

# COACH FENN PARK IMPROVEMENTS

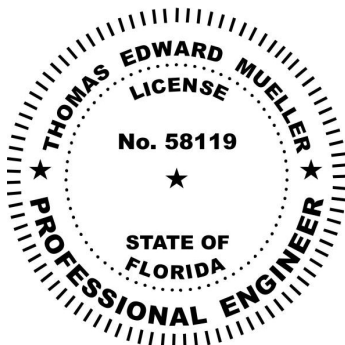
2306 AVENUE I  
Fort Pierce, Florida

## PROPOSED DRAINAGE DESIGN

January, 2026

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This item has been digitally signed and sealed by Thomas Mueller, P.E. on the date adjacent to the seal.

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## **COACH FENN PARK IMPROVEMENTS**

### **Proposed Drainage Design**

#### **1. Project Background**

The COACH FENN PARK is located between Avenue I and Avenue K and N23rd Street in the City of Fort Pierce, Saint Lucie County, Florida. The site is in Section 24, Township 28 South, and Range 19 East.

Proposed improvements include a driveway, 16 pervious parking spaces on the NE corner of the park, a splash pad, a restroom building and a Pavillon.

These improvements are located at the northwest corner of the park and encompass approximately 0.6 acres of disturbed area.

#### **2. Existing Conditions**

The property is home to a Boys and Girls Club, and residences include a playground, a basketball court and a baseball field.

By graphical plotting, the site lies within Zone X as shown on the Federal Emergency Management Agency (FEMA) Flood Information Rate Map (FIRM) panel 12111C0178J as published in June 2024. Zone X is defined as 'Area of Minimal Flooding'. Refer to Appendix A for a portion of the FEMA FIRM that includes this property.

Soils that underlay the site include Waveland and Immokalee fine sands and Waveland-Urban land. Both soil types are classified as Hydrologic Soil Group A. Refer to Appendix B for a Natural Resource Conservation Service (NRCS) soils map.

The Seasonal water table elevation was adopted from the Pinecrest Estates Drainage Improvements, Permit # 5603173P

#### **3. Existing Site Drainage**

The site drains by overland flow from the central portion of the site to the north, east and south lot lines, directing water to the adjacent N23th street, Avenue I and Avenue K. No organized, designed drainage is apparent on the site.

#### 4. Proposed Site Drainage

The runoff from the proposed driveway will slope down to the proposed pervious parking area to later be directed by a perimeter swale to a Dry Retention Basin with no outside discharge.

#### 5. Land Use Summary

Pre-Improvement Summary						
Basin	Pervious Area (ac)		Impervious Area (ac)		Building/Lake Area (ac)	
	SF	AC	SF	AC	SF	AC
SITE	26,786.00	0.61				
SIDEWALK				-		
OPEN AREA	26,786.00	0.61				
Total	26,786.00	0.61	-	-		-
%		100%		0%		0.0%

Post-Improvement Summary						
Basin	Pervious Area (ac)		Impervious Area (ac)		Building/Lake Area (ac)	
	SF	AC	SF	AC	SF	AC
SITE	26,786.00	0.61				
Impervious Pavement			4,721.00	0.11		
Pervious Pavement	2,567.00	0.06				
Building					436.00	0.01
Splash Pad			314.00	0.01		
Sidewalk			860.00	0.02		
Open Area	17,888.00	0.40				
Total	17,888.00	0.46	5,895.00	0.14	436.00	0.01
			Impervious + Building =		0.15	ac
%		76%		22%		2%

## **6. Water Quantity**

The proposed improvements add impervious area to the Site, but the proposed Retention basin and Swales are reducing significantly the amount of runoff from the Site.

The Pre-Improvement Run-off Volume for the 10 Year-1 day = 0.24 ac-ft

The Post- Improvement Run-off Volume for the 10 Year-1 day = 0.10 ac-ft

On this basis the reduction in stormwater runoff is expected to lower the design stages than those for the current conditions

The peak stage for the 100-Year, 3- day of current conditions is 19.91 feet

The peak stage for the 100-Year, 3-day of the proposed improvement is 19.9 feet .

The max flow for the Site for the 25 Year 3-day storm is 0.96 cfs. With the addition of the Retention Pond the max flow for the Site for the 25 year 3 day storm is 0.11 cfs reducing significantly the discharge.

The retention pond is required to contain the 10-year 24-hour rain event prior to discharge. This is achieved at an elevation of 19.61 and is equated to a volume of 0.16 acre-feet.

Refer to Appendix G for Stormwise (ICPR) and Appendix E for Stage Storage Reports.

## **7. Nutrient Loading Calculations and water quality**

The nutrient loading calculations for the current site (pre-development) and the proposed site (post-development) are provided in Appendix D. The assessment area for the site has been taken as the area within the silt fence around the construction site as shown in the Site Plan. The Site area within the Silt fence is 0.61 ac.

The required reduction efficiency is 95% for both TN and TP, to satisfy the new water quality rule for an impaired water body and OFW. To achieve this removal efficiency, 2.9 inches of dry retention is required. This corresponds to 0.15 ac-ft of dry retention volume over the 0.61 ac site.

Runoff from the site will be directed through swales to the Dry Retention basin.

Refer to Appendix D for nutrient loading calculations.

### 8. Retention Basin Recovery

To Dry Retention Basin Recovery calculation, show a total drawdown time of 15.43 hrs. with a permeability Rate of 0.00027 ft/sec.

<b>COACH FENN PARK</b>			
<b>Dry Retention Recovery Calculation</b>			
Dry Retention Bottom Area		4,574.00	SF
Depth		7.50	FT
Permeability Rate		0.00027	FT/Sec
Permeability Rate		3703.70	Sec/FT
Drawdown Time		27777.78	Sec
		7.72	Hrs
<b>Factor of Saftey = 2 (Total Drawdown Time)</b>		<b>15.43</b>	<b>Hrs</b>

Refer to Appendix C for the Saturated Hydraulic Conductivity value.

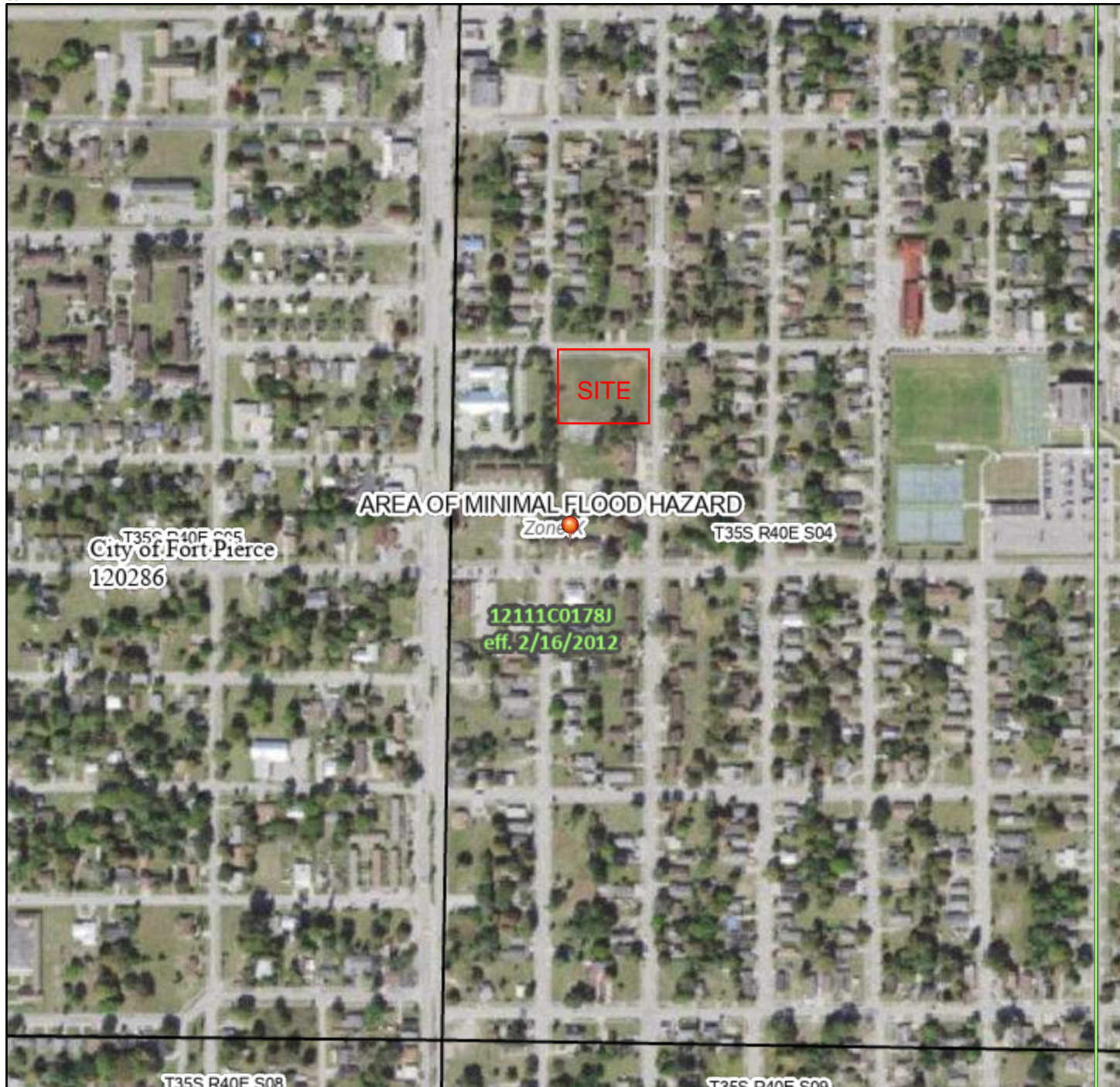
**APPENDIX 'A'**

**FEMA FIRM**

# National Flood Hazard Layer FIRMMette



80°21'14"W 27°27'47"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
OTHER FEATURES		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

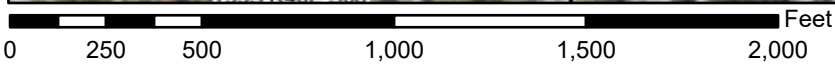
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **1/12/2026 at 8:01 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6,000

80°20'36"W 27°27'15"N

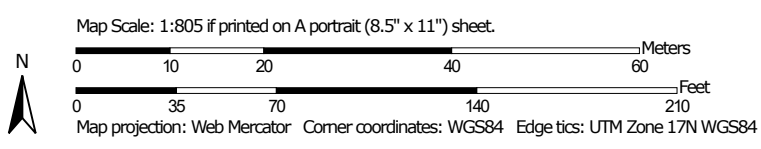
Basemap Imagery Source: USGS National Map 2023

**APPENDIX 'B'**  
**NRCS SOILS MAP**

Soil Map—St. Lucie County, Florida  
(COACH FENN PARK)




Soil Map may not be valid at this scale.




Soil Map—St. Lucie County, Florida  
(COACH FENN PARK)


### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

**Water Features**



Streams and Canals

**Transportation**



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

**Background**



Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: St. Lucie County, Florida

Survey Area Data: Version 19, Aug 29, 2025

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

Date(s) aerial images were photographed: Jan 18, 2022—Jan 30, 2022

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

## Map Unit Legend

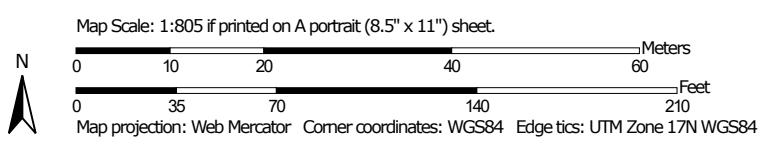
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
50	Waveland and Immokalee fine sands	1.1	35.9%
52	Waveland-Urban land complex	2.0	64.1%
<b>Totals for Area of Interest</b>		<b>3.2</b>	<b>100.0%</b>

**APPENDIX 'C'**  
**SATURATED HYDRAULIC CONDUCTIVITY**

Saturated Hydraulic Conductivity (Ksat), Standard Classes—St. Lucie County, Florida  
(COACH FENN PARK)




Soil Map may not be valid at this scale.



Saturated Hydraulic Conductivity (Ksat), Standard Classes—St. Lucie County, Florida  
(COACH FENN PARK)








## MAP LEGEND

### Area of Interest (AOI)








 Area of Interest (AOI)

### Soils







#### Soil Rating Polygons


-  Very Low (0.0 - 0.01)
-  Low (0.01 - 0.1)
-  Moderately Low (0.1 - 1)
-  Moderately High (1 - 10)
-  High (10 - 100)
-  Very High (100 - 705)
-  Not rated or not available

#### Soil Rating Lines


-  Very Low (0.0 - 0.01)
-  Low (0.01 - 0.1)
-  Moderately Low (0.1 - 1)
-  Moderately High (1 - 10)
-  High (10 - 100)
-  Very High (100 - 705)
-  Not rated or not available

#### Soil Rating Points






-  Very Low (0.0 - 0.01)
-  Low (0.01 - 0.1)
-  Moderately Low (0.1 - 1)
-  Moderately High (1 - 10)
-  High (10 - 100)
-  Very High (100 - 705)

 Not rated or not available


### Water Features

 Streams and Canals

### Transportation

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

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: St. Lucie County, Florida  
Survey Area Data: Version 19, Aug 29, 2025

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

Date(s) aerial images were photographed: Jan 18, 2022—Jan 30, 2022

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

## Saturated Hydraulic Conductivity (Ksat), Standard Classes

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
50	Waveland and Immokalee fine sands	81.9890	1.1	35.9%
52	Waveland-Urban land complex	81.9890	2.0	64.1%
<b>Totals for Area of Interest</b>			<b>3.2</b>	<b>100.0%</b>

### Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits. The classes are:

Very low: 0.00 to 0.01

Low: 0.01 to 0.1

Moderately low: 0.1 to 1.0

Moderately high: 1 to 10

High: 10 to 100

Very high: 100 to 705

### Rating Options

*Units of Measure:* micrometers per second

*Aggregation Method:* Dominant Component

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Fastest

*Interpret Nulls as Zero: No*

*Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)*

*Top Depth: 0*

*Bottom Depth: 36*

*Units of Measure: Inches*

**APPENDIX 'D'**  
**NUTRIENT LOADING CALCULATIONS**

## STORM WATER QUALITY TREATMENT EVALUATION.

### I. Project Description

The proposed project consists of the construction of an splash pad area , an small Pavillon , Restroom facilities and a parking Lot with 15 standard Pervious concrete parking spaces and a driveway and handicap impervious concrete space . To serve this facilities a water and sewer services are proposed. To provide water quality a dry retention area is proposed on the south side of the parking lot.

### II. Project Characteristics

- A. Type of Project : Low intensity Commercial
- B. Location : Saint Lucie County
- C. HUC 12: 030902060504
- D. Development within an Impaired Basin: Yes
- E. OFW Downstream Yes

#### Land Use

- 1. Total Area = 0.61 ac
- 2. Impervious area=
  - a. Building Roof area= 0.01 ac
  - b. Impervious Pavement 0.14 ac
  - c. Pervious Pavement 0.06
- 3. Pervious Area= 0.41 ac

### F. Water Level Elevations

- 1. SHWT EL.= 11.00 NGVD

### III. Water Quality Treatment Criteria

A. Stormwater treatment (Subsection 8.3.2 ,ERP AH Vopl. I)

1. TP Reduction= 95.00 %

2. TN Reduction= 95.00 %

3. Post-Development < Pre-Development

B. Commercial Treatment Required? No

#### IV. Water Quality Treatment Calculations

A. Rainfall Characteristics

1. Meteorological Region: Zone 2 (ERP Vol I Appex M1)

2. Average Annual Rainfall Depth= 54 in/yr (ERP Vol I Appex M3)

B. Pre-Development Annual Loading

1. Land Use Category: Low Intensity Commercial

a. EMCs

i. P= 0.93 mg/l (Table 9.2, ERP AH Vol I)

ii. N= 0.19 mg/l (Table 9.2, ERP AH Vol I)

b. Hydrologic Conditions: Good

c. HSG= Group D

d. Impervious Areas: 0.00 ac

e. Impervious CN= 98 (table 2-2a USDA-NRCS TR 55)

f. DCIA= 0.00 ac

g. DCIA%=  $\frac{\text{Impervious area}}{\text{Total area}} \times 100\%$  (Subsection 9.2.1 ERP AH Vol I)

DCIA%= 0.00 %

h. Pervious Area= 0.61 ac

i. Pervious CN=	89	(Table 2-2a, USDA-NCRS TR-55)
j. Non-DCIA=	0.00	((Pervious CN x Pervious Area)+(Impervious CN x Non-DCIA))/ Pervious Area+(Imp
k. Non-DCIA CN=	89.0	
2. ROC=	0.224	(Appendix N, ERP AH Vol I)
3. Average Annual Rainfall (ac-ft/yr)		
Annual Runoff Volume(as-ft/yr)=	0.62 ac-ft/yr	(Area)(Average Annual Rainfall
4. Annual Mass Loading (kg/yr)		
a. TN annual mass loading=	0.15 kg/yr	
b. TP annual mass loading=	0.71 kg/yr	

**C. Post Development Annual Loading**

1. Land Use:	Low Intensity Commercial	
a. EMCs		
i. P=	0.93 mg/l	(Table 9.2, ERP AH Vol I)
ii. N=	0.19 mg/l	(Table 9.2, ERP AH Vol I)
b. Hydrologic Conditions:	Good	
c. HSG=	Group D	
d. Impervious Areas:	0.15 ac	
e. Impervious CN=	98	(table 2-2a USDA-NRCS TR 55)
f. DCIA=	0.01 ac	
g. DCIA%=	$\frac{\text{Impervious area}}{\text{Total area}} \times 100\%$	(Subsection 9.2.1 ERP AH Vol I)
DCIA%=	1.27 %	
h. Pervious Area=	0.41 ac	

i. Pervious CN=	89	(Table 2-2a, USDA-NCRS TR-55)
j. Non-DCIA=	0.14 ac	((Pervious CN x Pervious Area)+(Impervious CN x Non-DCIA))/ Pervious Area+(Imp
k. Non-DCIA CN=	89.14	
2. ROC=	0.24	(Appendix N, ERP AH Vol I)
3. Annual Runoff Volume(ac-ft/yr)=	0.65 ac-ft/yr	(Area)(Average Annual Rainfall Depth )(ROC)(1/12 ft/in.)
4. Annual Mass Loading (kg/yr)		
a. TN annual mass loading=	0.15 kg/yr	
b. TP annual mass loading=	0.75 kg/yr	

#### D. Required Load Reduction

##### 1. TP

a. 95 % Reduction		(Subsection 8.3.2(a), ERP AH Vol. I)
b. Pre/Post Percent Reduction Calculation		(Subsection 8.3.2(a), ERP AH Vol. I)
1-(Pre-developm. Loading/Post Developmt. Loading))x100%=	4.74 %	
c. Required Load Removal=	<b>0.71</b> kg/yr	

##### 2. TN

a. <b>95 % Reduction</b>		(Subsection 8.3.2(a), ERP AH Vol. I)
b. Pre/Post Percent Reduction Calculation		(Subsection 8.3.2(a), ERP AH Vol. I)
(1-(PRE-DEVELOPM. LOADING/POST DEVELOPM. LOADINGbefore treatment))x100%=	4.74 %	
c. Required Load Removal=	4.50 kg/yr	

**3. REQUIRED REDUCTION:**

	TP	TN
Net Improvement	4.74 %	4.74 %
% Reduction	95 %	95 %
Required	95 %	95 %

**E. BMP DESIGN**

**1. Dry Retention :**

a. Retention Volume

i.  $(2.9\text{inch})(0.61\text{ac})= 0.15 \text{ ac-ft}$

ii. Percentage of Reduction provided 95.0 %

**APPENDIX 'E'**  
**STAGE STORAGE CALCULATIONS**

## PRE DEVELOPMENT STAGE STORAGE

Project Name: **COACH FENN PARK**  
 Project Number: **42765.00**

Designed:	LEP
Checked:	TM

### I. Site Data

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#### A. Acreage

1.	<b>Total</b>		<b>0.61</b>	ac
2.	Impervious			
	a.	Buildings	0.00	ac
	b.	Roadway / Parking Area	0.00	ac
	c.	Sidewalks / Curbs	0.00	ac
	d.	N/A	0.00	ac
	<b>Total Impervious</b>		<b>0.00</b>	<b>ac</b>
3.	Water management			
	a.	Lake Surface	0.00	ac
	b.	Lake Bank	0.00	ac
	<b>Total lake</b>		<b>0.00</b>	<b>ac</b>
	c.	Retention Area Bottom	0.00	ac
	d.	Retention Area Bank	0.00	ac
	e.	NA	0.00	ac
	<b>Total retention/detention</b>		<b>0.00</b>	<b>ac</b>
4.	Pervious			
	a.	Open Space	0.61	ac
	b.	Pervious Pavement	0.00	ac
	c.	NA	0.00	ac
	d.	NA	0.00	ac
	<b>Total Pervious</b>		<b>0.61</b>	<b>ac</b>

#### B. Minimum elevations

1.	Roads and Parking	N/A	ft-NAVD
2.	Finished Floor	N/A	ft-NAVD

#### C. Allowable discharge

1.	Pre vs Post (25 Yr-1 Day)	N/A	CSM
2.	Allowable discharge for this project (25yr 1dy)	N/A	CFS

#### D. Water level Elevation

1.	Wet season water table	11.00	ft-NAVD
2.	Control elevation	N/A	ft-NAVD
3.	Receiving body water level	N/A	ft-NAVD

#### E. Rainfall amounts

1.	Design Storm (10-year, 1-day)	6.0	inches
2.	Design Storm (25-year, 3-day)	10.00	inches
3.	Design Storm (100-year, 3-day)	12.00	inches
4.	Finish Floor (100-year, 3-day)	12.00	inches

## PRE DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed: 

LEP
TM

  
 Checked:

### III. Computations

#### B. SCS Curve Number

1. The wet season water/control elevation and the control elevation N/A      ft-NAVD
2. Average site finished grade

Land use	Area-A (ac)	Grade-G (ft)	A X G
Buildings	0.00	0.00	0.00
Roadway / Parking Area	0.00	0.00	0.00
Sidewalks / Curbs	0.00	0.00	0.00
N/A	0.00	0.00	0.00
Lake Surface	0.00	0.00	0.00
Lake Bank	0.00	0.00	0.00
Retention Area Bottom	0.00	0.00	0.00
Retention Area Bank	0.00	0.00	0.00
NA	0.00	0.00	0.00
Open Space	0.61	19.89	12.13
Pervious Pavement	0.00	0.00	0.00
NA	0.00	0.00	0.00
NA	0.00	0.00	0.00
Total	0.61		12.13
<b>Weighted Site Grade</b>			<b>19.89 ft-NAVD</b>

#### 3. Runoff Curve Number

Soil Type	Cover Type	CN	HSG	Area	CN*A
Waveland and Immokalee fine sands	Open Space (Fair)	89	D	0.61	54.29
Total				0.61	54.29
Weighted CN		89			

Note: Curve number referenced from TR55 table 2-2a

4. Calculate site-wide  $= (1000/CN) - 10$   
 $= 1.24$  inches of site-wide storage, S

5. Initial Abstraction  $= 0.247$

Note: Referece TR55 Lookup Table 4-1

6. Ia/S  $= 0.20$

#REF!

### PRE DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
Project Number: 42765.00

Designed:	LEP
Checked:	TM

### III. Computations

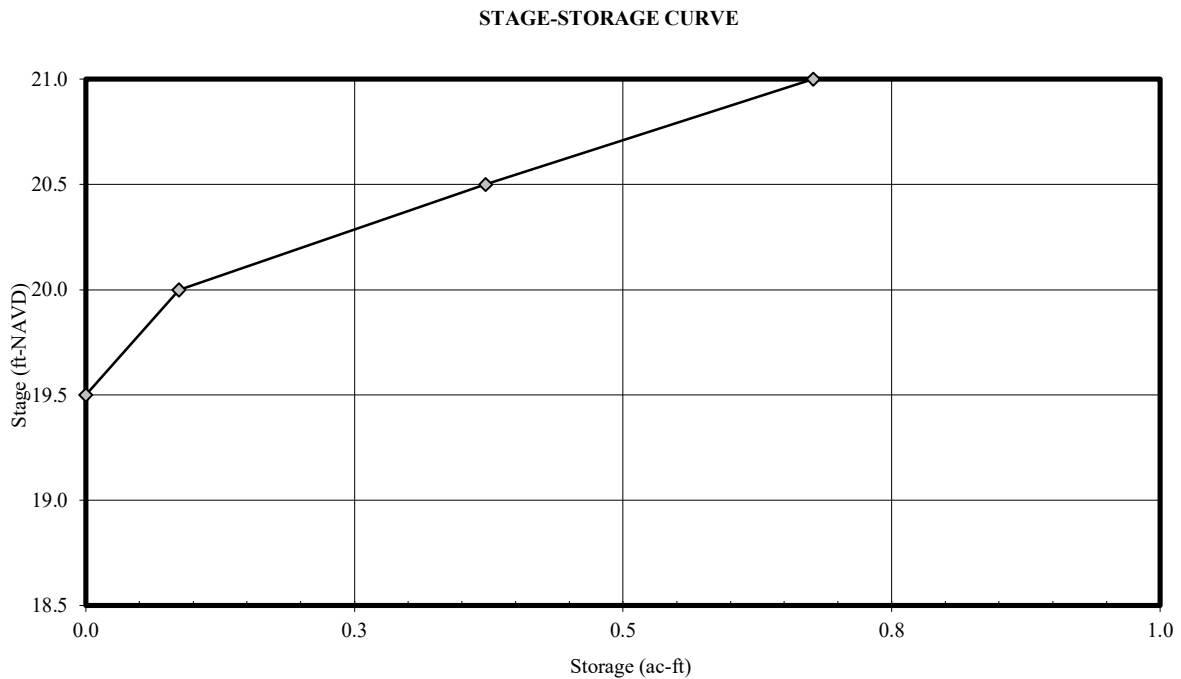
#### C. Project surface storage

##### 1. Assumptions

Land Use	Start	End	Area
Buildings	0.00	0.00	0.00
Roadway / Parking Area	0.00	0.00	0.00
Sidewalks / Curbs	0.00	0.00	0.00
N/A	0.00	0.00	0.00
Lake Surface	0.00	0.00	0.00
Lake Bank	0.00	0.00	0.00
Retention Area Bottom	0.00	0.00	0.00
Retention Area Bank	0.00	0.00	0.00
NA	0.00	0.00	0.00
Open Space	19.58	20.20	0.61
Pervious Pavement	0.00	0.00	0.00
NA	0.00	0.00	0.00
NA	0.00	0.00	0.00

2. For Stage-Storage curve data, please refer to table attached.

3. Stage-Storage curve.



**PRE DEVELOPMENT STAGE STORAGE**

Project Name: COACH FENN PARK  
 Project Number: 42765

Designed: LEP  
 Checked: TM

**Stage-Storage Curve Data**

Area (ac)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.00	
Start (ft-NAVD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.58	0.00	0.00	0.00	
Ends (ft-NAVD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.20	0.00	0.00	0.00	
Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	
Stage (ft-NAVD)	Buildings	Roadway / Parking Area	Sidewalks / Curbs	N/A	Lake Surface	Lake Bank	Retention Area Bottom	Retenti on Area Bank	Open Space	Pervious Pavement	NA	NA	Total	
19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.09	
20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.37	
21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	0.68	
21.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.98	
22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	0.00	0.00	0.00	1.29	
22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00	1.59	

## PRE DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

### IV. Design Storm Stages

#### A. Stage Summary

Design Storm	Stage (ft)
10-Year 1-day storm	20.27
25-Year 3-day storm	20.61
100-Year 3-day storm	20.78

#### B. 10-Year 1-Day Event

1. The rainfall of the 10-year 1-day storm  
 = 6.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 4.74 inches of runoff from the 10-year 1-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.24 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 20.27 feet, see table below

Storage (ac-ft)	Stage (ft)
0.09	20.00
0.24	20.27
0.37	20.50

#### C. 25-Year 3-Day Event

1. The rainfall of the 25-year 3-day storm  
 = 10.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 8.66 inches of runoff from the 25-year 1-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.44 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 20.61 feet, see table below

Storage (ac-ft)	Stage (ft)
0.37	20.50
0.44	20.61
0.68	21.00

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

D. 100-Year 3-Day Design Event

1. The rainfall of the 100-year 3-day storm  
 = 12.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 10.63 inches of runoff from the 100-year 3-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.54 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 20.78 feet, see table below

Storage (ac-ft)	Stage (ft)
0.37	20.50
0.54	20.78
0.68	21.00

## POST DEVELOPMENT STAGE STORAGE

Project Name: **COACH FENN PARK**  
 Project Number: **42765.00**

Designed:	LEP
Checked:	TM

### I. Site Data

---

#### A. Acreage

<b>1. Total</b>		<b>0.61 ac</b>
2. Impervious		
a. Buildings		0.01 ac
b. Roadway / Parking Area		0.11 ac
c. Sidewalks		0.02 ac
d. Splash Pad		0.01 ac
<b>Total Impervious</b>		<b>0.15 ac</b>
3. Water management		
a. Dry Retention Bottom		0.10 ac
b. Dry Retention Bank		0.06 ac
<b>Total Dry Retention</b>		<b>0.16 ac</b>
c. Swale Bottom		0.00 ac
d. Swale Bank		0.03 ac
e. NA		0.00 ac
<b>Total retention/detention</b>		<b>0.03 ac</b>
4. Pervious		
a. Open Space		0.20 ac
b. Pervious Pavement		0.06 ac
c. NA		0.00 ac
d. NA		0.00 ac
<b>Total Pervious</b>		<b>0.26 ac</b>

#### B. Minimum elevations

1. Roads and Parking		N/A ft-NAVD
2. Finished Floor		N/A ft-NAVD

#### C. Allowable discharge

1. Pre vs Post (25 Yr-1 Day)		N/A CSM
2. Allowable discharge for this project (25yr 1dy)		N/A CFS

#### D. Water level Elevation

1. Wet season water table		11.00 ft-NAVD
2. Control elevation		N/A ft-NAVD
3. Receiving body water level		N/A ft-NAVD

#### E. Rainfall amounts

1. Design Storm (10-year, 1-day)		6.0 inches
2. Design Storm (25-year, 3-day)		10.00 inches
3. Design Storm (100-year, 3-day)		12.00 inches
4. Finish Floor (100-year, 3-day)		13.00 inches

## POST DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

### III. Computations

---

#### A. Quality

1. Compute the first inch of runoff from the developed project
  - = 1 in X total area X (1ft/12in)
  - = 0.05 ac-ft for the first inch of runoff
  
2. Compute 2.5 inches times the percentage of imperviousness
  - a. Site area for water quality pervious/impervious calculations only:
    - = Total project - (water surface + roof)
    - = 0.49 ac of site area for water quality pervious/impervious
  - b. Impervious area for water quality pervious/impervious calculation only:
    - = (site area for water quality pervious/impervious) - pervious
    - = 0.17 ac if impervious area for water quality pervious/impervious
  - c. Percentage of imperviousness for water quality:
    - = (Impervious area for water quality/site area for water quality) 100%
    - = 35.22 % impervious
  - d. For 2.5 inches times the percentage impervious:
    - = 2.5 X percent impervious
    - = 0.88 inches to be treated
  - e. Compute volume required for water quality detention:
    - = Inches to be treated X (total site - Lake)
    - = 0.03 ac-ft for the 2.5 inches times the percentage imperviousness
  
3. Since the 0.05 ac-ft for the first inch of runoff is greater than the 0.03 ac-ft for the 2.5 inches times the percentage imperviousness, 0.05 ac-ft controls

#### 4. Quality Stage

Storage (ac-ft)	Stage (ft)
0.00	18.50
0.05	18.92
0.06	19.00

## POST DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed: 

LEP
TM

  
 Checked:

### III. Computations

#### B. SCS Curve Number

1. The wet season water/control elevation and the control elevation N/A ft-NAVD

2. Average site finished grade

Land use	Area-A (ac)	Grade-G (ft)	A X G
Buildings	0.01	20.50	0.21
Roadway / Parking Area	0.11	0.00	0.00
Sidewalks	0.02	19.95	0.40
Splash Pad	0.01	20.00	0.20
Dry Retention Bottom	0.10	18.50	1.92
Dry Retention Bank	0.06	19.10	1.15
Swale Bottom	0.00	18.50	0.00
Swale Bank	0.03	19.10	0.65
NA	0.00	0.00	0.00
Open Space	0.20	19.89	3.98
Pervious Pavement	0.06	19.70	1.18
NA	0.00	0.00	0.00
NA	0.00	0.00	0.00
Total	0.61		9.68
<b>Weighted Site Grade</b>		<b>19.36</b>	<b>15.93</b> ft-NAVD

3. Runoff Curve Number

Soil Type	Cover Type	CN	HSG	Area	CN*A
	Paved	98		0.15	14.70
	Open Space (Fair)	49	A	0.20	9.80
Total				0.35	24.50
Weighted CN		70			

Note: Curve number referenced from TR55 table 2-2a

4. Calculate site-wide moisture storage, S

$$= (1000/CN) - 10$$

$$= 4.29 \text{ inches of site-wide storage, S}$$

5. Initial Abstraction

$$= 0.381$$

Note: Referece TR55 Lookup Table 4-1

6. Ia/S

$$= 0.09$$

## POST DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

### III. Computations

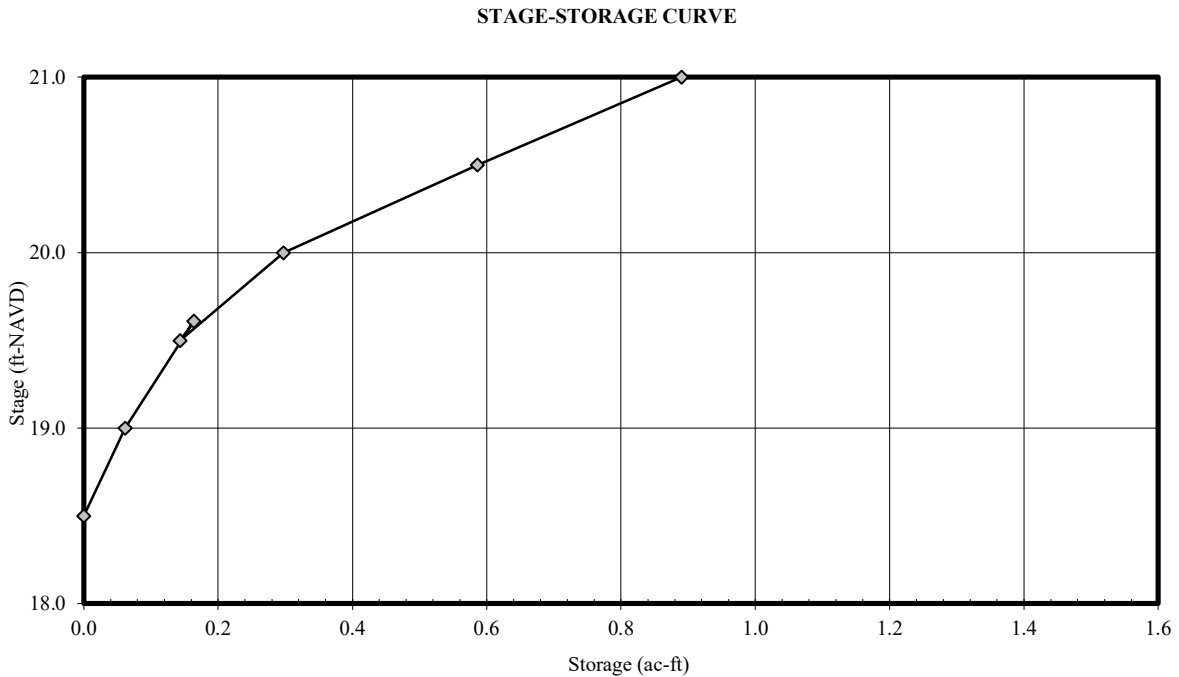
#### C. Project surface storage

##### 1. Assumptions

Land Use	Start	End	Area
Buildings	20.50	20.50	0.01
Roadway / Parking Area	19.75	20.15	0.11
Sidewalks	19.75	20.15	0.02
Splash Pad	20.00	20.00	0.10
Dry Retention Bottom	18.50	18.50	0.10
Dry Retention Bank	18.50	19.70	0.06
Swale Bottom	18.50	18.50	0.00
Swale Bank	18.50	19.70	0.03
NA	0.00	0.00	0.00
Open Space	19.58	20.20	0.20
Pervious Pavement	19.70	19.70	0.06
NA	0.00	0.00	0.00
NA	0.00	0.00	0.00

2. For Stage-Storage curve data, please refer to table attached.

3. Stage-Storage curve.



### POST DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765

Designed: LEP  
 Checked: TM

**Stage-Storage Curve Data**

Area (ac)	0.01	0.11	0.02	0.01	0.10	0.06	0.00	0.03	0.20	0.06	0.00	0.00	
Start (ft-NAVD)	20.50	19.75	19.75	20.00	18.50	18.50	18.50	18.50	19.58	19.70	0.00	0.00	
Ends (ft-NAVD)	20.50	20.15	20.15	20.00	18.50	19.70	18.50	19.70	20.20	19.70	0.00	0.00	
Difference	0.00	0.40	0.40	0.00	0.00	1.20	0.00	1.20	0.62	0.00	0.00	0.00	
Stage (ft-NAVD)	Buildings	Roadway / Parking Area	Sidewalks	Splash Pad	Dry Retention Bottom	Dry Retention Bank	Swale Bottom	Swale Bank	Open Space	Pervious Pavement	NA	NA	Total
18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.06
19.61	0.00	0.00	0.00	0.00	0.12	0.03	0.00	0.02	0.00	0.00	0.00	0.00	0.16
19.50	0.00	0.00	0.00	0.00	0.10	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.14
20.00	0.00	0.01	0.00	0.00	0.16	0.05	0.00	0.03	0.03	0.02	0.00	0.00	0.30
20.50	0.00	0.06	0.01	0.01	0.21	0.08	0.00	0.05	0.12	0.05	0.00	0.00	0.59
21.00	0.01	0.12	0.02	0.01	0.26	0.11	0.00	0.06	0.22	0.08	0.00	0.00	0.89
21.50	0.01	0.17	0.03	0.02	0.31	0.14	0.00	0.08	0.32	0.11	0.00	0.00	1.19
22.00	0.02	0.23	0.04	0.02	0.36	0.17	0.00	0.10	0.42	0.14	0.00	0.00	1.50

## POST DEVELOPMENT STAGE STORAGE

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

### IV. Design Storm Stages

---

#### A. Stage Summary

Design Storm	Stage (ft)
10-Year 1-day storm	19.51
25-Year 3-day storm	20.03
100-Year 3-day storm	20.19

#### B. 10-Year 1-Day Event

1. The rainfall of the 10-year 1-day storm  
 = 6.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 2.81 inches of runoff from the 10-year 1-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.14 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 19.51 feet, see table below

Storage (ac-ft)	Stage (ft)
0.06	19.00
0.14	19.51
0.14	19.50

#### C. 25-Year 1-Day Event

1. The rainfall of the 25-year 3-day storm  
 = 10.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 6.22 inches of runoff from the 25-year 3-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.32 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 20.03 feet, see table below

Storage (ac-ft)	Stage (ft)
0.30	20.00
0.32	20.03
0.59	20.50

Project Name: COACH FENN PARK  
 Project Number: 42765.00

Designed:	LEP
Checked:	TM

D. 100-Year 3-Day Design Event

1. The rainfall of the 100-year 3-day storm  
 = 12.00 inches
2. Inches of runoff, Q  
 =  $[P - (0.2 \times S)]^2 / [P + (0.8 \times S)]$   
 = 8.05 inches of runoff from the 100-year 3-day storm
3. Runoff Volume  
 = Inches of runoff X Site area  
 = 0.41 ac-ft runoff volume
4. The zero-discharge stage corresponding to the volume of runoff is  
 = 20.19 feet, see table below

Storage (ac-ft)	Stage (ft)
0.30	20.00
0.41	20.19
0.59	20.50

**APPENDIX 'F'**  
**SFWMD RAINFALL RETURNS**

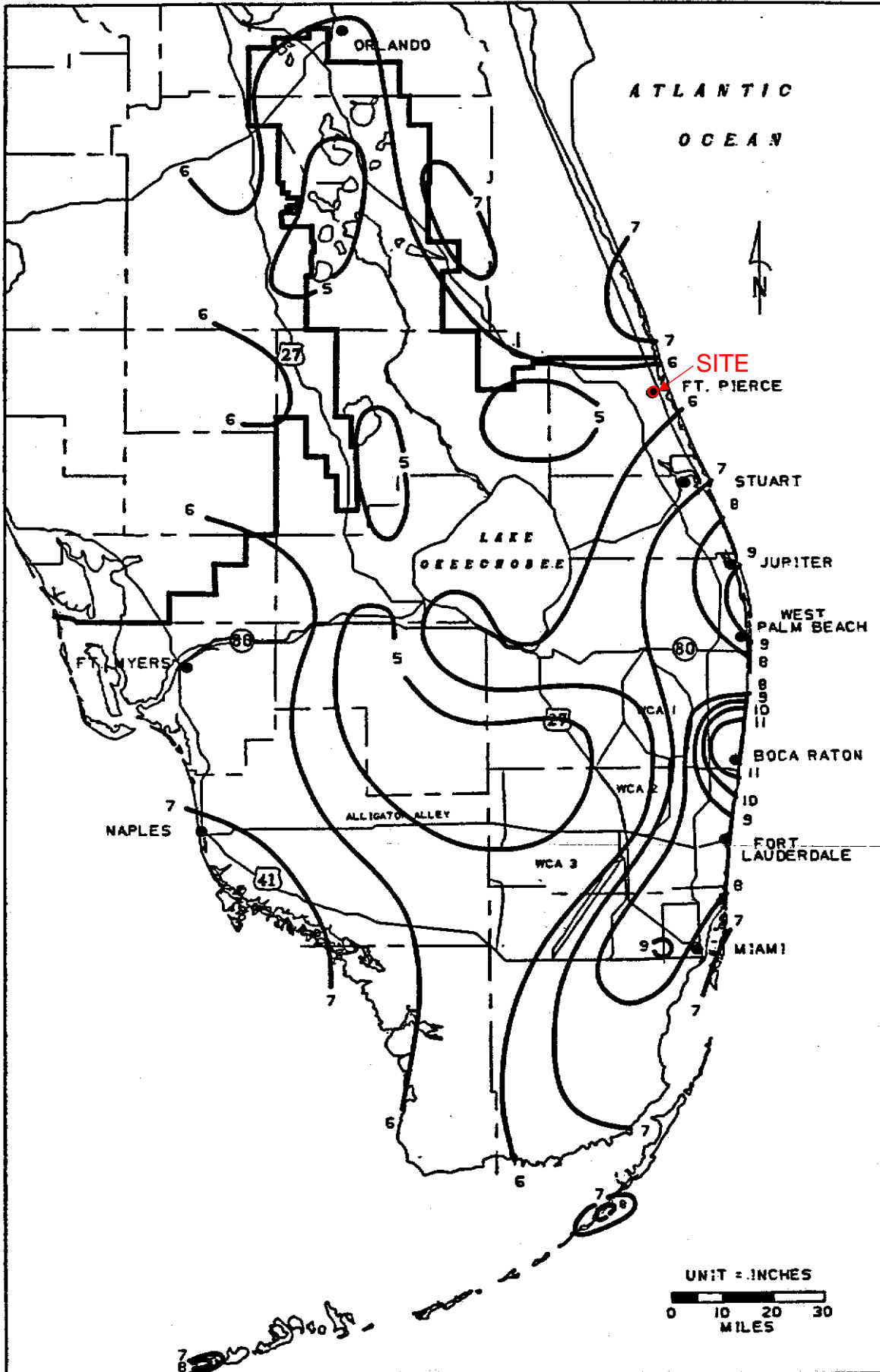


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

Figure C-4

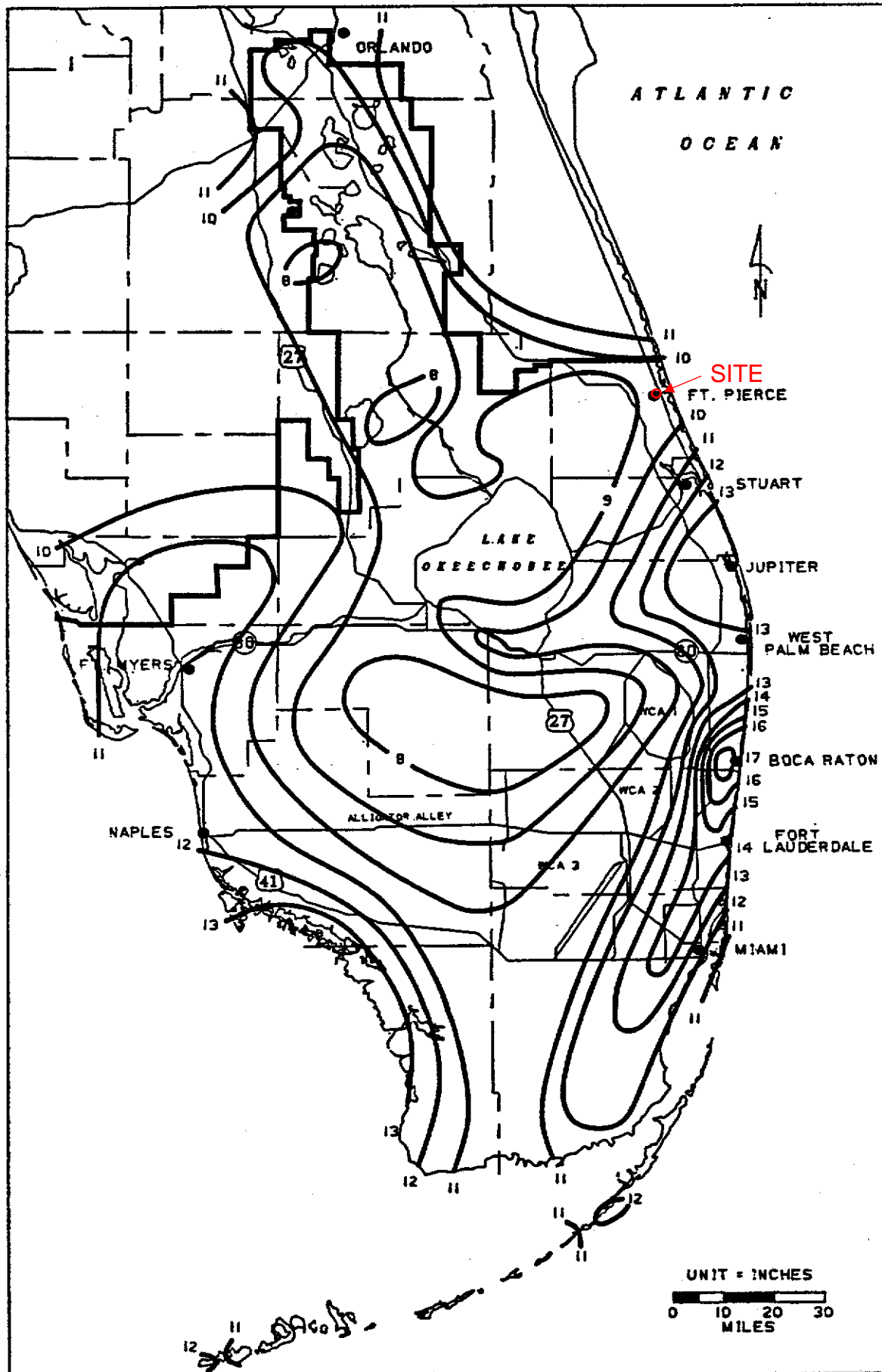


FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

Figure C-8

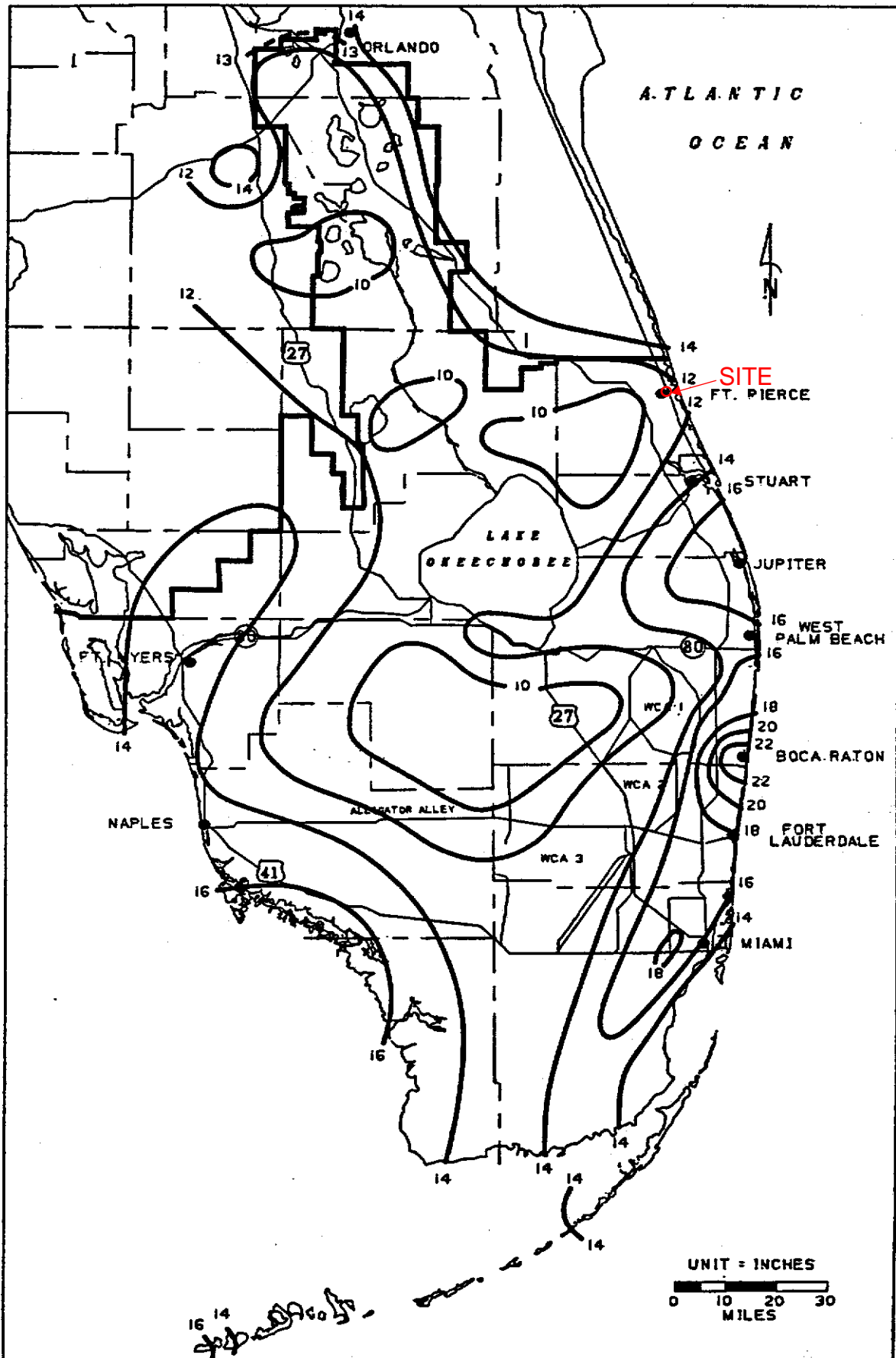


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

Figure C-9

**APPENDIX 'G'**  
**STORMWISE (ICPR) REPORTS**



ICPR PRE DEVELOPMENT MODEL

Link Min/Max Conditions : Multi Item | (sim, name) [EXISTING CONDITIONS]

Sim Name	Link Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
100Y-3D	L-DISCHARGE	1.31	0.00	-0.03	0.64	0.64	0.64
10Y-1D	L-DISCHARGE	0.93	0.00	0.02	0.57	0.57	0.57
25Y-3D	L-DISCHARGE	0.96	0.00	-0.02	0.58	0.58	0.58

## Node Max Conditions : Multi Item | (sim, name) [EXISTING CONDITIONS]

Sim Name	Node Name	Warning Stage [ft]	Alert Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
100Y-3D	N-SITE	0.00	0.00	19.91	-0.0008	1.31	1.31	13063
100Y-3D	NZA-DISCH ARGE	0.00	0.00	0.00	0.0000	1.31	0.00	0
10Y-1D	N-SITE	0.00	0.00	19.90	0.0010	1.42	0.93	12701
10Y-1D	NZA-DISCH ARGE	0.00	0.00	0.00	0.0000	0.93	0.00	0
25Y-3D	N-SITE	0.00	0.00	19.90	-0.0006	0.97	0.96	12731
25Y-3D	NZA-DISCH ARGE	0.00	0.00	0.00	0.0000	0.96	0.00	0

Simple Basin : Multi Item | (sim, name) : Runoff Summary [EXISTING CONDITIONS]

Sim Name	Basin Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]
100Y-3D	SMB-SITE	1.31	36.0000	13.00	10.31	0.4400
10Y-1D	SMB-SITE	1.42	12.0333	6.00	3.77	0.4400
25Y-3D	SMB-SITE	0.97	36.0000	10.00	7.45	0.4400

Simple Basin: SMB-SITE

Scenario: EXISTING CONDITIONS  
 Node: N-SITE  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 10.0000 min  
 Max Allowable Q: 0.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 0.4400 ac  
 Curve Number: 68.3  
 Ia/S: 0.08  
 % Impervious: 34.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Node: N-SITE

Scenario: EXISTING CONDITIONS  
 Type: Stage/Volume  
 Base Flow: 0.00 cfs  
 Initial Stage: 19.50 ft  
 Warning Stage: 0.00 ft  
 Alert Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
19.50	0.00	0
20.00	0.09	3920
20.50	0.37	16117
21.00	0.68	29621
21.50	0.98	42689
22.00	1.29	56192
22.50	1.59	69260

Comment:

**Node: NZA-DISCHARGE**

Scenario: EXISTING CONDITIONS  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 0.00 ft  
 Warning Stage: 0.00 ft  
 Alert Stage: 0.00 ft  
 Boundary Stage:

Comment:

**Weir Link: L-DISCHARGE**

Scenario:	EXISTING CONDITIONS	<b>Bottom Clip</b>
From Node:	N-SITE	Default: 0.00 ft
To Node:	NZA-DISCHARGE	Op Table:
Link Count:	1	Ref Node:
Flow Direction:	Both	<b>Top Clip</b>
Damping:	0.0000 ft	Default: 0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:
Geometry Type:	Irregular	Ref Node:
Invert:	19.81 ft	<b>Discharge Coefficients</b>
Control Elevation:	19.81 ft	Weir Default: 2.800
Cross Section:	X-SITE	Weir Table:
		Orifice Default: 0.600
		Orifice Table:

Comment:

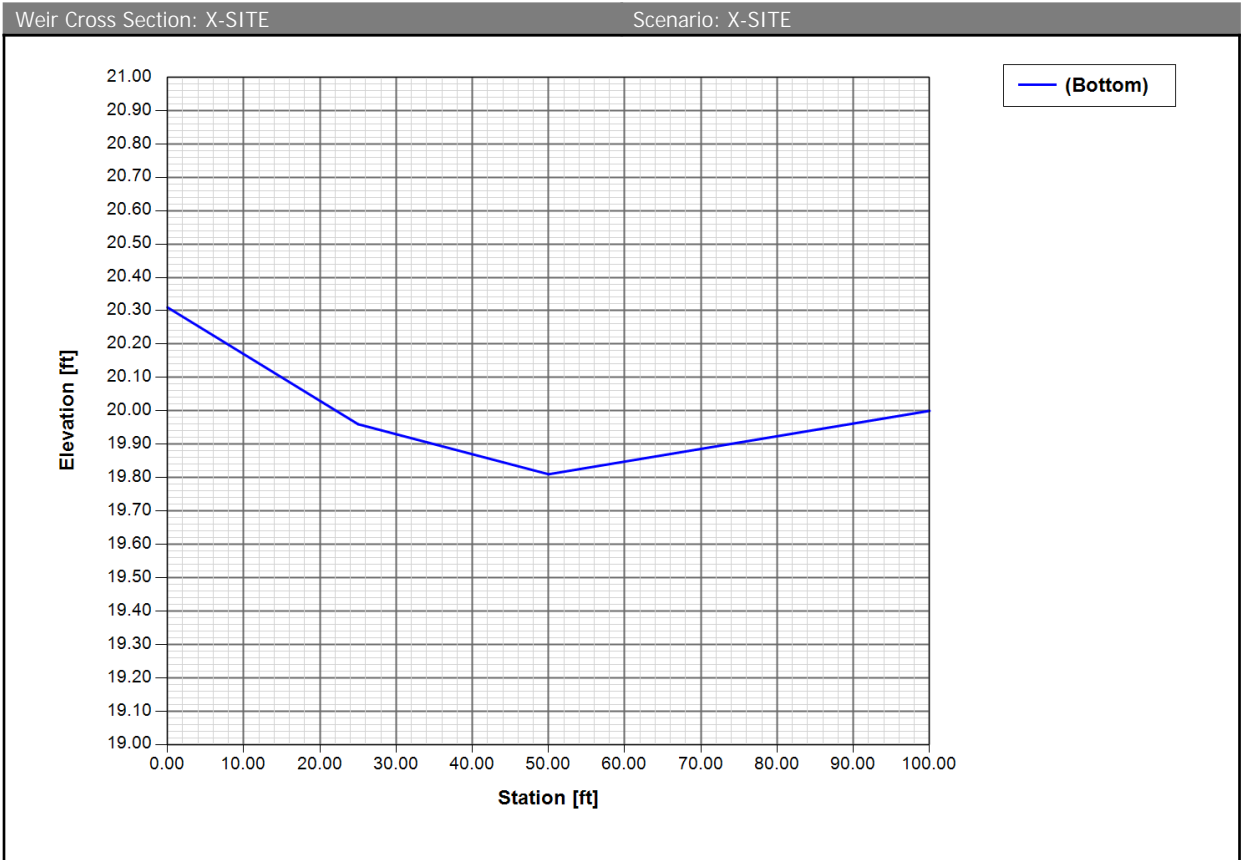
**Weir Cross Section: X-SITE**

Scenario: EXISTING CONDITIONS  
 Lid: No

**Bottom Point Table**

Order	Station [ft]	Elevation [ft]
0	0.00	20.31
1	25.00	19.96
2	50.00	19.81
3	100.00	20.00

Comment:



Simulation: 100Y-3D  
 Scenario: EXISTING CONDITIONS  
 Run Date/Time: 1/14/2026 10:09:50 AM  
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

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

Output Time Increments

Hydrology

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

Surface Hydraulics

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

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
Unit Hydrograph Folder:

Lookup Tables

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

Tolerances & Options

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

IA Recovery Time: 24.0000 hr  
Ia/S: 0.20 dec  
  
Smp/Man Basin Rain Opt: Global  
  
Rainfall Name: ~FLMOD  
Rainfall Amount: 13.00 in  
Storm Duration: 72.0000 hr  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area (1D): 100 ft2  
Energy Switch (1D): Energy

Comment:

Simulation: 10Y-1D

Scenario: EXISTING CONDITIONS  
Run Date/Time: 1/14/2026 10:10:23 AM

Program Version: StormWise 4.08.03

**General**

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

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

**Output Time Increments**

**Hydrology**

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

**Surface Hydraulics**

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

**Restart File**

Save Restart: False

**Resources & Lookup Tables**

**Resources**

Rainfall Folder:

Unit Hydrograph Folder:

**Lookup Tables**

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

**Tolerances & Options**

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	
Over-Relax Weight 0.5 dec	la/S: 0.20 dec
Fact:	
dZ Tolerance: 0.0010 ft	
Max dZ: 1.0000 ft	Smp/Man Basin Rain Global
	Opt:
Link Optimizer Tol: 0.0001 ft	

Rainfall Name: ~FLMOD  
 Rainfall Amount: 6.00 in  
 Storm Duration: 24.0000 hr  
 Dflt Damping (1D): 0.0050 ft  
 Min Node Srf Area 100 ft2  
 (1D):  
 Energy Switch (1D): Energy

Comment:

Simulation: 25Y-3D

Scenario: EXISTING CONDITIONS  
 Run Date/Time: 1/14/2026 10:10:34 AM  
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

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

Output Time Increments

Hydrology

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

Surface Hydraulics

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

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:

Unit Hydrograph  
Folder:

Curve Number Set:

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

Tolerances & Options

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

IA Recovery Time: 24.0000 hr  
  
Ia/S: 0.20 dec  
  
Smp/Man Basin Rain Global  
Opt:  
  
Rainfall Name: ~FLMOD  
Rainfall Amount: 10.00 in  
Storm Duration: 72.0000 hr  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area 100 ft2  
(1D):  
Energy Switch (1D): Energy

Comment:



ICPR POST DEVELOPMENT MODEL

Link Min/Max Conditions : Multi Item | (sim, name) [POST DEVELOPMENT]

Sim Name	Link Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
100Y-3D	L-DISCHARGE	0.89	0.00	0.03	0.57	0.57	0.57
100Y-3D	L-SITE TO RETENTION	1.49	-0.42	-1.50	0.08	0.08	0.08
10Y-1D	L-DISCHARGE	0.00	0.00	0.00	0.00	0.00	0.00
10Y-1D	L-SITE TO RETENTION	1.42	0.00	0.01	0.00	0.00	0.00
25Y-3D	L-DISCHARGE	0.11	0.00	0.00	0.18	0.18	0.18
25Y-3D	L-SITE TO RETENTION	0.97	0.00	-0.06	0.02	0.02	0.02

Node Max Conditions : Multi Item | (sim, name) [POST DEVELOPMENT]

Sim Name	Node Name	Warning Stage [ft]	Alert Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
100Y-3D	DISCHARGE	0.00	0.00	0.00	0.0000	0.89	0.00	0
100Y-3D	N-RETENTION AREA	0.00	0.00	19.90	0.0010	1.72	1.23	9219
100Y-3D	N-SITE	0.00	0.00	19.90	0.0010	1.31	1.49	9075
10Y-1D	DISCHARGE	0.00	0.00	0.00	0.0000	0.00	0.00	0
10Y-1D	N-RETENTION AREA	0.00	0.00	19.65	0.0010	1.80	0.00	8379
10Y-1D	N-SITE	0.00	0.00	19.72	0.0009	1.42	1.42	4473
25Y-3D	DISCHARGE	0.00	0.00	0.00	0.0000	0.11	0.00	0
25Y-3D	N-RETENTION AREA	0.00	0.00	19.86	0.0010	1.29	0.11	9109
25Y-3D	N-SITE	0.00	0.00	19.86	0.0010	0.97	0.97	8230

Simple Basin : Multi Item | (sim, name) : Runoff Summary [POST DEVELOPMENT]

Sim Name	Basin Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]
100Y-3D	SMB-RETENTIO N AREA	0.49	36.0000	13.00	6.90	0.2300
100Y-3D	SMB-SITE	1.31	36.0000	13.00	10.31	0.4400
10Y-1D	SMB-RETENTIO N AREA	0.38	12.0333	6.00	1.95	0.2300
10Y-1D	SMB-SITE	1.42	12.0333	6.00	3.77	0.4400
25Y-3D	SMB-RETENTIO N AREA	0.33	36.0000	10.00	4.61	0.2300
25Y-3D	SMB-SITE	0.97	36.0000	10.00	7.45	0.4400

Simple Basin: SMB-RETENTION AREA

Scenario: POST DEVELOPMENT  
 Node: N-RETENTION AREA  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 10.0000 min  
 Max Allowable Q: 0.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 0.2300 ac  
 Curve Number: 49.0  
 Ia/S: 0.04  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Simple Basin: SMB-SITE

Scenario: POST DEVELOPMENT  
 Node: N-SITE  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 10.0000 min  
 Max Allowable Q: 0.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 0.4400 ac  
 Curve Number: 68.3

Ia/S: 0.08  
 % Impervious: 34.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

**Node: DISCHARGE**

Scenario: POST DEVELOPMENT  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 0.00 ft  
 Warning Stage: 0.00 ft  
 Alert Stage: 0.00 ft  
 Boundary Stage:

Comment:

**Node: N-RETENTION AREA**

Scenario: POST DEVELOPMENT  
 Type: Stage/Volume  
 Base Flow: 0.00 cfs  
 Initial Stage: 18.50 ft  
 Warning Stage: 0.00 ft  
 Alert Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
18.50	0.00	0
19.00	0.06	2614
19.50	0.14	6098
20.00	0.24	10454
20.50	0.36	15682
21.00	0.47	20473

Comment:

**Node: N-SITE**

Scenario: POST DEVELOPMENT  
 Type: Stage/Volume  
 Base Flow: 0.00 cfs

Initial Stage: 19.50 ft  
 Warning Stage: 0.00 ft  
 Alert Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
19.50	0.00	0
20.00	0.06	2614
20.50	0.27	11761
21.00	0.49	21344
21.50	0.71	30928

Comment:

**Weir Link: L-DISCHARGE**

Scenario: POST DEVELOPMENT	Bottom Clip
From Node: N-RETENTION AREA	Default: 0.00 ft
To Node: DISCHARGE	Op Table:
Link Count: 1	Ref Node:
Flow Direction: Both	Top Clip
Damping: 0.0000 ft	Default: 0.00 ft
Weir Type: Broad Crested Vertical	Op Table:
Geometry Type: Irregular	Ref Node:
Invert: 19.81 ft	Discharge Coefficients
Control Elevation: 19.81 ft	Weir Default: 2.800
Cross Section: X-DISCHARGE	Weir Table:
	Orifice Default: 0.600
	Orifice Table:

Comment:

**Weir Link: L-SITE TO RETENTION**

Scenario: POST DEVELOPMENT	Bottom Clip
From Node: N-SITE	Default: 0.00 ft
To Node: N-RETENTION AREA	Op Table:
Link Count: 1	Ref Node:
Flow Direction: Both	Top Clip
Damping: 0.0000 ft	Default: 0.00 ft
Weir Type: Broad Crested Vertical	Op Table:
Geometry Type: Rectangular	Ref Node:
Invert: 19.70 ft	Discharge Coefficients
Control Elevation: 19.70 ft	Weir Default: 2.800
Max Depth: 1.00 ft	Weir Table:
Max Width: 165.00 ft	Orifice Default: 0.600
Fillet: 0.00 ft	Orifice Table:

Comment:

Weir Cross Section: X-DISCHARGE

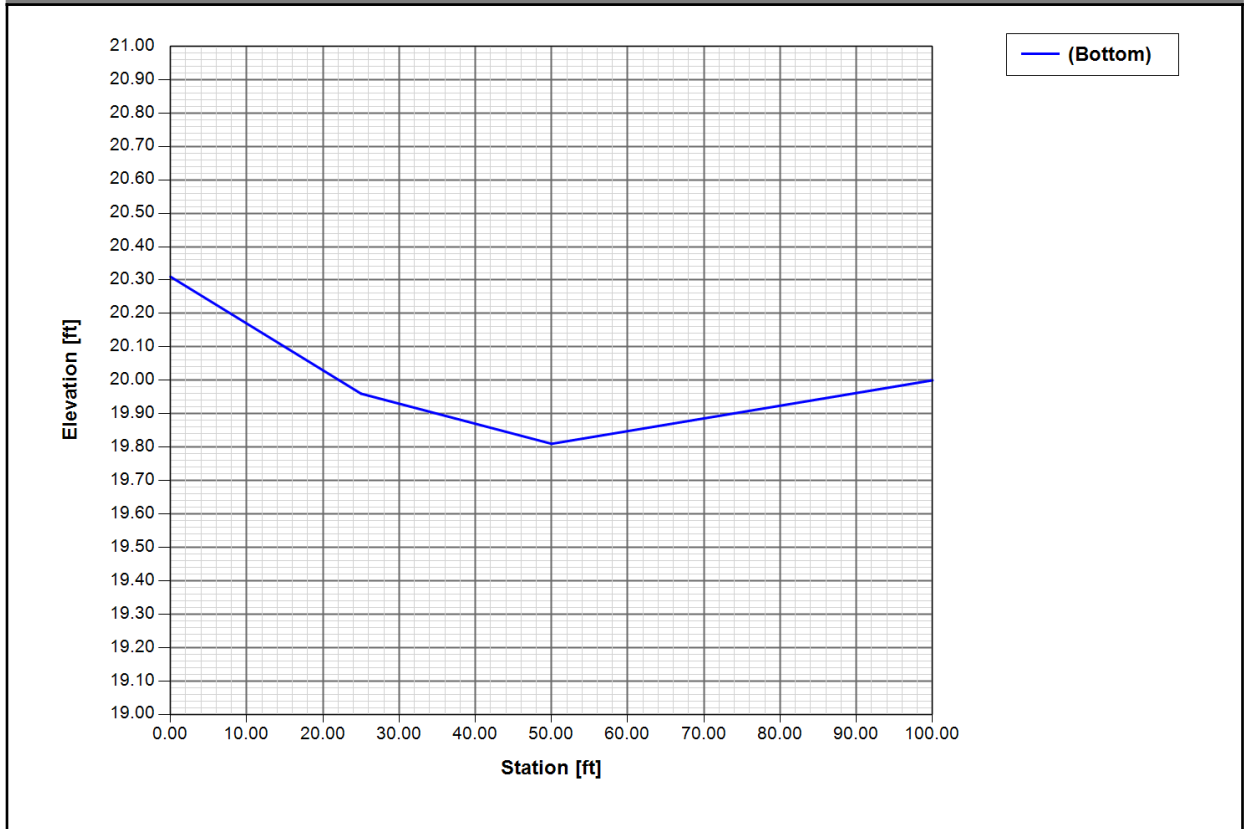
Scenario: POST DEVELOPMENT  
Lid: No

Bottom Point Table

Order	Station [ft]	Elevation [ft]
0	0.00	20.31
1	25.00	19.96
2	50.00	19.81
3	100.00	20.00

Comment:

Weir Cross Section: X-DISCHARGE Scenario: X-DISCHARGE



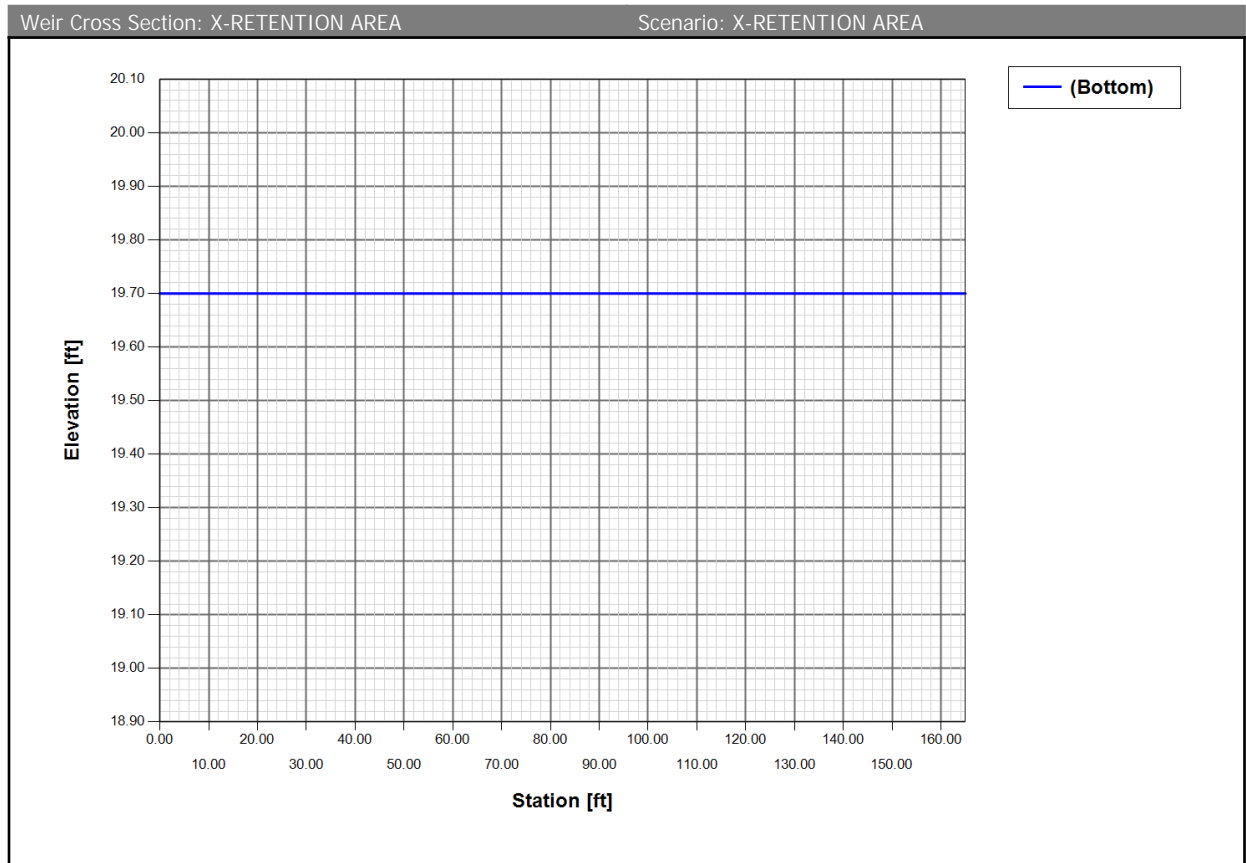
Weir Cross Section: X-RETENTION AREA

Scenario: POST DEVELOPMENT  
Lid: No

Bottom Point Table

Order	Station [ft]	Elevation [ft]
0	0.00	19.70
1	0.01	19.70
2	165.00	19.70

Comment:



Simulation: 100Y-3D

Scenario: POST DEVELOPMENT  
 Run Date/Time: 1/14/2026 10:29:43 AM  
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

Year Month Day Hour [hr]

Start Time: 0 0 0 0.0000  
 End Time: 0 0 0 80.0000

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

Output Time Increments

Hydrology

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

Surface Hydraulics

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

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
 Unit Hydrograph  
 Folder:

Lookup Tables

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

Tolerances & Options

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

IA Recovery Time: 24.0000 hr  
  
 Ia/S: 0.20 dec  
  
 Smp/Man Basin Rain: Global  
 Opt:  
  
 Rainfall Name: ~FLMOD  
 Rainfall Amount: 13.00 in  
 Storm Duration: 72.0000 hr  
 Dflt Damping (1D): 0.0050 ft  
 Min Node Srf Area: 100 ft2  
 (1D):

Energy Switch (1D): Energy

Comment:

Simulation: 10Y-1D

Scenario: POST DEVELOPMENT  
 Run Date/Time: 1/14/2026 10:30:12 AM  
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	30.0000

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

Output Time Increments

Hydrology

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

Surface Hydraulics

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

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
  
 Unit Hydrograph Folder:

Lookup Tables

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

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	
Over-Relax Weight 0.5 dec	Ia/S: 0.20 dec
Fact:	
dZ Tolerance: 0.0010 ft	
Max dZ: 1.0000 ft	Smp/Man Basin Rain Global
	Opt:
Link Optimizer Tol: 0.0001 ft	
	Rainfall Name: ~FLMOD
	Rainfall Amount: 6.00 in
	Storm Duration: 24.0000 hr
	Dflt Damping (1D): 0.0050 ft
	Min Node Srf Area 100 ft2
	(1D):
	Energy Switch (1D): Energy

Comment:

Simulation: 25Y-3D

Scenario: POST DEVELOPMENT  
 Run Date/Time: 1/14/2026 10:30:26 AM  
 Program Version: StormWise 4.08.03

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

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

Output Time Increments

Hydrology

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

Surface Hydraulics

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

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph  
Folder:

Lookup Tables

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

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

Tolerances & Options

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

IA Recovery Time: 24.0000 hr  
Ia/S: 0.20 dec  
Smp/Man Basin Rain Global  
Opt:  
Rainfall Name: ~FLMOD  
Rainfall Amount: 10.00 in  
Storm Duration: 72.0000 hr  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area 100 ft2  
(1D):  
Energy Switch (1D): Energy

Comment: