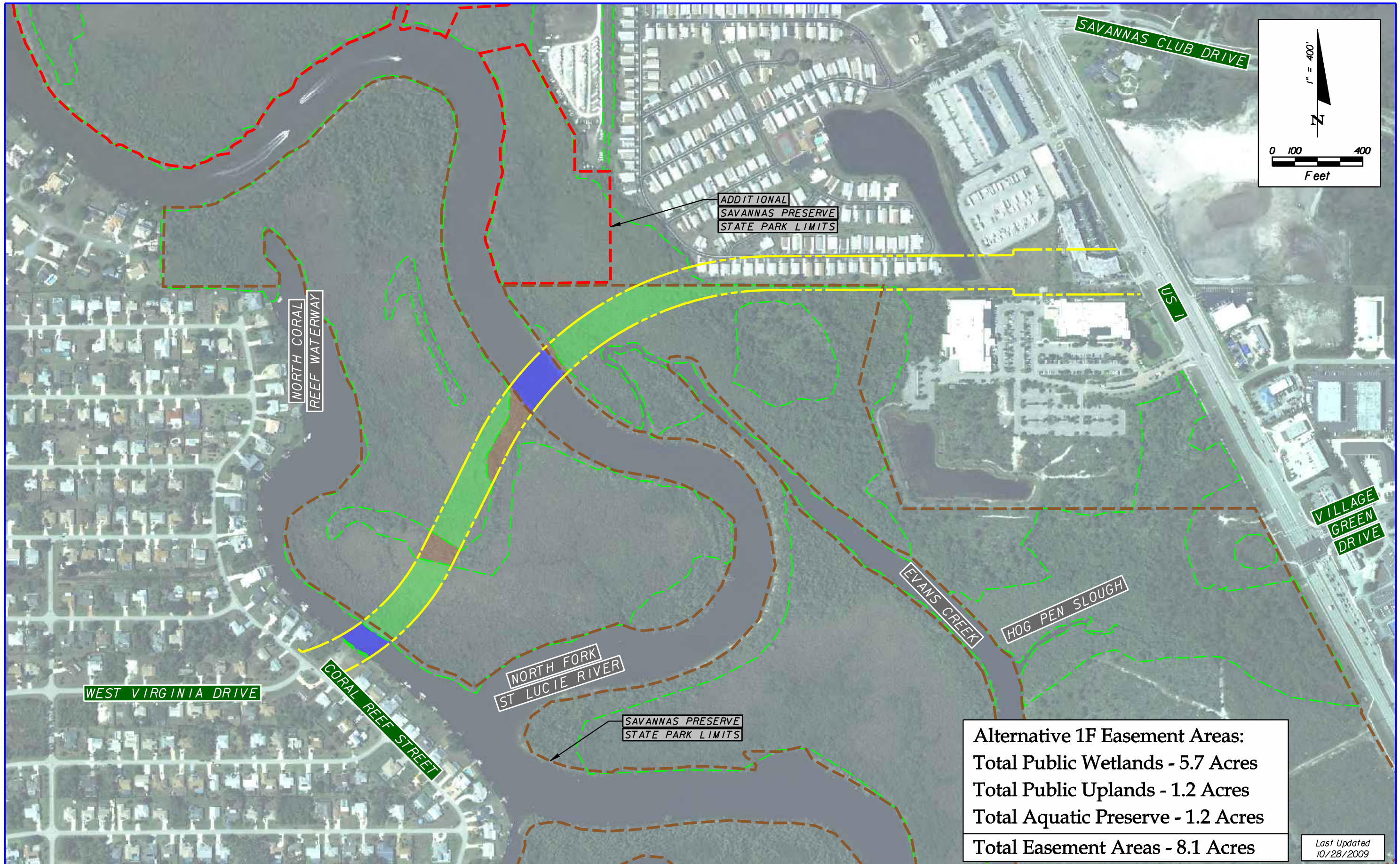
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 1 of 6
ALTERNATIVE 1C
FDEP EASEMENT AREA MAP

USER: 5intrld 10/28/2009 4:42:27 PM f:\project\5079986\cadd\roadway\FDEP_Easement_AltIC_PLANRDOI.DGN



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

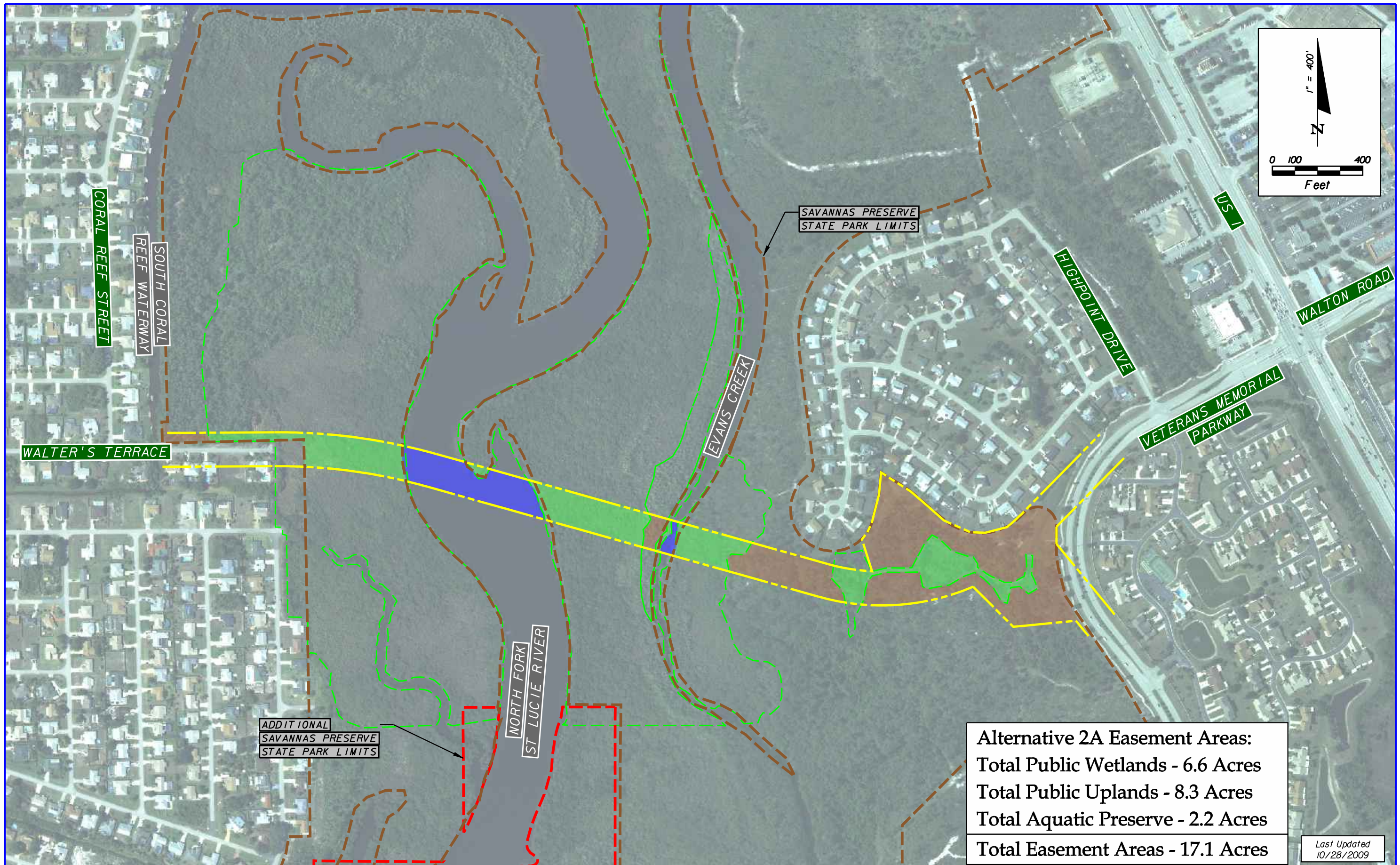
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 2 of 6
ALTERNATIVE 1F
FDEP EASEMENT AREA MAP

USER: 5intrld 10/28/2009 4:42:49 PM f:\project\5079986\cadd\roadway\FDEP_Easement_Alt1F_PLANRD01.dgn



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

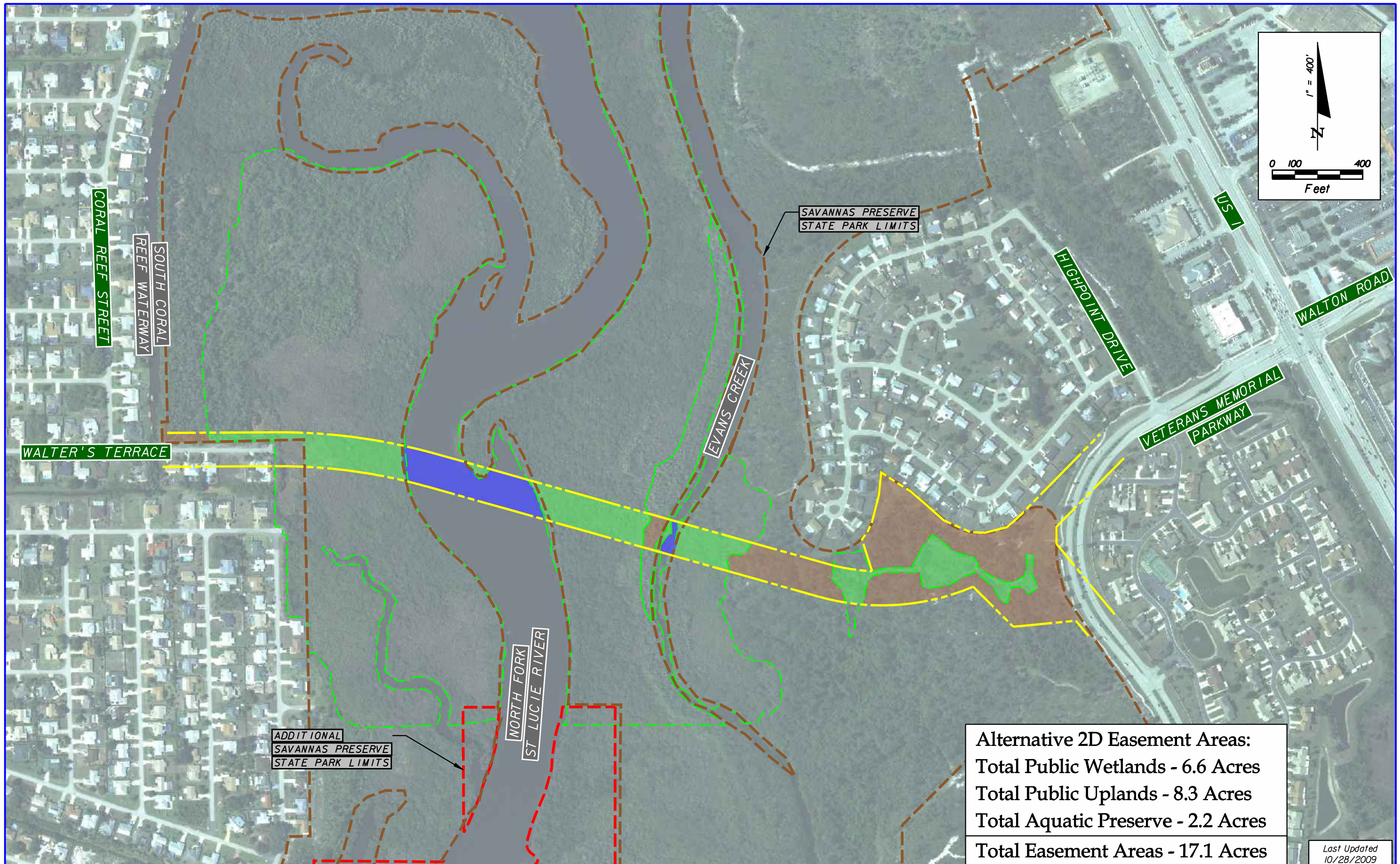
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 3 of 6
ALTERNATIVE 2A
FDEP EASEMENT AREA MAP

USER: 5intrld 10/28/2009 4:43:13 PM f:\project\5079986\cadd\roadway\FDEP_Easement_Alt2A_PLANRD01.dgn



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

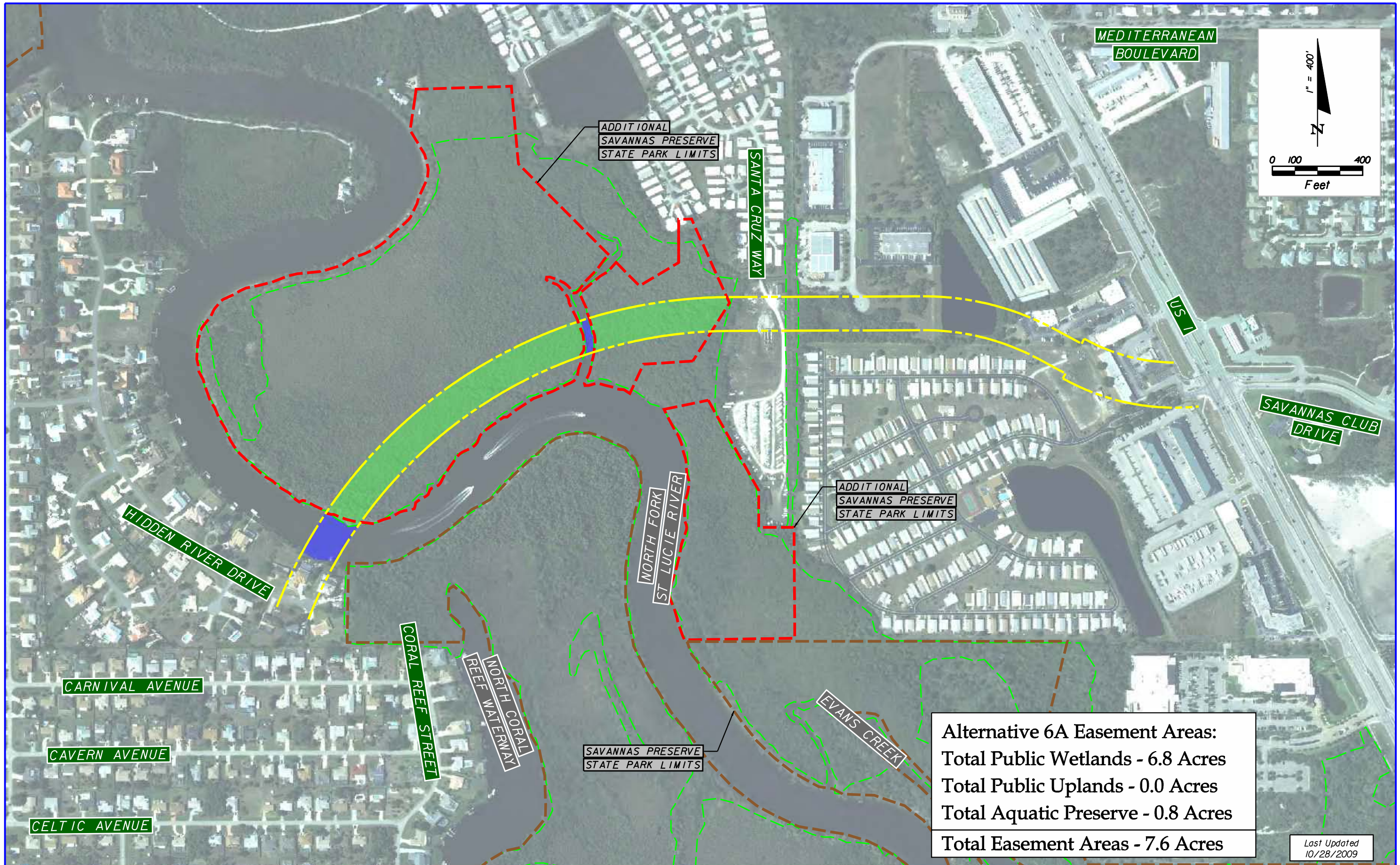
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 4 of 6
ALTERNATIVE 2D
FDEP EASEMENT AREA MAP

USER: 51ntrld 10/28/2009 4:43:36 PM f:\project\5079986\cadd\roadway\FDEP_Easement_Alt2D_PLANRD01.dgn



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

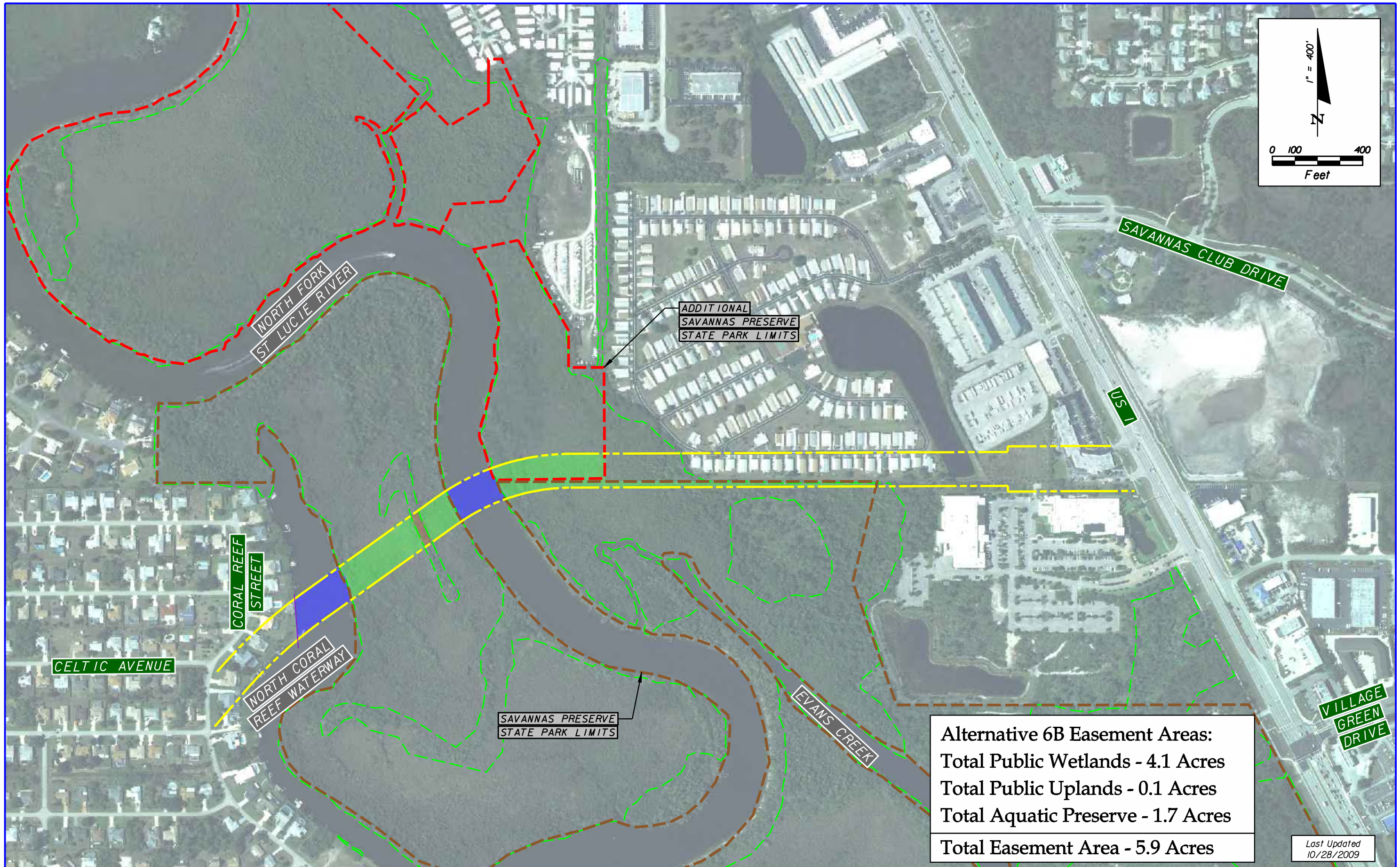
American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 5 of 6
ALTERNATIVE 6A
FDEP EASEMENT AREA MAP

USER: 5intrld 10/28/2009 4:43:59 PM f:\project\5079986\cadd\roadway\FDEP_Easement_Alt6A_PLANRD01.dgn



LEGEND

- Proposed Easement Limits
- Aquatic Preserve
- Public Uplands
- Public Wetlands
- Existing Savannas Preserve State Park Limits
- Potential Additional Savannas Preserve State Park Limits

American Consulting Engineers of Florida, LLC
2000 Palm Beach Lakes Boulevard, Suite 1000
West Palm Beach, FL 33409
Phone: (561) 253-9550 Fax: (561) 253-9551
Certificate of Authorization No. 9302

CITY OF PORT ST. LUCIE
121 S.W. PORT ST. LUCIE BLVD.
PORT ST. LUCIE, FL 34984

ROAD	COUNTY
CROSSTOWN PKWY	ST. LUCIE

Exhibit "J", Page 6 of 6
ALTERNATIVE 6B
FDEP EASEMENT AREA MAP

USER: 5intrld 10/28/2009 4:44:22 PM f:\project\5079986\cadd\roadway\FDEP_Easement_Alt6B_PLANRD01.dgn

UMAM Evans Mitigation

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study **Evans Property**	090107-1	AA1
Impact or Mitigation	Assessment conducted by:	Assessment date:
Proprietary Mitigation	C. Salicco; C. Carter	August 10-14, 2009

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 0	with: 8	Located adjacent and/or near the river. Many other wetland, surface water and upland communities located nearby along with surrounding State Preserve lands and a residential community.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 0	with: 0	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 0	with: 7	Pine flatwood with some cabbage palms, vines and other upland groundcover.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.000	0.750

Delta = [with-current]
0.750

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 0.645

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study - **Evans Property**	090107-1	AA2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
612 - Mangrove Swamps		Proprietary Mitigation	43.33

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	Class III	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Located directly abutting river, Evans Creek and uplands associated with Evans' residence. Also surrounded by other wetlands and located adjacent to State Preserve lands.

Assessment area description

Area consists of mangroves, leather fern, cabbage palm and some Brazilian pepper (5-20%), along with some other shrubby and groundcover wetland species. High quality areas located along Evans Creek.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Located adjacent and abutting river and surrounded by State Preserve lands. Located adjacent to uplands that encompass Evans' residence.	Potential preserve land in rapidly developing area;
Functions	**Mitigation for previous permit/other historic use**
Food chain support; water storage and attenuation; water quality improvement; wildlife cover; bird nesting	None
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**
Wading bird foraging, migratory bird foraging and nesting, amphibians, reptiles, small mammals, and fish	Wading birds (SSC,) wood stork (E)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco; Corey Carter	August 10-14, 2009

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study **Evans Property**	090107-1	AA2
Impact or Mitigation	Assessment conducted by:	Assessment date:
Proprietary Mitigation	C. Salicco; C. Carter	August 10-14, 2009

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 0	with: 7	Surrounding areas of relatively high quality along the river. Evans Creek bisects through much of the assessment area and the river separates two smaller areas located on the west. Evans residence and other small community located near the site.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 0	with: 8	Water levels appropriate, near optimum; water levels probably adequate for invertebrates and benthic organisms. Upstream freshwater discharges and sediment loads could negatively affect water quality and quantity. Some runoff from nearby development.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 0	with: 9	Consists of mangroves, leather fern, cabbage palm and some Brazilian pepper (5-20%).

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.000	0.800

Delta = [with-current]
0.800

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas	
FL = delta x acres =	34.664

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study - **Evans Property**	090107-1	AA3

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
438 - Mixed Hardwoods		Proprietary Mitigation	5.62

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	NA	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Located adjacent to mangrove swamps and a small residential development. Located near the North Fork St. Lucie River.

Assessment area description

Mixed hardwood upland area with some bamboo that was planted and spread through parts of the site. Evans' residence is located on this portion of the property.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
North Fork St. Lucie River, adjacent wetlands and small residential community.	Potential preserve land in rapidly developing area;
Functions	**Mitigation for previous permit/other historic use**
Food chain support; wildlife cover; bird nesting	None
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**
Wading and migratory birds, land crabs, fiddler crabs, osprey, pelicans, shorebirds.	Gopher tortoise, gopher frog, eastern diamondback rattlesnake, Eastern indigo snake, little blue heron, snowy egret, tricolored heron, Florida sandhill crane, woodstork, osprey, Sherman's fox squirrel

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco; Corey Carter	August 10-14, 2009

PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study **Evans Property**	090107-1	AA3
Impact or Mitigation	Assessment conducted by:	Assessment date:
Proprietary Mitigation	C. Salicco; C. Carter	August 10-14, 2009

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 0	with: 7	Located adjacent to mangrove swamps and a small residential development. Located near the North Fork St. Lucie River.
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 0	with: 0	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: 0	with: 6	Mixed upland hardwoods with some planted bamboo that has spread through the area. Overgrown and has different vines growing within.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.000	0.650

Delta = [with-current]
0.650

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

If mitigation
Time lag (t-factor) =
Risk factor =

For impact assessment areas
FL = delta x acres = 3.653

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

Form 62-345.900(2), F.A.C. [effective date 02-04-2004]

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Crosstown Parkway Extension PD&E Study - **Evans Property**	090107-1	AA1

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
411 - Pine Flatwood		Proprietary Mitigation	0.86

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
North Fork St. Lucie River	NA	

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Between the river and a developed community. State Preserve lands surround the area.

Assessment area description

This is a pine flatwood with some scattered cabage palms and other upland vegetation surrounded by the State Preserve lands.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Near the river and developed residential community.	Potential preserve land in rapidly developing area;
Functions	Mitigation for previous permit/other historic use
Food chain support; wildlife cover; bird nesting	None
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading and migratory birds, land crabs, fiddler crabs, osprey, pelicans, shorebirds.	Gopher tortoise, gopher frog, eastern diamondback rattlesnake, Eastern indigo snake, little blue heron, snowy egret, tricolored heron, Florida sandhill crane, woodstork, osprey, Sherman's fox squirrel

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Chris Salicco; Corey Carter	August 10-14, 2009

Mitigation Determination Formulas - Alternative 1C
(See Section 62-345.600(3), F.A.C.)

For each impact assessment area:
(FL) Functional Loss = Impact Delta X Impact acres

For each mitigation assessment area:
(RFG) Relative Functional Gain = Mitigation Delta (adjusted for preservation, if applicable)/((t-factor)(risk))

(a) Mitigation Bank Credit Determination

The total potential credits for a mitigation bank is the sum of the credits for each assessment area where assessment area credits equal the RFG times the acres of the assessment area scored

Bank Assessment Area	RFG	X	Acres	=	Credits
total					

(b) Mitigation needed to offset impacts, when using a mitigation bank

The number of mitigation bank credits needed, when the bank or regional offsite mitigation area is assessed in accordance with this rule, is equal to the summation of the calculated functional loss for each impact assessment area.

Impact Assessment Area	FL	=	Credits needed
AA1	0.65		
AA2	34.66		
AA3	3.65		
AA6			
AA10			
total	**38.96**		

(c) Mitigation needed to offset impacts, when not using a bank

To determine the acres of mitigation needed to offset impacts when not using a bank or a regional offsite mitigation area as mitigation, divide functional loss (FL) by relative functional gain (RFG). If there are more than one impact assessment area or more than one mitigation assessment area, the total functional loss and total relative functional gain is determined by summation of the functional loss (FL) and relative functional gain (RFG) for each assessment area.

	FL	/	RFG	=	Acres of Mitigation
AA1					
AA2					
AA3					
AA6					
AA10					
total					